Regional Paramedic Program for Eastern Ontario

Emergency Stroke Care

How are we doing?

Southeast Regional & District Acute Stroke Protocol Committee Annual Meeting June 2024

Evaluation data shared with special thanks to

- All 5 Paramedic Services
- Regional Paramedic Program of Eastern Ontario - Stroke Report
- QHC and KHSC Stroke Teams

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Meeting Agenda

1. Introductions and Welcomes
2. Approval of Minutes and Agenda
3. Business Arising
4. ASP Evaluation Review, Hyperacute Stroke Care
5. Telestroke Planning underway in Brockville
6. Paramedic Transport – BLS Standards and Guidelines
7. Roundtable Updates and Reminders
8. Adjournment / Next Meeting June 2025

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1. Introductions

- Land Acknowledgement
- Introductions
  - Shelley Huffman, New Regional Director SNSEO
  - Kayla Purdon, New Regional Best Practice Coordinator, SNSEO

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2. Approval of Minutes and Agenda

- Approval of Agenda
- Approval of minutes, June 28, 2023

3. Business Arising

1. Provincial BLS Standards 3.4; LAMS screening – Agenda item 6.1
2. Guidance for Medical Escorts for EVT Transfers – Agenda item 6.2
3. EVT repatriations – KHSC ICU to Referring ICU

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4. Acute Stroke Protocol Evaluation Review and Hyperacute Reports

1. Presentation/meeting slidedeck* combined data:
   - OH-CorHealth Ontario Stroke reports are delayed
   - FY 2023-24 Acute Stroke Protocol Data KHSC and Quinte Health
   - FY 2023-24 Regional Paramedic Program of Eastern Ontario Stroke Report
   - FY 2023-24 KHSC EVT Report
2. Discussion

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Ontario Stroke Report

- Has not been released since June 2022 and is currently still delayed due to data migration to Ontario Health; no information on when to expect
- However, we continue to have local hyperacute data to share from our stroke centres and from the RPPEO Stroke Report.

Stroke Care in South East 2020/21

NOTE: Arrow indicates how SE is trending from last FY report – improvement indicated by upward green arrow; worsening by downward red arrow

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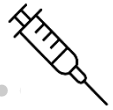
STROKE IS A MEDICAL EMERGENCY

68.6% ↑ (ON 66.2%)
of stroke/TIA patients arrived at the emergency department by ambulance

84.0% ↑ (ON 81.4%) of patients were referred to secondary prevention services after discharge from the emergency department*

TIME IS BRAIN



19.9% ↑ (ON 14.1%)
of ischemic stroke patients received hyperacute therapy

14.8% tPA (tissue plasminogen activator) (Target: >12%) (ON 10.5%)
31 minutes median door-to-needle time (Target: <30 minutes) (ON 44.0)

6.9% EVT (Endovascular therapy) (ON5.8%)

STROKE UNIT CARE IMPROVES OUTCOMES

1.81 ↑ **per 1000 population** (ON 1.46)
are admitted for acute stroke/TIA

41 hospitals in Ontario have a stroke unit

79.1% ↑ (ON 56.1%) of stroke patients treated on a stroke unit (Target: >75%)

SECONDARY PREVENTION OF STROKE OCCURS ACROSS THE CARE CONTINUUM

REHABILITATION OPTIMIZES RECOVERY

9 days ** ↑ (ON 8.0)
Median time from acute admission to inpatient rehabilitation

26.2%** ↑ (ON 31.4%)
of patients accessed inpatient rehabilitation

75 minutes per day of inpatient therapy was received per patient (Target: 180 minutes) (ON 68.9%)

STROKE JOURNEY CONTINUES AFTER DISCHARGE

57.2 days ** ↑ (ON 56.4)
Average number of days spent at home in the first 90 days after stroke

66.4%** received home-based rehabilitation* (ON 38.6%)
12** median number of visits (ON 9.0)

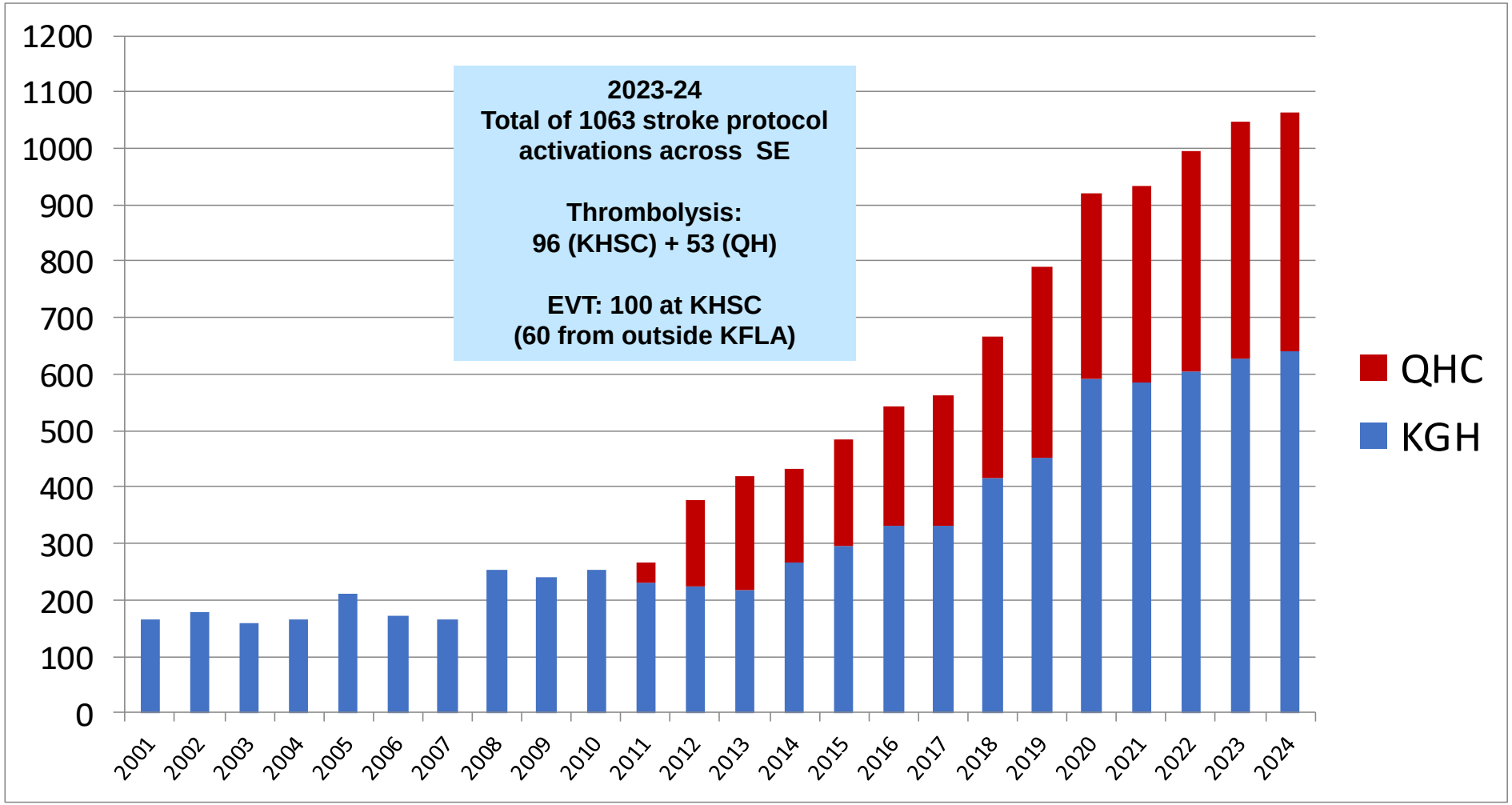
76.6% ↑ (ON 74.9%) of patients aged 65 and older with atrial fibrillation filled a prescription for anticoagulant therapy within 90 days of acute care discharge*

PATIENT OUTCOMES – SE rates each similar or improved from last FY
6.2% of stroke/TIA patients were readmitted within 30 days (ON 6.6%)
11.3% of stroke/TIA patients died within 30 days (ON 12.1%)
8.2%** of stroke patients were admitted to long-term care within 1-year post discharge (ON 6.3%)

Ontario Health
CorHealth Ontario

*There is currently no data available for outpatient rehabilitation and secondary prevention clinic.
** 2020/21 Q2 (YTD)

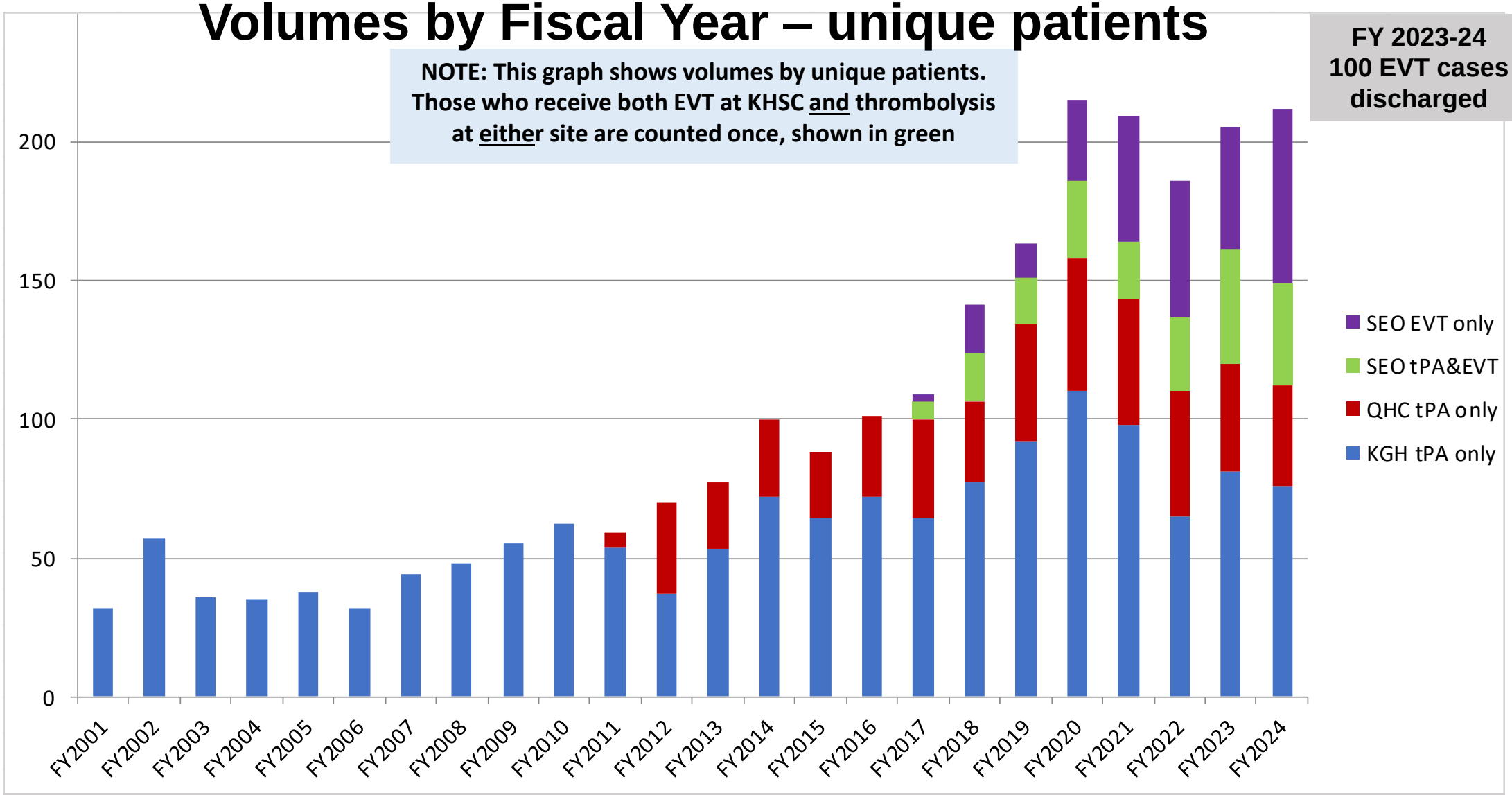
SEO ASP Activations KHSC/QH by Fiscal Year



