STROKE DISTINCTION™ REPORT

Kingston Health Sciences Centre, Kingston General Hospital

Survey Date: December 12 – 14, 2022

Report Date: January 20, 2023

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About the Stroke Distinction™ Report

Kingston Health Sciences Centre is participating in the Accreditation Canada Stroke Distinction™ program. As part of this ongoing process of quality improvement, an onsite survey was conducted December 12 – 14, 2022 at the Kingston General Hospital site. Information from the survey, as well as other data obtained from the organization, was used to produce this Stroke Distinction™ Report.

Survey results are based upon information provided by the organization and gained through interviews with clients, families, caregivers, service providers and community partners. Accreditation Canada relies on the accuracy of this information to evaluate the organization and produce the Stroke Distinction™ Report.

Confidentiality

This report is confidential and is provided by Accreditation Canada to the organization only. Accreditation Canada does not release the report to any other parties.

In the interests of transparency and accountability, Accreditation Canada encourages the organization to disseminate its Stroke Distinction™ Report to staff, board members, clients, the community, and other stakeholders.

Any alteration of this Stroke Distinction™ Report compromises the integrity of the process and is strictly prohibited.

A Message from Accreditation Canada

On behalf of Accreditation Canada, I extend my congratulations to Kingston Health Sciences Centre on your participation in a program that recognizes organizations that demonstrate clinical excellence and an outstanding commitment to leadership in stroke care. I hope you find the Stroke Distinction™ process to be an engaging and informative experience, and that it is providing valuable information to inform your quality and safety initiatives.

This Stroke Distinction™ Report shows your decision and the results of your recent Stroke Distinction™ survey. I encourage you to use the information in this report to guide your ongoing quality improvement activities. Your Accreditation Specialist is available if you have questions or need guidance.

Thank you for your leadership and for demonstrating your ongoing commitment to quality by integrating Stroke Distinction™ into your quality improvement program. We welcome your feedback about how we can continue to strengthen the program to ensure it remains relevant to you and your services.

Sincerely,

Leslee Thompson, Chief Executive Officer

Report Contents

Organization Profile

Stroke care within Kingston Health Sciences Centre (KHSC) is delivered through several patient care programs including the Stroke Prevention Clinic, Emergency Department, Imaging Services including Interventional Radiology, Critical Care and Medicine Programs. The responsibilities of the Regional Stroke Program and the KHSC inpatient neurosciences unit are led through the Medicine Program in partnership with the Stroke Network of Southeastern Ontario and the Regional Stroke Steering Committee.

KHSC, Kingston General Hospital is the Regional Stroke Centre for Southeastern Ontario which includes the county areas of Hasting and Prince Edward, Kingston, Frontenac, Lennox and Addington, and Lanark, Leeds and Grenville. KHSC is an academic teaching centre and centrally located as the only tertiary care facility in the region.

Executive Summary

Kingston Health Sciences Centre (referred to in this report as "the organization") is participating in the Accreditation Canada Stroke Distinction™ program. As part of the Stroke Distinction™ program, the organization has undergone a rigorous evaluation process. External peer surveyors conducted an onsite survey at the Kingston General Hospital site, during which they assessed the organization's programs and services. The organization was assessed against the Acute Stroke Service Standards.

To determine the award of Stroke Distinction™, Accreditation Canada verifies:

1. The degree of compliance with the standards.
2. The achievement of Key Quality Indicator thresholds and required data submissions.
3. The implementation of stroke protocols
4. The commitment to excellence and innovation.
5. The commitment to education for those with lived experience of stroke and their families and/or caregivers.

As the requirements of the Stroke Distinction™ program have been met, Accreditation Canada is pleased to recognize **Kingston Health Sciences Centre** for earning a **Stroke Distinction™ Award** for the **Acute Stroke Care** standard.

Overall, the Stroke Distinction™ surveyors identified the following areas of success within the organization's stroke services:

- Leadership
- Partnerships

- Patient Engagement
- Research

Overall, the Stroke Distinction™ surveyors identified the following opportunities for continued growth and improvement within the organization's stroke services:

- Stroke Unit Capacity
- Infrastructure
- Human Resources

Kingston Health Sciences Centre is commended on its commitment to using the Stroke Distinction™ program to improve the quality and safety of the services it offers to its clients and its community.

Award of Distinction™

Accreditation Canada's Accreditation Decision Committee (ADC) is responsible for conferring Distinction™ award decisions based on the decision guidelines. An organization or network is eligible for an award of Stroke Distinction™ that is valid for four years if all the following requirements are achieved.

	REQUIREMENT	RATING
1.	Standards criteria requirements are met.	MET
2.	Key Quality Indicators baseline thresholds and data submission requirements are met.	MET
3.	Protocol requirements are met.	MET
4.	Client and Family Education requirements are met.	MET
5.	Excellence and Innovation project requirements are met.	MET

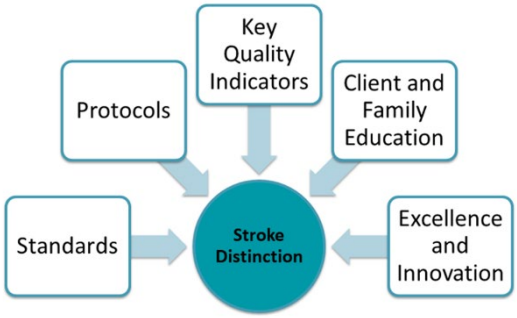
Based upon the results outlined above, Accreditation Canada is very pleased to recognize **Kingston Health Sciences Centre** for earning an award of **Stroke Distinction™** for the **Acute Stroke Care** standard.

Introduction

The Accreditation Canada Stroke Distinction™ program is a rigorous and highly specialized program that is condition-specific and assesses clinical team practices against the most current practice guidelines. The program recognizes organizations that demonstrate clinical excellence and an outstanding commitment to leadership in a specific field of expertise. The program is developed through partnership with the Heart and Stroke Foundation and is supported by close consultation with other key stakeholders and content experts to reflect detailed practices and the most up-to-date evidence. The program guides and supports organizations through a six-stage process conducted over a four-year cycle, including an on-site survey conducted by expert surveyors who have extensive practical experience in the field.

