

Supplementary file 1: Searches undertaken for each Key Questions

This section is divided into key questions (KQ) with the search strategy and results of searches undertaken for each KQ. Data relating to KQs 1-2 were undertaken by AC and JG; KQs 3-5 by JM and PB; part of KQ5 by KP and RC; and KQs 6-7 by KG and MS. The PRISMA diagrams are in Supplementary figures.

KQ1. In children aged ≤ 18 -years with chronic wet or productive cough unrelated to an underlying disease and without any specific cough pointers (e.g. coughs with feeding, digital clubbing, etc.),

- a. what is the evidence for PBB in clinical studies and clinical guidelines
- b. what have been used for the symptoms, signs and duration of cough for those with PBB

Search criteria for KQ1

Study Characteristic	Inclusion Criteria	Exclusion Criteria
Patient Population	<ul style="list-style-type: none">• Humans• Children with chronic cough (> 4 weeks) with wet or productive cough	Adults (aged >14 years)
Index Test	<ul style="list-style-type: none">• Antibiotics	None
Comparator	<ul style="list-style-type: none">• Placebo or no antibiotics	None
Target Condition	<ul style="list-style-type: none">• Chronic Cough	Known bronchiectasis or cystic fibrosis
Timing	<ul style="list-style-type: none">• Timing not limited	None
Setting	<ul style="list-style-type: none">• Inpatient and outpatient	None
Study design	<ul style="list-style-type: none">• Evaluation studies• Case series	<ul style="list-style-type: none">• Not a clinical study (e.g., editorial, non-systematic review, letter to the editor)
Publications	<ul style="list-style-type: none">• English-language only• Peer-reviewed articles• Relevant systematic review, meta-analysis, or methods article (used only for background and as potential sources of additional relevant material)	<ul style="list-style-type: none">• Non-English-language publications

KQ1 Search for ACCP Systematic review was undertaken on 19th July 2015
New search for the below undertaken on 30 Jan 2016

Search results for KQ1

PubMed

((("2015/07/19"[Date - Entrez] : "3000"[Date - Entrez])) AND ("chronic cough" OR "idiopathic cough" OR "refractory cough" OR "unresponsive cough" OR "intractable cough" OR "psychogenic cough" OR "unresolved cough" OR "unexplained cough" OR "wet cough" OR "productive cough") AND (antibiotics OR anti-bacterial agents) *Filters: Humans; English; Child: birth-18 years*

Results: 20

SCOPUS

TITLE-ABS-KEY(("chronic cough" OR "idiopathic cough" OR "refractory cough" OR "unresponsive cough" OR "intractable cough" OR "psychogenic cough" OR "unresolved cough" OR "unexplained cough" OR "wet cough" OR "productive cough") AND (antibiotics OR "anti-bacterial agents") AND (child OR children OR infant OR neonate OR adolescent)) AND (LIMIT-TO(LANGUAGE,"English")) AND (LIMIT-TO(PUBYEAR,2016) OR LIMIT-TO(PUBYEAR,2015))

Results: 75

Cochrane CENTRAL

("chronic cough" OR "idiopathic cough" OR "refractory cough" OR "unresponsive cough" OR "intractable cough" OR "psychogenic cough" OR "unresolved cough" OR "unexplained cough" OR "wet cough" OR "productive cough") AND (antibiotics OR "anti-bacterial agents") AND (child OR children OR infant OR neonate OR adolescent) in Title, Abstract, Keywords. LIMIT 2015 to 2016

Results: 0

KQ2. In children with chronic (>4 weeks) wet or productive with or without other specific cough pointers (e.g clubbing and feeding difficulties), what:

- are the possible causes
- tests should be undertaken and when should they be referred for further investigations?
- is the risk of harm in cases of delayed treatment and investigations?

