



## **Interprofessional Outcome Measures Across the Continuum of Stroke Care in Leeds and Grenville Summary Report from May 17, 2012 Interprofessional Workshop**

### **Background**

In April 2007, the Ontario Stroke System published the Consensus Panel on the Stroke Rehabilitation System "Time is Function" Report. In supporting the uptake of the recommendations of that Report, community forums were held across the Southeast Ontario Region by the SEO Stroke Network, between November, 2007 and March, 2008. Those forums were designed to engage health care professionals working in community and hospital rehabilitation settings around twenty (20) identified standards in practice. A number of initiatives arose from the Regional Forums, including the development of an Outcome Measures Workshop in the Quinte area, wherein Quinte Health Care hospital rehab providers and Quinte & District Rehabilitation Services community rehab providers collaborated around the evaluation of outcome measures in use across the hospital-community continuum in that part of the Region.

In 2009, the Canadian Stroke Network struck a National Rehab Consensus Panel of experts to set as a key objective to "prioritize a set of outcome measures in the various domains of the International Classification of Functioning that could be used to evaluate the outcomes of stroke rehabilitation in Canada." Significant inconsistencies in the outcome measures in use were observed nationally. It was also determined that outcome measures are frequently used only at admission and not at discharge, and that outcome measures currently used are not necessarily those evaluated for responsiveness.

The 2010 Best Practice Recommendations for Stroke Care, Section 5.1, Rehabilitation - Assessment Recommendation, states that "Clinicians should use standardized, valid assessment tools to evaluate the patient's stroke related impairments and functional status."

Based on the success of the Quinte area Workshop, and Canadian Best Practices in Rehabilitation, Regional planning commenced to ensure other parts of the SEO Region were afforded the same opportunity as Quinte for reflection and action planning towards implementation of best practice in outcome measures use. On that basis, similar Outcome Measures Workshops were held in Kingston on March 9, 2011, for health care professionals in Kingston, Frontenac and Lennox & Addington Counties (KFL&A), in Perth for health care professionals in Lanark County on September 29, 2011, and most recently, in Brockville on May 17, 2012, for health care professionals in Leeds and Grenville Counties.

The design of the last three Outcome Measures Workshops was intended to provide for interprofessional collaboration, both within teams, as well as across facilities and sectors. Interprofessional health care providers from acute, rehab and community settings were invited to participate. In addition to SEO Stroke Network team support, cross-representation of disciplines, settings and sectors comprised the Outcome Measures Workshop Planning Committee. Learnings

from the prior HPE Outcome Measures Workshop prompted extending the invitation both in the planning and in Workshop participation to CCAC Administrators and Case Managers.

The objective of the Leeds and Grenville Workshop was to identify opportunities to enhance collaborative interprofessional patient care planning and implementation to improve stroke care outcomes through the review and selection of outcome measures used across the continuum of care. By the end of the workshop, participants were afforded the opportunity to:

- Learn which outcome measures are currently being used across the continuum of care in their area and how these outcome measures align with the Provincial and Canadian best practice recommendations;
- Better understand the use and interpretation of outcome measurement tools;
- Enhance interprofessional collaboration through understanding of the outcome measures used and the roles and scope of practice of the interprofessional team members;
- Further develop a collaborative network of health care providers across the continuum of care;
- Further develop and share stroke expertise across the continuum of care;
- Consider whether there are new tools that could be used;
- Develop a common set of standardized outcome measurement tools to measure function.

The format and content of the workshop day were dependent on the information obtained from front-line staff in the area relative to current outcome measures practices. Therefore, initial planning for the Outcome Measures Workshops involved pre-workshop evaluation of outcome measures used by all members of each interprofessional team in the acute and rehab hospital settings and in the community. Electronic evaluation was conducted using Survey Monkey, wherein the interprofessional team members and administrators within each participating team were surveyed as to what outcome measures they currently use, ease of use, barriers to administration, tools of interest, those not currently in use, etc. For a comprehensive summary of the Pre-Workshop Survey Results, refer to Appendix "A" attached. Also attached hereto as Appendix "B" is the Workshop Agenda, delineating final the content and format of the day, which was aligned with the interests and needs of the participants based on survey results.

Concurrently, utilizing the National Rehabilitation Consensus Panel Recommendations and Evidence-Based Review of Stroke Rehabilitation (EBRSR), information was consolidated relating to clinical use and interpretation of those Outcome Measures recommended by the National Consensus Panel. It was felt that a resource such as this would assist in improving cross-discipline, cross-sectoral communication and improve understanding of patients' functional status relative to documented scores under particular Outcome Measures. Refer to Clinical Use and Interpretation Chart attached hereto as Appendix "C". The 'Clinical Use' column within this Chart consolidate front-line clinicians' experience with the respective outcome measures, and reflect some of the barriers and enablers in their clinical applications.

Upon consolidation of the Pre-Workshop survey results, the Planning Committee categorized each tool into one of the following functional domains: Functional Independence; Motor/Mobility; Cognition/Perception; Communication; Emotion and Dysphagia. Evaluation of the data included identifying tools used consistently across sectors, tools in use which align with the National Consensus Panel Recommendations; gaps in outcome measures use by domain, facility or by sector; quantifying ease of use ratings, barriers to use, etc., and identifying common tools not currently in use, but which participants wished to learn more about.

The Pre-Workshop survey results provided the basis and content in planning the half-day Workshop. The workshop was held May 17, 2012, in Brockville, providing a forum and content format designed to achieve the objectives outlined herein. The workshop began with an overview of the National Best Practice Outcome Measures. An overview of the Pre-Workshop Survey Results provided the opportunity for the larger group to frame the sub-regional picture and start to identify gaps, action areas, and opportunities for growth. A detailed case study was presented by interprofessional, cross-sectoral (acute-rehab-community) teams, bringing outcome measures to life by linking outcome measure scores at various stages of patient recovery with their functional status. It was important to recognize that there were members of the audience who had little to no familiarity with these outcome measures. Basic introductory information about what the outcome measures were and how they are used was introduced during the first two presentations and was further demonstrated during the case study that the many of the interprofessional team members were familiar with. The participants also were provided the Canadian Best Practice Outcome Measures Recommendations table (updated 2008) and a list of the outcome measures with their abbreviations to refer to during the workshop.

