



Title	Telehealth for Acute Stroke Management (Telestroke): Systematic Review of Analytic Studies and Environmental Scan of Relevant Initiatives
Agency	CADTH, Canadian Agency for Drugs and Technologies in Health Suite 600, 865 Carling Ave, Ottawa, Ontario K1S 5S8, Canada; Tel: +1 613 226 2553, Fax: +1 613 226 5392; publications@cadth.ca, www.cadth.ca
Reference	Technology report no 99, 2008

Aim

To evaluate the available data on using telehealth to deliver health services to acute stroke patients.

Conclusions and results

Telestroke improves access to thrombolysis treatment, which may in turn reduce mortality and serious morbidity post-stroke. A high level of patient satisfaction has been documented with this service. Conclusions regarding the economic impact and potential harm from telestroke services compared with face-to-face care could not be drawn from the available evidence. The lack of standardized reporting of resources and outcomes precludes comparisons among programs and the determination of best practices. The creation of 2 programs in Canada opens the door to collaborative efforts that could lead to standardized evaluation frameworks, economies of scale for knowledge transfer, and a better understanding of the safety and resource implications of the services that both programs offer.

Recommendations

The emerging telestroke programs, and their financial and political backers, have an opportunity to join efforts that could place Canada at the forefront of telestroke care, while ensuring that Canadians have access to the services that they expect, regardless of where they live.

Methods

This systematic review was based on a search of 5 bibliographic databases completed in mid-December 2006, and a scan of relevant reference lists. It included 22 studies with original data on telestroke modalities assessing health outcomes, cost effectiveness, patient and provider satisfaction, or process of care, published in English in a peer-review journal. Two independent teams of reviewers screened all articles and extracted data by consensus. The environmental scan, which identified 15 organizations (2 in Canada) providing telestroke services, was based on the articles included in the systematic review and a review of 400 hits from Google.

Further research/reviews required

More research is warranted to determine the impact of telehealth on post-stroke care. Our results present weak evidence for telerehabilitation, so no conclusions could be drawn in this area. A focused systematic review might be able to determine its effectiveness.