



Interprofessional Outcome Measures Across the Continuum of Stroke Care in Lanark

Summary Report from September 29, 2011 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) and in Perth for health care professionals in Lanark County on September 29, 2011. One final Outcome Measure Workshop is now being planned for Leeds, Grenville (Brockville) area for early 2012.

The design of both the KFL&A and Lanark Outcome Measures Workshop were 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 Lanark 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 September 29, 2011, in Perth, 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 two case studies 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 studies, 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); 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, as well as samples of domain-specific best practice outcome measures for participants to view. The tables were identified as follows:

Carousel Tables for Focus Group Discussions

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

STAND Screen, TORBSST Screen

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 41 people attended the Lanark Interprofessional Outcome Measures Workshop. Physiotherapists, Occupational Therapists, Speech-Language Pathologists, Nurses, Social Workers, Physicians, Managers, and Administrators, all working in various sectors of the care continuum were represented. Physiotherapy represented 15% of the attendees, Occupational Therapy 10%, Nursing (RN and RPN) 22%, and Speech Language Pathology 10%. Social Work, Registered

Dietitian and CCAC Case Managers each represented 2% respectively of attendees. Administrators represented 5% of those in attendance. There was also one Psychiatrist participating in the Workshop.

Sector representation of the workshop participants reflected 43% from an Inpatient Rehab setting, 39% from the Community, 15% from Acute Care and 3% from Community CCAC. 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. The group was a well experienced clinical group. Of those completing the survey, 22% reported greater than 20 years' experience, 50% with 11-19 years experience, 22% with 2-5 years' experience and 6% having less than one year's experience.

Feedback from the group reflected that the objectives of the day were clearly defined and met. Overall, 88% of participants indicated that the workshop met their expectations 'to a great extent' and 12% 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:

"It was wonderful connecting with therapists from the community, getting their feedback in working towards a better continuum of care for our patients. It was also a wonderful experience learning about the different standardized tools to improve methods of result reporting across disciplines."

"It enabled the various disciplines to see how each service builds on the others. Communication is so important."

"I came away with helpful ideas on how to use outcome measurement and screening tools in everyday practice. Great to network with colleagues who work in the community."

"The format demonstrated a lot of planning went into workshop. The workshop provided a broad and necessary general knowledge of outcome measures that can be used in stroke care. Presenters and facilitators were well-prepared and upbeat. I very much appreciated the handouts, location and lunch."

"I really enjoyed the chance to discuss challenges that I face in the community with professionals from other disciplines and health care settings."

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 practice and into community SLP dysphagia consults; and implementation of the STAND Dysphagia screening.

A similar final Regional Workshop is now being planned for Leeds, Grenville (Brockville) area in early 2012 in support of best practice stroke care across the continuum, particularly relating to facilitating uptake of the best practice recommendations in Outcome Measures use. Appendix "F" attached hereto is a Regional Summary of information gathered to date relating to Outcome Measures used in SEO. Upcoming workshops will feed into this document for a comprehensive Regional summary around best practice implementation in Outcome Measure use.

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
- 2010 Canadian Best Practice Recommendations for Stroke Care
www.strokebestpractices.ca

For Additional Information, please contact:

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Appendix "A" Outcome Measures Pre-Workshop Survey Results

Lanark County Outcome Measures Workshop								
OUTCOME MEASURES USED IN LANARK COUNTY								
Outcome Measurement Tool	ORGANIZATION					Best Practice OM	Ease of Use 1=easy 5=diff	
	Acute Care	Inpatient Rehab	Day Rehab	Complex Continuing Care	Community			
MOTOR / MOBILITY								
Chedoke-McMaster Stroke Assessment U/E	X	X	X	0	0	√	3	
Chedoke-McMaster Stroke Assessment L/E	X	X	X	0	0	√	3	
Modified Ashworth Scale	X	X	X	X	0	√	2.5	
Chedoke Arm and Hand Activity Inventory (CAHAI)	0	0	0	0	0	√		
Nine Hole Peg Test	0	0	0	0	0	√		
Timed "Up and Go" Test	X	X	X	0	X	√	1	
6-Minute Walk Test	0	X	0	0	0	√	1	
Berg Balance Scale	X	X	X	X	X	√	1.66	
Community Balance and Mobility Score	0	X	X	0	0	x	3.66	
Tinetti's Balance & Gait Test	0	X	X	0	0	x	2	
COGNITION / PERCEPTION								