2023-24 Total of 1063 stroke centre protocol activations: QH (N=421) + KHSC (N=642)
up from 1048 last year (420 + 628) last year
Includes 111 In-hospital stroke protocol activations – down from last year at 133

- **66 in-hospital at KHSC – 7 patients treated (2 TNK only; 3 EVT only; 2 TNK+EVT)**
- **45 in-hospital at QH – 1 thrombolysis**

KHSC/QH Thrombolysis and EVT Volumes by Fiscal Year – unique patients



Median Door-to Needle (DTN) times:
2023-24 (Q1-Q3) KGH 21 mins; QH 41.5 mins in Q3 and 32 mins in Q4
Key DTN factors: pre-notification; stay on paramedic stretcher to CT; TNK in CT suite

KHSC Growth in EVT and Thrombolysis Cases

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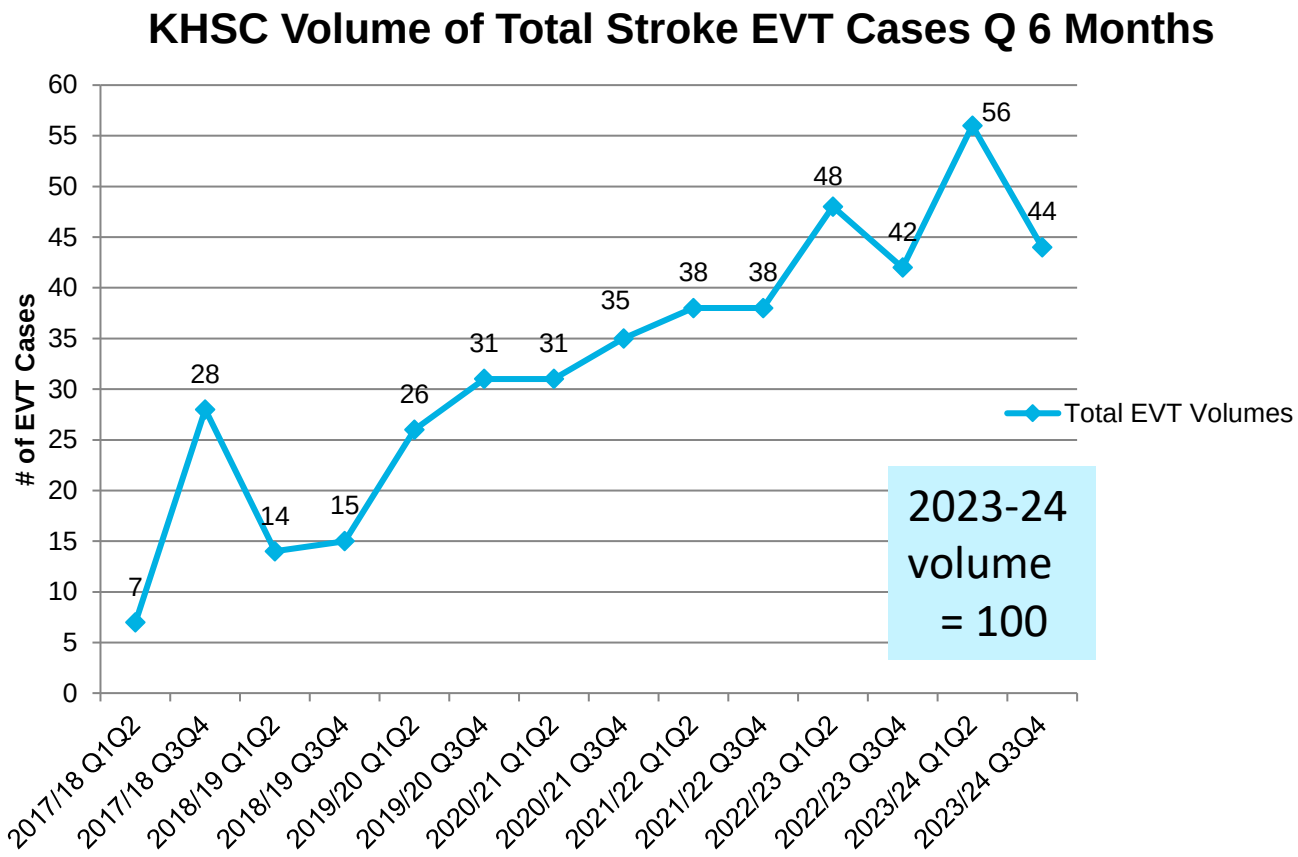
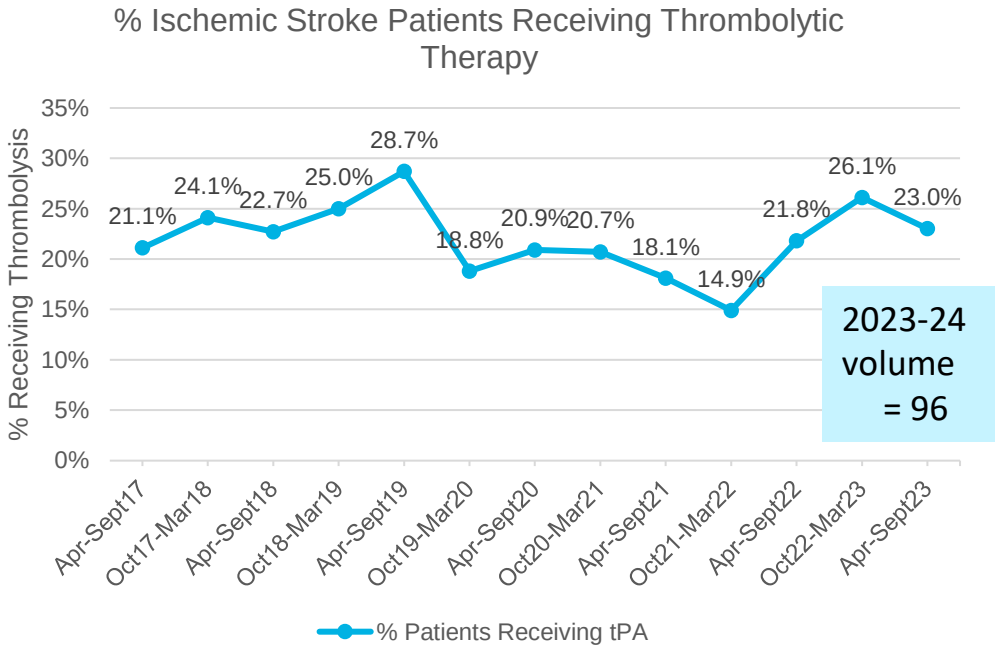
Centre des sciences de la santé de Kingston

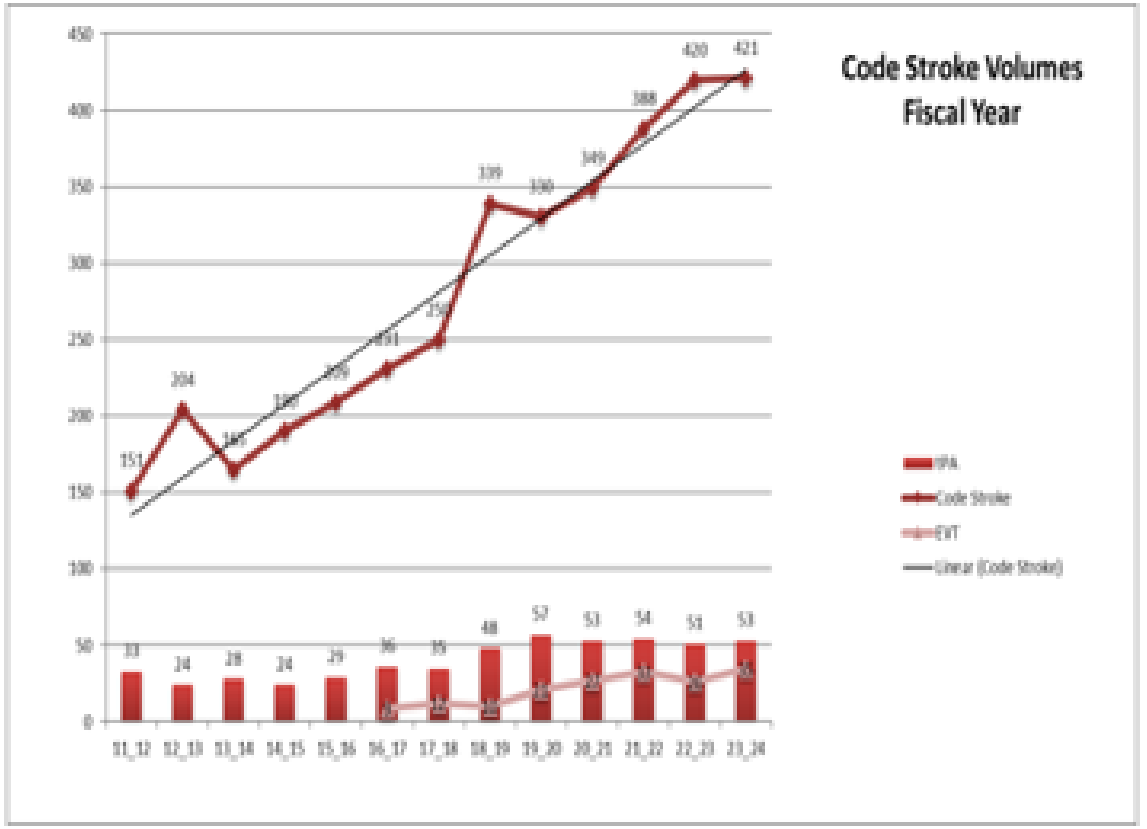


Thrombolysis rate relatively stable as EVT volumes grow



Quinte Health Growth in Code Stroke Activations Thrombolysis and EVT Transfers

Quinte Health



Regional Paramedic Program for Eastern Ontario

Regional Paramedic Program for Eastern Ontario
Stroke Report - Fiscal Year 2023-24