Following the case study, brief inservices were provided on Outcome Measures identified in the Pre-Workshop survey as tools participants wanted to learn more about. Those tools included: the Brief Assessment Schedule Depression Cards (BASDEC); the Chedoke Arm and Hand Activity Inventory (CAHAI); the Language Screening Test (LAST); the Screening Tool for Acute Neurological Dysphagia (STAND); Mini Nutritional Assessment (MNA); Berg Balance Scale; Montreal Cognitive Assessment (MoCA); the Leisure Competency Measure (LCM); the Ontario Society of Occupational Therapists Perception Evaluation (OSOT); and Functional Independence Measures used across the continuum (FIM – rehab; AlphaFIM – acute; and InterRAI – community).

The next component of the Workshop involved Focus Group / Carousel Table Discussions. Participants shared their perspectives on which tools best guide intervention and/or facilitate interprofessional and cross-sectional collaboration. Group discussion also reflected on whether there are outcome measurement tools that should be considered for incorporation into practice. Following consideration of individual and group perspectives, participants began to identify tools to recommend for consistent use within and across teams and consider how use of outcome measures can be facilitated.

At the beginning of the workshop, participants were provided with an action and reflection form, and were instructed to record their ideas throughout the day regarding the "Reflection" and "Action" questions being used during the Focus Groups and Action sessions. Attached hereto as Appendix "D" is a sample of the participant action and reflection form. The format of this document outlined reflections and actions by domain, and delineated personal, team and cross-sectoral actions. The guiding questions were as follows:

**Reflection Questions:**

- Are there tools you would like to consider incorporating into practice to guide patient care?
- Are there tools you would recommend consistently using across sectors and/or within teams?

**Action Questions:**

- What next steps should take place to support use of these tools between and/or within teams at the personal, team and cross-sectoral level?

The Carousel Focus Group approach to sharing perspectives and learning from each other is designed to allow a large group of people to quickly share their ideas in a way that facilitates the generation of deeper and broader understanding, ideas and actions. Groups of people rotate through discussion groups in a very limited amount of time. The groups' members change each time. Each table discusses and develops ideas and actions around one idea or problem. The groups then switch tables and the next group then uses the previous group's ideas to build on and develop plans which are built from a deeper understanding of the original topic or problem.

With this format, cross-sectoral, interprofessional groups rotated amongst two of the six domain-specific tables, with the guiding reflection and action questions and the facilitators supporting the discussions. A facilitator guided each table discussion, and table set up included flip charts to document group ideas. A separate table displaying samples of domain-specific best practice outcome measures was set up for participants to view throughout the day. The tables were identified as follows:

### **Carousel Tables for Focus Group Discussions**

Functional Independence  
Motor/Mobility  
Cognition/Perception  
Communication  
Emotion  
Dysphagia/Nutrition

The table displaying sample outcome measures included some of the following outcome measures and/or, where permitted, samples of tools were provided in the workshop package handouts:

Functional Independence  
FIM, Alpha-FIM, Inter RAI

Motor/Mobility  
BERG Balance Scale, Timed "Up and Go" Test, Chedoke Arm and Hand Activity Inventory (CAHAI), Chedoke-McMaster U-E/L-E Stroke Assessment (CMSA); COVS

Cognition/Perception  
MoCA Screen, MMSE Screen, MVPT/OSOT

Communication  
BDAE, BDAE Short Form, WAB, Language Screening Test

Emotion  
BASDEC Screen

Dysphagia/Nutrition  
STAND Screen, TORBSST Screen, MNA

These discussions lead to the closing component of the day which was an opportunity for reflection and action planning as a large group. In this larger group discussion, table discussions were summarized, with broader group perspectives offered on two key points: what are recommended consistent tools within each domain; and what can be considered for future use

of best practice recommended outcome measures. Actions arising were consolidated at personal, team and cross-sectoral levels. See Appendix "E" for a comprehensive summary of action items, delineated in each domain by personal, team and sector. Team and sectoral actions identified will be supported by the SEO Regional Stroke Network, with a number of action items being incorporated into the SEO Regional Workplan, wherein formalized support and monitoring will be offered.

## **Workshop Evaluation**

Approximately 32 people attended the Leeds and Grenville Interprofessional Outcome Measures Workshop. Physiotherapists, Occupational Therapists, Speech-Language Pathologists, Nurses, Recreational Therapists, Registered Dietitians, Managers, Administrators, one Pharmacist and one Physician all working in various sectors of the care continuum were represented. Physiotherapy represented 10% of the attendees, Occupational Therapy 13%, Nursing (RN and RPN) 30%, Speech Language Pathology 16% and Registered Dietitian 6%. CCAC Case Managers also represented 6% of attendees and Recreational Therapist, Pharmacist and Physician each represented 3% of attendees. Administrators represented 10% of those in attendance.

Sector representation of the workshop participants reflected 30% from an Inpatient Rehab setting, 19% from the Community, 32% from Acute Care, 6% from CCAC and 6% from Stroke Prevention. Some therapists in attendance work in more than one setting (e.g., acute and rehab).

A post workshop survey was conducted using the Survey Monkey tool to assess the effectiveness of the day. We obtained a 50% response rate to the survey. For those who participated in the survey, results reflected a well experienced clinical group, with 43.8% reported greater than 20 years' experience, 43.8% with 11-19 years experience and 12.5% with 6-10 years' experience.

Feedback from the group reflected that the objectives of the day were clearly defined and met. Overall, 12.5% of participants indicated that the workshop met their expectations to 'some extent', and 75% of participants indicated that the workshop met their expectations 'to a great extent'. A further 12.5% indicated the workshop exceeded their expectations. Questions were posed to participants around potential changes in practice as a result of the workshop and how those changes could be supported for implementation. Responses relating to practice change and implementation were incorporated into participants' action planning document to maintain momentum and facilitate individual, team and cross-sectoral next steps planning. Refer to Appendix "E", Actions and Reflections Chart.

