Preventing asthma deaths: asthma education interventions for healthcare professionals

Cochrane Airways Scoping Search Report

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Introduction to the scoping search report

This scoping search report describes the methods and results of scoping activities undertaken by Cochrane Airways on asthma education interventions for healthcare professionals. Interventions for prevention of asthma deaths was identified as priority by the Cochrane Airways Priority Setting Group (CAPSG) as part of the Cochrane Airways ‘whole of scope’ priority setting exercise conducted in 2019/2020. Training and education of healthcare professionals was identified as a factor in asthma-associated deaths by the 2014 National Review of Asthma Deaths.

This scoping search report does not attempt to appraise or synthesise the included studies. It provides a summary of the existing evidence on this topic.

Purpose

The purpose of this scoping search report is:

- to assess what evidence exists for this topic
- to inform the development of future Cochrane Review titles
- to provide a transparent record of scoping work undertaken by Cochrane Airways

Study inclusion criteria

Population: healthcare professionals

Intervention: asthma education/training

Comparator: any

Outcomes: any

Study design: systematic reviews, randomised controlled trials (RCTs), quasi-RCTs

Literature search

A limited and very narrow/focussed literature search was conducted in the Epistemonikos database and PubMed to identify relevant systematic reviews published in the last 10 years. A search for RCTs was conducted in the Cochrane Airways Register for studies published in the last 10 years.

The search strategies can be found in the appendix. Searches were conducted on 20th May 2020.

Assessment of search results

The search of Epistemonikos/PubMed retrieved 36 references. The search of the Cochrane Airways Trials Register retrieved 180 references. One member of the Cochrane Airways team (LS) screened the titles and abstracts using the Cochrane Register of Studies triage function, and checked full-text if necessary.

Included studies

The search identified 1 related systematic review, and 11 RCTs. The reviews and studies are summarised in Table 1 and Table 2. The references for each review and study is listed in the References section.
### Table 1: Summary of reviews

<table>
<thead>
<tr>
<th>Study ID</th>
<th>Review type</th>
<th>Included study types</th>
<th>Population</th>
<th>Intervention/theme</th>
<th>Outcome(s)</th>
<th>No. included studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>McCleary 2018</td>
<td>Systematic review</td>
<td>RCTs, CCTs</td>
<td>Healthcare professionals</td>
<td>professional education on asthma self-management support</td>
<td>professional behaviour change; patient outcomes</td>
<td>15</td>
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<tr>
<td>IMP(2)ART</td>
<td></td>
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</tbody>
</table>

### Table 2: Summary of studies

<table>
<thead>
<tr>
<th>Study ID</th>
<th>Trial Registration</th>
<th>Population</th>
<th>Intervention(s)</th>
<th>Comparator</th>
<th>No. participants randomized</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barne 2016</td>
<td></td>
<td>primary care doctors</td>
<td>one day training on Asthma diagnosis and management</td>
<td>?Usual care</td>
<td>52</td>
<td>India</td>
</tr>
<tr>
<td>Bosnic-Anticevich 2013</td>
<td></td>
<td>GPs, practice nurses &amp; pharmacists</td>
<td>Education on inhaler technique via: face-to-face workshop (intervention 1), online learning module (intervention 2), collaborative face-to-face workshop (intervention 3)</td>
<td>NA</td>
<td>81</td>
<td>Australia</td>
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<tr>
<td>Cabana 2014</td>
<td></td>
<td>primary care providers</td>
<td>Physician Asthma Care Education</td>
<td>Program provided by local faculty</td>
<td>101</td>
<td>USA</td>
</tr>
<tr>
<td>Cloutier 2012</td>
<td></td>
<td>Paediatric clinicians</td>
<td>Interventions designed to enhance clinician self-efficacy and readiness to change</td>
<td>?</td>
<td>24 paediatric practices (88 clinicians)</td>
<td>USA</td>
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<tr>
<td>De Vera 2014</td>
<td>NCT02170883</td>
<td>Pharmacists</td>
<td>Empowering pharmacists in asthma management through interactive SMS (EmPhAsIS)</td>
<td>Usual care</td>
<td>370 (target)</td>
<td>Canada</td>
</tr>
<tr>
<td>Fang 2011</td>
<td></td>
<td>clinical physicians</td>
<td>quality improvement educational program: technique courses on COPD and asthma</td>
<td>quality improvement educational program: theory courses on COPD and asthma</td>
<td>83 hospitals</td>
<td>China</td>
</tr>
<tr>
<td>Study</td>
<td>Intervention</td>
<td>Control</td>
<td>Patients (Treatment)</td>
<td>Country</td>
<td></td>
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<td>Goldberg 2012</td>
<td>Paediatric clinicians in the ED Physicians were randomized to receive a</td>
<td>Control (no PACCI)</td>
<td>57 (patients)</td>
<td>USA</td>
<td></td>
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<tr>
<td></td>
<td>completed PACCI (intervention)</td>
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<td>Griffiths 2016</td>
<td>Physicians and patients with asthma Physician Asthma Care Education (PACE)</td>
<td>Usual care</td>
<td>84 general practices (375 patients)</td>
<td>UK</td>
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<td></td>
<td>programme and the Chronic Disease Self Management Programme (CDSMP). Both</td>
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<td></td>
<td>were culturally adapted for south Asians with asthma</td>
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<td></td>
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<td>Hammersley 2010</td>
<td>Practice nurses 1-day workshop for HCPs on the diagnosis and management of</td>
<td>?</td>
<td>13</td>
<td>UK</td>
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<tr>
<td></td>
<td>allergic rhinitis and asthma</td>
<td></td>
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<tr>
<td>Patel 2019</td>
<td>Primary care physicians and their African American or Latino/Hispanic pediatric patients with persistent asthma 1. Physician Asthma Care Education (PACE) 2. Physician Asthma Care Education (PACE) with cross cultural communication training (PACE Plus)</td>
<td>Usual care</td>
<td>112 physicians (867 patients)</td>
<td>USA</td>
<td></td>
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<tr>
<td>Sheikh 2016</td>
<td>primary care practices 1. asthma education intervention aimed at primary care practices (12 months) 2. asthma education intervention aimed at primary care practices (6 months)</td>
<td>NA</td>
<td>10 practices</td>
<td>USA</td>
<td></td>
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</tr>
</tbody>
</table>
References

