Portable Stroke Diagnosis Devices for Adults with Stroke Symptoms: Diagnostic Accuracy and Cost-Effectiveness
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About CADTH: CADTH is an independent, not-for-profit organization responsible for providing Canada’s health care decision-makers with objective evidence to help make informed decisions about the optimal use of drugs, medical devices, diagnostics, and procedures in our health care system.

Funding: CADTH receives funding from Canada’s federal, provincial, and territorial governments, with the exception of Quebec.
Research Questions

1. What is the diagnostic accuracy of portable stroke diagnostic devices for adults with stroke symptoms?

2. What is the cost-effectiveness of portable stroke diagnostic devices for adults with stroke symptoms?

Key Findings

One non-randomized study was identified regarding the diagnostic accuracy of portable stroke diagnostic devices for adults with stroke symptoms. No relevant economic evaluations were identified.

Methods

A limited literature search was conducted by an information specialist on key resources including MEDLINE All (1946–) via Ovid, Embase (1974–) via Ovid, the Cochrane Library, the University of York Centre for Reviews and Dissemination (CRD) databases, the websites of Canadian and major international health technology agencies, as well as a focused Internet search. The search strategy was comprised of both controlled vocabulary, such as the National Library of Medicine’s MeSH (Medical Subject Headings), and keywords. The main search concepts were Cerebrotech, Lucid, Strokefinder, transcranial doppler ultrasonography, electric impedance, microwave tomography, portable devices, portable diagnosis, and stroke. No filters were applied to limit the retrieval by study type. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 01, 2014 and June 12, 2019. Internet links were provided, where available.

Selection Criteria

One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.

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<th>Table 1: Selection Criteria</th>
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<td><strong>Population</strong></td>
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<td><strong>Intervention</strong></td>
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<td><strong>Comparator</strong></td>
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<td><strong>Study Designs</strong></td>
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Results

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials, non-randomized studies, and economic evaluations.

One non-randomized study was identified regarding the diagnostic accuracy of portable stroke diagnostic devices for adults with stroke symptoms. No relevant health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, or economic evaluations were identified.

Additional references of potential interest are provided in the appendix.

Health Technology Assessments
No literature identified.

Systematic Reviews and Meta-analyses
No literature identified.

Randomized Controlled Trials
No literature identified.

Non-Randomized Studies


Economic Evaluations
No literature identified.
Appendix — Further Information

Previous CADTH Reports


Non-Randomized Studies

*Alternative Population – Patients with Traumatic Intracranial Hemorrhage*


*Trial Protocols*


*Review Articles*


