

Heart & Stroke

Stroke Month 2022 Key Messages and Backgrounder for media

June 1, 2022

Key messages and background information to accompany the 2022 Stroke Month media release

Top take-aways

- Stroke prevention, awareness, treatment and recovery has greatly improved over the past several decades because of research breakthroughs, increased awareness and improvements to stroke systems of care. Heart & Stroke has been a key contributor to the stroke advancements.
- Stroke is a medical emergency, but more Canadians are surviving stroke because the signs are recognized and fast action is taken to ensure they are able to get the right care at the right place in the right time.
- Despite advancements, more needs to be done to continue to raise awareness, address gaps in stroke care and recovery support and ensure more equitable access across the country.
- Stroke is on the rise in Canada due to the aging population and younger people having strokes. More than 89,000 strokes occur in Canada each year** and it is the third leading cause of death.

1. Stroke prevention, awareness, treatment and care in Canada has improved dramatically over the past several decades and stroke continues to rise.

- About thirty years ago stroke could be diagnosed but there were no treatments and very little recovery support.
- **NEW** Currently 878,000* people in Canada have had a stroke (or 878,000 people in Canada are living with stroke) and more than 89,000** strokes occur in Canada each year.



- Stroke in Canada is on the rise. The number of strokes will go up as the population ages (age is a risk factor) and the number of young adults experiencing stroke increases.
- More people are surviving stroke (*or living with stroke*) than thirty years ago due to research breakthroughs, better awareness of the signs of stroke and quick responses, advances in treatment and enhanced access to care.



- **NEW** Over 13 years (**2009 – 2022**) acute stroke treatment and care expanded substantially in hospitals across the country. Specifically, the number of hospitals that have stroke teams, stroke units, telestroke capacity, and provide tPA (Alteplase) or EVT have increased as following

- **Stroke teams** increased from 74 to 155 hospitals (+81). Dedicated stroke teams have broad expertise including neurologists, nurses, rehabilitation professionals, pharmacists, and others.
- **Stroke units** increased from 58 to 95 hospitals (+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 hospitals (+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. The pandemic accelerated the use of virtual care, allowing many in-person visits and types of care to be done using technology such as phone, video or email.

- **Alteplase (tPA)** capability increased from 153 to 232 hospitals (+79). Stroke patients who receive clot-busting Alteplase (tPA) 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.

2. Heart & Stroke has been a key contributor to research breakthroughs that have resulted in more prevention, improved diagnosis, increased life-saving treatments, better rehabilitation and enhanced recovery support.

- Since 1952, Heart & Stroke has invested over \$1.6 billion in life-saving research and has championed the adoption of discoveries into clinical practice and policy.

Research milestones that Heart & Stroke has supported include:

- **Risk factors and prevention**
 - In 2000 **ACE inhibitors** were discovered to significantly reduce the risk of heart attacks and strokes. ACE inhibitors lower blood pressure – the number one risk for stroke, and protect blood vessels.
 - The **PURE Study** (2002 - 2030) is a global initiative investigating risk factors for heart disease and stroke. Including 27 high, middle and low-income countries, 58 sites, and 225,000 participants from urban and rural communities, PURE is investigating the impact of modernization, urbanization, and globalization on health behaviours and how risk factors develop and influence cardiovascular disease and brain health and other areas. Early findings show that differences in death rates between less and more affluent countries are likely due to differences in health care rather than risk factors. The PURE-MIND study is looking at how covert strokes – small strokes that cause only subtle symptoms can lead to vascular cognitive impairment and vascular dementia (problems with planning, thinking and memory.)
 - In 2010 The **INTERSTROKE study** identified 10 risk factors that account for 90% of the risk of strokes worldwide: high blood pressure, physical inactivity, unhealthy diet, obesity, smoking, cardiac (heart) causes, diabetes, alcohol, stress and lipids. The study included 32 countries, diverse populations, men and women and various ages. (Note: Updated in 2016)
 - In 2014 **a better way to detect atrial fibrillation** (afib) was developed. Afib is a type of irregular heart rhythm that can triple risk of stroke but is treatable. Strokes caused by Afib are often more severe in women and women are more likely to die from Afib-related stroke.
 - In 2020 Heart & Stroke released new **guidelines that do not recommend ASA** (Acetylsalicylic acid), (for example brand names include Aspirin, Entrophen, Novasen) as a primary preventive measure for those who do not have a history of stroke or heart or vascular disease.
- **Diagnosis**
 - Developed in 1983 The **Canadian Neurological Scale** is a simple tool to measure stroke severity and is now used all over the world.

