

WHY 911? Optimizing Stroke Care in Northwestern Ontario

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Background:

- Heart and Stroke, Ontario FAST 2018 polling results show the public dials 911 when a person suddenly experienced the signs of stroke. The results demonstrate a decline in recognition and understanding of the signs of stroke from 2015 to 2018.
- The Ontario Stroke Report Card for North West Local Integrated Health Network 2013-2018 states 50.8% of stroke and TIA patients arrive at the ED by ambulance despite the provincial benchmark being 65.9%. NWO is the lowest performer provincially for this indicator over the last 5 years.
- We needed to understand WHY our patients do not call 911.

Objective:

- To determine if Northwestern Ontario residents know the signs of stroke and how to access stroke care.
- To understand why people call 911 and choose not to call 911 during stroke symptom onset.
- To support and guide public awareness initiatives, EMS training and stroke patients and family education.

Methods

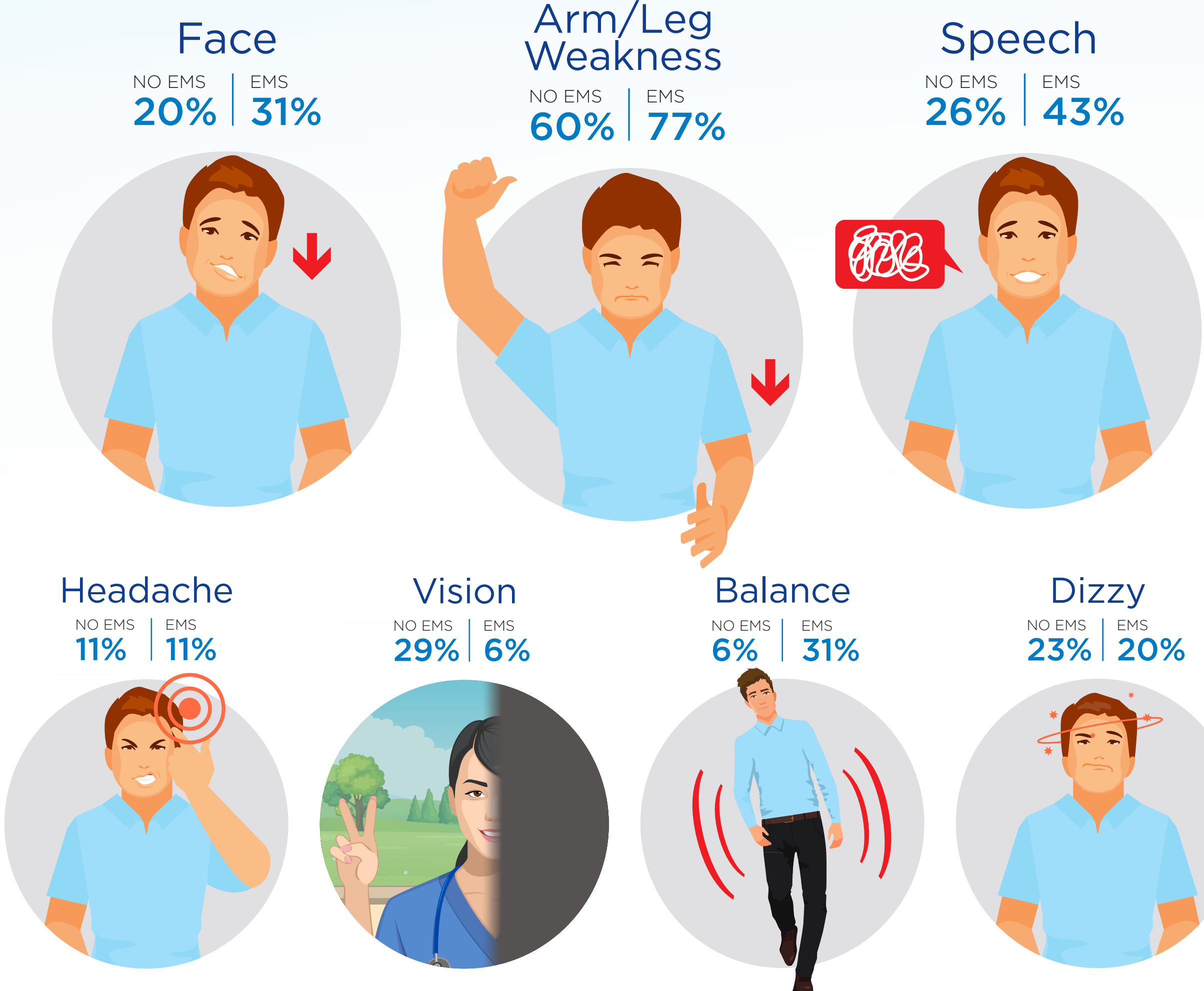
- August to December 2018, patients and families were interviewed to understand why they did or did not call 911.
- The questionnaire followed the same format and answers were open-ended to record individual experiences.