Montreal Cognitive Assessment (MoCA)	X	X	X	0	X	√	1.86
Five Minute Protocol from MoCA	0	0	0	0	0	√	2.5
MMSE+	X	X	X	X	X	√	1.44
Behavioural Inattention Test	0	0	0	0	X	√	
Line Bisection	0	0	0	0	0	√	1.66
Sunnybrook Neglect Assessment Protocol (SNAP)	0	0	0	0	X	√	
Rivermead Perceptual Assessment Battery	0	0	0	0	X	√	3.5
Ontario Society OT Perceptual Evaluation - OSOT	0	0	0	0	X	√	2.75
Motor-Free Visual Perception Test (MVPT)	0	X	X	0	X	√	2.25
Box and Block Test	0	0	0	0	0	√	4
Ross Information Processing Assessment	X	X	0	0	0	x	
Cognitive Linguistic Quick Test	X	X	0	0	0	x	
COMMUNICATION							
Boston Diagnostic Aphasia Assessment	0	0	0	0	X	√	2.33
Western Aphasia Battery	X	X	X	0	X	√	2
Frenchay Aphasia Screening Test	0	0	0	0	0	√	
Apraxia Battery for Adults	X	X	0	0	0	x	
Reading Comprehension Battery for Aphasia	X	X	0	0	0	x	
EMOTION							

Brief Assessment Schedule Depression Cards	X	X	X	X	X	Review	1
Hospital Anxiety and Depression Scale	0	0	0	0	X	√	1.88
Montgomery Asberg Depression Rating Scale	0	0	0	0	X	√	1
The HOPE Scale	0	0	0	0	X	x	
Drug Abuse Screening Test	0	0	0	0	X	x	
FUNCTIONAL INDEPENDENCE / ADL							
Functional Independence Measure (FIM)	0	X	0	0	0	√	2
Reintegration to Normal Living Index	0	0	0	0	X	√	
Assessment of Life Habits (LIFE-H) Leisure Section	0	0	0	0	X	√	
Stroke Impact Scale	0	0	0	0	X	√	
AlphaFIM	0	0	0	0	0	x	
RAI	0	0	0	0	X	x	
Caregiver Strain Index	0	0	0	0	X	x	
Respite Assessment Tool	0	0	0	0	X	x	
DYSPHAGIA							
Dysphagia Screening - STAND	0	0	0	0	0	√	2
Dysphagia Screening - TORBSST	0	0	0	0	0	√	3.33
GENERAL MEASURES OF STROKE SEVERITY							
NIH Stroke Scale	0	0	0	0	0	√	
Canadian Neurological Scale (CNS)	0	0	0	0	0	√	
Glasgow Coma Scale	0	0	0	0	0	x	

Appendix “B”

Interprofessional Outcome Measures Across the Continuum of Stroke Care in Lanark

Thursday, September 29th, 2011
Code’s Mill on the Park Inn and Spa, Perth

Time	Topic	Presenters
1130 -1220	Lunch & Registration <ul style="list-style-type: none"> ○ Network with your discipline specific colleagues 	
1220 -1235	Introduction	Sue Saulnier
1235 -1250	National Best Practice Outcome Measures	Dr. Kate Stolee
1250 -1300	A Focus on Outcome Measures used in Lanark County	Caryn Langstaff
1300 -1400	Tools of Interest <ul style="list-style-type: none"> Functional Independence Measures: <ul style="list-style-type: none"> ○ FIM & Alpha FIM (10 min) ○ InterRAI (5 min) ○ Stroke Impact Scale (5 min) Dysphagia & Nutrition: <ul style="list-style-type: none"> ○ Screening Tool for Acute Neurological Dysphagia (STAND) (5 min) ○ Mini Nutritional Assessment (MNA) (5 min) Motor Function: <ul style="list-style-type: none"> ○ Chedoke Arm and Hand Activity Inventory (CAHAI) (5 min) ○ Berg Balance Scale (5 min) Communication: <ul style="list-style-type: none"> ○ Language Screening Test (LAST) (5 min) Cognition/Perception <ul style="list-style-type: none"> ○ Montreal Cognitive Assessment (MoCA) (5 min) 	Cally Martin Shelly Huffman & Robin Riddell Cheryl Strautman Remika Gautam & Caryn Langstaff Shelley Graham Cally Martin Maura Donohue Josee Lemaire Cheryl Strautman & Clare Stevenson
	Emotion: <ul style="list-style-type: none"> ○ Brief Assessment Schedule Depression Cards (BASDEC) (5 min) 	Sarah Thompson
1400 -1435	Outcome Measures Used Across the Continuum of Care in Lanark County – Case Study	Josee Lemaire, Clare Stevenson, Cheryl Strautman, Remika Gautam & Robin Riddell

