

Background

Launch of a new FAST signs of stroke campaign

In 2014 Heart & Stroke launched a new campaign (FAST) to help people in Canada better recognize the signs of stroke and take action. The new campaign using the FAST signs of stroke was based on existing campaigns being used successfully in many countries, and originally developed in the UK in 1998 to train ambulance staff. Heart & Stroke also consulted with Canadian experts in neurology, emergency medicine, psychology and marketing.

Helping Canadians recognize the signs of stroke and act FAST

FAST stands for Face, Arms, Speech and Time (see full messages below). FAST translates to VITE in French, which stands for Visage (affaîssé), Incapacité (à lever les deux bras), Trouble (de la parole), Extrême urgence. The FAST signs are the three most common signs of stroke and they are the signs that are more likely to be caused by stroke. There are additional signs including vision changes (blurred or double vision), sudden severe headache (usually accompanied by other signs), numbness (usually on one side of the body), and problems with balance. In addition to the three signs, "Time" refers to the need to call 9-1-1 (or emergency medical services) right away.

A simple and effective campaign to increase awareness

Previous to 2014, Heart & Stroke awareness campaigns had focused on a longer list of signs and surveys indicated that not enough people recognized when someone was experiencing a stroke and knew what to do. Although signs of stroke had not changed, the new campaign was designed to focus on shorter, simpler messages based on an acronym (FAST) and conveyed the urgency to act. The goal was to increase the number of people in Canada who recognize the signs of stroke and know to call 9-1-1 to reduce the time between stroke onset and arrival in a hospital emergency department and to increase the proportion of stroke patients who arrive at a hospital emergency department by ambulance.

Heart & Stroke put significant resources into the research and development of the FAST campaign and has sustained that commitment through additional asset creation and updates, promotion, monitoring and evaluation, including through public polling. Over the past 10 years provincial governments, corporate partners (including media partners) and other community and health partners have provided strong support promoting these life-saving messages.

A continuously evolving and inclusive campaign

In 2022, based on insights from annual consumer polling, Heart & Stroke updated FAST campaign assets to further reinforce the need to call 9-1-1 (or local emergency medical services (EMS) where 9-1-1 services do not exist). Calling 9-1-1 can reduce the time between stroke onset and arrival at the best hospital, meaning the closest hospital that provides urgent stroke care.

The FAST signs of stroke mnemonic is available in English, French, traditional Chinese, simplified Chinese and Punjabi. Heart & Stroke, working in partnership with First Nations communities in Manitoba

is developing a toolkit which includes FAST assets adapted and translated into a number of First Nation languages (including for children and youth) to ensure they reflect the identified needs of the communities and include appropriate avenues for campaign promotion. The intent is to continue to expand the toolkit and make it available to other Indigenous communities across the country. Heart & Stroke is also exploring strategies to better reach newcomers with the FAST campaign.

FAST assets are publicly available to download at heartandstroke.ca/FAST

Top key messages/take-aways

- 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.

Key messages

10 years of raising awareness around the FAST signs of stroke

For a decade Heart & Stroke has been raising awareness around the need to act FAST when witnessing or experiencing stroke.

- In 2014 Heart & Stroke launched a new national campaign to raise awareness of the signs of stroke based on FAST, a simple and effective educational approach that was being used in other countries around the world in several languages.
 - **F**ace – is it drooping?
 - **A**rms – can you raise both?
 - **S**peech – Is it slurred or jumbled?
 - **T**ime to call 9-1-1 right away.
- Recognizing the signs of stroke and acting quickly can mean the difference between life and death, or the difference between a better recovery and a lasting disability. With stroke, time is brain.
- Anyone witnessing or experiencing the signs of stroke should call 9-1-1 or local emergency medical services (EMS) right away. Do not drive to the hospital, an ambulance will get you to the best hospital for stroke care. Lifesaving treatment begins the second you call 9-1-1.
- Working with governments, corporate, community and health partners, Heart & Stroke has supported FAST campaigns across the country for the past ten years in various locations and across channels.
- Awareness levels increase when campaigns are in market and drop off post-campaign.
- Life-saving treatments such as clot-busting drug treatments and endovascular thrombectomy (EVT) which physically removes clots through blood vessels must be administered as quickly as possible within a few hours of stroke onset to restore blood flow to the brain.
- Heart & Stroke has been a key contributor to stroke advancements by funding research, raising awareness, driving change throughout stroke systems of care across the country, and advocating for improvements to health policy.

Progress has been made over the past decade as more Canadians recognize the FAST signs of stroke. *According to polls commissioned by Heart & Stroke:ⁱ*

- 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 (21%) to more than four in 10 (44%).
- Significant gains have been made over the past three years alone, as the number of Canadians who can name at least two FAST signs of stroke increased from three in 10 (33%) to more than four in 10 (44%).