Figure 1

Characteristics of Patients Interviewed Sept 7 to Dec 6 - 2018 70 cases	
Interview	
Patient only	69%
Family only	4%
Both Pt and Family	27%
Gender	
Male	56%
Female	44%
Home Location	
City of Thunder Bay	54%
Regional	46%
Average Age of Pt	65 yrs
Average Age of Pt with Arrival Method	
EMS	69 yrs
No EMS	60 yrs
Arrival Method	
EMS	50%
Self Transport	50%
EMS Arrival Method with Gender	
Male	54%
Female	46%
No EMS Arrival Method with Gender	
Male	54%
Female	46%
No EMS Activation to Arrival Method	
Spouse	26%
Children / Friend	51%
Self	20%
Taxi	3%
Stroke checklist delivered	100%

Figure 2

Signs vs Arrival Method

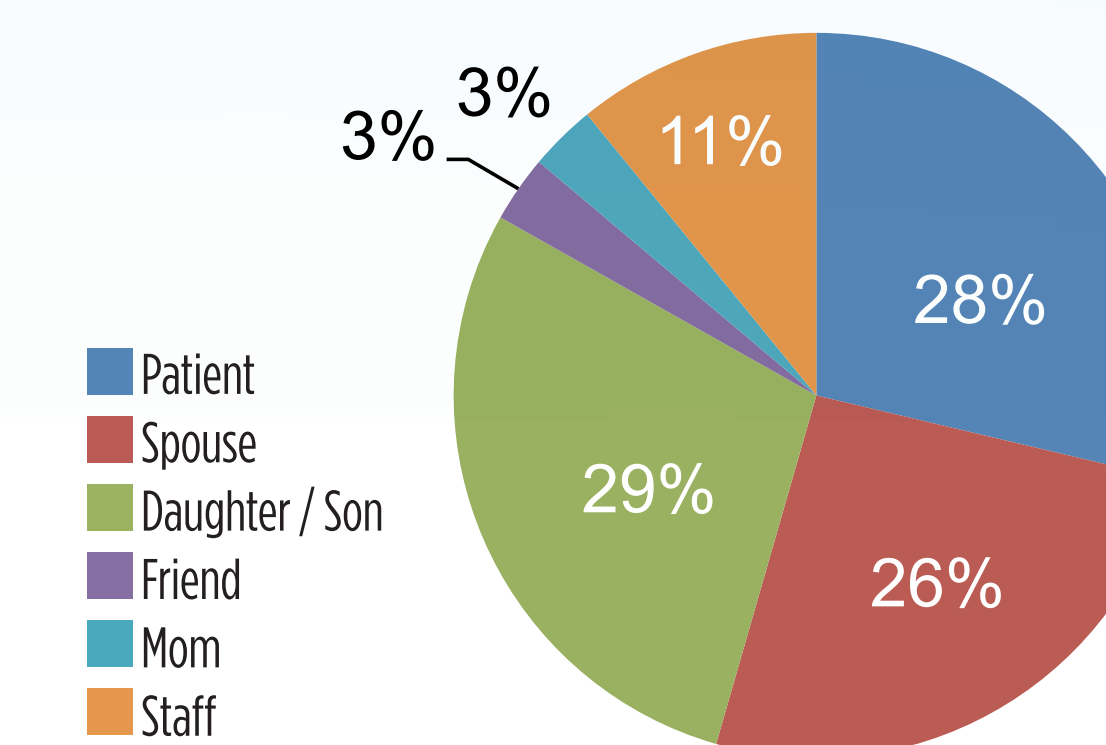


Results:

- 70 patients' interviewed.
- 50% patients activated EMS with 50% patients self transporting to ED.
- Patients did not call 911 because they didn't know it was a stroke, didn't think it was an emergency or had other symptoms.
- Those who called 911 knew the signs, saw it advertised, or had history of stroke.
- Bystanders recognized the signs and called 911 for the patients in both scenarios.

Figure 3

Patients who arrived via EMS:
Who called 911?



Patient who arrived via EMS
How did you know to call 911?

