Remote Monitoring for Chronic Cardiac Conditions: Clinical Effectiveness 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 clinical effectiveness of remote monitoring for chronic cardiac conditions?

2. What is the cost-effectiveness of remote monitoring for chronic cardiac conditions?

Key Findings

Ten systematic reviews (six with meta-analyses), two systematic reviews of systematic reviews, and ten economic evaluations were identified regarding the clinical and cost-effectiveness of remote monitoring for chronic cardiac conditions.

Methods

A limited literature search was conducted on key resources including Ovid Medline, PubMed, the Cochrane Library, University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. 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 April 03, 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.

Table 1: Selection Criteria

<table>
<thead>
<tr>
<th>Population</th>
<th>People with chronic cardiac conditions (i.e., heart failure, hypertension, arrhythmias /atrial fibrillation, syncope) or in cardiac rehabilitation</th>
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<tbody>
<tr>
<td>Intervention</td>
<td>Remote patient monitoring with a wearable</td>
</tr>
<tr>
<td>Comparator</td>
<td>Standard of care (e.g., doctor’s appointments)</td>
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<tr>
<td>Outcomes</td>
<td>Q1: Clinical effectiveness (e.g., quality of life, well-being, health status, hospital admissions) and safety (e.g., mortality)</td>
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<td></td>
<td>Q2: Cost-effectiveness</td>
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<tr>
<td>Study Designs</td>
<td>Health technology assessments, systematic reviews, meta-analyses, economic evaluations</td>
</tr>
</tbody>
</table>
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 economic evaluations.

Ten systematic reviews (six with meta-analyses), two systematic reviews of systematic reviews, and ten economic evaluations were identified regarding the clinical and cost-effectiveness of remote monitoring for chronic cardiac conditions. No relevant health technology assessments were identified.

Additional references of potential interest are provided in the appendix.

Health Technology Assessments

No literature identified.

Systematic Reviews and Meta-analyses


**Systematic Review of Systematic Reviews**


**Cardiac Rehabilitation**


**Economic Evaluations**


**Cardiac Rehabilitation**

Appendix — Further Information

Previous CADTH Reports


Systematic Reviews and Meta-Analyses

*Uncertain Outcome*

Systematic Review of Economic Evaluations – Unspecified Chronic Conditions


Systematic App Search


Overview of Systematic Reviews


Systematic Review Protocol