The Stroke Distinction™ program is comprised of the following key components:

- **Standards**: Stroke Distinction™ Standards are based on the latest research and evidence related to excellence in the field.
- **Key Quality Indicators**: A key component of the Stroke Distinction™ program is the requirement to submit data and meet thresholds on all applicable Key Quality Indicators. The organization opted to use the legacy **Key Performance Indicators** for their survey evaluation. The organization will be working towards transitioning to the new Key Quality Indicators following this survey.
- **Protocols**: The Stroke Distinction™ program requires the use of evidence-based protocols to promote a consistent approach to care and increase effectiveness and efficiency.
- **Education for People with Lived Experience of Stroke and Their Families and/or Caregivers**: Education and self-management support are integral parts of stroke care that should be addressed at all stages across the continuum of stroke services for stroke clients and their families and/or caregivers. Education is an ongoing and vital part of the stroke recovery process and must involve the stroke client as well as their family members and/or caregivers.
- **Excellence and Innovation Project(s)**: The Stroke Distinction™ program requires organizations to demonstrate the implementation of at least one and a maximum of two project(s) that align with best practice guidelines, utilize the latest knowledge, and integrate evidence to enhance the quality of care.



Summary of the Surveyor Team's Overall Observations

The Kingston Health Sciences Centre must be commended for its significant strengths in the delivery of stroke services with the Stroke Network of Southeastern Ontario. Southeastern Ontario covers a large geographic area of 20,000 km^2 with a population of 500,000. The Regional Stroke Centre is situated at the Kingston General Hospital (KGH) site of Kingston Health Sciences Centre. There is a strong leadership support across the organization for the services delivered. The Kingston Health Science Centre's stroke program brings together all the elements of a strong system of comprehensive stroke care, research, knowledge translation, and education. The team is supported by strong governance structures including both administrative and physician leadership, as well as the use of data, protocols, and guidelines. The interprofessional team is strong, dedicated, and knowledgeable providing the best care for the patients. The organization demonstrates stroke partnership with the internal partners such as the Emergency Department, diagnostics, and external partners such as paramedic services, regional partners, centres and clinics, and community partners. The partners very much enjoy the collaboration that the organization has with them on an ongoing basis for strengthening the services. The surveyors explored opportunities for improvement with the regional partners, community partners and patient partners that were interviewed.

The organization maintains great collaboration with other leaders in stroke care in the network and in the province. The organizational leaders collaborate at a provincial level supporting and partnering with other organizations to design, implement and sustain stroke best practices. The organization, in partnership with both internal and external partners, advocates for system and practice changes to continuously improve access to quality best practice stroke prevention and care for people throughout the region. The stroke program has access to provincial data through the regional stroke network and compares its performance against provincial benchmarks. This helps the leaders to redesign their program to meet the needs of the patients and community.

The acute stroke program is represented by a strong interprofessional team of leaders that oversee the stroke services and drives the strategic planning for the program. The leaders review the data frequently and the data is shared with the internal and external partners, the frontline staff, and patients on the unit. The reports are presented to organizational leaders as well. The organization uses data to learn more about the reason for variances and uses the information for quality improvement. The audits are done to understand the reason behind the variances in data. Indicator data submitted by the organization demonstrates their vision to advance stroke care and to bring positive outcomes for stroke patients.

Paramedic Services have access to relevant protocols to screen and bypass patients to the appropriate organization for receiving care. Paramedic Services are utilizing the provincial Paramedic Prompt Card to assist with decision making and bypass protocol for patient with symptoms of stroke. This includes use of the LAMS large vessel occlusion (LVO) clinical screening tool to assist with early communication of patients for potential Endovascular Thrombectomy (EVT). The Paramedic Services group felt supported

by the regional stroke staff especially related to educational resources and any updates related to stroke protocols. The bypass protocols are in place to ensure direct transport and access to stroke facilities.

Although there was no opportunity to observe an Acute Stroke Protocol in action, the team walked through the process with the surveyor from the time of pre-hospital to administration of IV thrombolysis. The process is well choreographed, and results are evident in excellent Door-to-Needle (DTN) times. There is a process in place for arrival of patients with stroke symptoms through triage and when stroke symptoms develop with inpatients. Emergency Department (ED) staff receive one day training on stroke management during onboarding and receive in-services for their ongoing education needs. The paramedic team members would benefit from having more joint education with Emergency team members and would also benefit from jointly working on further quality improvement projects, as needed.

Stroke Prevention Clinic (SPC) delivers secondary stroke prevention services with a team including stroke neurologist, Clinical Nurse Specialist/registered nurse, registered dietitian, and medical secretary. The team receives and screens referrals for appropriateness and triages them for urgency of care based on priority 1, 2, 3, or 4. Patient referrals for secondary stroke prevention services are received from the Kingston General Hospital (KGH) ED and Hôtel Dieu Hospital (HDH) Urgent Care Centre, Lennox & Addington County General Hospital ED, family physicians, specialists, and discharged in-patients. As part of the referral process, the respective team shares necessary information to continue the care. The clinic is open 5 days a week; 3 days at KGH and 2 days at HDH. The team highlighted the importance of more urgent service delivery at KGH 3 days a week for patients triaged with higher priority to allow close proximity to all stroke services at KGH if necessary. Patients are assessed through a hybrid model or in person, e-visits, and telephone. Emphasis is placed on all new patients to the clinic having an in-person assessment. Priority 2 referrals are seen within 3 days of receipt of referral. The SPC has strong leadership in their stroke neurologist team. SPC staff speaks of excellent collaboration amongst other teams through the stroke continuum. During the tracer, there was an opportunity to speak with a patient at the clinic. The patient spoke highly of the quick referral process and was pleased to have received a call within two days of her visit to the Emergency Department for her appointment. Educational materials were available for patients and families. Referrals to other services are sent as necessary e.g., diabetes education. The stroke prevention clinic staff and physician spoke about the importance of the clinic clerical and secretarial staff to their team.