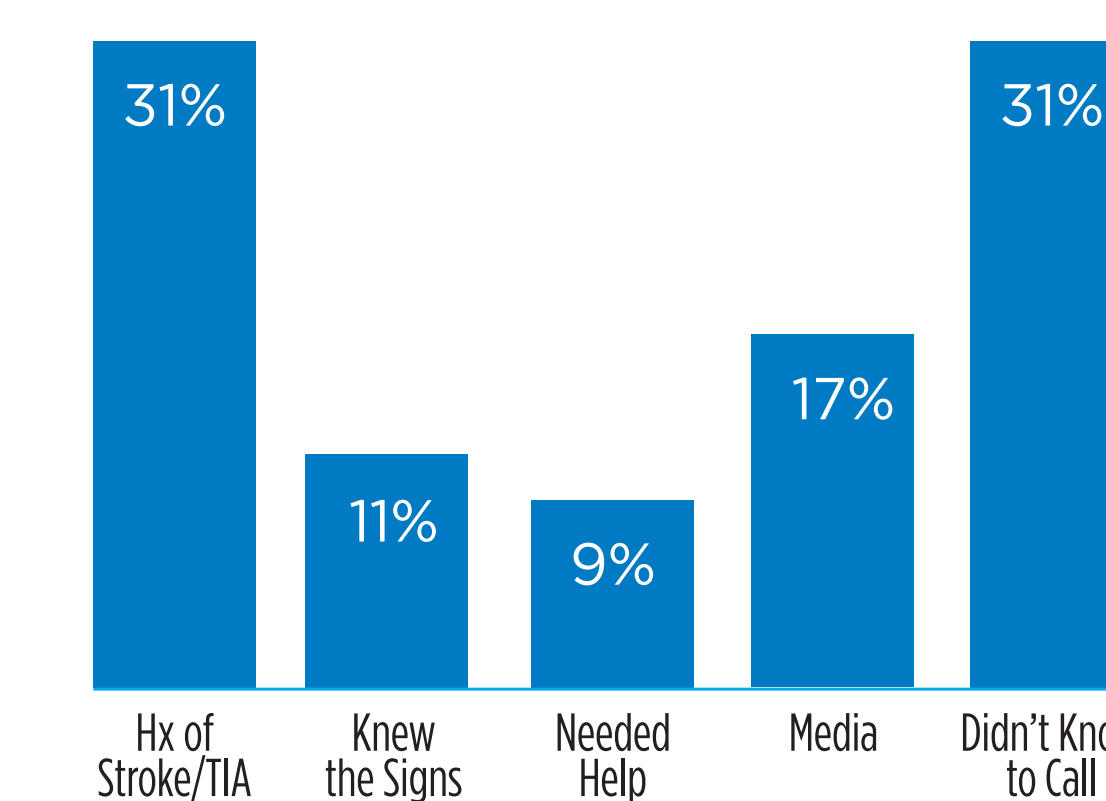


Figure 4

Patient who arrived NOT with EMS	35/70 (50%) patients called 911
Did you consider calling 911? Rationale	
No, never considered calling 911 due to:	
Did not know it was a stroke	29%
Wasn't an emergency	26%
Cost	9%
Driving already / live close / live far / go with family & friends	37%
Yes, but did not due to:	
Cost	6%
Took taxi: Less expensive and wanted spouse to come	3%
Total: 91% NO	
Total: 9% YES	

Conclusions

- Engaging patients determined whether existing public awareness initiatives and education at discharge are meeting the needs of the patients.
- The goal is 10% increase on the Ontario Stroke Report Card to increase the number of people accessing 911.
- Why 911 project will guide: Public Awareness Initiatives, EMS and First Responder Training, Stroke Patients and Families Education.

Public Awareness Initiatives:

determine our target audiences, content and delivery of public education.

- FAST campaign in Physician offices and public spaces including churches.
- BE FAST to include the Balance and Vision in education.
- Educate bystanders about their important roll.
- Focus on treatment times in education, importance of call 911, why FAST Decals, what can paramedics do to help.
- Emphasis the critical first hour in stroke care.
- Use video production to utilize in education. Display at health fairs / presentations, TVs in hospital, Physicians' offices.

EMS and First Responder Training:

continue to provide education in stroke care for this stakeholder group.

- Work with EMS to assist in the message of FAST.
- BE FAST: use data and research to make an addition to training and education.
- Emphasis the critical first hour in stroke care: work with the paramedics through education.
- Use video production for EMS training.
- Increase training and education through EMS LMS.

Stroke Patients and Families Education:

upon discharge the importance of accessing 911 for stroke care.

- Review the importance of calling 911.
- Provide stroke checklist.
- Educate about treatment times and not delaying access to care.
- Develop a discharge video for patients and families.
- Regional Patients: Explain first responders' role and specific EMS and access to care.