Survey Monkey post-workshop evaluation afforded the opportunity to consolidate both quantitative and qualitative information about the Workshop. A number of suggestions relating to content and format of the day will be considered in future outcome measures workshop planning for the Region. Overall, feedback from the day was very positive:

***"I learned the roles of each health care professional who provides stroke care and reflected how I could relate my role to others'."***

***"Very informative to hear other professionals describing their assessment."***

***"In all the years that I have been doing Case Management, I have never had the opportunity to meet with all team members in this type of forum or have all of the assessment tools explained in***

***such a concise, easy-to-understand way. Thank you so much for organizing such a worthwhile afternoon.”***

***“I have been attending these workshops for the last 12 years. This was the best one yet.”***

***“The group discussion work brought out many valuable processes for information sharing and dissemination. Well Done!”***

***“I found the discussion informative regarding the outcome measurement tools across professions and appreciated learning more about the role of Recreation Therapist. Good information sharing and generation of ideas. Great collaboration!”***

***“Sharing with other professionals; it is always positive to discuss different practices and see the issues depending on [the setting] in which you work – acute hospital, rehab, community.”***

### **Action Planning and Next Steps**

Participants were successful in identifying tools for consistent use across the care continuum in all domains. Planning details are outlined in detail in Appendix “E”, and include reflections and action planning as individuals, teams, facilities and/or sectors. Some key objectives arising from the Workshop which align with the SEO Stroke Network 2011-13 Workplan include adoption of the BASDEC as a Regional depression screening tool; adoption of the AlphaFIM Regionally as a rehab triage tool; adoption of the MoCA as a cognitive screening tool; incorporate the Mini Nutritional Assessment (MNA) into inpatient and community practice (e.g., dysphagia consults); and implementation of the STAND Dysphagia screening.

Appendix “F” attached hereto is a Regional Summary of information gathered relating to best practice implementation in Outcome Measures used in SEO.

## Appendices

Appendix "A"	-	Outcome Measures Pre-Workshop Survey Results
Appendix "B"	-	Workshop Agenda
Appendix "C"	-	Outcome Measures Use and Interpretation Chart
Appendix "D"	-	Action and Reflections Blank Participant Form
Appendix "E"	-	Action and Reflections Summary Chart
Appendix "F"	-	Summary of OM Used Across SEO Region

## Resource Links

- StrokEngine  
<http://strokengine.ca> – StrokEngine / Assess
- Evidence Based Review of Stroke Rehabilitation  
[www.ebrsr.com](http://www.ebrsr.com)
- 2010 Canadian Best Practice Recommendations for Stroke Care  
[www.strokebestpractices.ca](http://www.strokebestpractices.ca)

For Additional Information, please contact:

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## Appendix "A" Outcome Measures Pre-Workshop Survey Results

Leeds and Grenville Counties Outcome Measures Workshop							
OUTCOME MEASURES USED IN LEEDS AND GRENVILLE COUNTIES							
Outcome Measurement Tool	ORGANIZATION					Best Practice OM	Ease of Use 1=easy 5=diff
	Acute Care	Inpatient Rehab	Restorative Care	Complex Continuing Care	Community		
<b>MOTOR / MOBILITY</b>							
Chedoke-McMaster Stroke Assessment U/E	0	X	X	0	0	√	3.33
Chedoke-McMaster Stroke Assessment L/E	0	X	X	0	0	√	3.25
Chedoke-McMaster Stroke - Spasticity Subscale	0	X	X	0	0	√	3
Modified Ashworth Scale	0	X	X	X	0	√	2.5
Chedoke Arm and Hand Activity Inventory (CAHAI)	0	X	0	0	0	√	3
Nine Hole Peg Test	0	0	0	0	0	√	3
Timed "Up and Go" Test	0	X	X	0	0	√	1.6
6-Minute Walk Test	X	X	X	0	0	√	1.75
Berg Balance Scale	X	X	X	X	X	√	2

COGNITION / PERCEPTION							
Montreal Cognitive Assessment (MoCA)	X	X	X	X	X	√	1.4
Five Minute Protocol from MoCA	X	X	0	0	0	√	2.5
MMSE+	X	X	X	X	X	√	1.88
Behavioural Inattention Test	0	0	0	0	0	√	
Line Bisection	0	0	0	0	0	√	1
Sunnybrook Neglect Assessment Protocol (SNAP)	0	0	0	0	0	√	
Rivermead Perceptual Assessment Battery	0	X	0	0	0	√	5
Ontario Society OT Perceptual Evaluation - OSOT	X	X	X	0	X	√	2
Motor-Free Visual Perception Test (MVPT)	X	X	X	0	X	√	1.57
Box and Block Test	0	0	0	0	0	√	
Trails A & B	0	0	0	0	X	x	
Cognitive Assessment of Minnesota	0	X	X	X	0	x	
COMMUNICATION							
Boston Diagnostic Aphasia Assessment	0	?	?	?	X	√	2
Western Aphasia Battery	0	0	0	0	X	√	2
Frenchay Aphasia Screening Test	0	0	0	0	0	√	
Apraxia Battery for Adults	0	?	?	?	0	x	
Reading Comprehension Battery for Aphasia	0	?	?	?	0	x	





## Appendix “B”

**Interprofessional Outcome Measures  
 Across the Continuum of Stroke Care in  
 Leeds & Grenville Counties  
 Thursday May 17, 2012  
 Brockville Golf and Country Club**

