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Preventing asthma deaths: specialist involvement in asthma care during or after an asthma attack

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 preventing asthma deaths: specialist involvement in asthma care during or after an asthma attack. Interventions to prevent 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.

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: people with asthma and a current or previous exacerbation

Intervention: specialist care

Comparator: any

Outcomes: mortality, unscheduled healthcare use

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

Literature search

A limited literature search was conducted to identify relevant systematic reviews and trials. A search was conducted in the [Cochrane Airways Trials Register](#) to identify relevant RCTs and quasi-RCTs. A search of the [Epistemonikos](#) database was conducted to identify relevant systematic reviews published in the last 10 years. The search strategies can be found in the [appendix](#). Searches were conducted on 3rd June 2020.

Assessment of search results

The search of the Cochrane Airways Trials Register retrieved 59 references and the search of Epistemonikos retrieved 11 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 6 RCTs. The search did not find any systematic reviews on the topic of specialist asthma care. The RCTs are summarised in **Table 1**. The primary reference for each review and study is listed in the [References](#) section.

Table 1: Summary of studies

Study ID	Population	Intervention(s)	Comparator	No. participants randomized	Country
Castro 2003	Adults hospitalized with an asthma exacerbation	asthma nurse specialist intervention	Usual care	96	USA
Griffiths 2004	Adults & children (4-60 years) admitted to hospital with acute asthma	asthma specialist nurses, using a liaison model of care	visit promoting standard asthma guidelines; inhaler technique checked	324	UK
Levy 2000	Adults who had attended hospital for asthma twice in 12 months	three 6-weekly outpatient appointments with specialist asthma nurse	Usual care	211	UK
Nathan 2006	Adults (>16 years) admitted to hospital for acute asthma	follow-up clinic appointment within 2 weeks of hospital discharge with specialist nurse	follow-up clinic appointment within 2 weeks of hospital discharge with respiratory doctor	154	UK
Xu 2010	Children with acute presentation of asthma in last 12 months	<ol style="list-style-type: none"> 1. asthma education and management support from a Specialist Nurse by telephone or e-mail 2. asthma education and management support from a Specialist Nurse by interactive voice response system 	Usual care	121	Australia
Zeiger 1991	Adults and children (6-59 years) presenting to ER with acute asthma	facilitated referral to an asthma specialist and concomitant comprehensive ongoing asthma care	continued outpatient management from generalist physicians	309	USA

References

Randomized controlled trials

Castro M, Zimmermann NA, Crocker S, Bradley J, Leven C, Schechtman KB. Asthma intervention program prevents readmissions in high healthcare users *American journal of respiratory and critical care medicine* **2003**: 168 (9) ; 1095-1099

Griffiths C, Foster G, Barnes N, Eldridge S, Tate H, Begum S, Wiggins M, Dawson C, Livingstone AE, Chambers M, Coats T, Harris R, Feder GS. Specialist nurse intervention to reduce unscheduled asthma care in a deprived multiethnic area: the east London randomised controlled trial for high risk asthma (ELECTRA) *BMJ (Clinical research ed.)* **2004**: 328 (7432) ; 144

Levy ML, Robb M, Allen J, Doherty C, Bland JM, Winter RJD. A randomized controlled evaluation of specialist nurse education following accident and emergency attendance for acute asthma *Respiratory medicine* **2000**: 94 (9) ; 900-908

Nathan JA, Pearce L, Field C, Dotesio-Eyres N, Sharples LD, Cafferty F, Laroche CM. A randomized controlled trial of follow-up of patients discharged from the hospital following acute asthma: best performed by specialist nurse or doctor? *Chest* **2006**: 130 (1) ; 51-57

Xu C, Jackson M, Scuffham PA, Wootton R, Simpson P, Whitty J, Wolfe R, Wainwright CE. A randomized controlled trial of an interactive voice response telephone system and specialist nurse support for childhood asthma management *Journal of asthma* **2010**: 47 (7) ; 768-773

Zeiger RS, Heller S, Mellon MH, Wald J, Falkoff R, Schatz M. Facilitated referral to asthma specialist reduces relapses in asthma emergency room visits. [erratum appears in J Allergy Clin Immunol 1992 Aug;90(2): 278.] *Journal of allergy and clinical immunology* **1991**: 87 (6) ; 1160-1168

Appendix: Database search strategies

Cochrane Airways Register of Trials via The Cochrane Register of Studies

1	AST:MISC1 AND INSEGMENT	23509
2	MeSH DESCRIPTOR Asthma Explode All AND INSEGMENT	21506
3	asthma*:ti,ab AND INSEGMENT	61303
4	#1 or #2 or #3 AND INSEGMENT	65766
5	MESH DESCRIPTOR Symptom Flare Up EXPLODE ALL AND INSEGMENT	62
6	(acute* or exacerbat* or attack or severe or status asthmaticus or crisis or critical* or emergenc* or hospital*):ti,ab AND INSEGMENT	90508
7	MESH DESCRIPTOR Status Asthmaticus AND INSEGMENT	152
8	#5 OR #6 OR #7 AND INREGISTER	15223
9	#4 AND #8 AND INREGISTER	6846
10	specialist*:ti,ab AND INSEGMENT	2757
11	MESH DESCRIPTOR Specialization AND INSEGMENT	55
12	#10 OR #11 AND INREGISTER	233
13	#4 AND #8 AND #12 AND INREGISTER	59
14	INREGISTER	43508
15	#13 AND #14 AND INREGISTER	59

Epistemonikos

asthma AND specialist