Search criteria used for KQ2

Study Characteristic	Inclusion Criteria	Exclusion Criteria
Patient Population	<ul style="list-style-type: none"> Humans Children with chronic cough with wet or productive cough 	Adults (aged >14 years)
Index Test	<ul style="list-style-type: none"> Investigations or tests Referral Etiologies (this one is not in SR) 	None
Comparator	<ul style="list-style-type: none"> No investigations Non referral 	None
Target Condition	<ul style="list-style-type: none"> Chronic cough 	Known bronchiectasis or cystic fibrosis
Timing	<ul style="list-style-type: none"> Timing not limited 	None
Setting	<ul style="list-style-type: none"> Inpatient and outpatient 	None
Study design	<ul style="list-style-type: none"> Evaluation studies case series 	<ul style="list-style-type: none"> Not a clinical study (e.g., editorial, non-systematic review, letter to the editor)
Publications	<ul style="list-style-type: none"> English-language only Peer-reviewed articles Relevant systematic review, meta-analysis, or methods article (used only for background and as potential sources of additional relevant material) 	<ul style="list-style-type: none"> Non-English-language publications

KQ2 Search for ACCP Systematic review was undertaken on 27th July 2015

KQ2 Search for the below undertaken on 30 Jan 2016

Search results for KQ2

PubMed

((("2015/07/27"[Date - Entrez] : "3000"[Date - Entrez])) AND ("chronic cough" OR "idiopathic cough" OR "refractory cough" OR "unresponsive cough" OR "intractable cough" OR "psychogenic cough" OR "unresolved cough" OR "unexplained cough" OR "wet cough" OR "productive cough" OR (cough AND chronic disease[mh])) AND (diagnostic tests, routine[mh]

OR referral and consultation[mh] OR referral[tiab] OR consultation[tiab] OR decision trees[mh]
OR clinical pathways[mh] OR investigation* OR algorithms[mh]) Filters: Humans; English;
Child: birth-18 years

Results: 23

SCOPUS

TITLE-ABS-KEY(("chronic cough" OR "idiopathic cough" OR "refractory cough" OR
"unresponsive cough" OR "intractable cough" OR "psychogenic cough" OR "unresolved
cough" OR "unexplained cough" OR "wet cough" OR "productive cough" OR (cough
AND chronic disease)) AND ("diagnostic tests, routine" OR "routine diagnostic tests" OR
"referral and consultation" OR referral OR consultation OR "decision trees" OR "clinical
pathways" OR investigation* OR algorithm*) AND (child OR children OR infant OR
neonate OR adolescent) AND (human OR humans)) AND (LIMIT-TO (LANGUAGE ,
"English")) AND (LIMIT-TO (PUBYEAR , 2016) OR LIMIT-TO (PUBYEAR , 2015))

Results: 313

CENTRAL (Cochrane)

(("chronic cough" OR "idiopathic cough" OR "refractory cough" OR "unresponsive cough" OR
"intractable cough" OR "psychogenic cough" OR "unresolved cough" OR "unexplained cough"
OR "wet cough" OR "productive cough" OR (cough AND chronic disease)) AND ("diagnostic
tests, routine" OR "routine diagnostic tests" OR "referral and consultation" OR referral OR
consultation OR "decision trees" OR "clinical pathways" OR investigation* OR algorithm*)
AND (child OR children OR infant OR neonate OR adolescent)) in Title, Abstract, Keywords
LIMIT 2015 to 2016

Results: 0

PBB Search

Pubmed

("2015/07/27"[EDAT] : "3000"[EDAT]) AND ("protracted bacterial bronchitis"[All Fields] OR
"persistent bacterial bronchitis"[All Fields]) AND ("children"[All Fields] OR "child"[All Fields])

Results: 8

KQ3: In children with chronic (>4-weeks) wet or productive cough unrelated to an underlying disease and without any specific cough pointers, what bacteria are cultured from the lower airways and the associated airway cellularity?

Search criteria used for KQ3

Study Characteristic	Inclusion Criteria	Exclusion Criteria
Patient Population	<ul style="list-style-type: none"> • Humans • Children with chronic cough (> 4 weeks) with wet or productive cough • PBB • Protracted bacterial bronchitis 	Adults (aged >18 years)
Index Test	<ul style="list-style-type: none"> • Bacteriology • Bacteria 	None
Comparator	<ul style="list-style-type: none"> • No bacteriology • No bacteria 	None
Target Condition	<ul style="list-style-type: none"> • Chronic Cough 	Known bronchiectasis or cystic fibrosis
Timing	<ul style="list-style-type: none"> • Timing not limited 	None
Setting	<ul style="list-style-type: none"> • Inpatient and outpatient 	None
Study design	<ul style="list-style-type: none"> • Evaluation studies • Case series 	<ul style="list-style-type: none"> • Not a clinical study (e.g., editorial, non-systematic review, letter to the editor)
Publications	<ul style="list-style-type: none"> • English-language only • Peer-reviewed articles • Relevant systematic review, meta-analysis, or methods article (used only for background and as potential sources of additional relevant material) 	<ul style="list-style-type: none"> • Non-English-language publications

