Stroke Centre Pre-Notification by EMS

Renee Vilneff RN BNSc MN, Sr. Quality Assurance Strategist, AHS EMS

Overview

- STAT Stroke = acute stroke patient that can potentially be treated with thrombolysis or thrombectomy
- It is critical time sensitive determination: the patient must be transported directly to a Stroke Centre (Primary or Comprehensive) as fast as possible
- Early pre-notification to the hospital is a major determinant of fast hospital response
- Early pre-notification ideally occurs <u>prior</u> to leaving the scene
- Mandatory for all STAT Stroke patients

When Stroke is Suspected?

- Do you suspect a stroke?

- Go through the EMS Stroke Screen
  - Are there any **RED** findings?
    1. Level of consciousness - Responds to pain or unresponsive
    2. Speech - Incomprehensible or mute
    3. Hand grip - No grip
    4. Arm Strength - Falls rapidly or drifts down
    5. Leg Strength - Falls rapidly
  - Is the stroke onset 6 hours or less <u>Or</u> a stroke-on-awakening?
  - If Yes, by-pass to a stroke centre and **pre-notify**

Alberta Health Services

REVISED Stroke Screen

Place Label Here

EMS must obtain critical patient information on scene and complete the Stroke Screen en route.

Patient last seen neurologically normal		Patient name	Event number
Date *(dd-Mon-yyyy)*	Time *(hh:mm)*		
History provided by ☐ Patient ☐ Family member ☐ Other *(specify)* _____		Patient last seen by *(witness name)*	Witness phone
		History provider name	History provider phone

Complete **Physical Examination Findings** and **LAMS first,** then continue with **Screening Process**

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1. Physical Examination Findings *(Identifies Stroke Syndrome)*

Level of Consciousness
☐ **A**lert
☐ responds to **V**erbal
☐ responds to **P**ain
☐ **U**nresponsive

Facial Smile
☐ Normal (0)
☐ Right - Droop (1)
☐ Left - Droop (1)

Speech
☐ Normal
☐ Slurred
☐ Incomprehensible or mute

Hand Grips
☐ Normal (0)
☐ Right - Weak grip (1)
☐ Left - Weak grip (1)
☐ Right - No grip (2)
☐ Left - No grip (2)

Leg Strength
☐ Normal
☐ Right - Drifts down
☐ Left - Drifts down
☐ Right - Falls rapidly
☐ Left - Falls rapidly

Arm Strength
☐ Normal (0)
☐ Right - Drifts down (1)
☐ Left - Drifts down (1)
☐ Right - Falls rapidly (2)
☐ Left - Falls rapidly (2)

2. Los Angeles Motor Scale (LAMS) *(Assesses Stroke Severity)*

LAMS Score (Range 0 - 5): Calculate by adding the corresponding numbers beside Facial Smile, Hand Grips and Arm Strength of the Physical Examination Findings above. **Score the affected side only**

TOTAL = ☐

3. Continue to Screening Process ➡

Practitioner name *(print)*	Date *(dd-Mon-yyyy)*

Screening Process

Is blood glucose level greater than 3.0 mmol/L?

☐ No ➡ Treat as per Adult Stroke MCP and continue screening process

☐ Yes ➡ Continue screening process

Is one or more **red Physical Examination Findings** checked?

☐ No ➡ Transport to closest medical facility

☐ Yes ➡ Continue screening process

Last seen normal to arrival at Primary or Comprehensive Stroke Centre **6 hours or less OR awoke with symptoms?**

☐ No ➡ 🛑 screening process - Treat and transport as per local stroke strategy guidelines

☐ Yes ➡ EMS Stroke Screen is positive. Continue screening process

Is the LAMS score 4 or greater?

☐ No ➡ 🛑 Provide early pre-notification and rapid transport to the most appropriate Primary or Comprehensive Stroke Centre. Notify the triage nurse of a "STAT Stroke"

☐ Yes ➡ 🛑 As per local stroke strategy guidelines, call Emergency Link Centre stating "I have a STAT Stroke patient with a LAMS score of 4 or 5"

QuICR

Information to include in the pre-notification

- Age
- Sex
- Last Seen Normal (onset) time
- Vital signs (BP, HR, RR, SaO2, glucose)
- Symptoms
  - Red findings
  - LAMS score
- Estimated time of arrival
- If available, demographics (e.g. last name, year of birth, health care number)

How the Hospital uses the Pre-Notification

- Alert the care team, who can meet the patient at triage
- Pre-register the patient (if possible at the receiving hospital)
- Gather information from electronic records about the patient
- Prepare for thrombolysis
- Alert the CT scanner technicians/team
- Heads-up call for RAAPID for possible transport to Calgary/Edmonton for endovascular treatment (if LAMS 4-5)