Anthony Herd’s comprehensive, evidence-based, and optimistic reviews of acute stroke management (pages 1787 and 1795) are particularly timely for three reasons. First, we are on the brink of a sharp increase in the burden of cerebrovascular diseases as Canada’s baby boomers move into the high-risk age group. Second, the articles provide a backdrop for an array of new initiatives to deal with the problem more effectively. Third, they offer an opportunity to highlight the role of family physicians in the team approach to a complex medical condition.

Herd delivers the key message at the end of the second article: organized stroke care saves lives and reduces disability among survivors. A systematic review of the evidence from randomized trials shows that treatment in stroke units rather than general medical wards results in about 70 fewer dead or institutionalized patients for every 1000 treated. Moreover, this benefit is durable, reproducible in routine clinical settings, and not restricted to any particular subgroup of patients. In other words, organized stroke unit care is appropriate for virtually all patients and is likely to be highly cost effective.

In the trials, organized care was characterized by geographically defined and coordinated multidisciplinary teams of health professionals with interest and expertise in stroke and rehabilitation care. Caregivers were involved in the rehabilitation process, and education was provided for hospital staff as well as for patients and their caregivers. A more recent study found that the significant factors in a stroke unit “treatment package” included earlier mobilization, earlier use of acetylsalicylic acid, more frequent administration of parenteral fluid, and more frequent use of antipyretic and antibiotic therapy. Organized stroke unit care appears to benefit a range of stroke patients in a variety of ways, reducing death from secondary complications of stroke, and decreasing the need for institutional care through a reduction in disability.

Despite all this evidence, organized stroke unit care is not widely available and accessible. For example, in a 1998 survey of acute care hospitals in Ontario, only 4% had a dedicated stroke unit. But things are changing. The Canadian Stroke Systems Coalition (which includes the College of Family Physicians of Canada) was formed to provide leadership in development of a coordinated national approach to a comprehensive integrated stroke system. At the core of the coalition’s recently published recommendations is the concept of a national network of regional stroke programs.

Planning for a more coordinated approach to stroke care that spans prevention, emergency intervention, in-hospital treatment and rehabilitation on a stroke unit, and community reintegration is already under way in several parts of the country. Family physicians play a key role along this continuum, including providing acute care. The survey of Ontario hospitals showed that family physicians were the attending physicians for stroke patients in 78% of acute care hospitals. A central role in the reform of stroke care is clearly appropriate for family physicians, too. In Nova Scotia, family physicians are leading the way by actively participating in development of an integrated stroke strategy for the province.

Delivery of thrombolysis treatment to those who are eligible is only one component of organized stroke care. Tissue plasminogen activator (TPA) has given us the capability to reverse the devastating consequences of stroke, and nationwide experience indicates that the treatment can be administered effectively within our health care system. Yet questions and concerns persist about the role of TPA for acute stroke that published trials have not answered. Do the very elderly benefit? Should strokes of any severity be treated? How should the appearances of a computed tomography scan influence decisions about treatment? Is TPA effective when administered between 3 and 6 hours after stroke onset, as is suggested by the Cochrane Collaboration’s meta-analysis? Can the therapy be delivered effectively?
in community hospitals without stroke neurologists or neuroradiologists? These questions are being addressed by the Third International Stroke Trial (IST-3).16,17 A large, pragmatic randomized placebo-controlled trial now beginning in several countries. Canadian participation in IST-3 is currently being organized and will likely help facilitate wider deployment of thrombolysis for stroke, as was the case for hospitals that participated in the trials of thrombolysis for MI.18

Organized stroke care brings the added advantage of providing a framework for conducting clinical research, including treatment trials.8 Many research questions relating to all facets of stroke care are beginning to be more systematically addressed by the Canadian Stroke Network19 (recently funded by the federal Network of Centres of Excellence program). This offers much scope for collaboration involving family physicians.

Thrombolysis has served as a catalyst to improve long-standing deficiencies in the way our health system deals with stroke. A coordinated approach involving physicians at all levels of the health care system is essential. Could it be that organized stroke care has emerged in Canada?

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