

# Cost of caring for stroke patients double that of earlier estimates

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Health-care costs for patients in just the first six months after they have a stroke is more than \$2.5 billion a year in Canada, according to a study presented today at the Canadian Stroke Congress.

The Canadian [Stroke](#) Network's Burden of [Ischemic Stroke](#) (BURST) study found that the direct and indirect health-care costs for new stroke patients tally an average \$50,000 in the six-month period following a new stroke. There are about 50,000 new strokes in Canada each year.

Earlier and widely quoted estimates, based on the most recent data from Health Canada's [Economic Burden](#) of Illness (1998), indicated that the total cost of stroke in Canada was \$2.4 billion a year for both new stroke patients and long-term survivors. There are 300,000 people living with stroke in Canada.

"Our old estimates of how much stroke costs the economy are way off base," says Dr. Mike Sharma, who together with Dr. Nicole Mittmann of Sunnybrook Health Sciences Centre, led the BURST study, which is the first prospective national economic analysis on stroke costs.

"The cost of stroke is far more than we expected - at least double previous estimates."

BURST researchers examined the health-care costs of 232 hospitalized stroke patients in 12 sites across Canada at discharge, three months, six months, and one year. The study looked at both disabling and non-

disabling stroke.

Hospitalization, medication, physician services, [diagnostic imaging](#), homecare and rehabilitation all contribute to the bill. There are also indirect costs, including disability leave, lost wages, assisted devices, caregivers, and out-of-pocket expenses for families such as personal assistance products or changes to homes to accommodate disabilities.

While costs are much higher than expected, "the idea is to make initial investments in prevention and acute treatment to prevent these costs down the road," says Dr. Sharma.

For example, health-care costs fall sharply when people get access to the clot-busting drug tPA, which can significantly reduce post-stroke disability, as well as treatment in a specialized stroke unit.

Prevention is the biggest factor in reducing health-care spending overall, Dr. Sharma says. If people maintain a healthy blood pressure, maintain a healthy weight, reduce sodium intake, and exercise, the impact on stroke costs would be dramatic.

While at least 80 per cent of costs during the first six months post-stroke are health-system costs, families take on a greater proportion of stroke-related expenses, including those associated with caregiving, transportation, and lost income, beginning at the seventh month post-stroke and beyond.

Costs rise dramatically as levels of disability increase. People with non-disabling strokes - about 25 per cent of patients - personally expended about \$2,000 in costs during the first six months. The costs for families increased from there to as much as \$200,000 for the most severely affected.

"The difference between merely having symptoms to requiring even minimal at-home assistance from others can mean a significant cost difference," says Dr. Sharma. "The need to have someone drive you around and help with shopping can double personal costs - as well as costs incurred by the person helping you."

Dr. Sharma, who is director of the Ottawa Hospital's regional stroke program, says that personal costs for stroke survivors continue through their lifetimes. "It's a burden on individuals, their families, and communities."

"A stroke doesn't just affect one person – it has a ripple effect," says Heart and Stroke Foundation spokesperson Dr. Michael Hill. "It can challenge families, overburden caregivers, and have a tremendous toll on our healthcare system."

Stroke is the third leading cause of death and a leading cause of disability. The situation may get worse, with aging baby boomers entering their at-risk years.

In 2011 the baby boom generation will enter the period of increasing risk for stroke. "After age 55, the stroke risk doubles every 10 years," says Dr. Hill. "This will increase the strain on our healthcare services."

Over the next two decades, the number of Canadians who are age 65 and over will grow from roughly 4.3 million today to 8 million. Their share of the population will rise from about 13 per cent today to more than 20 per cent, says Dr. Hill.

"We have to learn – and learn fast – how to respond to this situation," says Dr. Antoine Hakim, Canadian Stroke Network spokesperson.

Coordination is key. "Our objective for the study was to identify the cost

drivers so decision makers can make informed choices," Dr. Sharma says.

Provided by Heart and Stroke Foundation of Canada

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