Time	Topic
1435 -1455	Break (20 min)
1455 - 1555	<p>Focus Groups – Carousel Table Discussions Cross-sectoral, interprofessional groups Rotation through 2 or 3 out of 6 domain-specific tables listed below</p> <p>Action Questions:</p> <ul style="list-style-type: none"> ➤ 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? ➤ 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? <p>Functional Independence</p> <ul style="list-style-type: none"> ➤ Functional Independence Measure – (FIM & Alpha-FIM) ➤ InterRAI ➤ Stroke Impact Scale <p>Motor / Mobility</p> <ul style="list-style-type: none"> ➤ BERG Balance Scale ➤ Timed “Up and Go” Test ➤ Chedoke Arm and Hand Activity Inventory (CAHAI) ➤ Chedoke-McMaster U-E / L-E Stroke Assessment (CMSA) ➤ Modified Ashworth Scale <p>Cognition / Perception</p> <ul style="list-style-type: none"> ➤ Montreal Cognitive Assessment (MoCA) ➤ Mini-mental State Exam (MMSE) ➤ Motor-free Visual Perception Test (MVPT) <p>Communication</p> <ul style="list-style-type: none"> ➤ Boston Dysphagia Aphasia Examination (BDAE) ➤ Western Aphasia Battery Test (WAB) ➤ Language Screening Test (LAST) <p>Emotion</p> <ul style="list-style-type: none"> ➤ Brief Assessment Schedule Depression Cards (BASDEC) ➤ Hospital Anxiety and Depression Scale (HADS) <p>Dysphagia & Nutrition</p> <ul style="list-style-type: none"> ➤ Screening Tool for Acute Neurological Dysphagia (STAND) ➤ Toronto Bedside Swallowing Screening Test (TOR-BSST) ➤ Mini Nutrition Assessment (MNA)

1555 -1630	<p>Action Planning</p> <p>Report back and clarification</p> <ul style="list-style-type: none">➤ 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?➤ 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?
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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
MOTOR			
Best Practice Recommended			
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
Others In Use			
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		
COGNITION / PERCEPTION			
Best Practice Recommended			
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;	

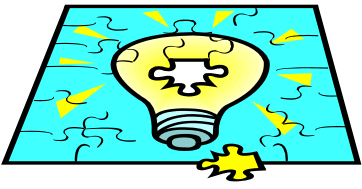
Mini Mental Screening Exam (MMSE)	Cognitive Screening	Fast, easy, not as stroke specific; not sensitive to mild or severe impairments; records cognitive changes over time	Total score 30; 23 or less indicative of presence of cognitive impairment; levels of impairment 24-30=none; 18-24=mild; 0-17=severe
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

Others In Use			
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			
COMMUNICATION			
Best Practice Recommended			
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

Others In Use			
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			
EMOTION			
Best Practice Recommended			
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.
Others In Use			
Brief Assessment Schedule Depression Cards (BASDEC)	Depression; good for patients with Aphasia	Easy to score; accurate; quick	Pass/fail screen.
FUNCTIONAL INDEPENDENCE / ADL			
Best Practice Recommended			
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
Others In Use			
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
DYSPHAGIA			
Best Practice Recommended			
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
Others In Use			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
MEASURES OF STROKE SEVERITY			
Best Practice Recommended			
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

Others In Use			
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	
COMMUNITY REINTEGRATION			
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

<p align="center">Reflections</p> <ul style="list-style-type: none"> • 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? 	<p align="center">Actions</p> <ul style="list-style-type: none"> • 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?
Functional Independence	
Motor/Mobility	
Cognition/Perception	
Communication	
Emotion	
Dysphagia & Nutrition	
Other	

Action Plan

Personal	Team	Cross-Sectoral
Functional Independence		
Motor/Mobility		
Cognition/Perception		
Communication		
Emotion		
Dysphagia		
Other		

Appendix “E”
Actions and Reflections - Next Steps: Lanark Outcome Measures
Lanark Interprofessional Outcome Measures Workshop
Reflections and Action Planning – September 29, 2011