The organization provides comprehensive inpatient acute stroke services. The team has a dedicated stroke unit with 6 beds. The organization also has a neurosciences unit where stroke patients are clustered for care in proximity to the stroke unit. The team with stroke expertise provides care for stroke patients on both stroke unit and stroke clustered unit. There is a process in place for Stroke Specialist Case Managers to identify stroke patients in the organization. Based on the list of stroke patients they receive; the Stroke Specialist Case Managers reach out to the units where patients are placed and work with the stroke team to provide directions for care and discharge planning. The role of Stroke Specialist Case Managers in the delivery of the stroke program needs to be commended. To continue to provide stroke best practices and support with early discharge planning, the interprofessional team including the

Stroke Specialist Case Managers and neurologist, meets 5 days a week and focuses on care planning. The team also engages patients and families in planning their care and discharge. The team monitors patient progress and rehab readiness and, in consultation with patients and families, supports them with their transition plan to the inpatient rehabilitation program and other areas such as the home hospital stroke unit. Once ready, the team carries out the necessary documentation and communicates with the rehab program for acceptance and transfer. The team follows all relevant guidelines such as VTE prophylaxis, falls and pressure injury prevention in delivering best practice care to the stroke patients. The team monitors patients for depression and as the clinical symptoms become evident the patients are referred to necessary disciplines for further assessment and treatment. The team is encouraged to screen patients using a validated depression screening tool when symptoms are noted and continue to inform the necessary disciplines for further assessment and treatment.

The surveyor team had the opportunity to attend the acute stroke team care rounds which run five days a week. The allied health, medical and nursing collaboration and communication for planning patient care is demonstrated during the team care rounds. The focus is on discharge planning taking into consideration patient readiness, rehab goals, functional needs, and deficits. The team members advocate for patients as a team, making every effort to consistently deliver evidence-based care. During the survey we had the opportunity to meet with several members of the stroke team. We heard accolades like “breath of fresh air”, supportive, intelligent, devoted, hard workers used to describe members of the stroke team. The strong physician support for the stroke program is excellent to see. Frontline staff talked of being supported at work and enjoyed being members of the stroke team. Community/ patient partners had high praise for the work being done by the team at Kingston.

The team focuses on discharge planning from the time of admission. The Stroke Specialist Case Manager meets with all stroke patients and families in the Emergency Department, in Critical Care and continues to meet with them on the unit and until discharge. This helps to develop a relationship with the patient and gain their trust. The allied health interprofessional staff conducts their assessment within 48 hours of admission and comes up with the therapy plan in consultation with the patient and families and the team. The team discusses the plan in the team care rounds to come up with a collaborative plan to support the patients and families. The patients and families told the surveyor that they are fully engaged and informed about their discharge plan. The team discusses with the patient what is happening in terms of diagnoses and treatment plan and the potential discharge options. Based on the functional and cognitive needs of the patient, the team follows the criteria and makes the referral to the appropriate care setting, including repatriation to the home hospital stroke unit. During transition time, the team shares vital information with the providers of the receiving facility or community providers and makes sure there is flow of information to continue the care. For example, for patients who meet the criteria for Providence Care Hospital for inpatient rehabilitation, the team will share the information with the Providence Care Hospital and provide additional information, as needed.

The team is undertaking efforts to ensure that patients are supported during transition by working with patients and families and other partners both internally and externally to ensure that patients receive care in the right place that matches their needs. The entire team plays a huge role in engaging patients

and families in making decisions about the transition plans. Patients are transitioned home with community supports, to inpatient rehabilitation at Providence Care Hospital (PCH), to home hospital stroke units and other longer-term care sites based on their needs. The team communicates with the leaders of these programs in preparation for the transition.

The surveyor recognizes the recent support to increase the allied health hours for weekend coverage. The organization is encouraged to find ways to ensure the program is supported by allied health staff coverage seven days a week to focus on continued mobilization and improving other patient outcomes such as flow and capacity.

The inpatient stroke unit appeared organized and clean. Staff reported having access to the equipment they needed. The leaders are encouraged to look at the infrastructure of the stroke unit with the hope of building a stroke unit with proper space. It is advised to review the space of the 6-bed stroke unit and design clinical space to provide a healing environment for patients. Currently, patients are in open space with the areas divided by curtains and walls in-between. Other design models should be evaluated that would include an environment that supports privacy, noise reduction, and above all supporting a patient centred environment. The program would benefit from having more space to enable patients to freely move around in the room with their mobilization aides. The program would also benefit from having more space in the gym and having more space to store equipment that patients need.

While the organization has a very strong interprofessional program, the program experiences some capacity challenges, particularly related to the utilization of the stroke unit. The organization is encouraged to look at the bed capacity for the acute stroke unit to ensure capacity meets demand, now and into the future. This can be done by continuing to follow criteria to make sure the stroke patients receive the care from the acute stroke program and to build capacity in the organization to move other patients that would benefit from being elsewhere. Also, the leaders are encouraged to continue to monitor the length of stay from stroke unit admission to discharge/transfer and stay within the provincial rehab transfer benchmarks (5-7 days) to increase the capacity and flow of the stroke unit. The rehab goals, rehab readiness, and discharge goals of patients can be monitored on a daily basis to expedite the discharge plan.

It is important to note that the organization has introduced new models of care including new roles such as nursing support assistants, patient mobility aides, and allied health assistants 7 days a week. This will help to ensure patients receive the right care in a timely manner and reach towards their goals much faster. However, due to staffing shortages of both nursing and allied health this has not been achieved consistently. Due to staffing shortages, the nurse patient ratio could be 1:10 at night which potentially could jeopardize delivering safe patient care. Since acute stroke patients are at risk of experiencing recurrent stroke in the first 48-72 hours, they need close monitoring for which appropriate staffing ratio is required. The leaders are encouraged to explore other models of care such as team nursing as evidenced in the literature.

