ONTARIO STROKE REPORT CARD, 2011/12

Indicator No.	Care Continuum Category	Indicator[1]	Ontario FY 2011/12 (2010/11)	Variance Across LHINs (Min–Max)	Provincial Benchmark[2]	High Performer[3]	
						Sub-LHIN/Facility	LHIN
1	Public awareness and patient education	Proportion of patients who arrived at ED less than 3.5 hours from stroke symptom onset.	– (42.3%)	–	– (52.0%)	Elgin Sub-LHIN	2, 11
2	Prevention of stroke	Annual age- and sex-adjusted inpatient admission rate for stroke/TIA (per 1,000 population).	1.3 (1.3)	1.1–1.9	1.1 (1.1)	Ottawa Centre Sub-LHIN	6, 9, 11
3	Prevention of stroke	Risk-adjusted stroke/TIA mortality rate at 30 days (per 100 patients).	12.2 (14.3)	10.1–15.9	12.2 (14.3)	Humber River Regional Hospital – Finch	7
4	Prevention of stroke	Proportion of ischemic stroke/TIA patients with atrial fibrillation prescribed or recommended anticoagulant therapy on discharge from acute care.	– (72.1%)	–	– (86.0%)	Queensway-Carleton Hospital	None
5	Prevention of stroke	Proportion of ischemic stroke patients without atrial fibrillation who received carotid imaging prior to hospital discharge.	– (78.7%)	–	– (92.8%)	Markham Stouffville Hospital	5
6	Acute stroke management	Proportion of suspected stroke/TIA patients who received a brain CT/MRI scan within 24 hours of arrival at ED.	– (89.6%)	–	– (97.7%)	Cambridge Memorial Hospital	5, 7
7	Acute stroke management	Proportion of ischemic stroke patients who arrived at ED less than 3.5 hours from symptom onset and received acute thrombolytic therapy (tPA) (excluding those with contraindications).	– (32.4%)	–	– (61.2%)	Trillium Health Centre	None
8	Acute stroke management	Proportion of stroke/TIA patients treated on a stroke unit at any time during their inpatient stay.	– (38.3%)	–	– (87.5%)	North Bay General Hospital	None
9	Acute stroke management	Proportion of stroke (excluding TIA) patients with a documented initial dysphagia screening performed during admission to acute care.	– (64.8%)	–	– (83.7%)	Thunder Bay Regional Health Sciences Centre	14
10	Acute stroke management	Proportion of ALC days to total length of stay in acute care.	27.3% (32.5%)	19.7–39.1%	14.6% (14.0%)	Grey Bruce Health Services – Owen Sound	None
11	Acute stroke management	Proportion of acute stroke (excluding TIA) patients discharged from acute care and admitted to inpatient rehabilitation.	31.5% (30.7%)	24.0–39.1%	42.6% (42.3%)	Barrie and Area Sub-LHIN	14
12	Stroke rehabilitation	Proportion of stroke (excluding TIA) patients discharged from acute care who received a referral for outpatient rehabilitation.	– (5.9%)	–	– (12.1%)	Burlington Sub-LHIN	14, 13
13	Stroke rehabilitation	Median number of days between stroke (excluding TIA) onset and admission to stroke inpatient rehabilitation (RCG-1 and RCG-2).	10.0 (10.0)	7.0–15.0	6.5 (7.0)	Northumberland Hills Hospital	9, 12
14	Stroke rehabilitation	Rehabilitation therapy staff/bed ratio for inpatient stroke rehabilitation.	–	–	–	–	–
15	Stroke rehabilitation	Proportion of ALC days to total length of stay in inpatient rehabilitation (active + ALC) (RCG-1).	5.2% (6.3%)	0.0–10.5%	5.2% (6.3%)	William Osler Health System – Civic	5
16	Stroke rehabilitation	Median FIM efficiency for moderate stroke in inpatient rehabilitation (RCG-1).	0.8 (0.8)	0.5–1.1	1.1 (1.1)	Royal Victoria Regional Health Centre	9, 12
17	Stroke rehabilitation	Mean number of CCAC visits provided to stroke/TIA patients in 2010/11 and 2011/12.	5.7 (6.1)	4.0–10.9	7.9 (6.8)	South East CCAC	10, 12
18	Stroke rehabilitation	Proportion of patients admitted to inpatient rehabilitation with severe stroke (RPG = 1100 or 1110) (RCG-1).	31.6% (31.2%)	14.1–41.4%	48.6% (46.9%)	Brant Community Healthcare System – Brantford	None
19	Reintegration	Proportion of stroke/TIA patients discharged from acute care to LTC/CCC (excluding patients originating from LTC/CCC).	9.1% (9.8%)	4.5–13.1%	3.7% (4.7%)	Urban Guelph Sub-LHIN	None
20	Reintegration	Age- and sex-adjusted readmission rate at 30 days for patients with stroke/TIA for all diagnoses (per 100 patients).	8.0 (8.0)	7.0–9.0	8.0 (8.0)	Mackenzie Health – Mackenzie Richmond Hill Hospital	3, 11

