

A systematic review of the use of Cochrane reviews in clinical guidelines, for lower respiratory disease, in children in the United Kingdom

Analysis plan

Objectives

1. To examine if all recommendations about interventions, relevant to respiratory diseases in Child Health, made in Cochrane reviews, are included in clinical practice guidelines for respiratory disease in Child Health in the UK.
2. To examine the cause when recommendations made in Cochrane reviews are not included in the guidelines or when the recommendations are only partially in agreement or in disagreement.

Guidelines

Search strategy

1. Guidelines will be searched in/on the website of:
 - a. Embase
 - b. Pubmed
 - c. British Paediatric Respiratory Society
 - d. British Thoracic Society (BTS)
 - e. Cystic Fibrosis trust (CF Trust)
 - f. Royal College of Paediatrics and Child Health (RCPCH)
 - g. Scottish Intercollegiate Guidelines Network (SIGN)
 - h. National Institute for Health and Clinical Excellence (NICE)
 - i. Asthma UK
 - j. British Lung Foundation
 - k. Pulmonary Hypertension Association (PHA-UK)
 - l. Alpha-1UK
 - m. Breathtakers
 - n. British Society for Allergy & Clinical Immunology
 - o. British infection association

2. Search strategy for each database is as follows:

A	Embase*	paediatrics'/syn OR 'pediatrics'/syn OR 'child'/syn OR 'children'/syn OR infants OR new AND born OR 'new born' OR 'new borns' AND (respiratory OR 'lung'/syn OR 'respiration'/syn OR 'airway'/syn OR 'asthma'/syn OR 'pneumonia'/syn OR 'wheezing'/syn OR cf OR cystic AND 'fibrosis'/syn OR 'bronchiectasis'/syn OR 'bronchoconstriction'/syn OR 'coughing'/syn OR 'allergic rhinitis'/syn) AND ('uk'/syn OR united AND kingdom OR great AND 'britain'/syn OR british OR 'wales'/syn OR 'scotland'/syn OR 'england'/syn) AND [humans]/lim AND [1aediat]/lim AND (guideline OR 'consensus'/exp)
B	Pubmed*	(paediatrics[Title/Abstract] OR 1aediatics[Title/Abstract] OR child[Title/Abstract] OR children[Title/Abstract] OR infants[Title/Abstract] OR (new[Title/Abstract] AND born[Title/Abstract]) OR new-born[Title/Abstract] OR new-borns[Title/Abstract]) AND (respiratory[Title/Abstract] OR lung[Title/Abstract] OR respiration[Title/Abstract] OR Airway[Title/Abstract] OR asthma[Title/Abstract] OR pneumonia[Title/Abstract] OR wheezing[Title/Abstract] OR CF[Title/Abstract] OR (cystic[Title/Abstract] AND fibrosis[Title/Abstract]) OR bronchiectasis[Title/Abstract] OR bronchoconstriction[Title/Abstract] OR coughing[Title/Abstract] OR

		wheezing[Title/Abstract] OR allergic rhinitis[Title/Abstract]) AND (UK[Title/Abstract] OR (United[Title/Abstract] AND Kingdom[Title/Abstract]) OR (Great[Title/Abstract] AND Britain[Title/Abstract]) OR British[Title/Abstract] OR Wales[Title/Abstract] OR Scotland[Title/Abstract] OR England[Title/Abstract]) AND “humans”[MeSH Terms] AND Practice Guideline[ptyp] AND English[lang] AND (“infant”[MeSH Terms] OR “child”[MeSH Terms] OR “adolescent”[MeSH Terms] AND (guideline OR consensus))
C	British Paediatric Respiratory Society	Guidelines
D	British Thoracic Society (BTS)	Guidelines
E	Cystic Fibrosis trust (CF Trust)	Consensus documents
F	Royal College of Paediatrics and Child Health (RCPCH)	Child health guidelines and standards: guidelines and standard developed by RCPCH, guidelines and standards developed by external organisations: endorsed by RCPCH: respiratory medicine, supported by RCPCH.
G	Scottish Intercollegiate Guidelines Network (SIGN)	Guidelines: child health, respiratory medicine
H	National Institute for Health and Clinical Excellence (NICE)	Filters: i. Information type: guidance ii. Conditions and diseases: respiratory iii. Information type: all iv. Public health: all v. Treatments, procedures and devices: drug treatments, radiotherapy, surgical procedures, therapeutic procedures. vi. Guidance type: all vii. Publication status: all viii. Date: all
I	Asthma UK	Guidelines/consensus documents
J	British Lung Foundation	Guidelines/consensus documents
K	Pulmonary Hypertension Association (PHA-UK)	Guidelines/consensus documents
L	Alpha-1UK	Guidelines/consensus documents
M	Breathtakers	Guidelines/consensus documents
N	British Society for Allergy & Clinical Immunology	BSACI guidelines
O	British infection association	Guidelines > Respiratory/Bacteria

*Search strategies for Pubmed and Embase are not interchangeable.