Written education materials are available for all stroke patients. The Stroke Specialist Case Managers

ensure that all stroke patients/families receive these education materials in a folder including information about the community supports. Efforts are made for patients that are not on the acute stroke unit to receive these educational materials in a timely manner. Kingston strives to provide patient centred care in that some educational materials are available in different languages, aphasia friendly materials, etc. The surveyor noted patients receiving educational materials during the patient tracers. Documentation of the education the patient has been given is not completed using a standardized tool, however it is documented in the discipline progress notes. There is a plan for a Regional Health Information System (CERNER) to be implemented in June 2024. This is a good opportunity to ensure there is a standardized tool for education documentation embedded in this system.

The organization has a hybrid model for documentation and clinical information management. The electronic system (Cerner) will be implemented in 2024 and the organization is looking forward to it. Currently, the information is transported into the CIHI DAD database using special projects whereby the data are collected on specific indicators and the data are reviewed by the clinical leads for accuracy. When the leaders have questions about the accuracy of the data, the clinical team would audit the charts for more clarity around the practices. For example, stroke utilization rate and swallowing assessment data needed further review by the chart audit to understand the reasons behind the variances in the data. This supports their quality improvement culture. In preparation for the implementation of the CERNER system in 2024, it will be important for the team to ensure the required stroke documentation is built into the new system before it goes live. It is also important to ensure a stroke dashboard with the relevant stroke performance indicators and metrics are built in to extract the real time data which will eliminate the need for manual data extraction.

The team shares data with the KHSC Stroke Distinction Committee, an Integrated Stroke Care Committee, and the Regional Stroke Steering Committee which include representation from various partners including patient advisors. The KHSC team engages in conversation based on the data to develop goals and action plans. Annual Stroke Reports are available in the public facing Stroke Network website. The KHSC Stroke Distinction Infographic with key data is shared with the frontline staff on the unit on the Quality Boards and the data are discussed in the daily safety huddle as well. The infographic is posted in the ICU as well.

The team is very committed to engage patient partners in co-designing the services in collaboration with the patient experience advisors. The patient advisors sit on many of the committees and are engaged in decision making. The Regional Stroke Community Reintegration Leadership Team is comprised of stroke survivors, family members and care providers from across the region advising the stroke network on key initiatives. The patient tracer methodology, stroke information packages, patient journey mapping are some examples of collaborative efforts between the leadership and the patient experience advisors. The patient advisors spoke highly of the collaboration between them and the leaders. The patient partners expressed that their voices are sought out and that they felt heard. While the patient tracers certainly bring the patient voice to the table, the task is labor intensive and maybe difficult to sustain. The team is encouraged to reinitiate the patient surveys. Realizing there is currently a gap as the vendor will be changing this may also be a great opportunity to build a patient survey specific to the stroke program to

provide patient experience data to augment the stroke distinction journey.

The survey team spoke to admitted patients and a discharged patient. All of them were appreciative of the caring and respectful approach of all the team members and student learners. The patients and their family members recognize the expertise of the stroke team members and their efficiency in delivering stroke care and treatments in a timely manner. The patients and family members reported receiving educational materials and that team members were communicating with them and engaging them in decision making related to their care and discharge planning. At the same time, they recognize the staffing challenges with nursing which was recognised by the survey team as well.

There has been significant growth in the research program at Kingston Health Sciences Centre over the past several years, with the support of the Queen's University and with the addition of the stroke clinician researchers. The team participates in national and international clinical trials. The noted one is the ACT trial where Tenecteplase (TNK) was introduced into practice recently. This site adopted the standard of practice using this drug as the first site in Ontario. While the rest of the country and the province are striving to meet the indicator of 50% of patient with DTN of 60 mins, the organization in the most recent 6 months has reached 83% of their patients DTN time of less than 60 mins with a median of 31.5 mins. With the implementation of TNK administration protocols, DTN will likely demonstrate further improvements in the future. The vision of stroke lead neurologist Dr. Jin to achieve a DTN of 15 mins is extraordinary.

In addition to the several clinical trials, the team leads and participates in the local prospective study on the social determinants of health and outcomes which also includes interprofessional team participation. The team includes patient partners as authors as well. The organization also supports nursing research which is an additional strength being an academic and stroke centre.

The other notable accomplishments of the team include implementation of a regional cerebral aneurysm endovascular coiling service, a vascular ultrasound lab, and funded community stroke support and aphasia conversation groups. The implementation of these various services makes the program more comprehensive and demonstrates the leaders' commitment to meet the various needs of the community.

Standards

The Stroke Distinction™ standards identify policies and practices that contribute to high quality, safe, and effectively managed care in a specific area of expertise. Each standard has a set of criteria that are statements outlining the activities required to achieve the standard. High-priority criteria are foundational requirements for delivering safe and quality services and are identified by a red exclamation mark within the standards.

During the survey, the surveyors assessed the organization's compliance with each section of the standard and provided the following results. As part of ongoing quality improvement, the organization is encouraged to address any unmet criteria.

Overall Ratings

REQUIREMENT	RESULTS	RATING
75% or greater of all criteria within the **Acute Stroke Services** standard have been rated as "met".	100%	MET
80% or more of all high-priority criteria within the **Acute Stroke Services** standard have been rated as "met".	100%	MET

Results Overview: Acute Stroke Services

Theme	Met %
Investing in comprehensive acute stroke services.	100%
Engaging a prepared and proactive acute stroke services team.	100%
Providing safe and appropriate hyperacute and acute stroke services.	100%
Helping clients, families, and/or caregivers live with stroke.	100%
Maintaining accessible and efficient clinical information systems.	100%
Monitoring quality and achieving positive outcomes.	100%

Results by Theme: Acute Stroke Services

Investing in Comprehensive Acute Stroke Services

Surveyor Comments

The organization collects and reports data on stroke prevalence, risk factors and demographic information with various partners and stakeholders through different committee meetings for service design and planning. The risk factors such as obesity, hypertension and smoking are higher within the region as compared to the provincial rate.