[1] Facility-based analysis (excluding indicators 1, 2, 11, 12 and 19) for patients aged 18–108. Indicators 2, 3, 10, 11 and 13–20 are based on CIHI data. Data from the 2010/11 report card are displayed in brackets. Low rates are desired for indicators 2, 3, 10, 13, 15, 19 and 20.

[2] Provincial benchmarks were calculated using the ABC methodology and facility/sub-LHIN data, except for indicators 3, 15 and 20 where the provincial rate was used; the 2010/11 benchmarks are displayed in brackets. For the benchmarking methodology, see Weissman et al. *Journal of Evaluation in Clinical Practice* 1999; 5(3):269–81.

[3] High-performing acute care facilities include only high-volume institutions (those treating more than 100 strokes per year). High-performing rehabilitation facilities include sites with moderate to high volumes (those admitting more than 38 stroke patients per year). For indicators 1, 4–9 and 12, high performers from the 2010/11 report card are presented.

Hospital Service Accountability Agreement indicators, 2010/11

– Data not available

Local Health Integration Networks (LHINs)

1 Erie St. Clair	4 Hamilton Niagara Haldimand Brant	7 Toronto Central	10 South East	13 North East
2 South West	5 Central West	8 Central	11 Champlain	14 North West
3 Waterloo Wellington	6 Mississauga Halton	9 Central East	12 North Simcoe Muskoka	

Canadian Stroke Network
Réseau canadien contre les accidents cérébrovasculaires
ontario stroke network
Advancing the Ontario Stroke System
ICES Institute for Clinical Evaluative Sciences

ONTARIO STROKE REPORT CARD, 2011/12:
TORONTO CENTRAL LOCAL HEALTH INTEGRATION NETWORK

Poor performance[1] | Acceptable performance[2] | Exemplary performance[3] | Benchmark not available[4]

