TITLE:  Tele-medicine for Patients with Diabetes: Clinical and Cost-effectiveness

DATE:  13 August 2015

RESEARCH QUESTIONS

1. What is the clinical evidence regarding tele-medicine interventions for patients with diabetes?

2. What is the cost-effectiveness of tele-medicine interventions for patients with diabetes?

KEY FINDINGS

Eighteen systematic reviews and twenty-four randomized controlled trials were identified regarding tele-medicine interventions for patients with diabetes. Two economic evaluations were identified regarding the cost-effectiveness of tele-medicine interventions for patients with diabetes.

METHODS

A limited literature search 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. Methodological filters were applied to limit retrieval to health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies and economic studies. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2010 and August 7, 2015. 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>Patients with diabetes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention</td>
<td>Tele-medicine interventions, such as:</td>
</tr>
<tr>
<td></td>
<td>• Video conferencing</td>
</tr>
<tr>
<td></td>
<td>• Home health monitoring</td>
</tr>
<tr>
<td></td>
<td>• Tele-health phone lines</td>
</tr>
<tr>
<td>Comparator</td>
<td>Usual care without tele-medicine</td>
</tr>
<tr>
<td>Outcomes</td>
<td>Q1: Clinical benefits (improved health outcomes, improved access to care, patient experience, travel time)</td>
</tr>
<tr>
<td></td>
<td>Q2: Cost-effectiveness</td>
</tr>
<tr>
<td>Study Designs</td>
<td>Health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies, 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 randomized controlled trials, non-randomized studies, and economic evaluations.

Eighteen systematic reviews and twenty-four randomized controlled trials were identified regarding tele-medicine interventions for patients with diabetes. Two economic evaluations were identified regarding the cost-effectiveness of tele-medicine interventions for patients with diabetes. No relevant health technology assessments were identified.

Due to the large volume of identified systematic reviews and randomized controlled trials, selection of relevant articles was limited to reports published in 2015 or 2014 and non-randomized studies are provided in the appendix.

Health Technology Assessments
No literature identified.

Systematic Reviews and Meta-analyses


Randomized Controlled Trials


Economic Evaluations


PREPARED BY:
Canadian Agency for Drugs and Technologies in Health
Tel: 1-866-898-8439
www.cadth.ca
APPENDIX – FURTHER INFORMATION:

Non-Randomized Studies

PubMed: PM25974092

PubMed: PM25629547

PubMed: PM24139705


PubMed: PM24131738

PubMed: PM24485208

PubMed: PM25251861

PubMed: PM24493770

PubMed: PM24991923