Systematic Reviews

Randomized controlled trials
Barne M, Agarkhedkar S, Bhondawe A, Thakare P, Hedawoo N, Madas S, Nagarkar A, Salvi S. Challenges in recruiting primary care doctors for a randomized controlled trial to study change in prescription practices due to our educational intervention Npj primary care respiratory medicine 2016: 26 ( 16022) ; 41-CR104


Cloutier MM, Tennen H, Wakefield DB, Brazil K, Hall CB. Improving clinician self-efficacy does not increase asthma guideline use by primary care clinicians Academic pediatrics 2012: 12 ( 4) ; 312-318

De Vera MA, Sadatsafavi M, Tsao NW, Lynd LD, Lester R, Gastonguay L, Galo J, FitzGerald JM, Brasher P, Marra CA. Empowering pharmacists in asthma management through interactive SMS (EmPhAsIS): study protocol for a randomized controlled trial Trials 2014: 15 ( 1) ; 488

Fang X, Li S, Gao L, Zhao N, Wang X, Bai C. Quality of care for copd and asthma in China: Clinicians' adherence to guidelines and the effects of a short term training course Respirology (carlton, vic.) 2011: 16 ( Suppl 2) ; 252-253


Hammersley V, Elton R, Walker S, Sheikh A. Healthcare professional improvement in confidence and competence in delivering allergy care following attendance at a 1-day allergic rhinitis and asthma workshop Allergy: european journal of allergy and clinical immunology. 2010: 65 ( SUPPL. 92) ; 143-144

A randomized trial *Journal of asthma* **2019**: 56 (3); 273-284

Sheikh SI, Chrysler M, Ryan-Wenger NA, Hayes Jr D, McCoy KS. Improving pediatric asthma care: a partnership between pediatric primary care clinics and a free-standing Children’s Hospital *Journal of asthma* **2016**: 53 (6); 622-628
Appendix: Database search strategies
Cochrane Airways Register of Trials via The Cochrane Register of Studies

#1 MESH DESCRIPTOR Health Personnel EXPLODE ALL AND INSEGMENT
((health or healthcare or medical) NEAR2 (personnel or worker* or professional* or staff)):ti,ab AND
#2 INSEGMENT
#3 (doctor* or nurse* or physician* or clinician*):ti,ab AND INSEGMENT
#4 (allied health NEAR2 (staff or personnel or worker*)):ti,ab AND INSEGMENT
#5 (nursing NEAR2 (staff or personnel or auxiliar$)):ti,ab AND INSEGMENT
#6 #1 OR #2 OR #3 OR #4 OR #5
#7 MESH DESCRIPTOR Primary Health Care EXPLODE ALL AND INSEGMENT
#8 MESH DESCRIPTOR Primary Care Nursing AND INSEGMENT
#9 MESH DESCRIPTOR Physicians, Primary Care AND INSEGMENT
#10 MESH DESCRIPTOR Family Practice EXPLODE ALL AND INSEGMENT
#11 primary care*:ti,ab AND INSEGMENT
#12 community:ti,ab AND INSEGMENT
#13 #7 OR #8 OR #9 OR #10 OR #11 OR #12
#14 #6 AND #13
#15 MESH DESCRIPTOR Asthma EXPLODE ALL AND INSEGMENT
#16 (asthma* or wheez*):ti,ab AND INSEGMENT
#17 #15 OR #16
#18 #14 AND #17
#19 MESH DESCRIPTOR Education, Professional EXPLODE ALL AND INSEGMENT
#20 (educat* or awareness or knowledge):ti,ab AND INSEGMENT
#21 #19 OR #20
#22 #18 AND #21
#23 INREGISTER
#24 #22 AND #23

Epistemonikos
Asthma education

PubMed
"Health Personnel/education"[MAJR] AND asthma[tiab]

‘Similar articles’ search