with thanks to

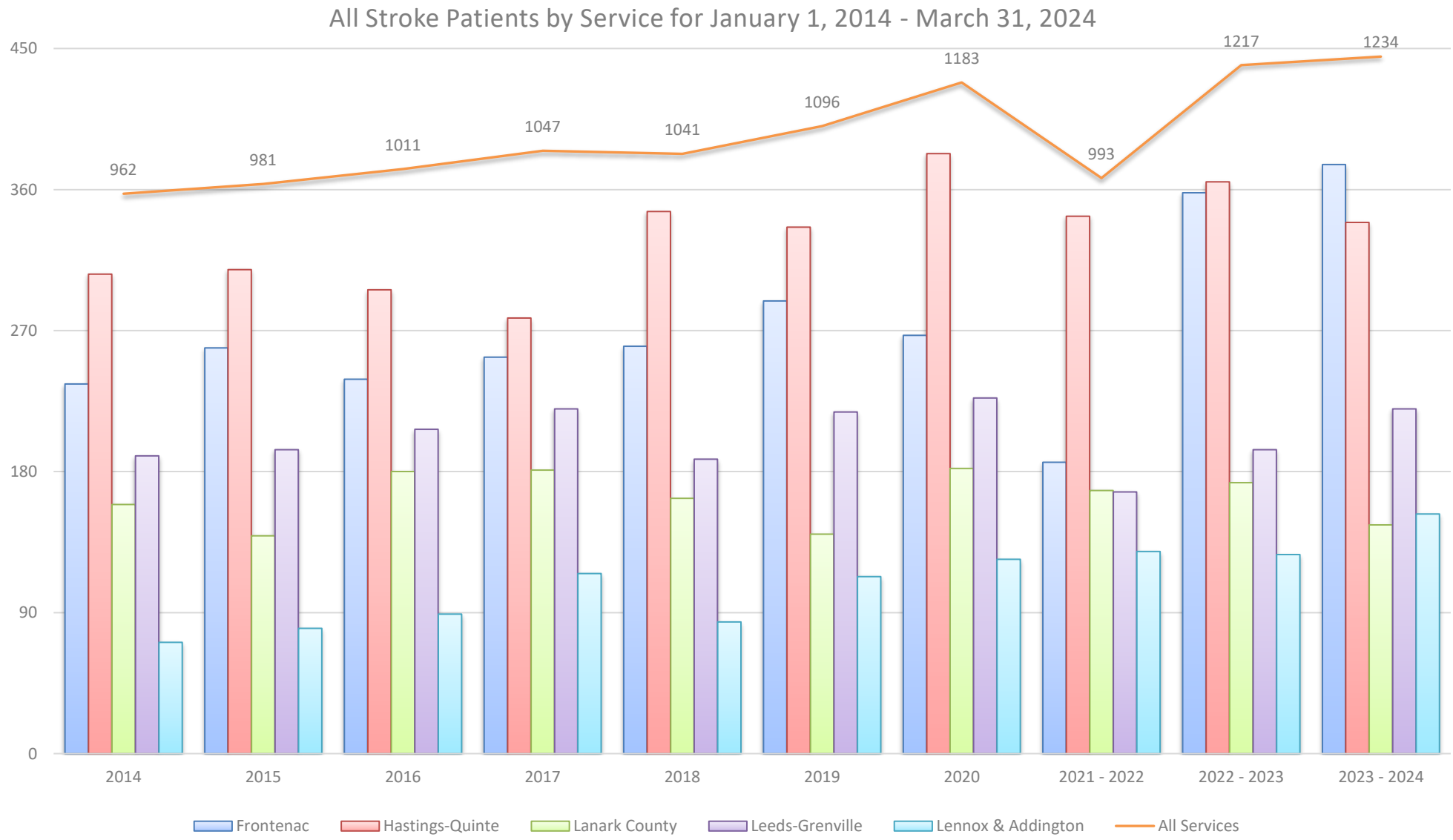
Base Hospital Program, The Ottawa Hospital
Megan Wall, EMS Coordinator
Yiping Ma, Analyst
James Bowen, EMS Coordinator
Benjamin de Mendonca, Manager, Quality & Patient Safety

and

All Paramedic Services

All Stroke Patients by Paramedic Service x 10 yrs

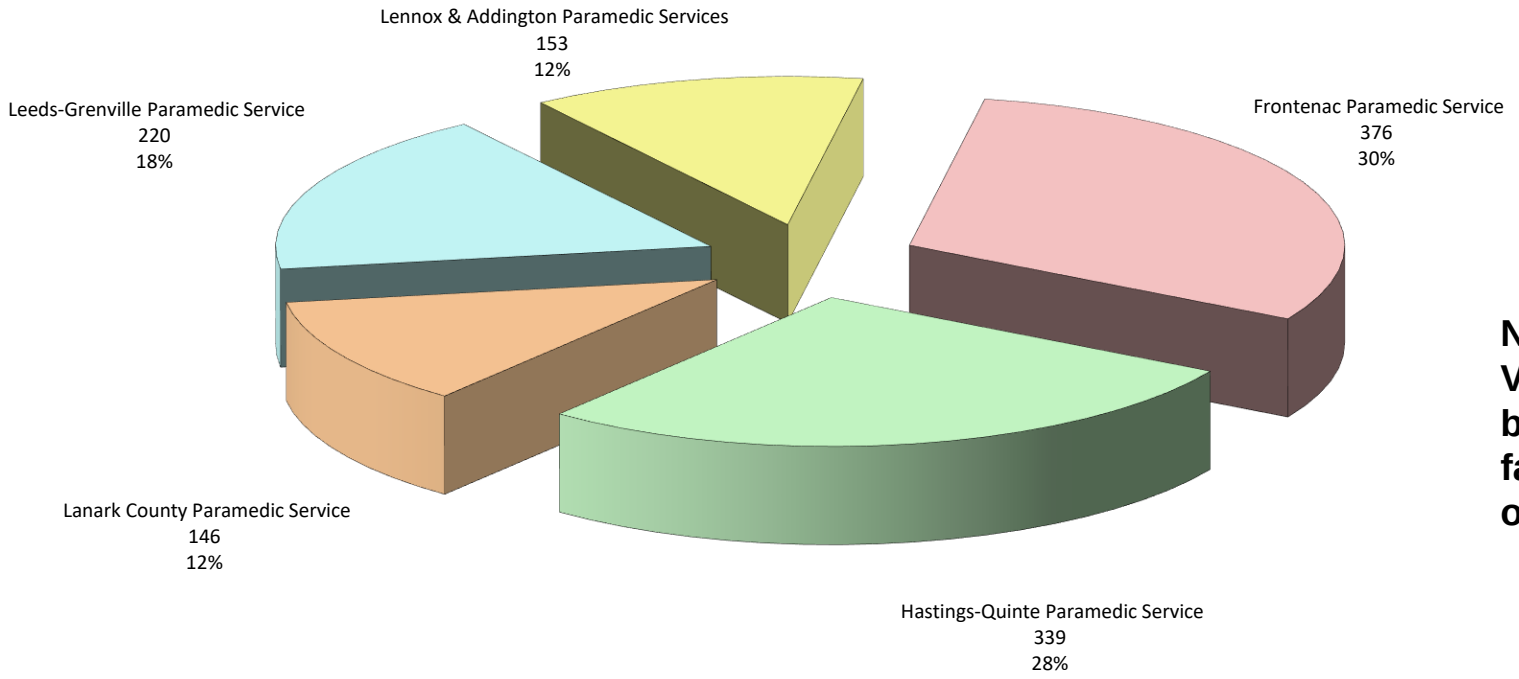
Data Source: RPPEO Stroke Report FY 2023-24



All Stroke Patients by Paramedic Service

Data Source: RPPEO Stroke Report FY 2023-24

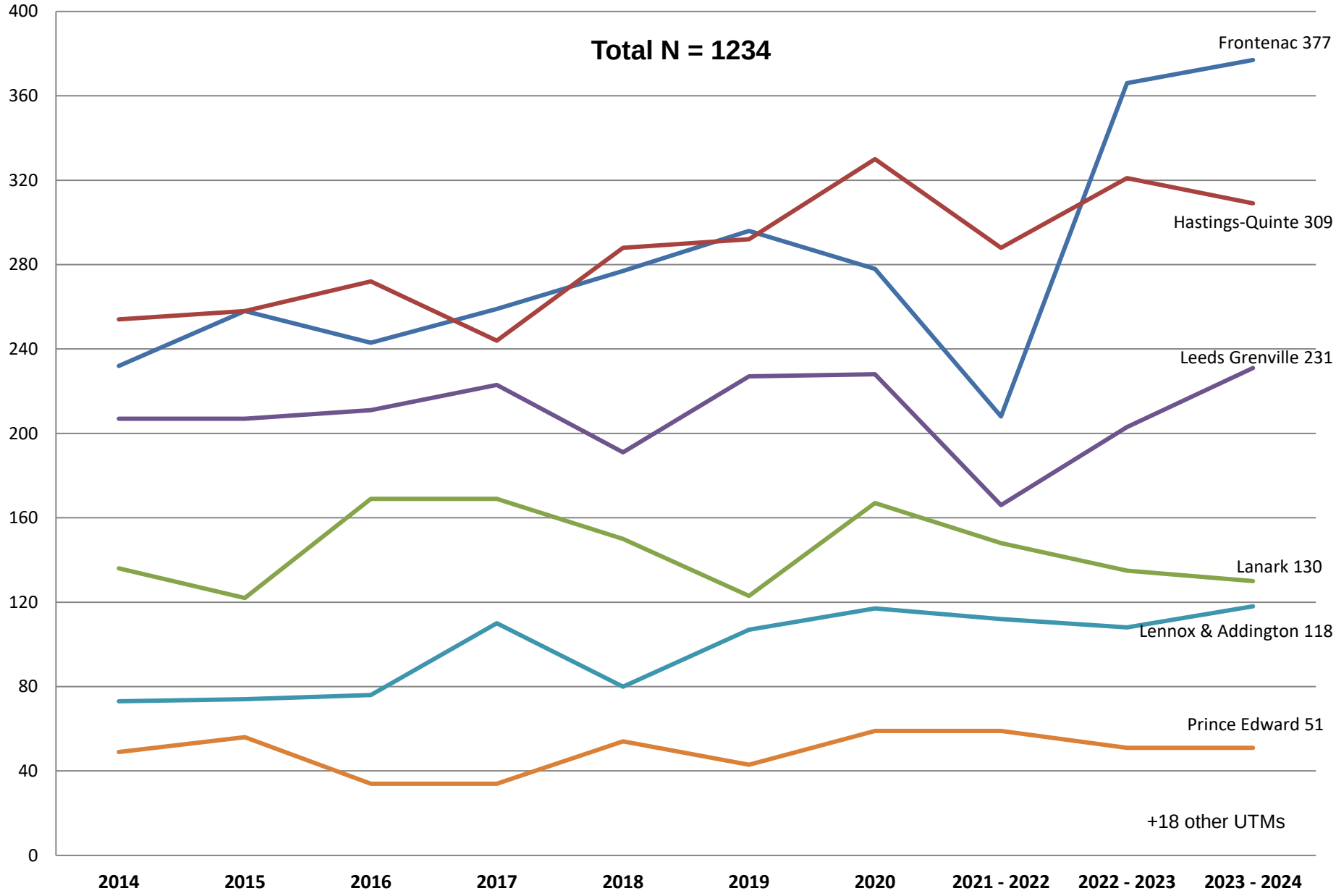
ALL STROKE PATIENTS FOR APRIL 1, 2023 - MARCH 31, 2024 BY RESPONDING PARAMEDIC SERVICE