Indicator No.	Care Continuum Category	Indicator[5]	LHIN FY 2011/12 (2010/11)	Variance Within LHIN (Min–Max)	Provincial Benchmark[6]	High Performer[7]	
						Sub-LHIN/Facility	LHIN
1	Public awareness and patient education	Proportion of patients who arrived at ED less than 3.5 hours from stroke symptom onset.	– (38.1%)	–	– (52.0%)	Elgin Sub-LHIN	2, 11
2	Prevention of stroke	Annual age- and sex-adjusted inpatient admission rate for stroke/TIA (per 1,000 population).	1.3 (1.3)	1.1–1.5	1.1 (1.1)	Ottawa Centre Sub-LHIN	6, 9, 11
3	Prevention of stroke	Risk-adjusted stroke/TIA mortality rate at 30 days (per 100 patients).	11.0 (12.7)	7.4–12.8	12.2 (14.3)	Humber River Regional Hospital – Finch	7
4	Prevention of stroke	Proportion of ischemic stroke/TIA patients with atrial fibrillation prescribed or recommended anticoagulant therapy on discharge from acute care.	– (73.1%)	–	– (86.0%)	Queensway-Carleton Hospital	None
5	Prevention of stroke	Proportion of ischemic stroke patients without atrial fibrillation who received carotid imaging prior to hospital discharge.	– (87.4%)	–	– (92.8%)	Markham Stouffville Hospital	5
6	Acute stroke management	Proportion of suspected stroke/TIA patients who received a brain CT/MRI within 24 hours of arrival at ED.	– (97.1%)	–	– (97.7%)	Cambridge Memorial Hospital	5, 7
7	Acute stroke management	Proportion of ischemic stroke patients who arrived at ED less than 3.5 hours from symptom onset and received acute thrombolytic therapy (tPA) (excluding those with contraindications).	– (45.5%)	–	– (61.2%)	Trillium Health Centre	None
8	Acute stroke management	Proportion of stroke/TIA patients treated on a stroke unit at any time during their inpatient stay.	– (35.8%)	–	– (87.5%)	North Bay General Hospital	None
9	Acute stroke management	Proportion of stroke (excluding TIA) patients with a documented initial dysphagia screening performed during admission to acute care.	– (69.6%)	–	– (83.7%)	Thunder Bay Regional Health Sciences Centre	14
10	Acute stroke management	Proportion of ALC days to total length of stay in acute care.	24.0% (28.8%)	13.3–39.3%	14.6% (14.0%)	Grey Bruce Health Services – Owen Sound	None
11	Acute stroke management	Proportion of acute stroke (excluding TIA) patients discharged from acute care and admitted to inpatient rehabilitation.	29.1% (31.4%)	20.5–37.2%	42.6% (42.3%)	Barrie and Area Sub-LHIN	14
12	Stroke rehabilitation	Proportion of stroke (excluding TIA) patients discharged from acute care who received a referral for outpatient rehabilitation.	– (5.2%)	–	– (12.1%)	Burlington Sub-LHIN	14, 13
13	Stroke rehabilitation	Median number of days between stroke (excluding TIA) onset and admission to stroke inpatient rehabilitation (RCG-1 and RCG-2).	12.0 (13.0)	9.5–16.0	6.5 (7.0)	Northumberland Hills Hospital	9, 12
14	Stroke rehabilitation	Rehabilitation therapy staff/bed ratio for inpatient stroke rehabilitation.	–	–	–	–	–
15	Stroke rehabilitation	Proportion of ALC days to total length of stay in inpatient rehabilitation (Active + ALC) (RCG-1).	4.7% (7.8%)	0.0–8.4%	5.2% (6.3%)	William Osler Health System – Civic	5
16	Stroke rehabilitation	Median FIM efficiency for moderate stroke in inpatient rehabilitation (RCG-1).	0.7 (0.6)	0.0–0.8	1.1 (1.1)	Royal Victoria Regional Health Centre	9, 12
17	Stroke rehabilitation	Mean number of CCAC visits provided to stroke/TIA patients in 2010/11 and 2011/12.	4.0 (4.7)	n/a	7.9 (6.8)	South East CCAC	10, 12
18	Stroke rehabilitation	Proportion of patients admitted to inpatient rehabilitation with severe strokes (RPG = 1100 or 1110) (RCG-1).	22.0% (21.8%)	12.5–50.0%	48.6% (46.9%)	Brant Community Healthcare System – Brantford	None
19	Reintegration	Proportion of stroke/TIA patients discharged from acute care to LTC/CCC (excluding patients originating from LTC/CCC).	13.1% (10.5%)	9.9–19.7%	3.7% (4.7%)	Urban Guelph Sub-LHIN	None
20	Reintegration	Age- and sex-adjusted readmission rate at 30 days for patients with stroke/TIA for all diagnoses (per 100 patients).	8.5 (9.3)	0.0–9.7	8.0 (8.0)	Mackenzie Health – Mackenzie Richmond Hill Hospital	3, 11

[1] Performance below the 50th percentile.

[2] Performance at or above the 50th percentile and greater than 5% absolute/relative difference from the benchmark.

[3] Benchmark achieved or performance within 5% absolute/relative difference from the benchmark.

[4] Data not available or benchmark under development.

[5] Facility-based analysis (excluding indicators 1, 2, 11, 12 and 19) for patients aged 18–108. Indicators 2, 3, 10, 11 and 13–20 are based on CIHI data. Data from the 2010/11 report card are displayed in brackets. For indicators 1, 4–9 and 12, performance ratings from the 2010/11 report card are presented. Low rates are desired for indicators 2, 3, 10, 13, 15, 19 and 20.