UNMET CRITERIA

There were no UNMET CRITERIA

Engaging a Prepared and Proactive Acute Stroke Services Team

Surveyor Comments

The organization uses an interprofessional approach to collaboratively plan and deliver acute stroke services; in doing so, the team uses current stroke best practice guidelines. The team receives stroke specific education during onboarding and to sustain their knowledge and competencies they are engaged in continuous learning activities such as those delivered through the annual Regional Education Plan and the Regional Stroke Symposium. Providers use simulation to practice hyperacute management. New hires to the acute stroke unit receive a 2-day orientation along with 12 orientation buddy shifts. New hires to ED and critical care receive training in hyperacute and acute stoke care during their orientation to these units. Clinical competencies are overseen by the Clinical Learning Specialists who support staff in obtaining these competencies. Safety huddles, and “Keeping up with updates" weekly emails are utilized to maintain expertise. Performance development plans are completed with unionized staff every two years and with non-union staff annually. The Clinical Learning Specialist and manager collaborate around required education. Information obtained from safety reports help identify support, training, and development needs for the team members.

Stroke Specialist Case Managers coordinate care and discharge planning for all stroke patients at KHSC including those on the stroke unit. These members provide outreach support to the stroke patients on the other units. These members are also the link between the regional partners and the KHSC stroke program. The Stroke Specialist Case Managers are the main contact for the patients and families and serve to provide continuity of care and communication following the patient from Emergency Department until the patient is transferred or discharged from the stroke unit. The team at Kingston General site works closely with the regional partners and community partners and engage them in planning services for the region. Being leaders in stroke care, the team provides leadership

for setting up services and providing education to various providers. For example, Kingston General and Providence Care leaders worked collaboratively designing, implementing, and evaluating the Fast Track project for improving inpatient rehabilitation intake and stroke unit utilization rate. The team has necessary equipment in place to deliver stroke care. The stroke program has the appropriate skill mix to deliver stroke care as well.

The stroke program would benefit from having more space to provide best care to the stroke patients. For example, instead of care spaces separated by curtains and walls in-between, design considerations could include a space that provides privacy, is noise free, and has adequate space to store equipment by the bedside. The unit and gym areas need more space for patient care and equipment. Patients and staff felt the need to have more staff to provide safe care for patients. At night, at the time of the survey, the nursing staff patient ratio can be 10:1.

UNMET CRITERIA

There were no UNMET CRITERIA

Providing Safe and Appropriate Hyperacute and Acute Stroke Services

Surveyor Comments

The Paramedic Services team has access to a relevant protocol to screen and bypass patients to the appropriate organization for receiving care. Paramedics are utilizing the provincial paramedic prompt care for decision-making and bypass as well as the LAMS LVO screening tool to assist with communication for patients with symptoms of stroke. The Paramedic Services group felt supported by the regional stroke staff especially related to educational resources and any updates related to the stroke protocol.

The established protocols are used by the emergency team to triage and activate the hyperacute stroke protocol. Through inclusion and exclusion criteria all relevant information is gathered to determine their eligibility for treatment with thrombolysis and/or EVT. 98% of all stroke patients receive CT scan within 24 hours. The hyperacute stroke team is to be commended for having all eligible stroke clients receive IV thrombolysis within the therapeutic window, 83 % have door to needle time of less than 60 mins with a median of 31.5 mins in the most recent 6-month data submission. The organization has a robust EVT program with excellent collaboration amongst the radiology and neurology team members. During the ED tracer there was evidence of the use of the referral process to the stroke prevention clinic for TIA patients discharged from ED.

The team provides comprehensive inpatient acute stroke services. The team has a dedicated stroke unit with 6 beds adjacent to a neurosciences unit where stroke patients are clustered for care. The team with stroke expertise care for stroke patients on both stroke unit and stroke clustered unit. There is a process in place for Stroke Specialist Case Managers to identify stroke patients in the organization. Based on the list of stroke patients they receive, the Stroke Specialist Case Managers reach out to the units where patients are placed and provide directions for care and discharge planning. They work to ensure that stroke specific expertise is made available for those off the neuroscience's unit. To focus on continuing to follow stroke best practices and to support with early discharge planning, the interprofessional team including the Stroke Specialist Case Manager and neurologist, meets 5 days per week for care planning. The team also engages patients and families in planning their care and discharge. The team monitors patients' progress and rehab readiness and in consultation with patient and families, supports them with their transition planning to the inpatient rehabilitation program or to other discharge destinations such as repatriation to their home stroke unit. Once ready, the team carries out the necessary documentation and communicates with the rehab program for acceptance and transfer. The team follows all relevant guidelines such as VTE prophylaxis and falls and pressure injury prevention in delivering best practice care to the stroke patients. The team monitors patients for depression and as the clinical symptoms become evident the patients are referred to necessary disciplines. The team is encouraged to screen patients using a validated depression screening tool when symptoms are noted and to continue to inform the necessary disciplines when appropriate for further assessment and treatment.

UNMET CRITERIA

There were no UNMET CRITERIA

Helping Clients, Families, and/or Caregivers Live with Stroke

Surveyor Comments

The Stroke Prevention Clinic delivers secondary stroke prevention services with a team including stroke neurologist, Clinical Nurse Specialist/registered nurse, registered dietitian, and medical secretary. The team receives and screens referrals for appropriateness and triages them for urgency of care based on priority 1, 2, 3, or 4. Patient referrals for secondary stroke prevention services are direct from the KGH ED and Hôtel Dieu Hospital (HDH) Urgent Care Centre, Lennox & Addington County General Hospital ED, family physicians, specialists, and discharged in-patients. As part of the referral process, the respective team shares necessary information to continue the care. The clinic is open 5 days a week. 3 days at KGH and 2 days at HDH. The team highlighted the importance of more urgent service delivery at KGH 3 days a week for patients triaged with higher priority to allow close proximity to all stroke services at KGH if necessary. Patients are assessed through a hybrid model or in person, e-visits, and telephone. Emphasis is placed on all new patients to the clinic having an in-

person assessment. Priority 2 referrals are seen within 3 days of receipt of referral.