N = 1234
Volumes increasing but proportions fairly consistent over previous years

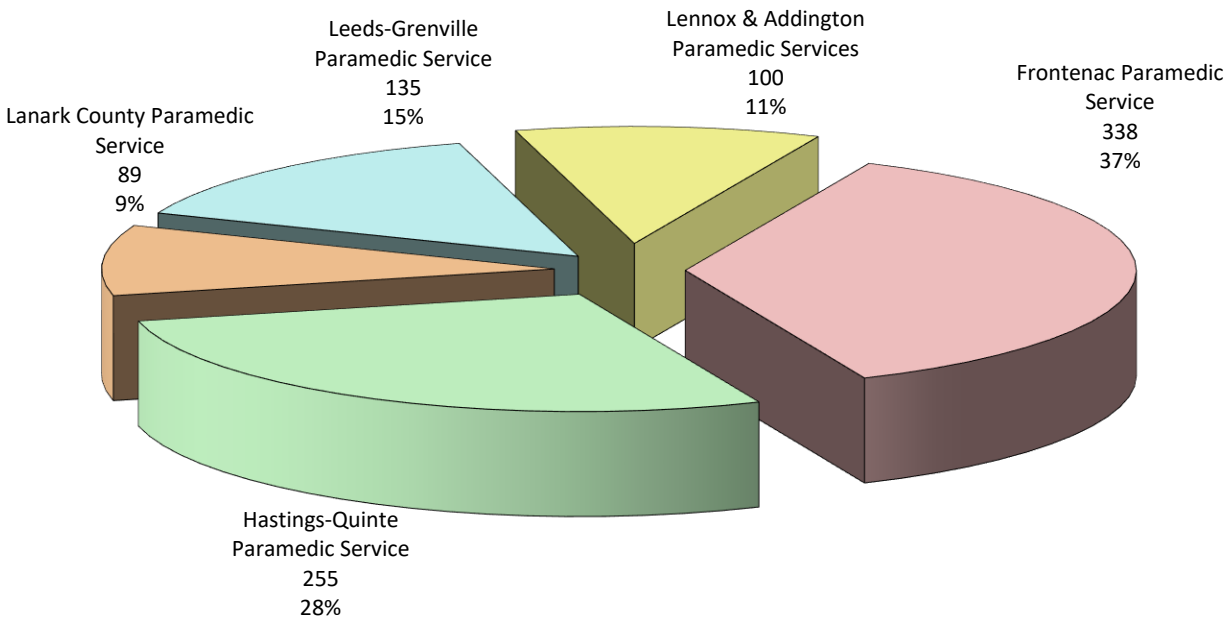
ALL Stroke Calls – Location of Calls by County over 10 years

Data Source: RPPEO FY2023-24 Stroke Report



Acute stroke calls taken to stroke centres FY 2023-24
N=917 of total 1234

74.3% of all stroke patients were taken directly to an acute stroke centre
485 = stroke centre was closest hospital; 324 = bypasses; 108 = transfers



Hospital most often bypassed is Brockville General
LLG patients have longest transports to access TNK

Reasons **317** patients were **not** redirected to stroke centre:

- **Unable to determine LSN = 64 (20%)**
- **Unable to deliver to stroke centre < 6 hrs = 101 (32%)**
  NOTE: OVER 50% related to TIME

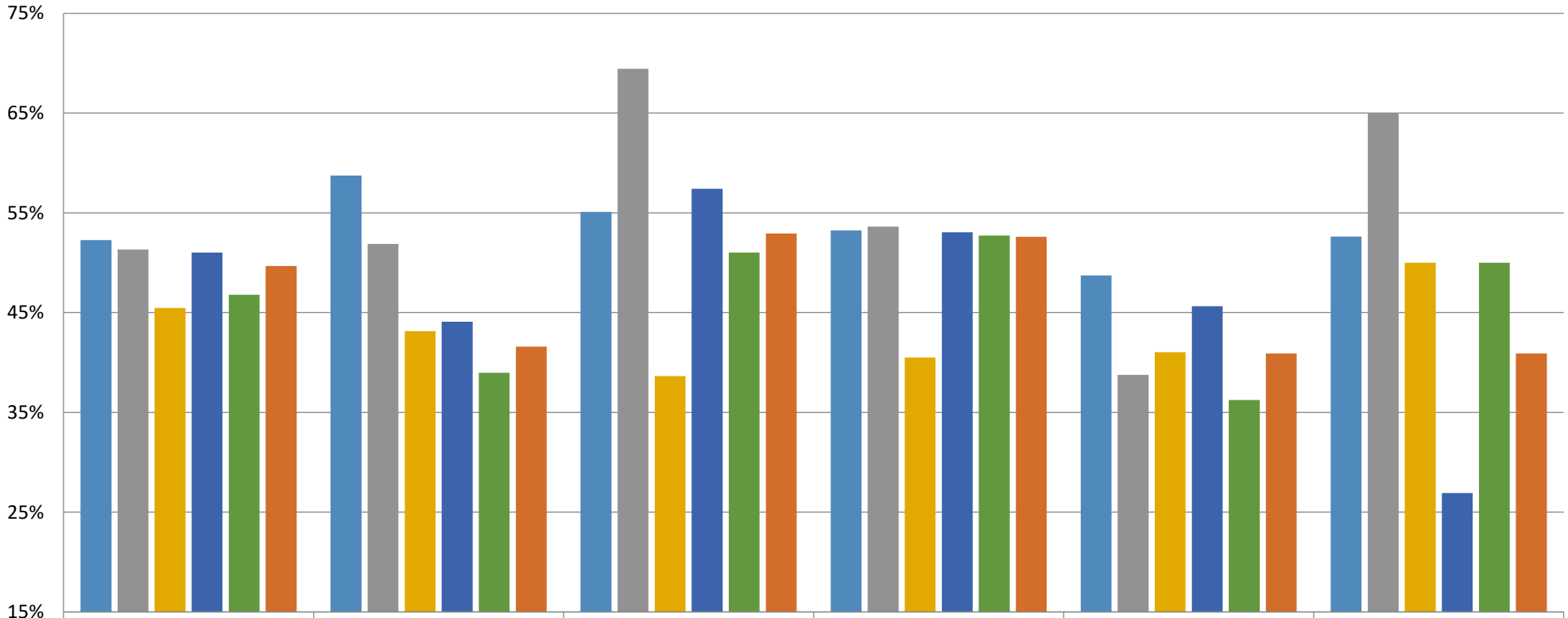
- Symptoms resolved prior to departing = 83 (26%)
- Seizure at onset of symptoms = 9 (3%)
- Unstable or LOC = 11 (3%)
- Terminally ill/palliative = 9 (3%)
- Symptoms mild = 10 (3%)
- Reason unclear or patient refused = 30 (10%)

Data Source: RPPEO Stroke Report FY 2023-24

Under 50% call 911 within 30 mins of symptom onset

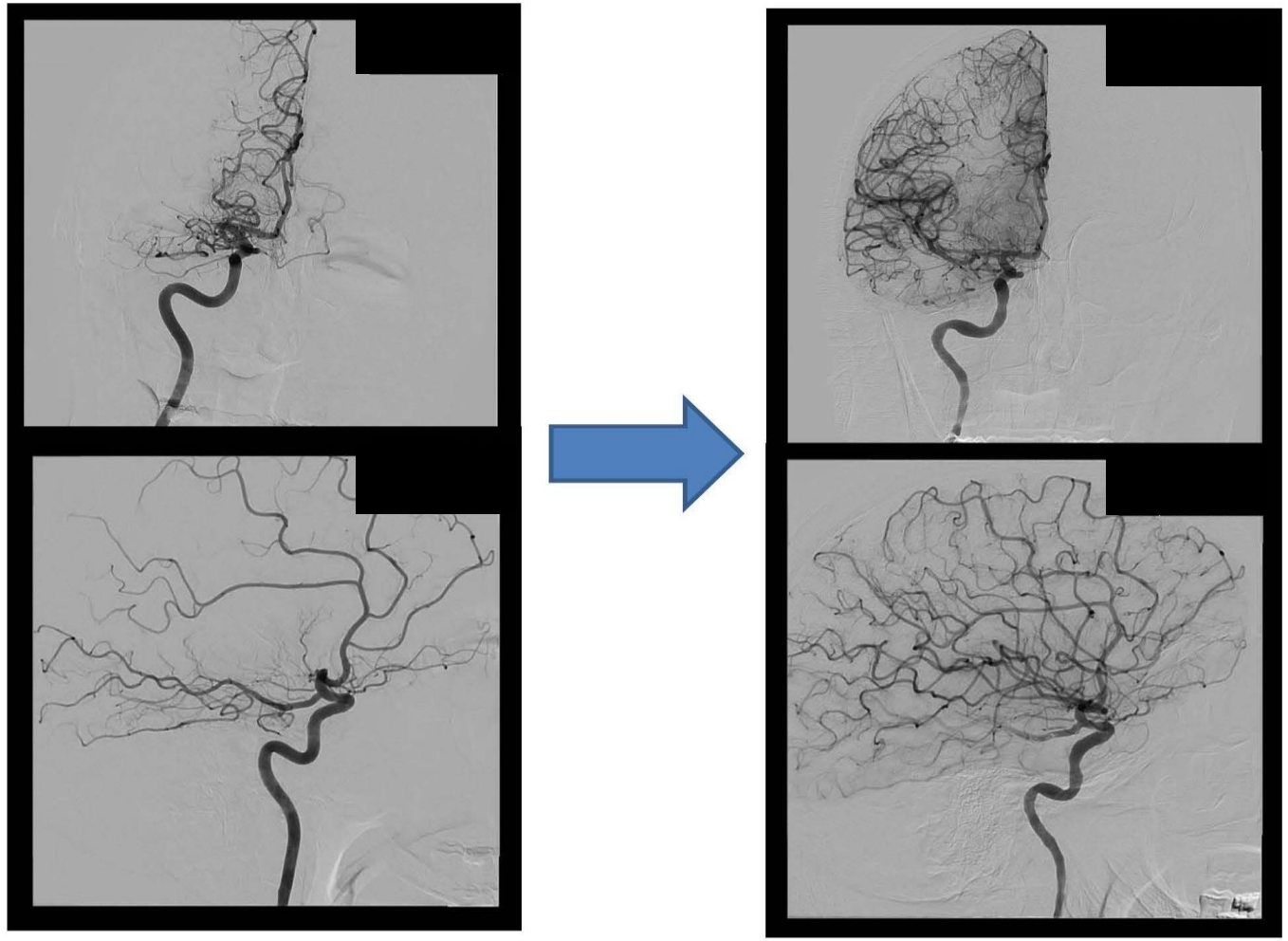
Data Source: RPPEO Stroke Report FY 2023-24