Selection strategy

1. Inclusion criteria for the guidelines will be:
 - a. Clinical practice guidelines
 - b. With at least one clear recommendation for an intervention
 - c. For a respiratory disease including the lower airways up to and including anatomical sites of the epiglottis and including croup.
 - d. For Child Health
 - e. Written in the United Kingdom
 - f. The last update
 - g. Where the main topic is not diagnosing, screening, determination, investigation, testing for diagnosing, observations, or monitoring.
 - h. When there is at least one Cochrane Review for the disease mentioned in the guideline title.
2. Exclusion criteria for the guidelines will be:
 - a. Guidelines for cancer
 - b. Guidelines about pregnancy
3. Inclusion criteria for the recommendations will be:
 - a. Recommendations for children (0-18 years)
 - b. About an intervention
 - c. For a respiratory disease including the lower airways up to and including anatomical sites of the epiglottis and including croup.
4. Exclusion criteria for the recommendation will be, all recommendations about:
 - a. Pregnancy
 - b. Diagnosing
 - c. Screening
 - d. Determination
 - e. Investigation
 - f. Testing for diagnosing
 - g. Observations or monitoring
 - h. Recording
 - i. Expert opinions
 - j. Recommendations for specialists not directly affecting patients, e.g. hand washing protocols.

Data collection

1. Data collection from the guidelines:

General data that will be collected from the guidelines includes the name of the guideline, the disease the guideline is for, information about: the guideline institution, funding, declaration of interest, publication date, update time, number of recommendations and the grading methodology used. This is specified in

Table 1: Guideline data collection in the appendix.

2. Data collection from the recommendations:
Data that will be collected from the guideline recommendations includes the recommendations themselves, if they are included, and information about: the level of evidence used, patient's age, subcategory of patients/disease, moment of therapy, type of intervention, if the intervention is effective, and the date of literature search. This is specified in Table 2: Guideline recommendation data collection in the appendix.

Cochrane Reviews

Search strategy

1. Cochrane reviews will be searched in the:
Cochrane Library
2. Search strategy will be*:
 - a. Child Health
 - b. Lungs and Airways

*We will not search the Cochrane "Ear Nose and Throat" topic. Croup and epiglottitis are dually listed under "Ear Nose and Throat" and "Respiratory infections" in the Cochrane Library.

Furthermore we will not include the Cochrane Library topic "Neonatal Care" in our search for Cochrane reviews. Our strategy will therefore miss than bronchopulmonary dysplasia (chronic lung disease) but we have not included a bronchopulmonary dysplasia guideline in our systematic review.

Selection strategy

1. Inclusion criteria for the Cochrane Reviews:
 - a. Cochrane Reviews
 - b. Further the same as for the guidelines. See Section: "Guidelines, selection strategy, 1b-g".
2. Inclusion criteria for the recommendations (author's conclusions) will be:
 - a. Recommendations for children (0-18 years)
 - b. For a respiratory disease including the lower airways up to and including anatomical sites of the epiglottis and including croup.
3. Exclusion criteria for the recommendations will be:
 - a. The same as for the guidelines. See section: "Guidelines, selection strategy, 3, a-j". Further:
 - b. Varicella
 - c. Measles
 - d. Meningitis
 - e. Mumps
 - f. Sinusitis
 - g. Smoking cessation
 - h. Sore throat

Data collection

1. Data collection from the Cochrane Reviews:

Data that will be collected from the Cochrane Reviews includes the Cochrane title, Cochrane number, the disease, the publication date, the number of recommendations and if the recommendation is clear. This is more specified in

Table 3: Cochrane Review data collection in the appendix.

2. Data collection from the recommendations:

Data collected from the recommendations will include the recommendations themselves and information about: patient's age, subcategory of patients/disease, moment of therapy and if the intervention is effective. This is more specified in Table 4: Cochrane review recommendations data collection in the appendix.

Guidelines and Cochrane Review linked

Information from the guidelines and the Cochrane Reviews will be linked.

Data collection:

1. Per guideline relevant Cochrane reviews will be collected that could be cited and the Cochrane Reviews that are cited by the guideline. This is more specified in Table 5: Cochrane Reviews relevant to the guideline in the appendix.
2. Per guideline the recommendations will be linked to Cochrane recommendations if possible and discrepancies between them will be noted. This is more specified in Table 2: Guideline recommendation data collection in the appendix.

Outcomes

Primary outcomes

Guidelines:

1. Description of guideline recommendations:
 - a. Mean/median number of recommendations
 - b. Funder
 - c. Year
 - d. Declaration of interest
 - e. Update time
 - f. Guideline method
 - g. Level of evidence used
 - h. Type of interventions
2. Calculate the proportion of guideline recommendations which reference a Cochrane Review.
3. Calculate the proportion of guidelines and recommendations which do not refer to a Cochrane Review where a relevant review was identified.
 - a. When the guideline did not cite the Cochrane Review:
 - i. Refer the publication date of the guideline with the first publication date of the Cochrane Review
 - ii. Guideline institution
 - iii. Conflict of interest

Cochrane Reviews:

1. Description of Cochrane recommendations:
 - a. Year
 - b. Update time
 - c. Type of interventions
 - d. If the recommendations are clear

Secondary outcomes

1. Compare rates of referring to a Cochrane Review by:
 - a. Conflict of interest
 - b. Guideline institution

2. Calculate the proportion of Cochrane Reviews cited but which differ in recommendation.
 - a. When there are discrepancies, refer number of discrepancies with:
 - I. Guideline institution
 - II. Level of evidence used (maybe another systematic review was used)
 - III. Conflict of interest
3. Calculate the proportion of Cochrane Reviews not cited and which would have let to a different recommendation.

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