The team focuses on discharge planning from the time of admission. The Stroke Specialist Case Manager meets with all stroke patients and families from ED onwards and continues to meet with them on the unit until discharge. This helps to develop a relationship with the patient and gain their trust. The allied health interprofessional staff conduct their assessment within 48 hours of admission and come up with the therapy plan in consultation with the patient and families and the team. The team discusses the plan in the team care rounds and come up with a collaborative plan to support the patients and families. The patients and families told the surveyor that they are fully engaged and informed about their discharge plan. The team discusses with patients what is happening in terms of diagnoses and treatment plan and the potential discharge options. Based on the functional and cognitive needs of the patient, the team follows the criteria and makes the referral to the appropriate care setting. During transition time, the team shares vital information with the providers of the receiving facility or community providers and makes sure there is flow of information to continue the care. For example, for patients who meet the criteria for Providence Care Hospital (PCH) for inpatient rehabilitation, the team will share the information with the PCH and provides additional information, as needed.

UNMET CRITERIA

There were no UNMET CRITERIA

Maintaining Accessible and Efficient Clinical Information Systems

Surveyor Comments

The organization has a hybrid model for documentation and clinical information management. The electronic system will be implemented in 2024 and the organization is looking forward to it. The information is transported into the CIHI DAD database using special projects whereby data is collected on specific indicators and the data is reviewed by the clinical leads for accuracy. When the leaders have questions about the accuracy of the data, the clinical team would audit the charts for more clarity around the practices. For example, stroke unit utilization rate and swallowing assessment data needed further review by chart audit to understand the reasons behind the data.

The team has put strategies in place to secure the safety and security of the patient information by monitoring the access to patient information and if a breach occurs, taking necessary actions to address it with the right people. If a breach were to occur, the same will be disclosed to the patients. Staff are expected to take an annual privacy course and managers audit the completion of the course.

UNMET CRITERIA

There were no UNMET CRITERIA

Monitoring Quality and Achieving Positive Outcomes

Surveyor Comments

The patient records and decision support teams and leadership team take extra measures to make sure the data is validated, and rigorous methodology is employed in ensuring the integrity of the data. The information management team has taken extra measures to promote the privacy of the data by setting up firewalls and deidentifying the data.

The organization is introducing a regional integrated electronic health record system in 2024 which will help to provide seamless access to patient information and for continuity of care and help to obtain real time data that would inform quality improvement initiatives. This will also eliminate the need for manual extraction of data in the future.

UNMET CRITERIA

There were no UNMET CRITERIA

Key Performance Indicators

The Key Performance Indicators (KPIs) are a key component of the Stroke Distinction™ program. Organizations are required to collect and submit data on all core performance indicators, and on two of the twelve optional performance indicators. Minimum thresholds must be achieved for seven of the nine acute stroke services KPIs. There are no required thresholds for optional indicators. Where core performance indicator thresholds are not achieved, the organization much develop an action plan that includes performance targets to guide improvement.

Ratings

The following section provides a list of the performance indicators collected by organizations assessed against the Acute Stroke Services standards. Ratings are based upon data submitted by the organization for each indicator.

REQUIREMENT	RATING
Collect and submit data on all nine acute stroke services core performance indicators.	MET
Meet thresholds for at least seven of the nine acute stroke services core performance indicators.	MET
Collect and submit data on at least two of twelve optional performance indicators.	MET

TYPE		PERFORMANCE INDICATOR	REPORTED	THRESHOLD	RATING
Core	1	Stroke / TIA Mortality Rates	10%	< 22%	MET
	2	Proportion of ischemic stroke clients who receive acute thrombolytic therapy (tPA)	15%	≥ 7%	MET
	3	Median time to administration of acute thrombolytic agent	83% have a DTN < 60 min	50% have a DTN < 60 min	MET
	4	Proportion of clients treated on stroke unit (or on a ward where patients are clustered)	71%	≥ 75%	UNMET

TYPE		PERFORMANCE INDICATOR	REPORTED	THRESHOLD	RATING
	5	Length of stay in acute care hospital setting for clients admitted following an acute stroke event	8.1 days	≤ 14 days	MET
	6	Readmission to acute care for stroke related causes	3%	≤ 12%	MET
	7	Proportion of acute stroke clients discharged to inpatient rehabilitation	35%	≥ 15%	MET
	8	Proportion of clients prescribed antithrombotic therapy	94%	≥ 90%	MET
	9	Proportion of clients with initial dysphagia screening at admission	75%	≥ 85%	UNMET
Optional	2	Proportion of acute stroke and TIA clients who receive brain CT or MRI within 24 hours of hospital arrival	98%	≥ 90%	MET
	4	Proportion of inpatients with stroke that experience complications during inpatient stay	5%	Varies with complication	MET

Surveyor Comments

KHSC is reporting in the legacy Key Performance Indicators. There is a plan to move to new Key Quality Indicators in the future reports. KHSC has met the required threshold of 7/9 of the core performance indicators and is tracking two optional performance indicators. From the seven met indicators, it is important to recognize the exceptional work by the hyperacute stroke team to meet and in most cases exceed the standard requirement of the door to needle time (DTN) of 60 minutes, the organization in the most recent 6 months has a median DTN time of 31.5 minutes. While KHSC did not meet 2 of the required indicators, the team has identified improvement plans in place to meet the necessary threshold of these indicators in the future. It is evident through the conversations with the stroke leadership team their commitment to meet the target indicator of the 75% acute stroke unit utilization rate. The leadership team recognizes that stroke patients receive the best care in the stroke unit cared for by the staff trained in the specialised stroke care. The survey team encourages the stroke leadership to look for opportunities for improvement within the organization that would see all stroke patients being treated on a dedicated stroke unit. The organization uses the STAND dysphagia screen, and there are some

challenges in meeting this performance indicator. The leaders are invested in exploring the variances in data conducting chart audits and using the information for improving the practice.

Protocols

Stroke protocols are intended for organizations that provide acute and/or inpatient stroke rehabilitation services. The implementation of standardized stroke protocols is a key component of excellence in stroke services. Standardized protocols help ensure that stroke care is people-centred, consistent, adheres to evidence-informed practices, follows the latest evidence-based clinical guidelines for service delivery, and maintains safety and quality across the continuum of care.

Ratings

To achieve an award of Distinction™, organizations must adopt and consistently follow at least 60% of the protocols.

