aerobic training to achieve the cardiovascular benefits associated with decreased risk factors for recurrent stroke.

References:
1. Ontario Heart and Stroke Foundation. Facts you should know about heart disease and stroke. 1999; Ontario Heart and Stroke Foundation, Toronto, ON

Community-Based Rehabilitation for Stroke Survivors

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Introduction

Timely access to appropriate rehabilitation services for stroke survivors is needed to optimize recovery and reduce the long-term burden of stroke for patients, families, communities, and the economy. The Canadian Best Practice Recommendations for Stroke Care (www.cmaj.ca December 2, 2008) includes recommendations for outpatient and community-based stroke rehabilitation based on current research. Given the marked lack of outpatient stroke rehabilitation resources in many communities, opportunities to take advantage of like services (e.g. cardiac rehabilitation) should be explored. Stroke and cardiac disease share a common set of risk factors and some similar recovery needs, therefore providing an opportunity for partnership.

Overview of the Canadian Stroke Strategy

The Canadian Stroke Strategy (CSS) was initiated under the leadership of the Canadian Stroke Network and the Heart and Stroke Foundation of Canada (www.canadianstrokestrategy.ca). It brings together a multitude of stakeholders and partners to develop and implement a coordinated and integrated approach to stroke prevention, treatment, rehabilitation and community reintegration in every province and territory in Canada.

The CSS provides a framework to facilitate the widespread adoption of evidence-based best practices across the continuum of stroke care, focusing at two levels: 1. the national...
level, where the creation of working groups to address priority initiatives supports provincial and territorial work through coordination, content development and communication; and 2. the provincial/territorial level, where coordinated and integrated systems of care are implemented and best practices in stroke prevention, treatment, rehabilitation and community reintegration are applied at the front lines of health care.

The results of an economic analysis for stroke care in Canada estimates that access to organized stroke care would prevent 160,000 strokes, prevent disability in 60,000 Canadians and save $8 billion in net healthcare costs over 20 years. These projections emphasize the need for organized stroke care, both in the acute and the post-acute phase.

“The Canadian Stroke Strategy brings together a multitude of stakeholders and partners to develop and implement a coordinated and integrated approach to stroke prevention, treatment, rehabilitation and community reintegration in every province and territory in Canada...”

CSS Action Plan and Current Priorities

The CSS National Steering Committee has identified five key strategic priorities for the current year. The 2008 update of the Canadian Best Practice Recommendations for Stroke Care was identified as the CSS’s top strategic priority. Critical components to the update include enhancing and expanding the content addressed in the guideline, and seeking innovative and effective mechanisms for implementation of the stroke recommendations across the continuum of care. This is supported by the availability of professional development tools, system performance indicators and the creating of partnerships to support implementation.

Best Practices for Stroke Care

Canadian Best Practice Recommendations for Stroke Care were originally developed in 2006 and continue to be updated every two years. Following a comprehensive review process, the 2008 update has recently been disseminated consisting of twenty-seven recommendations organized into six sections. Each recommendation is supported by a rationale, system implications, relevant performance measures, and summary of the evidence.

A concerted effort was made to ensure alignment with related clinical best practice guidelines, such as the Canadian Hypertension Guidelines, Canadian Diabetes Guidelines, and the Canadian Dyslipidemia Guidelines. The Canadian Stroke Strategy is committed to collaborating with others including the Canadian Association of Cardiac Rehabilitation to ensure that messages to clinicians and services to patients are consistent.

The Canadian Best Practice Recommendations for Stroke Care contains five recommendations for rehabilitation and community reintegration. These recommendations emphasize key components of the Stroke Canada Optimization of Rehabilitation through Evidence (SCORE) project and the Evidence-Based Review of Stroke Rehabilitation. The outpatient and community rehabilitation recommendation includes components for aerobic exercise programs, early supported discharge, therapy to resume activities of daily living, falls prevention, interventions for aphasia and dysphagia, and issues specific to younger stroke patients such as play and school activities.

These recommendations emphasize that stroke survivors have continued access to specialized stroke care and rehabilitation services appropriate to their individual needs in the community. Similar to all patients with cardiovascular disorders, stroke patients are at increased risk of vascular cognitive impairments due to microvascular disease and depression. The recommendations provide clinicians with guidance on assessing for these conditions that may be helpful for cardiac rehabilitation practitioners.

Outpatient and Community Rehabilitation in a priority

The 2008 Stroke Best Practices Consensus Panel was asked to prioritize the 27 recommendations for implementation, to provide guidance for the allocation of limited local, regional, and national resources in stroke care. While recognizing that effective stroke care is dependent on implementation of all of the best practice recommendations in an integrated system of care, the panel identified ten top priorities.
Outpatient and community rehabilitation emerged as the second highest priority, closely following management of transient ischemic attack and minor stroke.

The challenges to establishing and maintaining outpatient and community stroke rehabilitation capacity are many. Unfortunately, these services have typically not been seen as a high priority by funding bodies. In smaller communities there may be insufficient patient volume to justify dedicated human and physical resources, yet research concurs that these services should be available “close to home”. These factors provide incentives to find innovative solutions.

At the same time, there are facilitators that could enable the adoption of innovative solutions. These include the development of regional health systems and regional integrated stroke programs, the diffusion of telemedicine technologies, and the growing body of research evidence on stroke rehabilitation available to health planners and clinicians on the Internet (www.ebhrs.com).

Opportunities to Collaborate in Service Delivery

Can community-based cardiac rehabilitation programs also serve stroke survivors? The answer is seemingly a conditional “yes”. Broadly speaking, many of the rehabilitation goals for cardiac patients and stroke survivors are similar: regain functioning, reduce risk of recurrence through reduction of risk factors, and improve overall health. In addition to enhancing access to rehabilitation services for some stroke survivors, twinned or integrated services offer savings from shared overhead and may provide benefits in terms of patient motivation and professional satisfaction.

In order for community-based cardiac rehabilitation programs to meet the needs of some stroke survivors, and in order for stroke clinicians to support referrals to these services, a number of things should be in place. These include:

- Patients and families are active partners
- Process to ensure appropriate referrals
- Access to an interdisciplinary rehabilitation team with stroke expertise
- Rehabilitation plans tailored to the unique needs of each patient
- Effective communication with patient’s physician/healthcare team
- Implementation of standardized assessment and outcome tools that are valid and sensitive to stroke patients.
- An evaluation mechanism at both the patient and program level

Conclusion

Community-based rehabilitation services can be set up to serve multiple patient populations, and there are a number of existing examples of community-based rehabilitation programs serving both cardiac and stroke patients that can inform others about this model of care. These programs should be evaluated to establish the degree of consistency with stroke best practices in addressing the needs of stroke patients, from the funder, provider, and client perspectives. This will enable interested groups to formulate a strong business plan for the allocation of more resources for shared community-based stroke rehabilitation. This collaboration could provide an opportunity to reduce the burden of cardiovascular disease in Canada.

References