Time	Topic	Presenters
1130 -1215	<b>Lunch &amp; Registration</b> <ul style="list-style-type: none"> <li>o Network with your colleagues</li> </ul>	
1215 -1225	<b>Introduction</b>	Sue Saulnier
1225 -1240	<b>National Best Practice Outcome Measures</b>	Cally Martin
1240 -1250	<b>A Focus on Outcome Measures used in Leeds &amp; Grenville Counties</b>	Caryn Langstaff
1250-1405	<b>Tools of Interest</b> <b>Functional Independence:</b> <ul style="list-style-type: none"> <li>o FIM &amp; Alpha FIM (10 min)</li> <li>o InterRAI &amp; Contact Assessment (5 min)</li> <li>o *Leisure Competency Measure (15 min)</li> </ul> *Include highlight of the role of the Recreation Therapist <b>Dysphagia &amp; Nutrition:</b> <ul style="list-style-type: none"> <li>o Screening Tool for Acute Neurological Dysphagia (STAND) (5 min)</li> <li>o Mini Nutritional Assessment (MNA) (5 min)</li> </ul> <b>Motor Function:</b> <ul style="list-style-type: none"> <li>o Chedoke Arm &amp; Hand Activity Inventory (CAHAI) (5 min)</li> <li>o Berg Balance Scale (5 min)</li> </ul> <b>Communication:</b> <ul style="list-style-type: none"> <li>o Language Screening Test (LAST) (5min)</li> </ul> <b>Cognition/Perception</b> <ul style="list-style-type: none"> <li>o Montreal cognitive Assessment (MOCA) &amp; the Five Minute Protocol (5 min)</li> <li>o Ontario Society of Occupational Therapists (OSOT) Perception Evaluation (5 min)</li> </ul>	Caryn Langstaff Suzanne Dumas Thomas Hanson  Lynn Varma  Adonica Keddy  Cally Martin  Shannon Mosher  Josee Lemaire  Cheryl Strautman  Angela Rodgers
	<b>Emotion:</b> <ul style="list-style-type: none"> <li>o Brief Assessment Schedule Depression Cards (BASDEC) (5 min)</li> </ul>	Lorraine White & Cheryl Strautman
1405-1440	<b>Outcome Measures Used Across the Continuum of Care in Leeds &amp; Grenville Counties – Case Study</b>	Lorraine White Shannon Mosher Cheryl Strautman Angela Rodgers Lynn Varma

1440 -1500	<b>Break</b> (20 min)
1500 – 1600	<p><b>Focus Groups – Carousel Table Discussions</b>        Cross-sectoral, interprofessional groups        Rotation through 2 or 3 out of 6 domain-specific tables listed below</p> <p><b>Action Questions:</b></p> <ul style="list-style-type: none"> <li>➤ Are there tools you would like to consider incorporating into practice to guide patient care?</li> <li>➤ Are there tools you would recommend consistently using across sectors and/or within teams?</li> <li>➤ What next steps should take place to support use of these tools between and/or within teams at the personal, team and cross-sectoral level?</li> </ul> <p><b>Functional Independence</b></p> <ul style="list-style-type: none"> <li>➤ Functional Independence Measure – (FIM &amp; Alpha-FIM)</li> <li>➤ InterRAI &amp; Contact Assessment</li> <li>➤ Return to Normal Living</li> <li>➤ Leisure Competency Measure</li> </ul> <p><b>Motor / Mobility</b></p> <ul style="list-style-type: none"> <li>➤ BERG Balance Scale</li> <li>➤ Timed “Up and Go” Test</li> <li>➤ Chedoke Arm and Hand Activity Inventory (CAHAI)</li> <li>➤ Chedoke-McMaster U-E / L-E Stroke Assessment (CMSA)</li> <li>➤ Modified Ashworth Scale</li> </ul> <p><b>Cognition / Perception</b></p> <ul style="list-style-type: none"> <li>➤ Montreal Cognitive Assessment (MoCA) &amp; Five Minute Protocol</li> <li>➤ Ontario Society of occupational Therapists (OSOT) Perception Evaluation</li> <li>➤ Mini-mental State Exam (MMSE)</li> <li>➤ Motor-free Visual Perception Test (MVPT)</li> </ul> <p><b>Communication</b></p> <ul style="list-style-type: none"> <li>➤ Language Screening Test (LAST)</li> <li>➤ Boston Dysphagia Aphasia Examination (BDAE)</li> </ul> <p><b>Emotion</b></p> <ul style="list-style-type: none"> <li>➤ Brief Assessment Schedule Depression Cards (BASDEC)</li> <li>➤ Hospital Anxiety and Depression Scale (HADS)</li> </ul> <p><b>Dysphagia &amp; Nutrition</b></p> <ul style="list-style-type: none"> <li>➤ Screening Tool for Acute Neurological Dysphagia (STAND)</li> <li>➤ Mini Nutrition Assessment (MNA)</li> </ul>
1600 -1630	<p><b>Action Planning</b></p> <p><b>Report back and clarification</b></p> <ul style="list-style-type: none"> <li>➤ Are there tools you would like to consider incorporating into practice to guide patient care?</li> <li>➤ Are there tools you would recommend consistently using across sectors and/or within teams?</li> <li>➤ What ‘next steps’ should take place to support use of these tools between and/or within teams at the personal, team and cross-sectoral level?</li> </ul>

## Appendix “C” Outcome Measures – Use and Interpretation Chart

SEO Outcome Measures Workshops			
SEO Outcome Measures -- Measurement, Clinical Use and Interpretation			
Outcome Measurement Tool	Items Measured	KFLA Survey on Clinical Use Comments	Score Interpretation
<b>MOTOR</b>			
<b>Best Practice Recommended</b>			
Modified Ashworth Scale	Spasticity	Easy to administer; subjective; no specialized equipment; brief Ax	Scale 0-4 - 0=no increase tone; 4=rigid in flexion or extension
Chedoke-McMaster Stroke Assessment U/E	Upper extremity motor impairment	Significant time to administer; may not be directly related to treatment	Scale 1-7 - 1=flaccid paralysis; 7=normal
Chedoke-McMaster Stroke Assessment L/E	Lower extremity motor impairment	May not be directly related to treatment	Scale 1-7 - 1=flaccid paralysis; 7=normal
Chedoke Arm and Hand Activity Inventory (CAHAI)	arm and hand function/ability	Very informative to real life hand-arm activities; significant materials and time required; best for higher functioning patients	7 point quantitative scale- 1=total assist; 7=complete independence; Version 7 max score 49 (7 elements); Version 8 max score 56 (8 elements); Version 9 max score 63 (9 elements) Version 13 max score 91 (13elements)
Nine Hole Peg Test	arm and hand function/ability - fine manual dexterity	quick and easy; norms for age, gender and hand dominance, susceptible to practice effects	timed - lower scores = better fine manual dexterity