ACUTE STROKE CENTRE TRANSPORT PATIENTS (excluding transfers)% OF PATIENTS WHO ACTIVATED 911 WITHIN 30 MINUTES OF ONSET OF SYMPTOMS



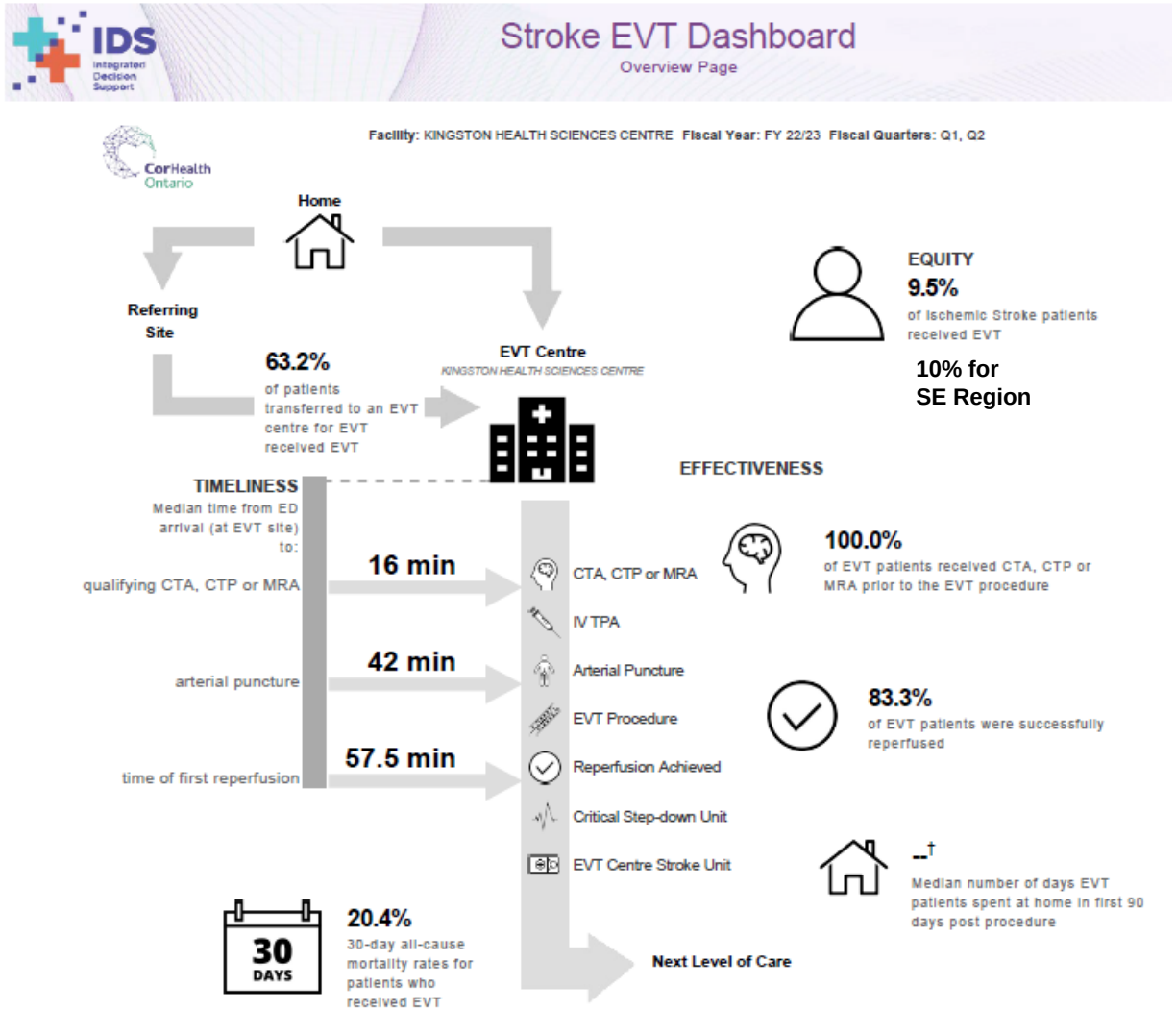
	Frontenac	Hastings-Quinte	Lanark	Leeds-Grenville	Lennox & Addington	Prince Edward County
2018	52%	59%	55%	53%	49%	53%
2019	51%	52%	69%	54%	39%	65%
2020	45%	43%	39%	41%	41%	50%
2021	51%	44%	57%	53%	46%	27%
2022 - 2023	47%	39%	51%	53%	36%	50%
2023 - 2024	50%	42%	53%	53%	41%	41%

KHSC EVT Current Outcomes

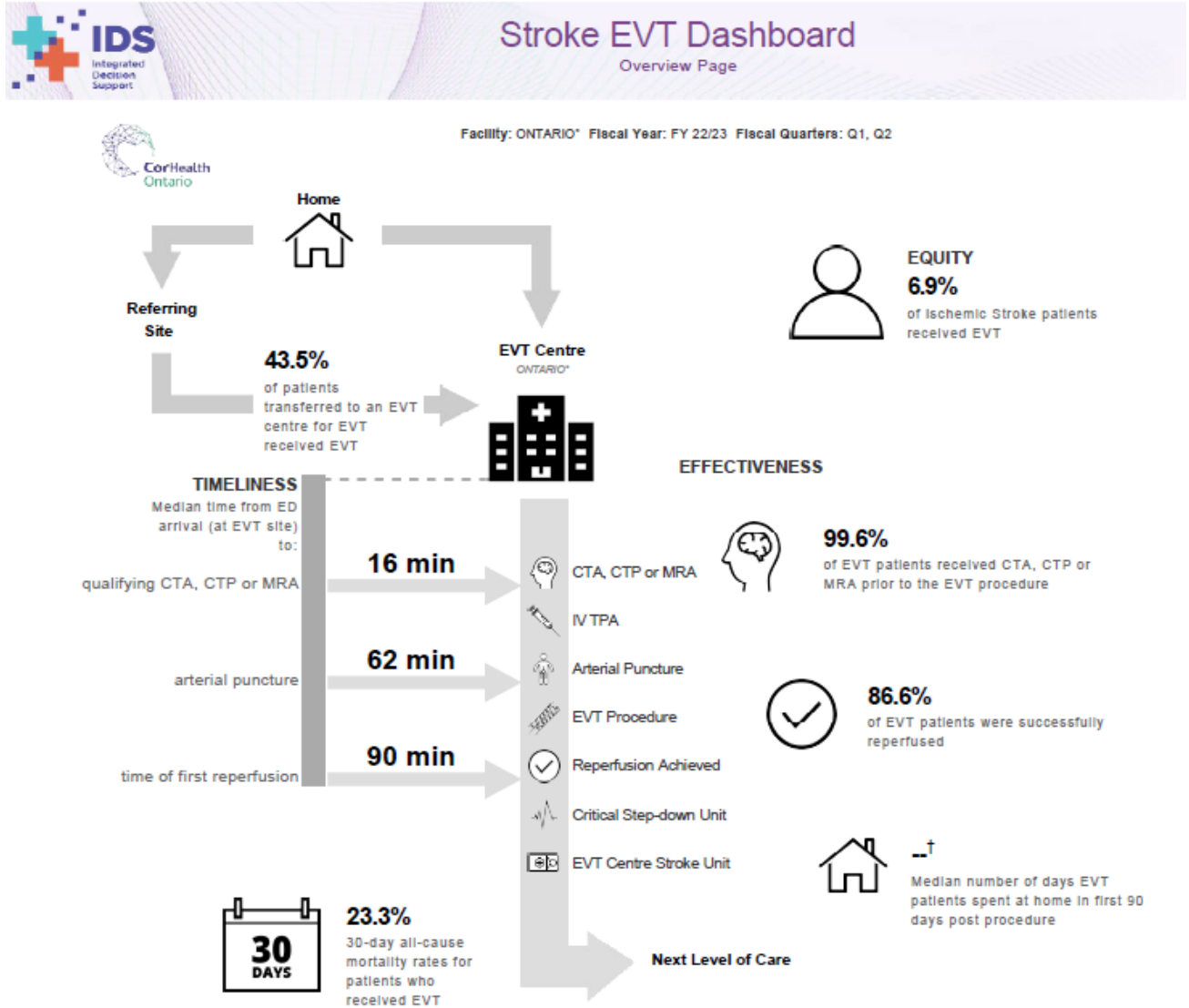


CorHealth Ontario EVT Report
FY 2022-23 – Q1, Q2 (April to Sept)

Kingston



Ontario



KHSC EVT Current Outcomes 2023-24

TOTAL: 432 anterior and 26 posterior cases to March 31, 2024

FY 2023-24: 100 EVT cases discharged

96 anterior, 4 posterior circulation cases discharged

- ongoing growth from last fiscal
- Geographic distribution: HPE – 37; KFLA – 39 (11 from L&A); LLG – 20; 4 out of region
- 39 female/61 male
- 85.4% reperfusion rate

For the 96 anterior cases – using Best MRS score at discharge -some still improving

- 26/96 (27.1%) with minimal to no disability MRS </= 2
- 37/96 (38.5%) with moderate disability
- 17/96 (17.7%) with severe disability
- 16/96 (16.7%) mortality