[6] Provincial benchmarks were calculated using the ABC methodology and facility/sub-LHIN data, except for indicators 3, 15 and 20 where the provincial rate was used; 2010/11 benchmarks are displayed in brackets. For the benchmarking methodology, see Weissman et al. *Journal of Evaluation in Clinical Practice* 1999; 5(3):269-81.

[7] High-performing acute care facilities include only high-volume institutions (those treating more than 100 strokes per year). High-performing rehabilitation facilities include sites with moderate to high volumes (those admitting more than 38 stroke patients per year). For indicators 1, 4–9 and 12, high performers from the 2010/11 report card are presented.

Hospital Service Accountability Agreement indicators, 2010/11

– Data not available n/a = Not applicable

Canadian Stroke Network
Réseau canadien contre les accidents cérébrovasculaires
ontario stroke network
Advancing the Ontario Stroke System
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ONTARIO STROKE REPORT CARD, 2011/12:
SECONDARY PREVENTION CLINICS

TORONTO CENTRAL LOCAL HEALTH INTEGRATION NETWORK

Indicator No.	Care Continuum Category	Indicator[1]	Toronto Central LHIN	Ontario	LHIN Variance[2] (Min–Max)	Ontario Variance[3] (Min–Max)	High Performer[4]	
							Facility	LHIN
1	Prevention of stroke	Proportion of ED visits for a suspected or confirmed stroke/TIA where the patient was discharged and had an initial SPC visit.	**18.6%**	21.3%	**0.0–26.8%**	4.7–29.7%	Queensway-Carleton Hospital	14, 11
2	Prevention of stroke	Proportion of emergent and urgent SPC visits where the patient was seen within recommended guidelines (24 hours and 72 hours, respectively).	**16.8%**	16.0%	**6.3–30.3%**	3.5–27.9%	Niagara Health System – Greater Niagara General	4, 13
3	Prevention of stroke	Proportion of SPC visits where ischemic stroke/TIA patients had vascular imaging ordered or completed prior to or during the visit.	**87.5%**	92.7%	**72.1–98.7%**	85.1–99.5%	Brant Community Healthcare System – Willet Grey Bruce Health Services – Owen Sound	11, 9
4	Prevention of stroke	Proportion of SPC visits where ischemic stroke/TIA patients with atrial fibrillation were prescribed and/or recommended anticoagulant therapy prior to or during the visit.	**85.9%**	80.1%	**82.9–87.5%**	57.4–89.3%	Toronto Western Hospital	9, 7
5	Prevention of stroke	Proportion of initial SPC visits where cognitive screening was performed.	**19.7%**	10.4%	**2.9–44.3%**	0.2–46.6%	Pembroke Regional Hospital	6, 7

[1] Facility-based analysis for patients aged 18–108. High rates are desired for all indicators.

[2] Variance within the LHIN (i.e., across facilities).

[3] Variance across the 14 LHINs.

[4] Restricted to facilities/LHINs with at least 50 eligible patients for each indicator.

Local Health Integration Networks (LHINs)

1 Erie St. Clair	4 Hamilton Niagara Haldimand Brant	7 Toronto Central	10 South East	13 North East
2 South West	5 Central West	8 Central	11 Champlain	14 North West
3 Waterloo Wellington	6 Mississauga Halton	9 Central East	12 North Simcoe Muskoka	

North & East GTA, South East, and Toronto West Stroke Networks
INTERPRETATION OF TC LHIN STROKE REPORT CARD 2011/12

Areas of progress and related initiatives/projects

Report card results relative to established benchmarks are consistent from last year. The following Toronto Stroke Network (TSN) shared workplan initiatives are in progress to address these areas:

Equity of Care and Access to Services

Stroke Flow:

- In 11/12 we achieved collaborative agreement amongst acute care hospitals across Toronto LHINs to consolidate volumes and gained commitment of 9 organizations to have dedicated stroke units with the appropriate best practice standard of care. Identified the need and initiated work with emergency services and system stakeholders to support access to these stroke unit hospitals.
- Commitment from most rehab organizations to move towards stroke best practice implementation.
- Knowledge Translation (KT) support included initiating education needs assessment, Best Practice guide development, and cross system collaborative development of common core elements of stroke care.