Timed "Up and Go" Test	Mobility and balance relative to walking and turning	quick and easy; no special equipment or training; objective and sensitive to change over time; not suitable for cognitively impaired	timed - lower scores better
6-Minute Walk Test	Mobility and exercise tolerance	Easy to use	distance measure - greater distance denotes better performance; duration of rests measured
Berg Balance Scale	Balance - static and dynamic	Easy to use; minimal space and equipment requirements	Scores of less than 45 out of 56 indicative of balance impairment
<b>Others In Use</b>			
COVS - Clinical Outcome Variable Score	General functional mobility	Easy to use, 20 mins. to administer	Score range 13-91 - higher score denotes greater mobility and function
Community Balance and Mobility Score	high level functional mobility and balance		
Motor Assessment Scale (Motor Learning)	every day motor function	brief and simple; performance based	Overall score out of 48; performance criterion 0-6 0=simple; 6=complex; tonus 4=optimal - greater or less indicative of hypertonus or hypotonus
Pain Visual Analogue Scale	pain scale		
<b>COGNITION / PERCEPTION</b>			
<b>Best Practice Recommended</b>			
Montreal Cognitive Assessment (MoCA)	Cognitive Screening	Fast, easy, sensitive; stroke friendly; detects mild forms of impairment; and impairments in executive functions	total score 30; 26 or less denotes screen failure; +1 score for education <grade 12
Five Minute Protocol from the MoCA	Cognitive Screening	Fast, easy, sensitive; stroke friendly;	

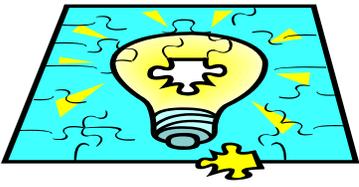
Mini Mental Screening Exam (MMSE)	Cognitive Screening	Fast, easy, not as stroke specific; not sensitive to mild or severe impairments; records cognitive changes over time	Total score 30; 23 or less indicative of presence of cognitive impairment; levels of impairment 24-30=none; 18-24=mild; 0-17=severe
Behavioural Inattention Test	inattention; unilateral visual neglect	Easy to administer; 40 mins; good re-test reliability; only deals with personal space and only identifies significant inattention; too time intensive for acute setting	Total score 227, with higher scores indicative of greater neglect - neglect indicated at 196 cutoff or greater
Line Bisection	Unilateral spatial neglect, inattention	Quick and easy; only picks up neglect in personal space; could be difficult if dominant hand affected; screening only, as neglect may be indicative of other syndromes such as hemianopia	Deviation of 6mm or more indicative of unilateral spatial neglect; or patient omits two or more lines on one half of the page
Rivermead Perceptual Assessment Battery	Perception	Long time to administer; good for patients with aphasia	
Ontario Society OT Perceptual Evaluation - OSOT	Perception	Harder and > 1hr to administer; assesses perceptual dysfunction in areas related to basic living skills; evaluates degree of impairment, monitors change and treatment effects	Standardized for use with individuals aged 40-69 years
Motor-Free Visual Perception Test (MVPT)	Visual perceptual screen, concentration, memory, good for patients with Aphasia	Easy and quick; flip chart and point, difficult for acute population; well-tolerated generally	Score out of 36; cutoff 30; poor MVPT scores predictive of poor driving outcome

<b>Others In Use</b>			
Cognitive Assessment of Minnesota (CAM)	Memory, concentration	Easy/difficult, one hour to administer	
Clock Draw Test	Visuospatial and praxis abilities; may detect deficits in attention and executive functioning	Easy and quick - 1-2 mins; screening only; good supplement to other cognitive evaluation	Evaluates errors, omissions and distortions; Poor performance correlates highly with poor performance on other cognitive screens
Cognitive Competency Test			
Rivermead Behaviour Memory Test			
Cognitive Linguistic Quick Test	Stroke and brain injury	Easy to administer	
PACE - Process and Cognitive Enhancement			
<b>COMMUNICATION</b>			
<b>Best Practice Recommended</b>			
Boston Diagnostic Aphasia Assessment	Auditory and reading comprehension; verbal and written expression; to diagnose aphasia; evaluates various perceptual modalities (auditory, visual, and gestural), processing functions (comprehension, analysis, problem-solving) and response modalities (writing, articulation, and manipulation)	Used in rehab; thorough; time consuming too intensive for acute; short form version quick and accurate and easy to interpret; 30-45 mins to administer	Percentiles; percentages; standard scores M=100, range 85-115, within normal limits
Frenchay Aphasia Screening Test (FAST)	Aphasia screening tool for non-SLPs	Screening for the presence of expressive or receptive aphasia by non-SLP.	Pass/fail screen. If fail, refer to SLP for Assessment
Western Aphasia Battery	Auditory and reading comprehension; verbal and written expression	Often used in acute; assesses functional language; severe supported by objects as well as pictures	Criterion cut off scores based on identified quotients

<b>Others In Use</b>			
Boston Naming Test	Anomia - evaluates word finding and vocabulary	Easy and quick to administer; supplemental test to BDAE	percentage correct score; total score out of 60
Reading Comprehension Battery for Adults	Reading comprehension	Adult Assessment; 30 mins to administer; 20 subtests; facilitate intervention direction	
Frenchay Dysarthria Assessment	Speech intelligibility; oral motor weakness	short, easy assessment; good inter-rater reliability	
Apraxia Battery for Adults	Presence and severity of apraxia of speech	easy to administer	
SLP Assessment of Leisure and Recreation			
<b>EMOTION</b>			
<b>Best Practice Recommended</b>			
Hospital Anxiety/Depression Scale (HADS)	Depression and anxiety	easy to administer; fast; no formal training required; based on self-report; correlates with Beck Depression Inventory	Total score 42, higher scores indicate greater anxiety and depression; 14 items each valued at 0-3; 0=absent, 3=extreme presence.
<b>Others In Use</b>			
Brief Assessment Schedule Depression Cards (BASDEC)	Depression; good for patients with Aphasia	Easy to score; accurate; quick	Pass/fail screen.
<b>FUNCTIONAL INDEPENDENCE / ADL</b>			
<b>Best Practice Recommended</b>			
Functional Independence Measure (FIM)	Functional independence; all domains; physical and cognitive disability in terms of burden of care	Well studied for validity and reliability; training and education required	Summed score of 18-126 with 18 being total dependence and 126 total independence
<b>Others In Use</b>			
AlphaFIM	Functional independence	Disability and functional status assessment in the acute setting	Abbreviated FIM - 6 items - eating, Grooming, Bowel Management, Transfers: Toilet, Expression, and Memory

