TITLE: Health Care Worker Initiated Telehealth for Outpatients with Chronic Obstructive Pulmonary Disease: Clinical Evidence and Guidelines

DATE: 10 February 2016

RESEARCH QUESTIONS

1. What is the clinical evidence regarding health care worker initiated telehealth for outpatients with chronic obstructive pulmonary disease (COPD)?

2. What are the evidence-based guidelines regarding health care worker initiated telehealth for outpatients with COPD?

KEY FINDINGS

One health technology assessment, three randomized controlled trials, and two non-randomized studies were identified regarding health care worker initiated telehealth for outpatients with COPD.

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. 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, 2011 and January 29, 2016. 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.

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### 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><strong>Population</strong></td>
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<td><strong>Intervention</strong></td>
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| **Comparator** | Q1: no call or outreach; no comparator  
Q2: no comparator needed |
| **Outcomes** | Q1: clinical benefit (e.g., improved symptom management, rates of hospitalization, rates of COPD exacerbations); harms  
Q2: Guidelines and recommendations (e.g., how programs are implemented, what patients to offer the intervention to, what the programs are assessing, how they are managing patients, how often the intervention occurs, when to discharge patients from the intervention) |
| **Study Designs** | Health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies, evidence-based guidelines |

COPD = chronic obstructive pulmonary disease

### 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 evidence-based guidelines.

One health technology assessment, three randomized controlled trials, and two non-randomized studies were identified regarding health care worker initiated telehealth for outpatients with COPD. No relevant systematic reviews, meta-analyses, or evidence-based guidelines were identified.

Additional references of potential interest are provided in the appendix.

### OVERALL SUMMARY OF FINDINGS

Three randomized controlled trials\(^2\)\(^4\) examined the effects of telehealth in COPD patients. One of the studies\(^2\) concluded that phone calls to COPD patients, initiated by a health care worker, had a negative effect on health status when compared to usual care. Another study\(^3\) suggested that “problem-solving therapy” (in the form of 12 phone calls) from nurses to COPD patients had no difference when compared to usual care. Nevertheless, the study\(^3\) did find an improvement in depressive symptoms and self-efficacy in clinically depressed patients who received the phone calls. A third randomized study\(^4\) determined that a telehealth intervention in COPD patients improved quality of life; however, it found no change in COPD-related hospitalization and all-cause mortality.
Two non-randomized studies\textsuperscript{5,6} also examined the effects of telehealth in COPD patients. One of the studies\textsuperscript{5} concluded that telehealth was a feasible solution for COPD patients. It found that telehealth had positive effects on quality of life and exercise tolerance in COPD patients. Another study\textsuperscript{6} found that their rehabilitation program led by nurses (which included face-to-face interviews and telephone calls) improved patient’s self-management skills, dyspnea, social activity level, walking distance, and overall quality of life.

The health technology assessment\textsuperscript{1} did not provide an abstract; therefore, a summary of this article cannot be presented.
REFERENCES SUMMARIZED

Health Technology Assessments

   PubMed: PM23074421

Systematic Reviews and Meta-analyses
No literature identified.

Randomized Controlled Trials

   PubMed: PM25400242

   PubMed: PM25548124

   PubMed: PM25251888

Non-Randomized Studies

   PubMed: PM26075928

   PubMed: PM23922290

Guidelines and Recommendations
No literature identified.
APPENDIX – FURTHER INFORMATION:

Systematic Reviews and Meta-Analyses - Unclear if Method of Delivery is from a Health Care Worker


Randomized Controlled Trials

Unclear if Method of Delivery is from a Health Care Worker


Video-Based Health Consultation

Non-Randomized Studies

Patient Preferences


Video-Based Health Consultation


Qualitative Studies


Review Articles

