TITLE: Disposable Spacers for Metered-Dose Inhalers: Clinical Effectiveness and Guidelines

DATE: 10 March 2015

RESEARCH QUESTIONS

1. What is the clinical effectiveness and safety of disposable spacers used with metered-dose inhalers (MDIs) for patients with asthma or chronic obstructive pulmonary disease (COPD) in a hospital setting?

2. What are the evidence-based guidelines for disposable spacers used with MDIs for patients with asthma or COPD in a hospital setting?

KEY FINDINGS

One randomized controlled trial regarding the clinical effectiveness of disposable spacers used with metered-dose inhalers for patients with asthma in the hospital setting was identified.

METHODS

A limited literature search was conducted on key resources including PubMed, The Cochrane Library (2015, Issue 3), 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, 2010 and March 4, 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 of any age, with asthma or COPD, in a hospital setting</th>
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<tbody>
<tr>
<td>Intervention</td>
<td>Disposable (paper or cardboard) spacers used with metered-dose inhalers (MDIs), e.g., LiteAire</td>
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<tr>
<td>Comparator</td>
<td>Plastic spacers or no comparator</td>
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<tr>
<td>Outcomes</td>
<td>Clinical effectiveness, safety, guidelines</td>
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<tr>
<td>Study Designs</td>
<td>Health technology assessment reports, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies, evidence-based guidelines</td>
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</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 evidence-based guidelines.

One randomized controlled trial regarding the clinical effectiveness of disposable spacers used with metered-dose inhalers for patients with asthma in the hospital setting was identified. No relevant health technology assessment reports, systematic reviews, meta-analyses, non-randomized studies, or evidence-based guidelines were identified. In addition no evidence was identified regarding the safety and cost-effectiveness of these devices.

Additional references of potential interest are provided in the appendix.

Health Technology Assessments
No literature identified.

Systematic Reviews and Meta-analyses
No literature identified.

Randomized Controlled Trials


Non-Randomized Studies
No literature identified.

Guidelines and Recommendations
No literature identified.

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APPENDIX – FURTHER INFORMATION:

Additional References