Inter RAI	Functional independence; all domains	Community assessment to prevent or stabilize early health or functional decline	Assesses 12 domains
<b>DYSPHAGIA</b>			
<b>Best Practice Recommended</b>			
Dysphagia Screening - TORBSST	Dysphagia screening tool	Fast, easy to administer; screens for safety and efficiency of swallow; requires SLP to train users	Pass / Fail screen. If fail, refer to SLP
Dysphagia Screening - STAND	Dysphagia screening tool	Fast, easy to administer; screens for safety and efficiency of swallow; allows for train the trainer model	Pass / Fail screen. If fail, refer to SLP
<b>Others In Use</b>			Pass / Fail screen. If fail, refer to SLP
Bedside Evaluation of Dysphagia (BED)	Dysphagia Clinical Assessment	SLP Assessment tool; evaluations non-physiological, oral mechanism and oral-pharyngeal dysphagia symptoms with food and liquid trials	SLP clinical assessment; validity maximized when paired with instrumental assessment VFSS
<b>MEASURES OF STROKE SEVERITY</b>			
<b>Best Practice Recommended</b>			
Canadian Neurological Scale (CNS)	Evaluates mentation (LOC, orientation and speech) and motor function (face, arm, leg)	short, simple to use; can be used to monitor change and predict patient outcomes	Scores from each section summed. Total 11.5, with lower scores indicative of greater neurological deficit
NIH Stroke Scale	Measures severity of symptoms post-stroke, quantifying neurological deficit	quick and simple; standardized training procedure required	Total scores range from 0-42 with higher scores reflecting greater severity; stratified as >25=very severe; 15-24=severe; 5-14=mild to moderate; 1-5=mild impairment

<b>Others In Use</b>			
Glascow Coma Scale	Depth or duration of impaired consciousness or coma; measures motor responsiveness; verbal performance and eye opening	used for patients with reduced LOC	
<b>COMMUNITY REINTEGRATION</b>			
Leisurescope Plus	Measures patient's areas of high interest; emotional motivation for participation; and need for high arousal experiences (risks)	quick and easy to administer; 45 visual comparisons	
Leisure Competence Measure	Measures leisure awareness, attitude, cultural/social behaviours, interpersonal skills, community reintegration skills, social contact, community participation	201 page manual; used as screening and/or as full standardized assessment for goal setting and objective measure of change over time	
Leisure Satisfaction Measure	Patient satisfaction level with leisure activities	Assist in establishing goals to maximize patient participation in leisure activities	



## Appendix "D"

### Actions and Reflections – Participant Form

#### My Interprofessional Outcome Measures

Reflections	Actions
<ul style="list-style-type: none"> <li>• Are there tools you would like to consider incorporating into practice to guide patient care?</li> <li>• Are there tools you would recommend consistently using across sectors and/or within teams?</li> </ul>	<ul style="list-style-type: none"> <li>• What 'next steps' should take place to support use of these tools between and/or within teams at the personal, team and cross-sectoral level?</li> </ul>
<b>Functional Independence</b>	
<b>Motor/Mobility</b>	
<b>Cognition/Perception</b>	
<b>Communication</b>	
<b>Emotion</b>	
<b>Dysphagia &amp; Nutrition</b>	
<b>Other</b>	

## Action Plan

Personal	Team	Cross-Sectoral
<b>Functional Independence</b>		
<b>Motor/Mobility</b>		
<b>Cognition/Perception</b>		
<b>Communication</b>		
<b>Emotion</b>		
<b>Dysphagia &amp; Nutrition</b>		
<b>Other</b>		

## Appendix “E”

### Actions and Reflections - Next Steps: Leeds & Grenville Outcome Measures

### Leeds & Grenville Interprofessional Outcome Measures Workshop Reflections and Action Planning – May 17, 2012

<i><b>Domain</b></i>	<i><b>REFLECTION</b></i>	<i><b>ACTION</b></i>
<b>Functional Independence</b>	<p>FIM – currently in use - designated rehab beds            BGH Alpha FIM – implementation – history:</p> <ul style="list-style-type: none"> <li>○ Acute therapists at BGH were trained a few years ago</li> <li>○ Require recertification as &gt;2 years and new staff</li> <li>○ Staff then originally questioned why they were trained – readiness was an issue</li> <li>○ Difficulties were noted relative to identifying Champions without full IPC acute team at BGH – PT, OT, SLP, RN at the time</li> <li>○ Also patient triage/transition more challenging as two separate organizations (BGH and St. Vincent)</li> </ul> <ul style="list-style-type: none"> <li>● AlphaFIM is a standardized, objective measure, providing a common language of patients’ functional status in acute setting</li> <li>● Alpha FIM directs patient centred care – interprofessional, whole person, not discipline specific</li> </ul>	<ul style="list-style-type: none"> <li>● Implement AlphaFIM in acute care at BGH</li> <li>● Incorporate real patient / chart review into AlphahFIM training               <ul style="list-style-type: none"> <li>○ Hands on</li> <li>○ Interprofessional team</li> </ul> </li> <li>● Incorporate Alpha FIM score into rehab referral form for triage to rehab - D/C disposition</li> <li>● Increase cross sectoral communication (community – hospital)               <ul style="list-style-type: none"> <li>○ e.g, InterRAI on readmissions</li> </ul> </li> <li>● Communicate FIM scores to community therapists</li> <li>● FIM – IPC team would benefit from Recreation Therapist input at that point in continuum</li> </ul>
<b>Mobility</b>	<p><b><u>Tools you’d like to consider</u></b></p> <ol style="list-style-type: none"> <li>1. Berg – understand it better (CM)</li> <li>2. CMSA – PSFDH description page – share with Case managers (CM)</li> <li>3. CAHAI (Community OT)</li> </ol> <ul style="list-style-type: none"> <li>● CCAC CM to include OM scores in her assessment to help community therapists know</li> <li>● Actually watch Berg assessment being administered (or others like perceptual)</li> <li>● Cheat Sheet to interpret key OM’s</li> <li>● Interpretation of scores, eg, Rec therapist electronic assessment to pull in the Berg balance score</li> <li>● On line charting to include all standardized assessment scores in one place</li> </ul>	<ol style="list-style-type: none"> <li>1. Develop a Cheat Sheet “red flags” and interpretation – MoCA Trials A&amp;B, Clock, Berg, Depression</li> <li>2. Electronic charting to include a standardized assessment “repository” and creates red flags in your own assessment – including a red flag to nursing for Berg balance in relation to falls protocol!</li> <li>3. Find out where the <u>breakdown</u> occurs in terms of passing on therapy information in both directions (to community and back to hospital) - *Find out if there is a breakdown in passing info from hospital CM to team assistant to community</li> <li>4. Read guideline re: CAHAI (Community OT)</li> </ol>

