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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

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

Table 2: Summary of studies

Study ID	Trial Registration	Population	Intervention(s)	Comparator	No. participants randomized	Country
Barne 2016		primary care doctors	one day training on Asthma diagnosis and management	?Usual care	52	India
Bosnic-Anticevich 2013		GPs, practice nurses & pharmacists	Education on inhaler technique via: <ul style="list-style-type: none"> face-to-face workshop (intervention 1), online learning module (intervention 2) collaborative face-to-face workshop (intervention 3)	NA	81	Australia
Cabana 2014		primary care providers	Physician Asthma Care Education	Program provided by local faculty	101	USA
Cloutier 2012		Paediatric clinicians	Interventions designed to enhance clinician self-efficacy and readiness to change	?	24 paediatric practices (88 clinicians)	USA
De Vera 2014	NCT02170883	Pharmacists	Empowering pharmacists in asthma management through interactive SMS (EmPhAsIS)	Usual care	370 (target)	Canada
Fang 2011		clinical physicians	quality improvement educational program: technique courses on COPD and asthma	quality improvement educational program: theory courses on COPD and asthma	83 hospitals	China

Goldberg 2012		Paediatric clinicians in the ED	Physicians were randomized to receive a completed PACCI (intervention)	Control (no PACCI)	57 (patients)	USA
Griffiths 2016	NCT00214669	clinicians and patients with asthma	Physician Asthma Care Education (PACE) programme and the Chronic Disease Self Management Programme (CDSMP). Both were culturally adapted for south Asians with asthma	Usual care	84 general practices (375 patients)	UK
Hammersley 2010		Practice nurses	1-day workshop for HCPs on the diagnosis and management of allergic rhinitis and asthma	?	13	UK
Patel 2019	NCT01251523	Primary care physicians and their African American or Latino/Hispanic pediatric patients with persistent asthma	<ol style="list-style-type: none"> 1. Physician Asthma Care Education (PACE) 2. Physician Asthma Care Education (PACE) with cross cultural communication training (PACE Plus) 	Usual care	112 physicians (867 patients)	USA
Sheikh 2016		primary care practices	<ol style="list-style-type: none"> 1. asthma education intervention aimed at primary care practices (12 months) 2. asthma education intervention aimed at primary care practices (6 months) 	NA	10 practices	USA

References

Systematic Reviews

McCleary N, Andrews A, Buelo A, Captieux M, Morrow S, Wiener-Ogilvie S, Fletcher M, Steed L, Taylor SJC, Pinnock H. IMP(2)ART systematic review of education for healthcare professionals implementing supported self-management for asthma *NPJ primary care respiratory medicine* **2018**: 28 (1) ; 42

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

Bosnic-Anticevich S, Williamson M, Cvetkovski B, Mavritsakis S, Traversers-Mason P, Mendrela G, Sainsbury E, Stuart M, Mackson J, Armour C. Comparing three different forms of interprofessional education on health professional inhaler technique and maintenance of correct technique *European respiratory journal* **2013**: 42 (Suppl 57) ; P3840

Cabana MD, Sligh KK, Evans D, Mellins RB, Brown RW, Lin X, Kaciroti N, Clark NM. Impact of Physician Asthma Care Education on patient outcomes *Health education & behavior* **2014**: 41 (5) ; 509-517

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

Goldberg EM, Laskowski- Kos U, Wu D, Gutierrez J, Bilderback A, Okelo S, Garro A. Can the pediatric asthma control and communication instrument (PACCI) be used in the ED to improve clinicians' assessment of asthma control? *Academic Emergency Medicine. Conference: 2012 Annual Meeting of the Society for Academic Emergency Medicine, SAEM 2012 Chicago, IL United States. Conference Start: 20120509 Conference End: 20120512. Conference Publication: (var.pagings)* **2012**: 19 (s1) ; S348 [661]

Griffiths C, Bremner S, Islam K, Sohanpal R, Vidal DL, Dawson C, Foster G, Ramsay J, Feder G, Taylor S, Barnes N, Choudhury A, Packe G, Bayliss E, Trathen D, Moss P, Cook V, Livingstone AE, Eldridge S. Effect of an education programme for South Asians with asthma and their clinicians: a cluster randomised controlled trial (OEDIPUS) *Plos ONE [electronic resource]* **2016**: 11 (12) ; e0158783

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

Patel MR, Song P, Bruzzese JM, Hao W, Evans D, Thomas LJ, Pinkett-Heller M, Meyerson K, Brown RW. Does cross-cultural communication training for physicians improve pediatric asthma outcomes?

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