

CADTH RAPID RESPONSE REPORT: SUMMARY OF ABSTRACTS

Automatic External Defibrillators in Long-Term Care Facilities: Clinical Effectiveness, Cost- Effectiveness, and Guidelines

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Research Questions

1. What is the clinical effectiveness of automatic external defibrillators in long-term care facilities?
2. What is the cost-effectiveness of automatic external defibrillators in long-term care facilities?
3. What are the evidence-based guidelines regarding the use of automatic external defibrillators in long-term care facilities?

Key Findings

No relevant clinical evidence, economic evaluations, or evidence-based guidelines were identified regarding automatic external defibrillators in long-term care facilities.

Methods

A limited literature search was conducted by an information specialist on key resources including PubMed, 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 automatic external defibrillators and long-term care facilities. 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 1, 2015 and May 3, 2020. 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

Population	Individuals in cardiac arrest or with heart arrhythmias
Intervention	Automatic external defibrillators (AED)
Comparator	Q1,Q2: No AED; standard care Q3: Not applicable
Outcomes	Q1: Clinical effectiveness (e.g., mortality, safety [e.g., rates of adverse events]) Q2: Cost-effectiveness (e.g., cost per quality-adjusted life-year gained) Q3: Recommendations regarding best practices (e.g., treatment protocols, guidance around how and where these devices should be made available)
Study Designs	Health technology assessments, systematic reviews, randomized controlled trials, non-randomized studies, economic evaluations, and evidence-based guidelines

Results

No relevant health technology assessments, systematic reviews, randomized controlled trials, non-randomized studies, economic evaluations, or evidence-based guidelines were identified regarding automatic external defibrillators in long-term care facilities.

References of potential interest that did not meet the inclusion criteria are provided in the appendix.

Overall Summary of Findings

No relevant literature was found regarding automatic external defibrillators in long-term care facilities; therefore no summary can be provided.

References Summarized

Health Technology Assessments

No literature identified.

Systematic Reviews and Meta-Analyses

No literature identified.

Randomized Controlled Trials

No literature identified.

Non-Randomized Studies

No literature identified.

Economic Evaluations

No literature identified.

Guidelines and Recommendations

No literature identified.

Appendix — Further Information

Systematic Reviews and Meta-Analyses — Long-Term Care Not Specified

1. Holmberg MJ, Vognsen M, Andersen MS, Donnino MW, Andersen LW. Bystander automated external defibrillator use and clinical outcomes after out-of-hospital cardiac arrest: a systematic review and meta-analysis. *Resuscitation*. 2017 Nov;120:77-87. [PubMed: PM28888810](#)

Additional References

2. Provider letter 15-13 — Automated external defibrillator (AED) requirements. Austin (TX): Texas Department of Aging and Disability Services; 2015 Apr 29. Available from: <https://apps.hhs.texas.gov/providers/communications/2015/letters/PL2015-13.pdf>. Accessed 2020 May 15