Search results for KQ3

PubMed

("chronic cough" OR "idiopathic cough" OR "refractory cough" OR "unresponsive cough" OR "intractable cough" OR "psychogenic cough" OR "unexplained cough" OR "wet cough" OR "productive cough" OR "PBB" OR "Protracted bacterial bronchitis") AND ("bacteriology" OR "bacteria")

Filters: Humans; English; Child: birth-18 years

Results: 14

Web of Science:

TOPIC: ((chronic cough OR idiopathic cough OR refractory cough OR unresponsive cough OR intractable cough OR psychogenic cough OR unexplained cough OR wet cough OR productive cough OR PBB OR protracted bacterial bronchitis) AND (bacteriology OR bacteria)) AND TOPIC: (child OR children OR adolescent OR infant OR neonate) Refined by: LANGUAGES: (ENGLISH) AND DOCUMENT TYPES: (ARTICLE OR REVIEW OR PROCEEDINGS PAPER)

Results: 284

SCOPUS:

TITLE-ABS-KEY(("chronic cough" OR "idiopathic cough" OR "refractory cough" OR "unresponsive cough" OR "intractable cough" OR "psychogenic cough" OR "unexplained cough" OR "wet cough" OR "productive cough" OR "PBB" OR "protracted bacterial bronchitis") AND ("bacteriology" OR "bacteria") AND (child OR children OR infant OR neonate OR adolescent)) AND (LIMIT-TO(LANGUAGE,"English"))

Results: 108

Cochrane CENTRAL

("chronic cough" OR "idiopathic cough" OR "refractory cough" OR "unresponsive cough" OR "intractable cough" OR "psychogenic cough" OR "unresolved cough" OR "unexplained cough" OR "wet cough" OR "productive cough" OR "PBB" OR "protracted bacterial bronchitis") AND (bacteriology OR "bacteria") AND (child OR children OR infant OR neonate OR adolescent)

Results: 1

KQ4: In children with PBB, in addition to ‘classical’ bacteriology, what else is known about the airway microbiology (viruses, virus-bacteria interactions, microbiome)?

KQ4 was also undertaken in parts; (i) virus, (ii) microbiome and interactions.

KQ4(i): In children aged <18 years with PBB, what is the known microbiology (virus)?

Search criteria used for KQ4(i)

Study Characteristic	Inclusion Criteria	Exclusion Criteria
Patient Population	<ul style="list-style-type: none">• Humans• Children with chronic cough (> 4 weeks) with wet or productive cough• PBB• Protracted bacterial bronchitis	Adults (aged >18 years)
Index Test	<ul style="list-style-type: none">• Viruses	None
Comparator	<ul style="list-style-type: none">• No viruses	None
Target Condition	<ul style="list-style-type: none">• PBB	Known bronchiectasis or cystic fibrosis
Timing	<ul style="list-style-type: none">• Timing not limited	None
Setting	<ul style="list-style-type: none">• Inpatient and outpatient	None
Study design	<ul style="list-style-type: none">• Evaluation studies• Case series	<ul style="list-style-type: none">• Not a clinical study (e.g., editorial, non-systematic review, letter to the editor)
Publications	<ul style="list-style-type: none">• English-language only• Peer-reviewed articles• Relevant systematic review, meta-analysis, or methods article (used only for background and as potential sources of additional relevant material)	<ul style="list-style-type: none">• Non-English-language publications

Search results for KQ4(i)

PubMed

(“chronic cough” OR “idiopathic cough” OR “refractory cough” OR “unresponsive cough” OR “intractable cough” OR “psychogenic cough” OR “unresolved cough” OR “unexplained cough” OR “wet cough” OR “productive cough” OR “PBB” OR “protracted bacterial bronchitis”) AND

("viruses" OR "virus")

Filters: Humans; English; Child: birth-18 years

Results: 17

Web of Science:

TOPIC: ((chronic cough OR idiopathic cough OR refractory cough OR unresponsive cough OR intractable cough OR psychogenic cough OR unresolved cough OR unexplained cough OR wet cough OR productive cough) AND (virus OR viruses)) AND TOPIC: (child OR children OR adolescent OR infant OR neonate) Refined by: LANGUAGES: (ENGLISH) AND DOCUMENT TYPES: (ARTICLE OR REVIEW OR PROCEEDINGS PAPER)

Results: 92

SCOPUS:

TITLE-ABS-KEY(("chronic cough" OR "idiopathic cough" OR "refractory cough" OR "unresponsive cough" OR "intractable cough" OR "psychogenic cough" OR "unresolved cough" OR "unexplained cough" OR "wet cough" OR "productive cough") AND ("viruses" OR "virus") AND (child OR children OR infant OR neonate OR adolescent)) AND (LIMIT-TO(LANGUAGE,"English"))

Results: 103

Cochrane CENTRAL

("chronic cough" OR "idiopathic cough" OR "refractory cough" OR "unresponsive cough" OR "intractable cough" OR "psychogenic cough" OR "unresolved cough" OR "unexplained cough" OR "wet cough" OR "productive cough") AND ("viruses" OR "virus") AND (child OR children OR infant OR neonate OR adolescent)

Results: 1

KQ4(ii): In children aged <18 years with PBB, what is the known microbiology (microbiome and interactions)?

Search criteria used for KQ4(ii)

Study Characteristic	Inclusion Criteria	Exclusion Criteria
Patient Population	<ul style="list-style-type: none"> • Humans • Children with chronic cough (> 4 weeks) with wet or productive cough • PBB • Protracted bacterial bronchitis 	Adults (aged >18 years)
Index Test	<ul style="list-style-type: none"> • Microbiology • Microbiota • Microbiome • Biofilm 	None
Comparator	<ul style="list-style-type: none"> • No microbiology 	None
Target Condition	<ul style="list-style-type: none"> • PBB 	Known bronchiectasis or cystic fibrosis
Timing	<ul style="list-style-type: none"> • Timing not limited 	None
Setting	<ul style="list-style-type: none"> • Inpatient and outpatient 	None
Study design	<ul style="list-style-type: none"> • Evaluation studies • Case series 	<ul style="list-style-type: none"> • Not a clinical study (e.g., editorial, non-systematic review, letter to the editor)
Publications	<ul style="list-style-type: none"> • English-language only • Peer-reviewed articles • Relevant systematic review, meta-analysis, or methods article (used only for background and as potential sources of additional relevant material) 	<ul style="list-style-type: none"> • Non-English-language publications

Search results for KQ4(ii)

PubMed

("chronic cough" OR "unresponsive cough" OR "refractory cough" OR "intractable cough" OR "psychogenic cough" OR "unexplained cough" OR "wet cough" OR "productive cough" OR "PBB" OR "protracted bacterial bronchitis") AND ("microbiology" OR "microbiota" OR "microbiome" OR "biofilm")

Filters: Humans; English; Child: birth-18 years

Results: 53

Web of Science:

TOPIC: ((chronic cough OR idiopathic cough OR refractory cough OR unresponsive cough OR intractable cough OR psychogenic cough OR unresolved cough OR unexplained cough OR wet cough OR productive cough OR PBB OR protracted bacterial bronchitis) AND (microbiology OR microbiota OR microbiome OR biofilm)) AND TOPIC: (child OR children OR adolescent OR infant OR neonate) Refined by: LANGUAGES: (ENGLISH) AND DOCUMENT TYPES: (ARTICLE OR REVIEW OR PROCEEDINGS PAPER)

Results: 14

SCOPUS:

TITLE-ABS-KEY(("chronic cough" OR "idiopathic cough" OR "refractory cough" OR "unresponsive cough" OR "intractable cough" OR "psychogenic cough" OR "unresolved cough" OR "unexplained cough" OR "wet cough" OR "productive cough" OR "PBB" OR "protracted bacterial bronchitis") AND ("microbiology" OR "microbiota" OR "microbiome" OR "biofilm") AND (child OR children OR infant OR neonate OR adolescent)) AND (LIMIT-TO(LANGUAGE,"English"))