The FAST campaign has helped more Canadians recognize the signs of stroke and know what to do. *According to polls commissioned by Heart & Stroke:*

- Currently, nearly six in 10 Canadians (58%) who have seen or heard the FAST campaign can name at least two of the FAST signs of stroke, compared to less than four in 10 (35%) of those who are not aware of the campaign.
- Currently nearly nine in 10 (89%) of those who can name all three FAST signs of stroke would call 9-1-1 right away if they witnessed someone experiencing a stroke, compared to only seven in 10 (70%) who couldn't name any FAST signs of stroke.

Recall FAST signs of stroke over time summary (adults in Canada 18+)

	Canada 2021	Canada 2022	Canada 2023
0 FAST signs	39%	35%	32%
1 FAST sign	27%	25%	25%
2 FAST signs	24%	27%	27%
3 FAST signs	10%	13%	16%
At least 2 FAST signs	33%	40%	44%
At least 1 FAST sign	61%	65%	68%
Immediate Action: EMS/911	81%	82%	79%

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 and recognition varies across the country. *According to polls commissioned by Heart & Stroke:*

- Currently three in 10 Canadians (32%) cannot name any of the FAST signs of stroke. This means one-third of the population are unaware of how to recognize the most common signs of this medical emergency.

- Less than half of Canadians know more than one FAST sign of stroke. Currently more than four in 10 Canadians (44%) can name at least two of the FAST signs of stroke and fewer than two in 10 (16%) can name all three FAST signs.
- Currently nearly eight in 10 Canadians (79%) would call 9-1-1 right away if they witnessed someone experiencing a stroke. This number has hardly changed in the past almost 10 years and in fact in the last year it decreased slightly. Calling 9-1-1 in a medical emergency such as stroke is essential; an ambulance will get you to the best hospital for stroke care.
- Recognition of the FAST signs of stroke varies across the country (adults 18+):

	0 FAST signs	At least 2 FAST signs
Newfoundland and Labrador	25%	51%
Prince Edward Island	21%	59%
Nova Scotia	23%	44%
New Brunswick	30%	51%
Quebec	32%	43%
Ontario	37%	37%
Manitoba	22%	57%
Saskatchewan	28%	52%
Alberta	28%	45%
British Columbia	24%	55%

There are some remarkable differences in awareness levels of FAST signs of stroke based on gender, age, place of birth and race or ethnicity. *According to polls commissioned by Heart & Stroke:*

- **Women** are more aware of the FAST signs of stroke than men.
 - Although knowledge of at least two FAST signs of stroke has increased among both men and women, currently nearly half of women (48%) can name two or more FAST signs of stroke compared to fewer than four in 10 men (39%).
- **Older Canadians** are more familiar with the FAST signs of stroke and more likely to take action:
 - More than half of Canadians over age 50 (52%) can name two or more FAST signs of stroke compared with fewer than four in 10 under age 50 (37%).
 - More Canadians over age 50 (83%) would call 9-1-1-right away if they witnessed someone having a stroke compared to those under age 50 (75%).
- Currently fewer than two in 10 (17%) **newcomers** (lived in Canada for ten years or less) can name at least two of the FAST signs of stroke. Although, this is a slight increase from the previous year, it is still too low, especially when compared with those **born in Canada** – nearly half (48%) of whom can name at least two FAST signs of stroke.
- Currently six in 10 **newcomers** to Canada (61%) cannot name any of the FAST signs of stroke. This lack of awareness is putting communities at risk of not receiving timely care for a medical emergency.
- **Newcomers** to Canada are also less likely to call 9-1-1 right away if they witnessed someone experiencing a stroke, compared to those born in Canada.
- **Many ethnically diverse communities** are less likely to be familiar with the FAST signs of stroke. Fewer South Asian, East/South East Asian, Black, Indian, Middle Eastern/West Asian/North African and Latin American Canadians can name two or more FAST signs of stroke compared with White Canadians.
- Targeted strategies are required to address these inequities to ensure everyone knows the signs of stroke and what to do, regardless of gender, age, place of birth, and race or ethnicity.

Stroke continues to rise in Canada – more people are living with stroke and more strokes are happening each year.