	REFLECTION	ACTION
Functional Independence	<ul style="list-style-type: none"> ➤ Stroke Impact Scale (SIS) – desire to learn more about; client-centred, interprofessional tool; good start point for dialogue with client, can leave with client to complete (time efficient); easy to implement; consider issues of self-reflection tool. ➤ FIM – mandated tool in rehab, Perth no mandated beds; FIM on front of chart and designated person completes assigned parts as they see client ➤ AlphaFIM useful information for team in determining appropriateness for rehab ➤ Specific training and testing required to use all three tools ➤ InterRAI difficult to read on the computer; often received after client initial visit; CM narrative notes useful 	<p>Consistent Tools</p> <ul style="list-style-type: none"> ➤ Stroke Impact Scale (SIS) (community) ➤ AlphaFIM (acute) ➤ FIM (rehab) ➤ InterRAI (community) <p>Personal Actions</p> <ul style="list-style-type: none"> ➤ Maintain awareness of various measures used across the continuum and how they relate to my setting ➤ Consider AlphaFIM training <p>Team Actions</p> <ul style="list-style-type: none"> ➤ Consider use of AlphaFIM ➤ Interpret and use AlphaFIM scores in discharge disposition planning <p>Action Across Sectors</p> <ul style="list-style-type: none"> ➤ Consider SIS as an interprofessional tool for monitoring community reintegration ➤ Improve flow and timing of information shared across sectors
Mobility and Arm Function	<ul style="list-style-type: none"> ➤ Acute care nurses interested in interpretation of BERG ➤ CAHAI looks useful and relevant to home 	<p>Consistent Tools</p> <ul style="list-style-type: none"> ➤ BERG (balance and mobility) ➤ TUG

	REFLECTION	ACTION
	<p>setting, no training required, functional and meaningful</p> <ul style="list-style-type: none"> ➤ Interprofessional understanding – promote dialogue regarding meaning of various measures ➤ In the community, BERG helps direct the exercise program ➤ Good to understand foundational issues related to mobility (self-image, self-esteem, role in community) ➤ Helpful to nursing to understand level of risk re safety and balance and capabilities; can understanding of these measures be incorporated into nursing assessment? Educate via Podcast? ➤ Predicting safety issues and care needs (discussing with nurses and Case Manager) ➤ Tinetti used in LTC setting; balance and gait are components, can progress to higher levels ➤ Community perspectives – do see exercise programs from rehab setting and use info in red binders, but less if a direct discharge from acute; ➤ Need to document if there is no rehab assessment on discharge from acute (e.g. d/c on weekend before PT or OT assessed); currently little information received from acute; exercise programs are lost by the time patient gets home and/or patients don't know who their therapist was if acute discharge ➤ Referral to CCAC and need to build understanding of priority if patient has not been assessed on direct discharge from acute. 	<ul style="list-style-type: none"> ➤ CAHAI (arm function) Note: Tinetti used in some LTC homes <p>Personal Actions</p> <ul style="list-style-type: none"> ➤ Trial CAHAI, as no formal training required (community and hospital OT and PT therapists) ➤ Improve sharing results with team members, including reporting on outcome measures results in rounds, progress notes, etc. ➤ Consider use of BERG / TUG as appropriate <p>Team Actions</p> <ul style="list-style-type: none"> ➤ Establish regular meetings related to information flow in the absence of acute rounds; ➤ Discuss information sharing with CCAC hospital Case Managers; ➤ Develop mechanism (one page cheat sheet re screening / assessment results interpretation/red flags) for CCAC CM to prioritize for timely community assessment, especially where no rehab assessment on discharge ➤ Improve sharing results with team members, including reporting on outcome measures results in rounds, progress notes, etc. ➤ Simple, fast tools in community, such as BERG, TUG ➤ Increase interprofessional collaboration by connecting nursing and therapists especially in acute care ➤ Build Case Manager stroke expertise - understanding of IP roles and recovery post-stroke, through interprofessional education and collaboration; understanding special needs of stroke and managing stroke in the community (e.g., SIS may be valuable) – utilize Tips and Tools, also focus CM training on needs of patients with mild strokes as move quickly on d/c ➤ Include Tinetti information in future outcome measures