Results: 48

Cochrane CENTRAL

("chronic cough" OR "idiopathic cough" OR "refractory cough" OR "unresponsive cough" OR "intractable cough" OR "psychogenic cough" OR "unresolved cough" OR "unexplained cough" OR "wet cough" OR "productive cough" OR "PBB" OR "protracted bacterial bronchitis") AND ("microbiology" OR "microbiota" OR "microbiome" OR "biofilm") AND (child OR children OR infant OR neonate OR adolescent)

Results: 1

KQ5. In children aged <18 years with PBB, what are the known pathobiology (risk factors, underlying mechanisms, cellular pathways, immunity, airway malacia)?

KQ5 was also undertaken in parts; (i) focused on **risk factors, underlying mechanisms, cellular pathways, immunity**; (ii) focused on airway malacia.

KQ5(i). In children aged <18 years with PBB, what are the known pathobiology (risk factors, underlying mechanisms, cellular pathways, immunity

Search criteria used for KQ5(i)

Study Characteristic	Inclusion Criteria	Exclusion Criteria
Patient Population	<ul style="list-style-type: none"> • Humans • Children with chronic cough (> 4 weeks) with wet or productive cough • PBB • Protracted bacterial bronchitis 	Adults (aged >18 years)
Index Test	<ul style="list-style-type: none"> • Pathobiology • Immunity • Innate immunity • Risk factors • Signaling pathways • Cellular pathways • Inflammation 	None
Comparator	<ul style="list-style-type: none"> • No pathobiology 	None
Target Condition	<ul style="list-style-type: none"> • PBB 	Known bronchiectasis or cystic fibrosis
Timing	<ul style="list-style-type: none"> • Timing not limited 	None
Setting	<ul style="list-style-type: none"> • Inpatient and outpatient 	None
Study design	<ul style="list-style-type: none"> • Evaluation studies • Case series 	<ul style="list-style-type: none"> • Not a clinical study (e.g., editorial, non-systematic review, letter to the editor)
Publications	<ul style="list-style-type: none"> • English-language only • Peer-reviewed articles • Relevant systematic review, meta-analysis, or methods article (used only for background and as potential sources of additional relevant material) 	<ul style="list-style-type: none"> • Non-English-language publications

Search results for KQ5(i)

PubMed

("chronic cough" OR "idiopathic cough" OR "refractory cough" OR "unresponsive cough" OR "intractable cough" OR "psychogenic cough" OR "unresolved cough" OR "unexplained cough" OR "wet cough" OR "productive cough" OR "PBB" OR "protracted bacterial bronchitis") AND ("pathobiology" OR "immunity" OR "innate immunity" OR "risk factors" OR "signalling pathways" OR "cellular pathways")

Filters: Humans; English; Child: birth-18 years

Results: 145

Web of Science:

TOPIC: ((chronic cough OR idiopathic cough OR refractory cough OR unresponsive cough OR intractable cough OR psychogenic cough OR unresolved cough OR unexplained cough OR wet cough OR productive cough OR PBB OR protracted bacterial bronchitis) AND (pathobiology OR immunity OR Innate immunity OR risk factors OR signalling pathways OR cellular pathway)) AND TOPIC: (child OR children OR adolescent OR infant OR neonate) Refined by: LANGUAGES: (ENGLISH) AND DOCUMENT TYPES: (ARTICLE OR REVIEW OR PROCEEDINGS PAPER)

Results: 157

SCOPUS: TITLE-ABS-KEY(("chronic cough" OR "idiopathic cough" OR "refractory cough" OR "unresponsive cough" OR "intractable cough" OR "psychogenic cough" OR "unresolved cough" OR "unexplained cough" OR "wet cough" OR "productive cough" OR "PBB" OR "protracted bacterial bronchitis") AND ("pathobiology" OR "immunity" OR "innate immunity" OR "risk factors" OR "signalling pathways" OR "cellular pathway") AND (child OR children OR infant OR neonate OR adolescent)) AND (LIMIT-TO(LANGUAGE,"English"))

Results: 236

Cochrane CENTRAL

("chronic cough" OR "idiopathic cough" OR "refractory cough" OR "unresponsive cough" OR "intractable cough" OR "psychogenic cough" OR "unresolved cough" OR "unexplained cough" OR "wet cough" OR "productive cough" OR "PBB" OR "protracted bacterial bronchitis") AND (("pathobiology" OR "immunity" OR "innate immunity" OR "risk factors" OR "signalling pathways" OR "cellular pathway") AND (child OR children OR infant OR neonate OR adolescent))

Results: 0

KQ5(ii). In children aged <18 years with PBB, what are the known pathobiology (airway malacia)?