	<ul style="list-style-type: none"> <li>• CCAC CM's to see/use the CMSA scoring guide from PSFDH to help interpret</li> <li>• Community therapists not getting the therapy assessments and D/C summaries</li> <li>• Whenever reporting a score explain what it <u>means</u></li> <li>• Red flag from Berg score to trigger falls protocol</li> </ul>	<p>5 a). Whenever reporting a score on an OM <u>explain</u> what it means</p> <p>5 b). Use Shared Work Day – set up WATCHING OT and PT assessments</p> <p>6 a). Consider adding some <u>condition specific tests</u> for stroke to the <u>nursing electronic assessment</u> – e.g., sitting balance, MoCA (5 min)</p> <p>6 b). <u>Use Berg score to inform falls protocol</u> including taking <u>off</u> protocol</p> <p>Integrate BERG, OSOT and MoCA fluidly into TR Intact assessment from OT and PT intake assessments.</p>
<p><b>Cognition</b></p>	<ul style="list-style-type: none"> <li>• MoCA in community – admission</li> <li>• Blaylock is being used on D/C       <ul style="list-style-type: none"> <li>◦ Could trigger referral to OT – making sure electronically</li> </ul> </li> <li>• MMSE and MoCA may be too long – implementing 5 min protocol on admissions       <ul style="list-style-type: none"> <li>◦ Cued by Dx or shift OT</li> <li>◦ Stroke pathway</li> <li>◦ Discharge planning</li> </ul> </li> <li>• Medical directives for stroke for cognition – based on Blaylock and/or 5 min protocol</li> <li>• Automatic referrals to therapies for cognition/function</li> <li>• If CCAC CM knows that they were completed then to include it in referral</li> <li>• RAI-CA final section</li> <li>• In e-chart – one tab for standardized axs</li> <li>• Education on the consistent process for where scores are recorded</li> <li>• Cheat Sheets for scores</li> <li>• Blaylock – communication of score</li> <li>• Transfer between sites</li> <li>• Hospital - community</li> </ul>	<ol style="list-style-type: none"> <li>1. Blaylock – ability to trigger a 5 min screen and/or referral to therapy</li> <li>2. Emerg Protocols around automatic referrals to OT/PT – stroke pathway</li> <li>3. Communication of scores – Blaylock – transition between sites - to/from CCAC       <ul style="list-style-type: none"> <li>◦ Outcome measures to/from hospital – community</li> <li>◦ Where on the chart is this?</li> </ul> </li> <li>4. Cheat Sheets – for cross disciplines understanding of scores</li> <li>5. Community – Stroke Network       <ul style="list-style-type: none"> <li>◦ Formal process to use MoCA on admit to community - D/C</li> </ul> </li> </ol>
<p><b>Communication</b></p>	<p><b>Tools:</b></p> <ul style="list-style-type: none"> <li>• Implement LAST       <ul style="list-style-type: none"> <li>◦ To bring in SLP in sooner (rehab) and also in acute</li> <li>◦ Something to validate use of SLP resources</li> <li>◦ To validate what observing intuitively</li> </ul> </li> <li>• Across – hard to see use of LAST in community</li> <li>• Rehab</li> </ul>	<p>LAST</p> <ol style="list-style-type: none"> <li>1. Increase awareness within facility       <ul style="list-style-type: none"> <li>• Engage SLP for education</li> <li>• Manager buy-in</li> <li>• Increase awareness of availability and to sustain use – track and report outcomes accuracy of predictability/year</li> </ul> </li> <li>2. Include in Orientation of Staff</li> <li>3. Engage at University level       <ul style="list-style-type: none"> <li>• Interprofessional – who is - ?SLP, PT,</li> </ul> </li> </ol>

	<ul style="list-style-type: none"> <li>○ Include other staff – target groups and implement</li> <li>○ Sit down with SLP on site</li> <li>○ Other professionals seeking strategies on how to interact communicatively</li> <li>○ Manager buy-in</li> <li>○ Increase awareness – of availability; perhaps 1:1 review/trial</li> <li>● For sustained use       <ul style="list-style-type: none"> <li>○ Perhaps include orientation with staff</li> <li>○ Regular reminders of availability</li> <li>○ Perhaps track use and report to team – use and outcomes – helps keep aware</li> </ul> </li> <li>● GAP       <ul style="list-style-type: none"> <li>○ General understanding SLP terms</li> </ul> </li> </ul> <p><u>1. Tools</u></p> <ul style="list-style-type: none"> <li>● Challenge to know what a facility has</li> <li>● Helpful if all same</li> <li>● *LAST – beneficial to nursing as well; helps with clients beyond the obvious</li> </ul> <p><u>2. Cross Sectors – LAST</u></p> <p><u>3. More interprofessional awareness</u></p> <ul style="list-style-type: none"> <li>● At universities – so targeting new graduates – who are we and how to know when to call us in</li> <li>● Need buy-in – all levels</li> </ul>	<p>OT and what can tell me I need them</p> <p>4. CONT to target – all sites – same tool helps with awareness and consistency</p> <p>Identified Gaps:</p> <ul style="list-style-type: none"> <li>● SLP/communication strategies for working/interacting with clients with S&amp;L deficits</li> <li>● Lack of knowledge what do/can do?</li> <li>● Tools to communicate, eg, low tech boards</li> </ul>
<p><b>Emotion</b></p>	<p><b><u>Tools to consider:</u></b></p> <p>1. BASDEC</p> <ul style="list-style-type: none"> <li>○ Easy</li> <li>○ Quick</li> <li>○ Communication – may show it</li> <li>○ Realistic This might also be an action</li> <li>○ Functional for pts</li> <li>○ Seems more valid</li> </ul> <p>2. HADS (referrals) –Worried about bias and people might be prone to fill out the screening tool based on others’ expectations “I wonder what they want me to write” – fear of outcome, uncertainty with Likert scale</p> <p><u>Tools to use across sectors:</u></p> <ul style="list-style-type: none"> <li>● Better fit community b/c resources – professional</li> <li>● ER – not realistic</li> </ul>	<ul style="list-style-type: none"> <li>● Educate early – Universities – include this important screening tool</li> <li>● Educate physicians, team and family</li> <li>● Part of orientation</li> <li>● Photocopy (check if able to do so)</li> <li>● Check list – clinical pathway       <ul style="list-style-type: none"> <li>○ Linking acute and rehab and community</li> </ul> </li> <li>● Monitor progress – system for this (eg, 1 year later)</li> <li>● Communicate same language – number (I think this means score)</li> <li>● Having someone implement it – consensus / agreement</li> <li>● Being able to access the tool (improve access to the tool)</li> <li>● Consistent person</li> <li>● Simple policy – if score – refer to -- ?</li> </ul>