Times: 9 min D to CT; 39 min D to puncture, 57 min D to Reperfusion (target 90 mins)

36 cases treated between 6 and 24 hours in FY 2022-23

- 36 Anterior cases: HPE - 14; KFLA - 14 (3 L&A); LLG – 7; 1 other region
- Disability Outcomes:
  - 7/36 (19.4%) minimal to no disability
  - 16/36 (44.4%) moderate disability
  - 7/36 (19.4%) severe disability
  - 6/36 (16.7%) mortality

NOTE: provincial mortality rate for ALL cases was 23% in 2022-23

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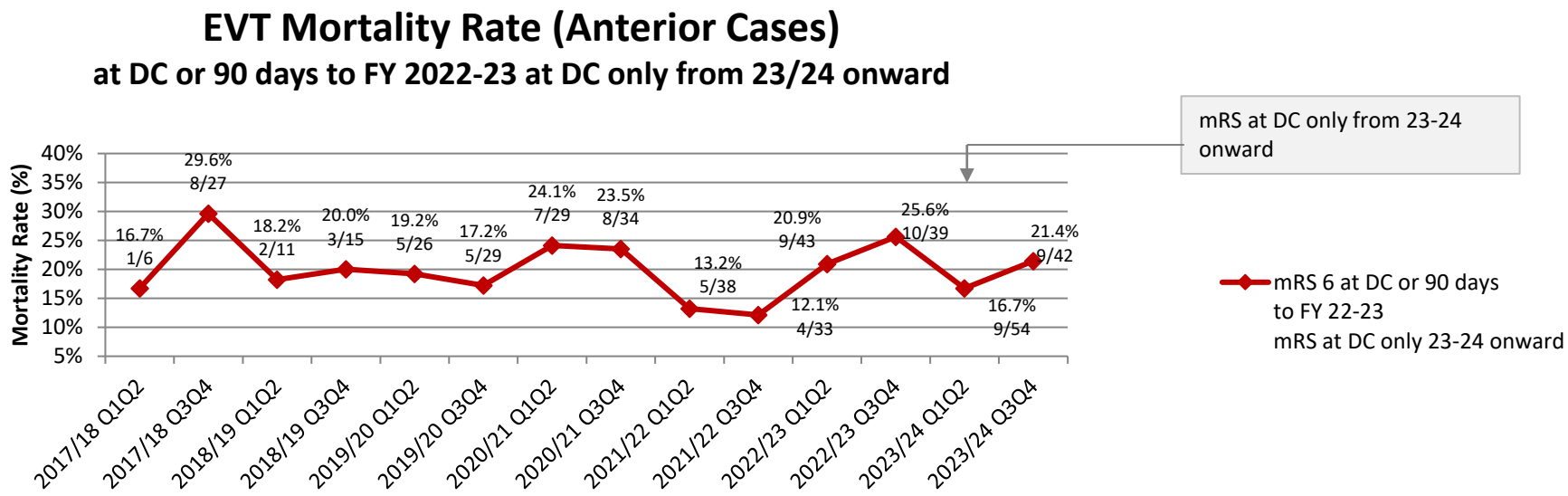
KHSC EVT Current Outcomes 2023-24



NOTE: provincial mortality rate for ALL cases was 23% in 2022-23

Hôpital Hotel Dieu Hospital

Hôpital Général de Kingston General Hospital

Kingston Health Sciences Centre

Centre des sciences de la santé de Kingston

Discussion/Questions

Volumes are growing!

Treatment parameters and options are growing.

Public Awareness of stroke signs is still limited.

Need to build capacity for hyperacute Rx in our region.

5. Telestroke Planning underway in Brockville

1. Presentation/meeting slidedeck*

   Deanne Henson

   Director of Patient Care, Brockville General Hospital

2. Discussion about changes in stroke centre mapping

   Jeff Carss – Chief, L&G Paramedic Services and all

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Brockville General Hospital
Right here, with you.

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Brockville General Telestroke

Time is Brain: *Improving outcomes by serving people closer to home*

Brockville General Hospital
Right here, with you.

WHY?

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Message #1: Time is Brain. Faster access is well known to improve outcomes.

- Telestroke is run through *Criticall Ontario* to facilitate expert stroke neurology video consultation using OTN & ENITS imaging transfer.

Message #2: Brockville General has all other stroke services in place.

- Stroke Prevention Clinic, Integrated Stroke Unit – acute & rehab service; Community Supports

Message #3: Stroke is on the rise. We need to build regional capacity for emergency care.

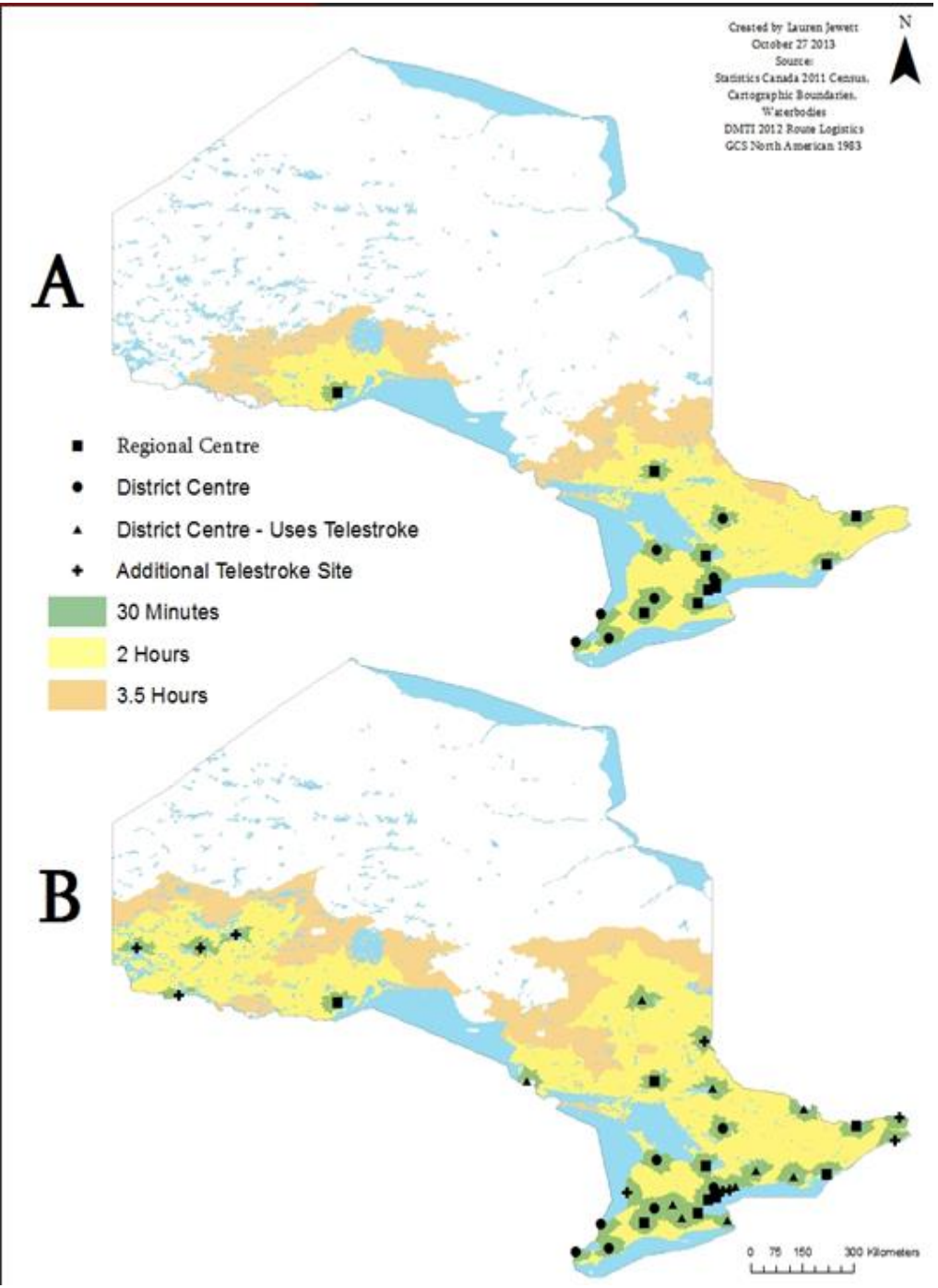
Brockville General Hospital
Right here, with you.

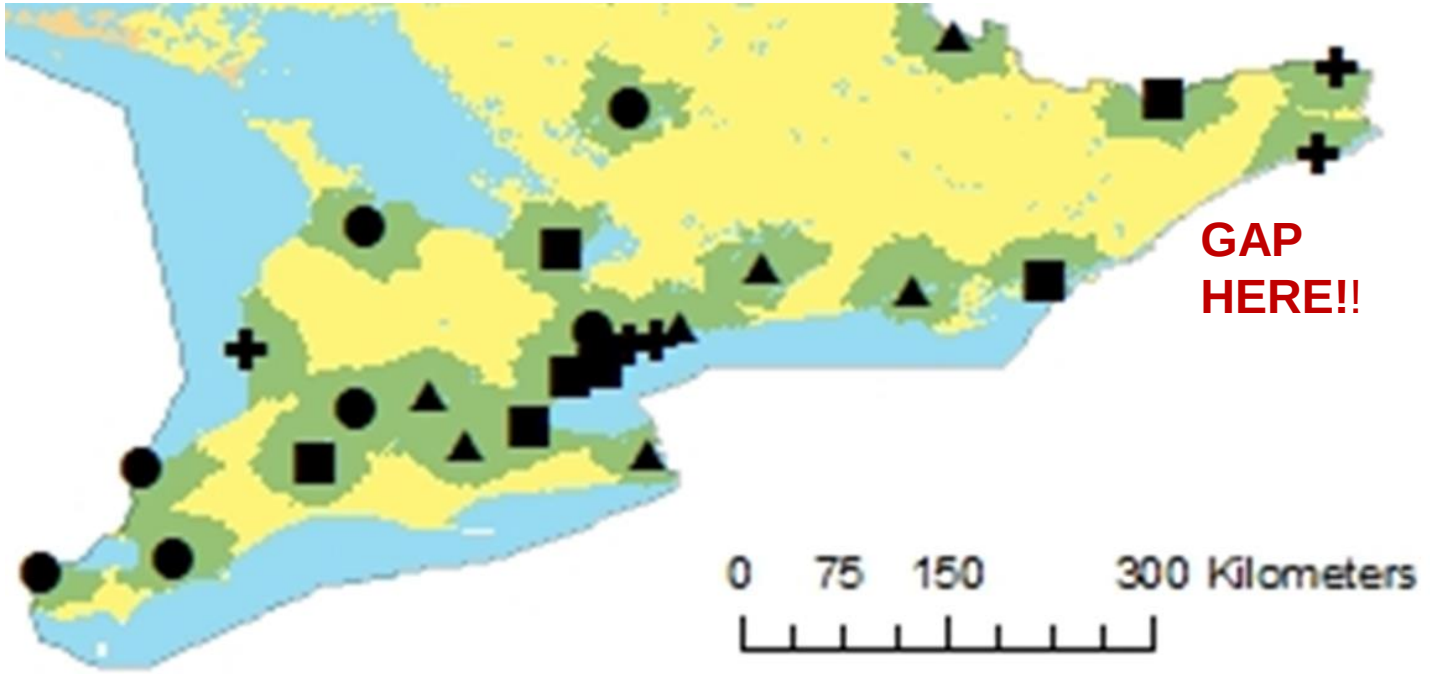
Transfer to Kingston Delays Care

TIME is BRAIN

Volume is significant:
2023/24 - **112** stroke patients taken to KGH from L&G; **20** others from S.Perth & Smiths Falls = **132**
Some excluded due to time window.
Continued growth is anticipated.