Search criteria used for KQ5(ii)

Study Characteristic	Inclusion Criteria	Exclusion Criteria
Patient Population	<ul style="list-style-type: none"> • Humans • Children with chronic cough (> 4 weeks) with wet or productive cough • PBB • Protracted bacterial bronchitis 	Adults (aged >18 years)
Index Test	<ul style="list-style-type: none"> • Airway malacia • Airway lesion/s • Tracheomalacia • Bronchomalacia 	None
Comparator	<ul style="list-style-type: none"> • No airway malacia • No airway lesions • No tracheomalacia • No bronchomalacia 	None
Target Condition	<ul style="list-style-type: none"> • PBB 	Known bronchiectasis or cystic fibrosis
Timing	<ul style="list-style-type: none"> • Timing not limited 	None
Setting	<ul style="list-style-type: none"> • Inpatient and outpatient 	None
Study design	<ul style="list-style-type: none"> • Evaluation studies • Case series 	<ul style="list-style-type: none"> • Not a clinical study (e.g., editorial, non-systematic review, letter to the editor)
Publications	<ul style="list-style-type: none"> • English-language only • Peer-reviewed articles • Relevant systematic review, meta-analysis, or methods article (used only for background and as potential sources of additional relevant material) 	<ul style="list-style-type: none"> • Non-English-language publications

Search results for KQ5(iii)

PubMed

("chronic cough" OR "unresponsive cough" OR "refractory cough" OR "intractable cough" OR "psychogenic cough" OR "unresolved cough" OR "unexplained cough" OR "wet cough" OR "productive cough" OR "PBB" OR "protracted bacterial bronchitis") AND ("airway malacia"

OR “ airway lesions” OR “airway lesion” OR “tracheomalacia” OR “bronchomalacia”)

Filters: Humans; English; Child: birth-18 years

Results: 11

Web of Science:

TOPIC: ((chronic cough OR idiopathic cough OR refractory cough OR unresponsive cough OR intractable cough OR psychogenic cough OR unresolved cough OR unexplained cough OR wet cough OR productive cough OR PBB OR protracted bacterial bronchitis) AND (airway malacia OR airway lesions OR airway lesion OR tracheomalacia OR bronchomalacia)) AND TOPIC:

(child OR children OR adolescent OR infant OR neonate) Refined by: LANGUAGES: (ENGLISH) AND DOCUMENT TYPES: (ARTICLE OR REVIEW OR PROCEEDINGS PAPER)

Results: 33

SCOPUS:

TITLE-ABS-KEY(("chronic cough" OR "idiopathic cough" OR "refractory cough" OR "unresponsive cough" OR "intractable cough" OR "psychogenic cough" OR "unresolved cough" OR "unexplained cough" OR "wet cough" OR "productive cough" OR "PBB" OR "protracted bacterial bronchitis") AND ("airway malacia" OR "airway lesions" OR "airway lesion" OR "tracheomalacia" OR "bronchomalacia") AND (child OR children OR infant OR neonate OR adolescent)) AND (LIMIT-TO(LANGUAGE,"English"))

Results: 24

Cochrane CENTRAL

("chronic cough" OR "idiopathic cough" OR "refractory cough" OR "unresponsive cough" OR "intractable cough" OR "psychogenic cough" OR "unresolved cough" OR "unexplained cough" OR "wet cough" OR "productive cough" OR "PBB" OR "protracted bacterial bronchitis") AND ("airway malacia" OR "airway lesions" OR "airway lesion" OR "tracheomalacia" OR "bronchomalacia") AND (child OR children OR infant OR neonate OR adolescent)

Results: 1

KQ6: In children aged ≤18-years with chronic wet or productive cough unrelated to an underlying disease and without any specific cough pointers (e.g. coughing with feeding, digital clubbing, etc.):

- a. How effective are antibiotics in improving clinical outcomes (eg. cough resolution)?
- b. What is the most suitable antibiotic?
- c. For how long should antibiotics be prescribed?
- d. Does treatment dose and duration influence risk of recurrence in the following 12-months?