REQUIREMENT	RATING
Protocols are based on the current evidence-informed practices for stroke.	MET
Protocols are used by appropriate interdisciplinary team members.	MET
Protocols are included in the client's health record, as appropriate.	MET
Protocols are shared with other health care providers, as appropriate.	MET
Protocols are regularly reviewed, updated, and communicated to all members of the stroke team.	MET

Acute Stroke Services Protocols

REQUIREMENT	PROTOCOL	IMPLEMENTED	RATING
60% of the protocols must be adopted and consistently followed.	Emergency Medical Services (EMS) Stroke screening	IMPLEMENTED	MET
	EMS bypass / direct transport to stroke centres (including air ambulance)	IMPLEMENTED	MET
	EMS pre-notification of suspected stroke	IMPLEMENTED	MET
	Emergency Department notification of hospital-based stroke team	IMPLEMENTED	MET

REQUIREMENT	PROTOCOL	IMPLEMENTED	RATING
	Neurovascular imaging for potential stroke clients (rapid access to CT)	IMPLEMENTED	MET
	tPA eligibility screening	IMPLEMENTED	MET
	tPA administration	IMPLEMENTED	MET
	Administering acute ASA therapy	IMPLEMENTED	MET
	Formal criteria for identifying appropriate clients for referral to inpatient rehabilitation	IMPLEMENTED	MET
	Swallowing ability assessment	IMPLEMENTED	MET
	Initial assessment of rehabilitation needs	IMPLEMENTED	MET
	Assessing and managing diabetes mellitus (when present)	IMPLEMENTED	MET
	Pressure injury prevention	IMPLEMENTED	MET
	Falls prevention	IMPLEMENTED	MET

Surveyor Comments

The team has implemented all the necessary stroke related best practice standard protocols. The team needs to be commended for its efforts in ensuring these best practice standards are met consistently and meeting the targets and are found in use in the patient health records. The compliance with the best practice protocols is demonstrated in the performance indicators. For example, patients are given IV thrombolysis on the CT table after the plain CT is completed and when stroke is detected, and this measure not only helps the patient for faster recovery but also improves the door-to- needle-time. The team has also implemented cerebral perfusion imaging studies using RAPID software to determine eligible EVT candidates. Following the treatments, the team ensures a good handover happens during transition between teams and units. The team demonstrates delivering patient centred care when one physician stays with the patient while the team focuses on managing the hyperacute stroke care and transitioning between diagnostics and critical care. As leaders, the physicians take responsibility to train physicians in the other KHSC areas and other parts of the region to be experts in stroke treatment.

Education for People with Lived Experience of Stroke and Their Families and/or Caregivers

Education and self-management support are integral parts of stroke care that should be addressed at all stages across the continuum of stroke services for stroke clients and their families and/or caregivers. Education is an ongoing and vital part of the stroke recovery process and must involve the stroke client as well as their family members and/or caregivers. Information provided to stroke clients about their journey towards recovery can lead to improved understanding of coping and self-management strategies and improved ability to maintain the strategies over time. Skills training for stroke clients, as well as their families and/or caregivers, often prevents or reduces mental health disorders, and can ease the perceived burden of self-management, consequently leading to improved quality of life. The information provided at each phase of the stroke journey – including acute care, rehabilitative care, community reintegration and long-term recovery should be relevant to the changing needs of stroke clients and their families and/or caregivers. Simply distributing information materials is not sufficient; client education must be interactive in nature. The education process must also be informed by and developed with people with lived experience of stroke.

Ratings

To achieve an award of Stroke Distinction™, the organization's education for people with lived experience of stroke must meet the following requirements:

REQUIREMENT		RATING
Evidence that the stroke education program is an integrated component of stroke care delivery. **All four criteria must be achieved.**	Educational materials for stroke clients and their families and/or caregivers are available and accessible on the unit.	MET
	Educational materials for stroke clients and their families and/or caregivers are available in a variety of languages appropriate to the demographic needs of the defined population.	MET
	Educational materials for stroke clients and their families and/or caregivers are available in formats appropriate for persons with special communicative needs.	MET
	During tracer interviews, stroke clients and their family and/or caregivers report receiving education	MET

REQUIREMENT		RATING
	regarding their recovery and self-management from health care providers that care for them.	
Consistent documentation in the client health record that education has been provided to people with lived experience of stroke and their families and/or caregivers**. Two out of the four criteria must be achieved.**	Standardized tools are used to document education components to ensure that all critical elements are addressed prior to client discharge.	UNMET
	The client health record includes a standardized location for the documentation of client education activities.	MET
	Each health care professional involved in the stroke care team has documented all education provided within the discipline notes or common progress notes.	MET
	Specific content addressed during each educational session (e.g., skills taught and demonstrated, discharge preparation, etc.) has been documented	MET

Surveyor Comments

Educational material including the Heart and Stroke Foundation of Canada "Your Stoke Journey" is available to all stroke patients and is used by the interprofessional team for stroke education. The infographic “Your Recovery Journey After Stroke” is a quick reference guide for patients to access services.

Written educational materials are available for all stroke patients. The Stroke Specialist/ Case Managers ensure all stroke patients/families receive this written information. Efforts are made for stroke patients that are not on the stroke unit to receive these education materials in a timely manner. Stroke materials are readily available in English and French. If other languages are required, staff on the stroke unit will reach out to the Regional Stroke Program for assistance. Educational materials are available to support patients with special needs. Besides written materials, there is an option to view or download an iBook "Partners in Stroke Recovery" free of charge.

Patients and families agreed that they receive education on the unit with the educational materials in the folder. Each discipline reinforces information from the stroke information package during their session with the patient and families. Patients and families reported receiving information about various

community supports as well.

The team currently does not have a standardized documentation tool for education to ensure all critical elements are covered before discharge. Currently, staff are documenting patient education given in the interprofessional progress note. There is a plan for a Regional Health System (CERNER) to be implemented in June 2024. Leadership should ensure there is a standardized documentation tool for education embedded in this system.