- **Acute stroke treatment**
 - One of the biggest life-saving breakthroughs, the **clot-busting drug tPA (Alteplase)** was first used in 1999 to treat ischemic stroke – the most common type of stroke caused by a blood clot which interrupts blood flow to the brain. Patients treated with Alteplase are at least 30% more likely to have minimal or no disability three months after stroke.
 - In 2015 the ground-breaking **ESCAPE** trial results were released revealing that **endovascular thrombectomy (EVT)** reduces death from stroke by 50% and leads to better recovery. EVT is used to treat major strokes by physically removing blood clots through blood vessels using a special device and high-tech imaging. This new treatment was incorporated into the Heart & Stroke Canadian Stroke Best Practice Recommendations within weeks of the trial results being released.
 - Trials are underway for a new blood-thinning treatment for a type of stroke called cerebral venous thrombosis or CVT which occurs when a blood clot blocks a vein draining blood from the brain.
- **Rehabilitation and recovery**
 - The **Heart & Stroke Foundation Canadian Partnership for Stroke Recovery** is a world-leading research partnership focused on stroke recovery, bringing together a network of clinical researchers at rehabilitation hospitals and facilities across Canada.
 - Timing it Right Stroke Family Support Program addresses the changing needs of family caregivers (2016).
 - When it was released in 2017 RecoverNow was the first mobile tablet-based rehabilitation intervention to help stroke recovery.
 - Starting in 2020 the **CanStroke** Recovery Trials are the first-ever national clinical trials platform focused on stroke recovery. The parallel **CanStim** platform is the first of its kind in the world to study and test a new combination approach that uses brain stimulation and conventional therapy to boost recovery. Both projects are funded by the Heart & Stroke Canadian Partnership for Stroke Recovery.

3. **Stroke is a medical emergency and improvements in stroke treatment and care only matter if people experiencing stroke can get the right care at the right place in the right time.**

- Heart & Stroke has been a major driver in improving coordination and integration of stroke services and stroke systems across the country often working in partnership with regional champions.
- The faster someone experiencing a stroke gets to a hospital that provides acute stroke care services, the better their chances of survival and a better recovery.
- In 2000 the **Canadian Stroke Network** launched and in 2004 the **Canadian Stroke Strategy** began which was a joint initiative with Heart & Stroke and the Canadian Stroke Network. The strategy was a catalyst for transforming stroke services across the country by supporting provincial efforts to improve prevention, diagnosis, treatment and recovery.
- The establishment of **Canadian Stroke Best Practice Recommendations** in 2006, enabled timely adoption of major treatment advances and are now the gold-standard of care for stroke in Canada and are used around the world.
- **Telestroke** was first used in 2002 to increase access to life-saving, clot-busting drugs to smaller, rural and remote communities using technology, but has expanded over the

decades – and accelerated during the pandemic – to include many services from prevention through to rehabilitation and recovery.

4. Recognizing the signs of stroke and acting quickly can mean the difference between life and death, or the difference between a full recovery and a lasting disability.