	<ul style="list-style-type: none"> <li>• Acute – check screen – but then there exists a lack of resources to follow-up the screen</li> <li>• Referrals to outreach team</li> <li>• Rehab – check screen – no Dr, no resources Once again this is similar to acute, Can do the screen but lack of resources for follow-up</li> </ul> <p><b>Barriers:</b></p> <ul style="list-style-type: none"> <li>• Lack of resources – SW Acute       <ul style="list-style-type: none"> <li>○ Check community (action)</li> <li>○ Check primary care (action)</li> <li>○</li> </ul> </li> </ul> <p>Communication</p> <ul style="list-style-type: none"> <li>• Availability</li> <li>• Cost</li> <li>• Acute – no part of admission process</li> <li>• Who / post screening – referral? Who would do it – Dr and then who?       <ul style="list-style-type: none"> <li>○ Now – psychiatry – severe cases</li> <li>○ Less wait time with mental health</li> </ul> </li> <li>• Follow up – what happens after this</li> <li>• Cultural discrepancies in the tool</li> </ul> <p><b>Across Sectors:</b></p> <ul style="list-style-type: none"> <li>• Lack of Electronic communication link</li> <li>• Consistent place to look for it</li> <li>• Consistent person in community – ie, CCAC case managers)</li> <li>• Therapists receive part of the chart – eg, faxed to them</li> <li>• Can always request it (action)</li> </ul>	
<p><b>Dysphagia / Nutrition</b></p>	<ol style="list-style-type: none"> <li>1. MNA       <ul style="list-style-type: none"> <li>• Look at effect on resources and ?which population to target, ?when to administer?, ie, &gt;7 days to prompt community RD referral</li> <li>• Could help guide need for RD consult – Emerg or admission Ax</li> <li>• ?look at resources available</li> </ul> </li> <li>2. STAND       <ul style="list-style-type: none"> <li>• good tools to justify uncertainty and increase safety, increase referrals</li> <li>• Emerg – implement at the 1<sup>st</sup> steps and outcome for clients and identified sooner</li> </ul> </li> <li>3. BASDEC       <ul style="list-style-type: none"> <li>• ?Community</li> </ul> </li> </ol>	<ul style="list-style-type: none"> <li>• Screening tool for community (swallowing)</li> <li>• MNA       <ul style="list-style-type: none"> <li>○ more training with emphasis on stroke</li> <li>○ would be used more appropriately</li> <li>○ make STAND part of the care plan</li> </ul> </li> <li>• Continued education with STAND       <ul style="list-style-type: none"> <li>○ Nursing</li> <li>○ ?emerg</li> <li>○ GSS</li> <li>○ Orientation</li> <li>○ Physicians and other professionals</li> <li>○ Medical directives on use of STAND tool</li> </ul> </li> </ul>

	<ul style="list-style-type: none"><li>• Use of Shared Work Day</li><li>• Continuity related to education</li><li>• ?incorporating MNA / STAND into nursing orientation</li></ul>	
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## Appendix “F”

### Summary of Outcome Measures Used to Date Across the Southeast Ontario Region June, 2012

Outcome Measure	HPE	KFL&A	L&G	Lanark
<b>Functional Independence</b>				
AlphaFIM	In Use	In Use (K) In Progress (L&A)	In Progress	In Progress
FIM	In Use	In Use	In Use	In Use
InterRAI	In Use	In Use	In Use	In Use
<b>Motor/Mobility</b>				
BERG	In Use	In Use	In Use	In Use
TUG	In Use	In Use	In Use	In Use
CAHAI	---	In Progress	In Progress	In Progress
<b>Pain</b>				
VAS (Visual Analogue Scale)	In Use	In Use	In Use	In Use
<b>Cognitive/Perceptual</b>				
MoCA	In Use	In Use	In Progress In Use at SPC	In Progress
Line Bisection	--	In Use	--	--
MVPT	In Use	In Use	In Use	In Use
OSOT	In Use	In Use	In Use	--
MMSE	In Use	In Use	In Use	In Use
COPM	In Use	In Use	--	--
<b>Communication</b>				
BDAE	In Use	In Use	In Use	In Use
WAB	In Use	In Use	--	In Use
FAST	In Progress	In Progress	--	--
LAST	--	--	In Progress	In Progress
<b>Emotion</b>				
HADS	---	In Use	---	---
<b>Dysphagia</b>				
STAND	In Use	In Use (K)	In Progress	In Progress
TORBSST	---	In Use (L&A)	---	---
<b>Tools In Use (Not on Canadian Recommended List)</b>				
BASDEC (emotion)	In Use	In Use	In Progress	In Use
COVS (mobility)	---	In Use	In Use	--

Note: Regional Workplan Objectives also include supporting Regional implementation and use of:

- BASDEC for depression screening
- MoCA for cognitive screening
- AlphaFIM for rehab triage
- STAND for dysphagia screening (and ongoing support for TORBSST where already in use)