TITLE: Tele-Medicine for Patients with Chronic Obstructive Pulmonary Disease: Clinical and Cost-Effectiveness

DATE: 10 August 2015

RESEARCH QUESTIONS

1. What is the clinical evidence regarding tele-medicine interventions for patients with chronic obstructive pulmonary disease?

2. What is the cost-effectiveness of tele-medicine interventions for patients with chronic obstructive pulmonary disease?

KEY FINDINGS

Nine systematic reviews, 25 randomized controlled trials, and six economic evaluations were identified regarding tele-medicine interventions for patients with chronic obstructive pulmonary disease.

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 01, 2010 and July 31, 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 chronic pulmonary obstructive disease</th>
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<tbody>
<tr>
<td>Intervention</td>
<td>Tele-medicine interventions:</td>
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<tr>
<td></td>
<td>• Video conferencing</td>
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<td>• Home health monitoring</td>
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<td>• Tele-health phone lines</td>
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<td>Comparator</td>
<td>Usual care without tele-medicine</td>
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<tr>
<td>Outcomes</td>
<td>Clinical benefits (improved health outcomes, improved access to care, patient experience, travel time)</td>
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<td></td>
<td>Cost-effectiveness</td>
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<tr>
<td>Study Designs</td>
<td>Health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies, economic evaluations</td>
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</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.

Nine systematic reviews, 25 randomized controlled trials, and six economic evaluations were identified regarding regarding tele-medicine interventions for patients with chronic obstructive pulmonary disease. No relevant health technology assessments were identified. Due to the large volume of relevant literature identified, non-randomized studies have been included in the appendix.

Additional references of potential interest, along with relevant non-randomized studies, are provided in the appendix.

**Health Technology Assessments**

No literature identified.

**Systematic Reviews and Meta-analyses**


Randomized Controlled Trials


Economic Evaluations


PubMed: PM23848542

PubMed: PM23020647

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APPENDIX – FURTHER INFORMATION:

Non-Randomized Studies


