TITLE: Telemedicine for the Treatment of Urgent Conditions: Clinical Effectiveness, Cost-Effectiveness, and Guidelines

DATE: 16 September 2015

RESEARCH QUESTIONS

1. What is the clinical effectiveness of the use of telemedicine to facilitate the delivery of emergency health care?

2. What is the cost-effectiveness of the use of telemedicine to facilitate the delivery of emergency health care?

3. What are the evidence-based guidelines regarding the use of telemedicine to facilitate the delivery of emergency health care?

KEY FINDINGS

Three non-randomized studies were identified regarding the clinical effectiveness of the use of telemedicine to facilitate the delivery of emergency health care. No relevant cost studies or evidence-based guidelines were identified.

METHODS

A focused search (with main concepts appearing in title, abstract or subject heading) was conducted on key resources including 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 1, 2012 and September 3, 2015. Internet links were provided, where available.

The summary of findings was prepared from the abstracts of the relevant information. Please note that data contained in abstracts may not always be an accurate reflection of the data contained within the full article.
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>Population</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, economic evaluations, and evidence-based guidelines.

Three non-randomized studies were identified regarding the clinical effectiveness of the use of telemedicine to facilitate the delivery of emergency health care. No relevant health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, economic evaluations or evidence-based guidelines were identified.

Additional references of potential interest are provided in the appendix.

OVERALL SUMMARY OF FINDINGS

One non-randomized study\(^1\) examined the effect of a high-intensity telemedicine program on emergency department (ED) visits by patients in a senior living community as compared with usual care. The use of telemedicine for acute illness care resulted in an 18% decrease in ED visits. There was no significant change reported in the control group.

Two non-randomized studies examined the use of telemedicine for mental health evaluations.\(^2,3\) One study\(^2\) compared the evaluation of patients by video conference or in-person in the ED. No significant differences in diagnosis or admission recommendation were identified between the two assessment methods. The second study\(^3\) compared outcomes before and after the implementation of an emergency telemental health evaluation service in a rural ED. Time to treatment, length of stay, and time from arrival to consult were all significantly reduced after the implementation of the telehealth program.
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


Economic Evaluations
No literature identified.

Guidelines and Recommendations
No literature identified.

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APPENDIX – FURTHER INFORMATION:

Systematic Reviews – Video Component Not Specified in Abstract


Randomized Controlled Trials – Simulation


Non-Randomized Studies

Alternate Comparator Group


No Comparator Group


Simulation


Economic Evaluations – Alternate Comparator Group


Review Articles


Additional References