Geomapping Ontario





Brockville General Hospital
Right here, with you.

2023 Re-engagement

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Enablers

- Critical Care Outreach Team – nursing support to ED
- Critical Care physicians willing to assist during days
- Majority of stroke presentations on days/evenings
- Plans to increase DI coverage were initiated pre-pandemic
- TNK = less nurse escort requirement for EVT transfers
- Paramedic protocols, Integrated Stroke Unit, Stroke Prevention Clinic
- Provincial Telestroke; KHSC Stroke Service supports

Barriers and Opportunities

- DI: 24/7 CT tech coverage, training & competency – call back model ready
- ED physician workload – support on nights
- Clarification of the evidence, telestroke supports, key messages

Workgroup Formed 2024

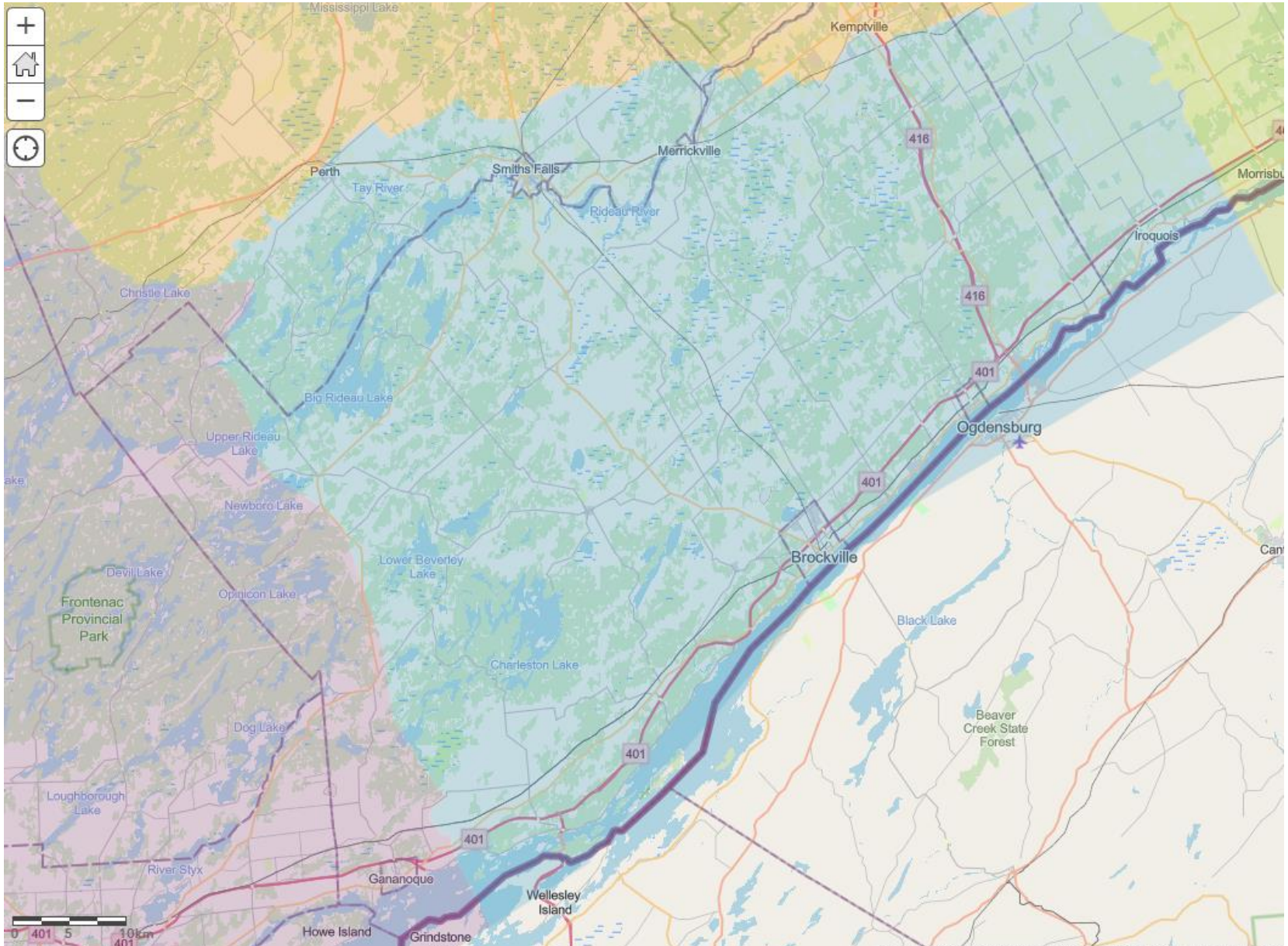
- Multidisciplinary and cross-program engagement
- Advisory and problem-solving role
- Project plan oversight
- Includes BrGH teams, SNSEO, L&G Paramedic Services and a Patient & Family advisor
- Meetings held every 2 weeks

Project Plan

Project plan: components – applied across programs e.g., DI, ED, CC

a. Engagement and readiness application
b. Clinical processes and pathways
c. OTN technology
d. Imaging protocol (mCTA) and technology (PACS/ ENITS)
e. Communication plan
f. Resources – staff, space, supplies and equipment
g. Education and training
h. Evaluation plan
i. Modifications to acute stroke protocol and provincial Telestroke
j. Full MOCK July 4th and Launch July 8th 2024

Change in Dispatch Mapping to Stroke Centres will Change when Brockville goes live as a Telestroke Site.



NOTE that this map will vary somewhat pending traffic concerns, obstructions etc.

Dispatch uses a real-time computer assisted mapping.

Brockville General Hospital
Right here, with you.

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Together we can do it!

Patients will benefit.

The community will benefit.

Questions/Discussion

6. Paramedic Transport – Reminders
BLS Standards and Guidelines

1. BLS standards update: LAMS Positive Patients in 6-24 hour time window
   - LAMS to 24 hours; CTAS 2 if positive, Communicating with local ED; documentation
   - Any updates or concerns?
2. Guidelines for determining Medical Escorts for EVT Transport (includes post TNK)
   - Provincial guide; transport experience from Quinte Health; transfer communication
   - Discussion and relevance for Brockville

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Basic Life Support Patient Care Standards

Version 3.4

Comes into force
March 10, 2023

Emergency Health
Regulatory and
Accountability Branch
Ministry of Health

Ontario

Paramedic Basic Life Support Standards
LAMS Screen to 24 hours

Change in BLS Standards 3.4 for Stroke Care March 2023 page 77

6. perform a secondary screen for LVO stroke using the Los Angeles Motor Scale (LAMS) for all probable stroke patients presenting within 24 hours of stroke symptom onset.
   a. if LAMS is greater than or equal to 4 (≥4), classify the patient as CTAS 2,
   b. inform the receiving hospital whether "LVO Clinical Screen is positive or negative "
   c. Document LAMS screen for patients presenting with CVA/Stroke symptoms 0-24 hours from symptom onset.

***** NO CHANGE to Bypass Protocol in SE region *****

Paramedic Prompt Card for Acute Stroke Bypass Protocol

This prompt card provides a quick reference of the *Acute Stroke Protocol* contained in the *Basic Life Support Patient Care Standards* (BLS PCS).

Indications under the Acute Stroke Protocol

Redirect or transport to the closest or most appropriate Designated Stroke Centre (DSC)* will be considered for patients who meet **BOTH** of the following:

1. Present with a new onset of at least one of the following symptoms suggestive of the onset of an acute stroke:
    a. Unilateral arm/leg weakness or drift.
    b. Slurred speech or inappropriate words or mute.
    c. Unilateral facial droop.
2. Can be transported to arrive at a Designated Stroke Centre within 6 hours of a clearly determined time of symptom onset or the time the patient was last seen in a usual state of health.

Inform the CACC/ACS to aid in the determination of the most appropriate destination.

*A Regional Stroke Centre, District Stroke Centre or Telestroke Centre regardless of EVT capability.

Large Vessel Occlusion (LVO) Assessment

Perform a secondary screen for LVO stroke using the Los Angeles Motor Scale (LAMS) for all probable stroke patients presenting within 24 hours of stroke symptom onset.

a. if LAMS is greater than or equal to 4 (≥4), classify the patient as CTAS 2
b. inform the receiving hospital whether *LVO Clinical Screen is positive or negative* **

** In select regions, LVO Clinical Screen + patients, presenting within 6 hours of stroke symptom onset, may be redirected to the closest EVT centre.

Contraindications under the Acute Stroke Protocol

ANY of the following exclude a patient from being transported under the Acute Stroke Protocol:

1. CTAS Level 1 and/or uncorrected airway, breathing or circulatory problem.
2. Symptoms of the stroke resolved prior to paramedic arrival or assessment***.
3. Blood sugar <3 mmol/L****.
4. Seizure at onset of symptoms or observed by paramedics.
5. Glasgow Coma Scale <10.
6. Terminally ill or palliative care patient.
7. Duration of out of hospital transport will exceed two hours.

***Patients whose symptoms improve significantly or resolve during transport will continue to be transported to a Designated Stroke Centre.**

****If symptoms persist after correction of blood glucose level, the patient is not contraindicated.

CACC/ACS will authorize the transport once notified of the patient's need for redirect or transport under the Acute Stroke Protocol.

Ontario

LVO screen – up to 24 hours and if positive, CTAS 2

If LVO positive, give local receiving hospital ED a heads up to triage quickly – potential transfer for EVT

- **Los Angeles Motor Scale (LAMS)** is a brief 3-item stroke severity assessment measure designed for pre-hospital use.
- It identifies possible **large vessel occlusion (LVO) stroke** & potential eligibility for endovascular thrombectomy (EVT).
- ***A score of 4 or greater is considered positive.***
- Patients scoring 4 or 5 may benefit from EVT to reduce or eliminate disability.