- The number of people in Canada living with stroke has steadily increased over the past 20 years. Currently almost one million people in Canada are now living with stroke.ⁱⁱ
- When the FAST campaign first launched in 2014 there were an estimated 62,000 strokes in Canada each year. According to the latest analysis based on a Heart & Stroke funded study there are now approximately 108,707 strokes each year in Canada.ⁱⁱⁱ That is roughly one stroke every five minutes.
- Stroke can happen at any age. More than 10,000 children (0 – 18 years) are living with stroke.^{iv}
- Stroke is on the rise in Canada due to the aging population and because more younger people are having strokes.^v
- Over half of people in Canada have been touched by heart conditions or stroke. According to the most recent poll commissioned by Heart & Stroke, six in 10 Canadians have themselves experienced or had someone close to them experience a heart condition or stroke.
- Stroke is a leading cause of adult disability.

Stroke prevention, awareness, treatment and care in Canada has improved dramatically over the past several decades yet more needs to be done as stroke continues to rise.

- More people are surviving stroke than 30 years ago due to research breakthroughs, better awareness of the signs of stroke and quick responses, advances in treatment and enhanced access to care.
- Over 13 years (2009 – 2022) acute stroke treatment and care expanded substantially in hospitals across the country^{vi}. Specifically, the number of hospitals that have stroke teams, stroke units, telestroke capacity, and provide intravenous thrombolysis or EVT increased as following:
 - **Stroke teams** increased from 74 to 155 (+81)*. Dedicated stroke teams have broad expertise including neurologists, nurses, rehabilitation professionals, pharmacists, and others.
 - **Stroke units** increased from 58 to 95 (+37). A stroke unit is a specialized hospital unit dedicated to the care and management of stroke patients. Stroke unit care increases the odds that a stroke patient will survive, return home without further hospital care and regain independence.
 - **Telestroke** capacity increased from 71 to 307 (+236) for acute stroke management. Telestroke was first used to increase access to life-saving, clot-busting drugs to smaller, rural and remote communities but has expanded over the decades to include many services from prevention through to rehabilitation and recovery.
 - **Intravenous thrombolysis** capability increased from 153 to 232 (+79). Stroke patients who receive clot-busting drugs within a few hours are much more likely to have little to no disability.
 - **EVT (endovascular thrombectomy)** treatment increased from 0 to 25 hospitals. EVT physically removes blood clots to restore blood flow to the brain and reduces death by 50% and leads to better recovery.

Definitions

A stroke happens when blood stops flowing to a part of the brain or bleed occurs in the brain, leading to death of brain cells. Strokes can be large or small, and the effects of stroke depend on the part of the brain affected and the extent of damage.

- **Ischemic stroke** is the most common form of stroke, caused by a blood clot. **Hemorrhagic stroke** occurs when a blood vessel ruptures, causing bleeding in or around the brain. A **transient ischemic attack (TIA)**, sometimes referred to as a mini-stroke, is caused by a small clot that briefly blocks an artery and stops blood flow. TIAs are an important warning that a more serious stroke may occur.

Heart & Stroke social handles and links

Twitter

- **EN:** @HeartandStroke (<https://twitter.com/HeartandStroke>)
- **FR:** @coeuretavc (<https://twitter.com/coeuretavc>)

Facebook

- **EN:** @heartandstroke (<https://www.facebook.com/heartandstroke>)
- **FR:** @coeuretavc (<https://www.facebook.com/coeuretavc>)

Instagram

- @heartandstroke (<https://www.instagram.com/heartandstroke/>)

LinkedIn

- @heartandstroke (<https://www.linkedin.com/company/heart-and-stroke>)

heartandstroke.ca/FAST Beat Stroke #StrokeMonth

ⁱ Heart & Stroke commissioned national, bilingual polls of Canadian residents 18 years and older conducted by Environics Research Group between 2015 – 2023. The most recent poll surveyed 3,846 Canadian residents between Nov. 29 - Dec. 31, 2023. Sample sizes for prior year polls ranged from 2,850 to 3,380 Canadian residents. Polls conducted from 2021 onward utilized an online/digital format in which respondents were drawn from an online panel and polls conducted prior to 2021 used a telephone format; results between these two time periods are not directly comparable. Survey data were weighted by region, age, and gender to match census data.

ⁱⁱ [Canadian Chronic Disease Surveillance Database](#), 2020/21 data

ⁱⁱⁱ Holodinsky, J. K. et al. Estimating the number hospital or emergency department presentations for stroke in Canada. *Can. J. Neurol. Sci.* 1–18 (2022)

^{iv} Heart & Stroke 2017 Stroke Report, stat provided by Dr Adam Kirton, based on IPSS data.

^v Botly, L. C. P. et al. Recent Trends in Hospitalizations for Cardiovascular Disease, Stroke, and Vascular Cognitive Impairment in Canada. *Can. J. Cardiol.* 36, 1081–1090 (2020).

^{vi} Stroke Resource and Service Inventory, Heart & Stroke, updated April 2022