Excellence and Innovation Project(s)

Excellence and innovation are key components to improve stroke care. Formally recognizing excellence and innovation as a priority in an organization empowers staff at all levels to make improvements. Excellence and innovation projects encourage knowledge sharing and collaboration around a common improvement goal.

To achieve an award of Distinction™, organizations must implement a minimum of one and a maximum of two Excellence and Innovation project(s) that meet all the following requirements:

- Must be evidence-based and aligned with clinical and best practice guidelines for people-centred stroke care including the latest Canadian Stroke Best Practice Recommendations1.
- Demonstrates improvement to the overall quality of services within the facility or region.
- Includes a completed project evaluation, and measures sustainability of the project over time.
- Communicates findings within the organization and externally, as applicable.
- Notable for what it could contribute to the delivery of stroke services.

Fast-Track Stroke Rehab Referral Project

Project Description

A "Fast Track" team successfully implemented a new Fast Track rehab referral process to enable earlier transfer from acute to rehabilitation. For a specific cohort, the new process replaced a Providence Care Hospital (PCH) on-site assessment at KHSC with a more robust referral package. Using a quality improvement approach, three time-intensive key elements were removed from the process:

1) Detailed KHSC chart review by PCH

2) KHSC on-site patient assessment by PCH

3) Written patient summary by the PCH on-site assessor for the PCH team.

The following Fast-Track processes were implemented:

1) An enhanced referral package

2) A new Neurology Form to capture key stroke-specific medical care items

3) The Rehab Team received the full referral package in lieu of a patient summary.

In the first year, 64 patients were referred as Fast Track. This process achieved the new 4 business-hour target of referral to decision to accept for rehab within a median of 77.5 minutes. Previously the median for stroke onset to transfer was up to 18 days. For the Fast Track cohort, this has come down to

a usual median of 6-7 days. As a result of improved flow to rehab, patients have a shorter length of stay in acute care; this supports patients also getting into the acute stroke unit which support flow of patients overall. This not only helps to sustain patients receiving care in the stroke unit, but also ensuring capacity for hyperacute treatments for the region. In addition, the project has further nurtured and built relationships between the acute and rehab teams to support future initiatives.

Ratings

To achieve an award of Distinction™, the organization's excellence and innovation project(s) must meet the following requirements:

REQUIREMENT	RATING
The project is evidence based and aligned with clinical practice guidelines for people-centred stroke care, including the latest *Canadian Stroke Best Practice Recommendations*.	MET
The project demonstrates improvement to the overall quality of stroke services within the facility or the region.	MET
The project includes a completed project evaluation and measures sustainability of the project over time.	MET
The project communicates findings within the organization and externally, as applicable.	MET
The project is notable for its potential to contribute to the delivery of stroke services.	MET

Surveyor Comments

Kingston General Hospital has implemented a Fast Track stroke rehabilitation referral project in collaboration with their inpatient rehab care provider, Providence Care Hospital. The goal of this project is to improve the inpatient rehab access/intake from the acute stroke program. This quality improvement project stemmed from the need to reduce the time to get into the inpatient rehab program (in 2018-2019 median time of 13.0 days compared to Provincial rate of 8 days) and ultimately improve the stroke unit capacity. This project was coordinated by the Stroke Network of Southeastern Ontario.

The project is aligned with the organizations' mission which is "partnering in care, discovery and learning to achieve better health for our communities while transforming our health care system" as well as the Canadian Best Practice recommendations for stroke. The organization partnered with the leaders of

Providence Care Hospital and redesigned a new process to improve access to inpatient rehabilitation. Through this project, the leaders collaboratively developed Fast Track criteria for eligible acute patients for in-patient rehabilitation and a new rehab referral process replaced the old practice of in person assessment to be eligible for the rehab program. The highlight of this project is that the organization followed a true quality improvement approach with an aim statement and followed the Quality Improvement framework from identifying the problem to interventions, evaluation, spread and sustainment. KHSC allocated funding to augment the FTE for Stroke Specialist Case Manager to conduct patient assessment in a timely manner. This will be continued as part of sustaining this project. Initially they trialed the referral program with fast-track patients. The process is now being applied/spread to other patients.

With the concentrated efforts, the project team was able to see a huge improvement in the time from referral to decision, which was greater than 2 days. The team is not only meeting the provincial target of 4 hours but exceeding it with a median of 77.5 minutes and also meeting median time from stroke onset to rehab in 7 days for this patient group. In addition to these results, the team saw reduction in acute length of stay, which will ultimately improve the stroke unit utilization.

Recent data show the median time from admit to rehab admit for all stroke patients referred to rehab has decreased from 13 in 2018-19 to 8.5 days in 2022-2023 quarter 2, given the Fast Track cohort forms a growing percentage of those referred. The team is encouraged to take measures to ensure the time to admit from stroke unit to rehab unit stay is within the provincial target of 5-7 days for the full cohort of stroke patients referred to rehab. This will improve the capacity and flow of the acute stroke unit.

Another highlight of this project is that the team conducted patient stroke patient experience tracers along the continuum of care from ED to inpatient care to the community. This exercise provides rich qualitative data on patient experience which has been utilized to inform future improvement opportunities.

The team has been sharing data related to this project at various committees and are planning to submit an abstract to World Stroke Congress and are looking for other opportunities to share the findings from the patient tracers. The team was asked to think about how the program will be maintained in the future including the patient tracer interviews. The team is encouraged to publish the findings from the qualitative patient tracer interviews for other organizations to learn from the patient experience.

Next Steps

Congratulations on completing your Stroke Distinction™ survey! We hope that the findings outlined in this report will guide Kingston Health Sciences Centre, Kingston General Hospital's ongoing quality improvement activities.

As you know, Stroke Distinction™ requires an ongoing commitment to the highest levels of quality service. To maintain a Stroke Distinction™ award status, it is important to continue to submit Key Quality Indicator (KQI) data. For additional information on submitting KQI data, or on any other aspect of the program, please contact your Accreditation Canada Client Engagement Lead.

Thank you for participating in the Stroke Distinction™ Program and taking this opportunity to improve stroke services for clients, their families, and/or caregivers.