	REFLECTION	ACTION
		<p>workshops as it is used in LTC</p> <p>Action Across Sectors</p> <ul style="list-style-type: none"> ➤ Acute to community opportunities for collaboration across sectors discussing solutions regarding transfer of information, ➤ Refining Hospital to Community communication linkages via: <ul style="list-style-type: none"> ➤ Knowing who Case Manager is in order to ask for copy of discharge summary ➤ Community therapists having timely access to hospital discharge summaries (even where discharge summaries are completed, they are not getting to community therapists) ➤ Use Discharge Link Meeting to report outcome measures, include all involved disciplines ➤ Community use of hospital Discharge Report for treatment continuity and avoid repeating assessment (e.g., Berg may not need to be repeated on admit to community if just done on discharge from rehab)
<p>Cognition / Perception</p>	<ul style="list-style-type: none"> ➤ Mini-Cog tool was presented at a recent geriatric conference – group will research further; currently being used in KGH ED by RNs, with some reflection about communication gaps ➤ Group expressed interest in MoCA and queried whether there is any resource for clients that addresses expressive language issues ➤ What tools are available for clients with auditory issues ➤ Executive function screen for MoCA stronger than MMSE, and more sensitive to stroke 	<p>Consistent Tools</p> <ul style="list-style-type: none"> ➤ MoCA ➤ Clock Draw ➤ Trails ➤ MMSE ➤ Mini-Cog <p>Personal Actions</p> <ul style="list-style-type: none"> ➤ Investigate adjusting screening tools for clients with sensory (auditory, expressive) issues <p>Team Actions</p> <ul style="list-style-type: none"> ➤ Incorporate a cognitive screen into all stroke admissions ➤ Consider performing Trails on all stroke admissions, with clock

	REFLECTION	ACTION
		<p>draw for cognitive screen and in assessing ability to drive;</p> <ul style="list-style-type: none"> ➤ Provide clock draw and Trails A & B to the therapy teams for screening support resources ➤ PSFDH OT team to share their training video for MMSE/MoCA via website ➤ Teaching in the administration of MoCA <p>Action Across Sectors</p> <ul style="list-style-type: none"> ➤ Shared Work Day between hospital and community OTs ➤ Communication of cognitive screening scores or cognitive-perceptual issues across the continuum
<p>Communication</p>	<ul style="list-style-type: none"> ➤ The BDAE and WAB are similar comprehensive language assessments – use based on SLP preferences – BDAE often in rehab, WAB often for more severe patients (objects available) ➤ Assessment critical to knowledge of language status, particularly for hidden deficits, such as receptive language ➤ Assists other disciplines in understanding patient and how to communicate, and clarifies behaviour (confusion vs comprehension) ➤ Interest by the group in the LAST particularly in detecting receptive oral language issues; would be of value for non-SLPs to identify potential issues ➤ LAST would provide 'concrete' (quantitative) evidence supporting (qualitative) observations in recommending service referrals ➤ Question: What about client motivation to change post-incident – is there a assessment tool for this? 	<p>Consistent Tools</p> <ul style="list-style-type: none"> ➤ WAB ➤ BDAE ➤ LAST <p>Personal Actions</p> <ul style="list-style-type: none"> ➤ Use communication strategies and SLP tools to improve communication access based on patients functional language status ➤ Consider importance of charting client motivation <p>Team Actions</p> <ul style="list-style-type: none"> ➤ Consider a global language screen at acute level for stroke patients e.g., LAST ➤ Need to update contact lists ➤ Increase knowledge across disciplines ➤ Improve communication between OT/PT/SLP/RN and Case Manager; ensure a common understanding, language and content identified, shared and used in reports/referrals ➤ Improve team communication by SLP pairing patient's scores to their functional status in reports/referrals ➤ Increase face-to-face contact

	REFLECTION	ACTION
		<ul style="list-style-type: none"> ➤ Consider training non-SLPs in the community on a language screening tool where suspect language decline or deficit ➤ Ensure all disciplines aware of what tools have been identified and what tools are available, e.g., via stroke web portal. <p>Action Across Sectors</p> <ul style="list-style-type: none"> ➤ In reporting (verbal and written) SLP to link OM scores with level of severity - functional status ➤ Sharing of assessment results (e.g., WAB) across sectors to avoid retest reliability; sharing of information in a timely manner ➤ Completion of a language screen in transition planning (e.g., CCAC manager in transition planning from acute - D/C planner)
<p>Emotion</p>	<ul style="list-style-type: none"> ➤ The group noted value in BASDEC and showed an interest in its use ➤ BASDEC could help include SW more often (and more appropriately and early enough in process) ➤ Benefits at all levels (disciplines, teams and across sectors) ➤ Can be administered by various disciplines, with very limited training ➤ Can be used for both survivor and spouse/caregiver ➤ Respect limitations of depression <u>screening</u> and need for referral where failed screening 	<p>Consistent Tools</p> <ul style="list-style-type: none"> ➤ BASDEC <p>Personal Actions</p> <ul style="list-style-type: none"> ➤ Consider emotional state of patient and changes over time during recovery; ongoing watch for need to refer ➤ Explore feasibility of incorporating new outcome measures (e.g., BASDEC) into practice of therapists <p>Team Actions</p> <ul style="list-style-type: none"> ➤ Education of interprofessional teams relating to BASDEC ➤ Screening for depression using BASDEC as part of the protocol in community setting <p>Action Across Sectors</p> <ul style="list-style-type: none"> ➤ Follow-up with Consensus Panel to reevaluate BASDEC for best practice OM consideration ➤ Consider BASDEC for use as consistent depression screen by various disciplines within teams and across sectors