Search criteria used for KQ6

Study Characteristic	Inclusion Criteria	Exclusion Criteria
Patient Population	<ul style="list-style-type: none"> Humans Children with chronic cough (>4-weeks) with wet or productive cough 	Adults (aged >18-years)
Index Test	<ul style="list-style-type: none"> Antibiotics 	None
Comparator	<ul style="list-style-type: none"> Placebo or no antibiotics 	None
Target Condition	<ul style="list-style-type: none"> Chronic cough 	Known bronchiectasis or cystic fibrosis
Timing	<ul style="list-style-type: none"> Timing not limited 	None
Setting	<ul style="list-style-type: none"> Inpatient and outpatient 	None
Study design	<ul style="list-style-type: none"> Evaluation studies Case series 	<ul style="list-style-type: none"> Not a clinical study (e.g., editorial, non-systematic review, letter to the editor)
Publications	<ul style="list-style-type: none"> English-language only Peer-reviewed articles Relevant systematic review, meta-analysis, or methods article (used only for background and as potential sources of additional relevant material) 	<ul style="list-style-type: none"> Non-English-language publications

Search undertaken on 1 April 2016

"chronic cough" OR "idiopathic cough" OR "refractory cough" OR "unresponsive cough" OR "intractable cough" OR "psychogenic cough" OR "unresolved cough" OR "unexplained cough" OR "wet cough" OR "productive cough" OR "moist cough" AND antibiotic* OR "anti-bacterial agent*" OR "anti-microbial agent*" AND child* OR infant* OR adolescent*. Filters:

LANGUAGE: (English), Human

Search results for KQ6

PubMed

Results: 75

Scopus

Results: 92 (1 duplicate)

Medline (EbscoHost)

Results: 50

Web of Science

Results: 64 (1 duplicate)

Cochrane CENTRAL

Results: 20

Searching reference lists of identified articles

Results: 17

KQ7: In children aged ≤18-years with chronic wet or productive cough unrelated to an underlying disease and without any specific cough pointers (e.g. coughing with feeding, digital clubbing, etc.):

- a. What is the role of prophylactic antibiotics?
- b. What is the risk of antibiotic resistance?
- c. How should recurrences be managed?

Search criteria used for KQ7

Study Characteristic	Inclusion Criteria	Exclusion Criteria
Patient Population	<ul style="list-style-type: none"> Humans Children with chronic cough with wet or productive cough 	Adults (aged >18-years)
Index Test	<ul style="list-style-type: none"> Antibiotics 	None
Comparator	<ul style="list-style-type: none"> Placebo or no antibiotics 	None
Target Condition	<ul style="list-style-type: none"> Chronic cough 	Known bronchiectasis or cystic fibrosis
Timing	<ul style="list-style-type: none"> Timing not limited 	None
Setting	<ul style="list-style-type: none"> Inpatient and outpatient 	None
Study design	<ul style="list-style-type: none"> Evaluation studies case series 	<ul style="list-style-type: none"> Not a clinical study (e.g., editorial, non-systematic review, letter to the editor)
Publications	<ul style="list-style-type: none"> English-language only Peer-reviewed articles Relevant systematic review, meta-analysis, or methods article (used only for background and as potential sources of additional relevant material) 	<ul style="list-style-type: none"> Non-English-language publications

Search undertaken on 1 April 2016

"chronic cough" OR "idiopathic cough" OR "refractory cough" OR "unresponsive cough" OR "intractable cough" OR "psychogenic cough" OR "unresolved cough" OR "unexplained cough" OR "wet cough" OR "productive cough" OR "moist cough" AND antibiotic* OR "anti-bacterial agent*" OR "anti-microbial agent*" AND child* OR infant* OR adolescent*. Filters:

LANGUAGE: (English), Human

Search results for KQ7

PubMed

Results: 75

Scopus

Results: 92 (1 duplicate)

Medline (EbscoHost)

Results: 50

Web of Science

Results: 64 (1 duplicate)

Cochrane CENTRAL

Results: 20

Searching reference lists of identified articles

Results: 17