Key Messages for Southeastern Ontario

1. **There is NO change across Southeastern Ontario in terms of stroke bypass/re-direct**. The process is the **usual Acute Stroke Protocol process** for paramedics. Patients who fit prompt card criteria will go to closest Stroke Centre if within 6 hr time window. Outside 6-hr time window, they go to local hospital ED who will assess & decide on transfer to KGH for EVT. **EDs are using ACT FAST as their LVO screen**/triage tool & can transfer directly to KGH on stroke protocol if ACT FAST positive **in 6 to 24 hour time window.**
2. Paramedics **provide CACC with actual LAMS score**.
3. Paramedics **let local hospital ED know they have a patient that is LVO positive when patching in about Acute Stroke Protocol**. This gives ED a **"heads up"** to help EDs make faster decisions about Acute Stroke Protocol including transfers.

Large Vessel Occlusion Screening Tools

Paramedic Prompt Card

Revised BLS 3.4

“LAMS” Large Vessel Occlusion Screening Tool

in use by Paramedic Services **to 24 hours**

ED Walk-in Protocols

in use since 2019-20 in EDs up to 24-hours post stroke onset

“ACT-FAST” screening tools

LAMS SCORECARD

Would this patient benefit from StrokeEVT?

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STEP 1
FACIAL DROOP

Ask the person to smile. Is there any weakness or facial droop?

0 Absent
1 Facial droop present

_____

+

STEP 2
ARM DRIFT

Bring the person's arm(s) up to a 90° angle and ask them to hold that position for 10 seconds. Is there any drift or drop of an arm?

0 Absent
1 Drifts Down
2 Falls Rapidly

_____

+

STEP 3
GRIP STRENGTH

Ask the person to grip your hands. Does one hand have less power than the other?

0 Normal
1 Weak Grip
2 No Grip

_____

=

STEP 4
ADD SCORE

Total possible score is 5

_____

If LAMS score is positive (4 or greater), patient may be eligible for EVT

January 13, 2021; Adapted from Northwestern Ontario Regional Stroke Network

TRIAGE TOOLs for Acute Stroke < 24 hours

STROKE NETWORK of Southeastern Ontario

FAST Stroke Screen:

FACE is it drooping? OR **ARM** can raise both arms? OR **SPEECH** is it slurred or jumbled? AND **TIME** is it less than 24 hours?

- ✓ One or more symptoms from Face, Arm, Speech **AND**
- ✓ LAST SEEN NORMAL <24 hours

IF ≤ 6 hours, refer to Pink Poster to activate Acute Stroke Protocol
IF 6 -24 hours, Complete **ACT-FAST**

ACT-FAST Stroke Screen:

"ARM" (one-sided arm weakness)

Position both arms at 45^0 from horizontal with elbows straight
POSITIVE TEST : One arm falls completely within 10 seconds

For patients that are uncooperative or cannot follow commands:
POSITIVE TEST:
Witness minimal or no movements in one arm & movements in other arm

Proceed if Positive

If **RIGHT** ARM is weak

"CHAT" (Severe language deficit)
POSITIVE TEST: Mute, speaking incomprehensible, or unable to follow simple commands

If **LEFT** ARM is weak

"TAP" (gaze & shoulder tap)
Stand on patient's weak side
POSITIVE TEST : Consistent eye gaze away from weak side
Otherwise
Tap shoulder & call name
POSITIVE TEST : Does not quickly turn head & eyes to you

Proceed if Positive

Physician will assess EVT Eligibility (Positive if All Criteria Met)

1. Deficits are NOT pre-existing (mild deficits now worse are acceptable as true deficits)
2. Living at home independently– must be independent with hygiene, personal care, walking
3. Does NOT have stroke mimics: seizure preceding symptoms, Hypoglycemia = glucose less than 2.8 mmol/L, Active malignancy with brain lesions

Proceed if Positive

Refer to Pink Poster to Activate Acute Stroke Protocol

2019-04-29

Additional Tips:

If patient is uncooperative or cannot follow commands & you clearly witness minimal or no movements in one arm and normal or spontaneous movements in the other arm, THEN proceed to next ACT-FAST Step

If both arms are similarly weak, or testing is clearly affected by shoulder problems or pain, notify ED physician

- Try to use clues to guess time last seen well – did someone talk to or call patient?
- For suspected Wake-Up symptoms, did patient get up overnight? Were they normal when first getting up?
- Negative eligibility if time of onset is > 24 hours

- If there is uncertainty as to time of symptom onset or whether a patient meets the ACT-FAST or Acute Stroke Protocol criteria, the ED physician can contact the neurologist on call for stroke for consultation

Reminder: Sample USED by ED STAFF in non-treating centres

Adapted from "Ambulance Clinical Triage for Acute Stroke Treatment" Zhao et al. Stroke 2018; 49: 945-951

Ontario Health
CorHealth Ontario

June 2023

Guidance for Determining the need for a Medical Escort for Confirmed Life or Limb Patients[1] with Acute Ischemic Stroke being Transferred for Endovascular Thrombectomy (EVT)

Medical escort if:

- **Patient receiving IV infusion**
- **Patient has received or likely to require ongoing acute hypertension medication**
- **At risk of medical deterioration requiring intervention outside paramedic scope**

Offload immediately upon arrival

If received TNK and above conditions not met, a medical escort may not be medically required

- **Use standard protocols for allergic reactions**
- **Neither ACP or PCP have ability to treat hypertension, nor can they manage infusion pumps**
- **Only ACP can intubate**

Relevance for District Stroke Centres – QH TNK implementation

- **Updates/discussion**

Quinte Health

GUIDANCE FOR DETERMINING NEED FOR RN ESCORT WITH ACUTE ISCHEMIC STROKE PATIENTS BEING TRANSFERRED FOR ENDOVASCULAR THERAPY (EVT)

If a patient receives TNK, a RN escort **may not** be medically required and the patient can travel with only paramedics. General guidelines for the need for an RN escort are found below, but in the end the sending physician will determine the need for an RN escort. Decisions to send the patient with paramedics alone should be discussed with paramedic services for concurrence.

The following guidelines will provide some criteria for determining if an RN escort is needed for EVT transport by land paramedics services:

TRANSPORT WITH PARAMEDICS ONLY

LIASE WITH TRANSPORTING PARAMEDICS TO ENSURE CONCURRENCE WITH DECISION

- Not intubated or at risk for intubation
- No decreased LOC (GCS 13 or greater)
- No IV medications or fluids required during transfer either by IV infusion pump or IV push (eg. IV antihypertensives, IV pressors, IV steroids, IV glucose, IV fluids - N/S, RL etc.)
- No active allergic reaction or angioedema from TNK
- Age 19 or greater
- Has not had a seizure on this presentation
- Not pregnant
- Not high risk of medical detoriation (vital signs stable, no post TNK bleeding, etc)

TRANSPORT WITH RN ESCORT

TNK GIVEN – ICU RN TRANSPORTS
NO TNK GIVEN – ED RN TRANSPORTS

- Intubated or at risk of airway compromise
- Decreased LOC (GSC 12 or less)
- IV Medications or fluids required during transfer
- Active allergic reaction or angioedema from TNK
- Age less than 19
- Has had a seizure on this presentation
- Pregnant
- High risk of medical deterioration (unstable vitals, post TNK bleeding, etc)
- Above transfer guidelines apply to both ED and inpatient cases – TNK given = ICU RN, No TNK given = ED RN

Quinte Health Guidance for Determining Need for RN Escort

Quinte Health

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7. Other Updates and Reminders – Round Table

- KHSC ED Stroke RN
- Public Awareness – Stroke Month – Heart and Stroke Campaign
- Why 911 Study- H&S and KHSC
- Community Paramedicine updates
- Transfers, Communication, Repatriation
- LUMEO Regional Health Information System
- Other?

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KHSC - Stroke RN in ED
Laura McDonough - Manager

Stroke RN Shift Duties

- Check and prepare stroke cart
- Prep stretcher and supplies for ASP
- Review all stroke orders on admitted patients to ensure STAND/consults are called
- Assist with ASP in the department
- Assist with post TNK assessments and provide support to RN for stroke scale completion.
- Review FAST and ACT FAST criteria with triage and offload RN
- Other tasks at the request of the charge nurse

Kingston Health Sciences Centre

Centre des sciences de la santé de Kingston

June is Stroke Awareness Month!!

Heart and Stroke FAST Signs of Stroke Campaign

Top key messages/take-aways 2024

- Heart & Stroke launched the FAST signs of stroke campaign a decade ago to help more people in Canada recognize the most common signs of stroke and know to **call 9-1-1 right away – this can make the difference** between life and death, or the difference between a better recovery and a lasting disability.
- Progress has been made as the number of Canadians who can **name at least two FAST signs of stroke has doubled** over the past almost ten years from two in 10 to more than four in 10.
- Despite improvements over the past 10 years not enough Canadians recognize the FAST signs of stroke and know to call 9-1-1 right away if they witness or experience them. **FAST awareness levels vary depending on gender, age, place of birth and race or ethnicity**.
- **Stroke continues to rise** in Canada. Currently almost one million people in Canada are now living with stroke and 108,707 strokes occur each year. Over half of people in Canada have been touched by heart conditions or stroke.

Why 911

Optimizing Stroke Care in NWO

Public Awareness Initiatives
EMS and First Responders
Patients and Family Education

NORTHWESTERN ONTARIO
Regional Stroke Network

Community Paramedicine

Enhancing Healthcare through
Community Paramedicine

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SOUTHEASTERN ONTARIO

LUMEO

Regional Health Information System – LUMEO and Stroke Care

- Workflows and transitions
- Order sets
- Assessment Tools
- Data capture

Final Reminders!!

- Transfers, Communication, Repatriation
- Pre-notification
  - Call ahead - provide ED with patient name/DOB if possible
  - Inform ED of estimated time of arrival – if delayed, let them know
  - Inform if patient is “LVO positive or negative”
- IV starts en route
- Documentation of ASP: onset time/LSN; stroke assessment; special transport code; reasons why met / did not meet ASP; LAMS score

- Contacts:

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STROKE ACR REVIEW – DATA QUALITY THEMES

REGIONAL PARAMEDIC PROGRAM FOR EASTERN ONTARIO

NOTE: Specialty Transport Code not used - unable to track if ASP or not without manual audit

Other reminders from last year's audit:

1. "Time of Occurrence" documentation not standard
2. Stroke assessment documentation not standard
   - Stroke assessment findings (facial assessment, extremity assessment, speech assessment, last seen normal) were not consistently documented in the physical exam sections.

8. Adjournment-Next meeting June 2025

THANK YOU!

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