- In 2014 Heart & Stroke launched the FAST campaign to help Canadians recognize the signs of stroke, understand stroke is a medical emergency and to act FAST:
 - **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.
- Download the FAST stroke signs [here](#).
- Anyone witnessing or experiencing the signs of stroke should call 9-1-1 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.
- **NEW** Too many Canadians do not recognize the signs, nor know what to do when they see them. According to the most recent Heart & Stroke poll^{***}, four in ten Canadians do not know any of the FAST signs of stroke.
- With stroke, time is brain. 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.

5. Despite advancements, more needs to be done to address gaps in stroke care and ensure equitable access across the country.

Women

- In 2017, 36% more women died of stroke than men in Canada and because they live longer, more women are living with the effects of stroke.
- Women who have had a stroke have worse outcomes than men, have more activity limitations and lower overall levels of mental and physical well-being.
- Women continue to be underrepresented in stroke clinical trials yet their bodies are not the same, stroke affects them differently and they are at higher risk at key stages in their lives: during pregnancy and menopause and elderly women are the most likely to have a stroke and their strokes are the most severe.

Geography, age and socio-economic status

- Geography and socioeconomic status continue to be a barrier to receiving optimal stroke treatment and care and rural residents are less likely to receive specialized stroke care.
- The majority of people who experience stroke require ongoing recovery support and while some excellent resources are available in communities, they are too few and mostly in major centres and barriers exist around awareness, access and cost.
- Stroke can happen at any age yet there is a lack of awareness of stroke in the very young by pediatric healthcare professionals and caregivers; gaps in treatment and care; and little disability support.

Indigenous Peoples

- Rates of stroke and heart disease among Indigenous women in Canada are rising and are nearing or surpassing those of non-Indigenous women.
- First Nations, Métis and Inuit Peoples are more likely to have high blood pressure and diabetes – both risk factors for stroke – and are at greater risk of stroke than the general population, and twice as likely to die from it.
- The social determinants of health impacting Indigenous peoples are staggering including pronounced disparities between non-Indigenous and First Nations communities in income and housing. Indigenous communities are burdened with higher rates of cardiovascular disease than non-Indigenous communities, and obstacles in the healthcare system prevent them from having their needs met.

Heart & Stroke resources

- Stroke [information](#) to raise awareness and understanding around stroke, signs of stroke (FAST), stroke [resources](#) and [webinars](#) for people living with stroke and caregivers and health professionals.
- Heart & Stroke’s [Community of Survivors](#) and [Care Supporters’ Community](#) are two separate members-only Facebook groups: one for survivors of heart disease or stroke and one for those who provide support or care to them. The groups offer social and emotional support in a safe, inclusive and respectful environment.
- [Canadian Stroke Best Practice Recommendations](#)

Statistics

- 878,000 Canadians are living with stroke (or Currently 878,000* people in Canada have had a stroke).*
- More than 89,000 strokes occur in Canada each year.**
- Stroke is the third leading cause of death in Canada.
- Stroke is rising due to aging population and younger people having strokes.
- Stroke is a leading cause of adult disability; half of all people in Canada living with stroke need help with daily activities such as eating, bathing, dressing, going to the washroom and getting around.
- Stroke can happen at any age.
- One in 6,300 babies is born with stroke; this is one each week.
- In Canada there are more than 10,000 children (0 – 18 years) living with stroke.
- Stroke is one of the 10 most expensive causes of acute care hospitalization in Canada, with an annual cost of \$146 million. The total cost of stroke to the Canadian economy is about \$3.6 billion per year.
- 1.9 million brain cells die every minute during a stroke.

*Public Health Agency of Canada. Canadian Chronic Disease Surveillance System, 2017. <https://health-infobase.canada.ca/ccdss/data-tool/> (choose “stroke” and “prevalence” from the drop down).

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*** National, bilingual online/digital poll conducted between December 3-31, 2021 by Environics Research Group of 3,291 Canadian residents 18 years and older drawn from online panels. The survey data were weighted by region, age, and gender to match census data.

Definitions

A stroke happens when blood stops flowing to any part of the brain. 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>)