	REFLECTION	ACTION
		<ul style="list-style-type: none"> ➤ Opportunity for interprofessional collaboration ➤ Support referral process to SW/Psychologist etc using objective OM especially only one discipline observing the patient ➤ Investigate options for behaviour assessment for depression where cognitive or language deficits exist ➤ Consider linking with Lanark Community Mental Health
<p>Dysphagia and Nutrition / Hydration</p>	<ul style="list-style-type: none"> ➤ Interest in STAND in acute and ED hospital setting and Rehab/CCC ➤ Also value in community and LTC ➤ No physician order required for the completion of a screening, and can establish a standing order for SLP Assessment if required (failed screen) ➤ Ruled out TORBSST due to training costs and sustainability, especially relative to resources and staff training in the community ➤ Standardized screen improves physician awareness as to patients' swallowing status and needs ➤ A Dysphagia Screening tool in the community provides an objective measure to assist Case Managers around required SLP referrals. ➤ MNA would improve interprofessional collaboration – needed in both hospital and community ➤ Also consider low mobility patients discharged home (weight gain, not just loss) 	<p>Consistent Tools</p> <ul style="list-style-type: none"> ➤ STAND ➤ MNA <p>Personal Actions</p> <ul style="list-style-type: none"> ➤ Use a dysphagia screening tool such as STAND ➤ Always monitor for swallowing status change and need for re-screening <p>Team Actions</p> <ul style="list-style-type: none"> ➤ Global screening for dysphagia in ED and acute, and Rehab/CCC as needed for stroke patients ➤ IPC Education to increase team and physician awareness, what tools are used, what questions to ask ➤ Incorporate MNA screen as part of SLP Dysphagia Assessment in community -- via SLP home visits (as 90% of visits for SLPs relate to dysphagia), therefore higher likelihood of need for nutrition/hydration evaluation) ➤ Multidisciplinary team meetings at Communicare will share MNA and STAND to train non-RD and non-SLP staff in screening tools ➤ Improve efficiency in use of SLP time <p>Action Across Sectors</p> <ul style="list-style-type: none"> ➤ Dysphagia screening should extend into rehab setting to protect for changes in patients' swallowing status.

	REFLECTION	ACTION
		<ul style="list-style-type: none"> ➤ Dysphagia screening should extend into community setting to protect for changes in patients' swallowing status and in consideration of unrestricted food environment and patient function in the home setting. ➤ Increase communication across hospital-community sectors; utilize information from discharge reports ➤ Pilot MNA in hospital setting and in community setting
<p>General Comments</p>		<ul style="list-style-type: none"> ➤ Share outcome measures score and functional status interpretation AND date of results ➤ Read and understand outcome measures used by other disciplines and utilize what the results mean ➤ Improve Communication within and across teams, e.g., rounds, progress notes, contact team members via voice mail ➤ Develop and maintain therapist contact list for cross-sectoral communication. ➤ Help plan education opportunities with nursing staff regarding allied health outcome measures; interprofessional collaborative education ➤ Ensure admission and discharge outcome measures completed for objective measure of functional change ➤ Receive discharge summaries prior to first visit in community ➤ Ensure at least one outcome measure on file prior to discharge or indication as to why measure not completed ➤ Include therapists' contact information on CCAC referral form to enable community-hospital therapist dialogue ➤ Create an acute care red flag to community OM interpretation 'cheat sheet' for Case Managers to highlight high risk priority issues on discharge: e.g. – where no PT/OT/SLP Assessment: BASDEC score of X = risk for depression MoCA score of X = risk of cognitive limitation; driving BERG score of X = risk of falls, etc.

Appendix “F”

Summary of Outcome Measures Used to Date Across the Southeast Ontario Region March 30, 2011

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