

# Stroke patients past the 90-day danger period remain at high risk for repeat event

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People who have had a stroke or transient ischemic attack (TIA or mini-stroke) are at high risk for a second similar event or other serious medical problems for at least five years and need better follow up and strategies to prevent these problems, according to data presented at the Canadian Stroke Congress.

At present, most stroke or TIA patients in Canada are followed closely by specialty clinics for about 90 days after an event, during the period they are considered at highest risk for a repeat event. If no such incident occurs during that period, they are often transferred back to community care (such as with a family physician).

However, the new study shows that these patients in fact have an almost 10 per cent risk in the first year of having a repeat stroke, dying, having a heart attack or being admitted to long-term care.

And, over the long-term, these patients remain at high risk. After five years, their risk of these events occurring was double that of individuals of the same age and sex who did not have a previous stroke or TIA.

"This high long-term risk was surprising and shows that we need to develop better strategies and interventions for these patients to prevent as many of these serious problems as we can," says Dr. Richard Swartz, director of the University of Toronto stroke program and leader of the study.

The research was done at the Institute for Clinical Evaluative Sciences (ICES) using data from the Ontario Stroke Registry (formerly known as the Registry of the Canadian Stroke Network) involving about 34,000 patients discharged from hospital following a stroke or TIA from 2003 to 2011.

They then excluded all patients who, within 90 days after their discharge, died, had another stroke or TIA, had a heart attack, were hospitalized for any reason or were admitted to long-term care. More than 10,000 patients, or 30 per cent, were excluded, demonstrating why this 90-day period has historically been considered so high-risk for those who have a stroke or TIA and why they are generally provided close medical followup by stroke clinics.

The records for the remaining patients, about 24,000, were then examined over the following years, with the discovery that 9.3 per cent of them had a repeat stroke or TIA, died, had a [heart attack](#) or were admitted to long-term care in the first year after this highest-risk period was over.

Death was the most common of the events, occurring in 5.1 per cent of patients in the first year. Among those who survived the first year, the event rate remained at five per cent for each of the following four years.

"We now need to identify ways to determine which people, among those who have made it through the riskiest period, remain most at risk for serious events so we can develop appropriate preventive interventions," says Dr. Swartz, who is also a stroke neurologist at Sunnybrook Health Sciences Centre. His team has started new studies to look at the potential impact of [risk factors](#) such as depression, obstructive sleep apnea and cognitive impairment.

They have already developed and validated a quick test physicians could

use to evaluate cognitive decline in stroke or TIA patients. "If we determine that cognitive decline is a predictor of greater risk for a subsequent stroke or TIA, a simple tool such as this could allow doctors to easily identify patients at higher risk and take more aggressive measures to help prevent subsequent events," he says.

This study shows that more patients need to be followed closely for longer periods because the elevated risk continues after 90 days, indeed for years.

"If it's not feasible, due to lack of resources, to follow patients longer in stroke clinics, we must do more to educate patients, their families and their family physicians and nurse practitioners to be more alert to the ongoing risks," says Ian Joiner, director of stroke for the Heart and Stroke Foundation. "Even those who seem to recover very well after a stroke or TIA must be followed closely."

The Heart and Stroke Foundation has developed best practices for the transition of care for [stroke patients](#), as well as a post-stroke checklist in a new patient guide, Taking Charge of Your Stroke Recovery. The checklist is a communication guide for doctors, clinic staff, [patients](#) and their families.

## Research creates survivors

After a [stroke](#) at age 30, Annie Dulude's family doctor's ongoing followup played a major role in her recovery and in controlling her risk factors. He was an essential bridge between her specialists and kept track of her medications.

"Not only did he refer me to a cardiologist to repair a hole in my heart, he also referred me to a psychologist because I was scared I would go to sleep and not wake up," she says. "My family doctor also asks me

questions to monitor my progress in managing risk factors and ensuring I don't develop new ones. His involvement is very reassuring."

Provided by Heart and Stroke Foundation of Canada

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