System Integration and Efficiency

- Acute and Rehab System-wide groups continued to identify and monitor priorities for implementation of recommended best practices. This included an emerging need for standardized admission criteria across rehab hospitals and education support for front line staff.
- Led a cross-system forum to assist organizations in developing strategies to support earlier transition to rehab.
- Initiated implementation of the 3 core projects of the Transition Improvement for Continuity of Care initiative (TICC) (Stroke Passport, Peers Fostering Hope, Knowing Each Other's Work) across 12 organizations.
- Launched the TSNs' Virtual Community of Practice (VCoP) to support best practice initiatives (e.g. Stroke Flow and TICC) and connect clinicians, administrators and academics, encouraging peer support and sharing of resources and knowledge.

Effectiveness

- Initiated efforts to prepare organizations for implementing CIHI 340, a data source for the Stroke Flow evaluation framework and mandatory reporting effective April 1st, 2012.
- Utilization of LHIN Stroke Report Cards to increase awareness of current state, inform discussions for system improvement and initiate associated necessary change.

Gaps/Areas for Improvement	*Current or planned activities to address gaps/areas for improvement*
Equity of Care and Access to Services A standard of care and best practices across the continuum to drive access to quality care.	▪ Support the implementation of the 2013/14 Health Service Funding Reform for stroke and provincial rehab expert panel recommendations for stroke care. Incorporate the emerging need of a coordinated approach to stroke prevention into the broader system-wide planning and redesign discussions. ▪ Implementation of a process assessment survey for acute and rehab to inform KT and education plan development with an established Advisory Committee to provide oversight. ▪ Leveraging the VCoP as a key support for the Education and KT plan. ▪ Develop protocols and standardize communication to address gaps related to emergency access to hyperacute and stroke unit care. **Indicators 2,3,4,5,6,8,9,10,11,12,13,14,15,16,17,18,19,20** **Stroke Prevention Indicators 1,2,3,4,5**
System Integration and Efficiency Optimal utilization of rehabilitation (inpatient and outpatient) services to facilitate flow and improve patient and system outcomes.	Acute Implementation of: ▪ Volume re-organization to ensure critical mass (~200+ stroke patients) ▪ Geographically defined stroke unit with specialized, dedicated interprofessional team ▪ Review of processes of care to expedite earlier transfer to rehab – target by day 5-7 (e.g. completion of AlphaFIM® by day 3) **Indicators 3,4,5,6,8,9,10,11,12,13,18,19,20** Rehab Implementation of: Increased access to timely and appropriate rehab ▪ Increased intensity (3 hrs/pt/day – PT, OT, S-LP) ▪ More patients with severe stroke accessing high intensity inpatient rehab (informed by AlphaFIM® scores) ▪ Access to outpatient services for mild stroke patients within 2 weeks of discharge from acute care **Indicators 11,12,13,14,15,16,18,19,20**
Effectiveness A mechanism to evaluate and monitor changes in the system and support ongoing improvement.	▪ Establish evidenced based targets for the Stroke Flow evaluation framework. ▪ Support further definition of outpatient indicators and overall coordinated data capture for monitoring the system. ▪ Evaluate the impact of TICC projects on the patient and caregiver experience to foster continued improvement and broader application in the system. ▪ Integration of stroke prevention audit results into system planning. ▪ Support data quality improvement in acute care organizations for the CIHI #340 indicators for stroke (mandatory reporting as of April 1st, 2012).

Opportunities for LHIN Collaboration

- Continue support and leadership for implementation of the Stroke Flow and Rehab Expert Panel recommendations, including: facilitating cross LHIN engagement to ensure consistency and coordination in access to services, supporting system monitoring and accountability to improve quality and flow.
- TSNs continue to participate and coordinate stakeholder engagement to inform the work of the TCLHIN Implementation Steering Committee and Health Links initiative.
- Increase attention to other community based supports including access to secondary stroke prevention to support implementation of Quality Based Procedures (QBP) for stroke. Additional commitment with transitional resources may be required to bridge the gap until QBP is implemented across the continuum.
- Engage the TSNs and the Greater Toronto Stroke Coordinating Committee as a credible advisor to assist in prioritizing and/or endorsing stroke related initiatives within the TCLHIN.

South East Toronto Stroke Network
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North & East GTA STROKE NETWORK
collaboration • education • innovation

TORONTO WEST STROKE NETWORK

Ontario Stroke System
Fewer strokes. Better outcomes.