



Background

Acute cough is defined as being less than 3 weeks in duration.

This audit is only assessing patients that present with acute cough due to an upper respiratory tract infection and acute bronchitis that are aged 18-75 years old.

Pneumonia and other causes of acute cough are excluded.

NICE Clinical Knowledge Summaries (CKS) suggests that the cause of an acute cough be diagnosed as an upper respiratory tract infection or acute bronchitis based on the clinical features listed below:

Acute cough due to **upper respiratory tract infections**

- **Symptoms** — cough with or without sputum, general malaise, and possibly fever.
- **Signs** — no focal chest signs.

Acute cough due to **acute bronchitis**

- **Symptoms** — cough with or without sputum, breathlessness, wheeze, or general malaise.
- **Signs** — no chest signs other than wheeze and crackles. Crackles, if present, should clear with coughing — if they persist, diagnose pneumonia.

Aim

This audit evaluates antibiotic prescribing for acute cough against the [NICE Guidelines CG69: Respiratory tract infections – antibiotic prescribing: Prescribing of antibiotics for self-limiting respiratory tract infections in adults and children in primary care](#) and [Public Health England \(PHE\) Management of infection guidance for primary care for consultation and local adaptation](#).

This audit tool can be modified to follow local infection management guidelines.

Audit requirements

Search for 30-40 consultation records relating to cough due to upper respiratory tract infection or acute bronchitis in patients aged 18 years-75 years old. The read codes listed below are a suggested sample of read codes which may be used when conducting this audit. This list is by no means exhaustive and clinicians are advised to use read codes which they use when seeing patients with cough due to upper respiratory tract infection or acute bronchitis in order to generate the type of consultation required for this audit. Some GPs may find that searching for just one read code generates all the consultations they require for the audit.

1656.00	Feverish cold	H00..12	Coryza – acute
171..00	Cough	H00..13	Febrile cold
171..11	C/O – cough	H00..15	Pyrexial cold
1712.00	Dry cough	R062.00	[D]Cough
1713.00	Productive cough -clear sputum	H00..11	Common cold
171F.00	Cough with fever		

171Z.00	Cough symptom NOS
H00..00	Acute nasopharyngitis

Method

Aim for 30-40 consultations (with a minimum number of 20 consultations) to be analysed to determine overall compliance with NICE and PHE Primary Care guidance:

- **Acute cough due to upper respiratory tract infections:**
 - Antibiotics are usually unnecessary. Share self help advice and patient information leaflet.

- **Acute cough due to acute bronchitis:**
 - Antibiotics are usually *not* indicated in people who are otherwise well.
 - Consider prescribing antibiotics for people who have a pre-existing condition that impairs their ability to deal with infection or is likely to deteriorate with acute bronchitis. This includes people >80 years and ONE of the following or >65years and TWO of the following:
 - hospitalisation in past year
 - oral steroids
 - diabetic
 - congestive heart failure

Compliance with the decision to treat a patient with a respiratory tract infection can be determined by using the care pathway present in the [NICE Guidelines CG69: Respiratory tract infections – antibiotic prescribing: Prescribing of antibiotics for self-limiting respiratory tract infections in adults and children in primary care](#)

Compliance with the antibiotic(s), dose, frequency and duration can be determined using the **Public Health England (PHE) Management of infection guidance for primary care for consultation and local adaptation.**

Condition	Drug	Dose	Duration of Treatment
Upper Respiratory Tract Infection	No antibiotic required, consider delayed antibiotic script. Share self help advice/patient information leaflet		
Acute Bronchitis	Amoxicillin	500mg TDS	5 days
	Doxycycline (If penicillin allergic)	200mg stat then 100mg OD	5 days

Results

The following tables show the results that should be recorded

Acute Cough with URTI	NICE/PHE Guidance		Total
	Followed	Not Followed	
No Antibiotic Prescribed			

Back up/Delayed Prescription Given			
Immediate Antibiotic Prescribed			
Total number of patients consulting			
Self-care advice given			
Leaflet shared with patient/carer			
Safety netting advice given			

Acute Cough due to Acute Bronchitis	NICE/PHE Guidance		Total
	Followed	Not Followed	
No Antibiotic Prescribed			
Back up/Delayed Prescription Given			
Immediate Antibiotic Prescribed			
Total number of patients consulting			
Self-care advice given			
Leaflet shared with patient/carer			
Safety netting advice given			

Review of Antibiotic Prescriptions for Acute Cough		
Parameter	Total Number	
	Acute Bronchitis	URTI
1. Patients prescribed an antibiotic		
2. Antibiotic Choice Correct		
3. Dose Correct		
4. Frequency Correct		
5. Duration of antibiotic course correct		
6. All Parameters of Antibiotic Prescribing Correct (i.e points 2-5 all correct)		
7. Self-help advice given		
8. Patient information leaflet given		

Calculations

1.

Overall compliance with NICE/ PHE guidance on whether to prescribe an antibiotic =

$$\frac{\text{Total number of PHE Antibiotic Prescribing Guidance Followed}}{\text{Total number of patients in audit}} \times 100$$

(European indicators by ESAC suggest that only 0-20% of patients older than 1 year of age should be prescribed antibiotics for acute upper respiratory tract infection.)

(European indicators by ESAC suggest that only 0-30% of patients 18-75 years of age should be prescribed antibiotics for acute bronchitis.)

2.

Overall compliance to PHE Primary Care guidance on appropriate antibiotic prescribing (i.e of those patients who were prescribed an antibiotic, all parameters of antibiotic prescribing were met for each patient) =

$$\frac{\text{All parameters of antibiotic prescribing correct}}{\text{(Value in row 6 in table above)}} \times 100$$

$$\frac{\text{Total number of patients prescribed an antibiotic}}{\text{(value in row 1 above)}}$$

(ESAC suggest that 80-100% of patients older than 1 year of age who are prescribed antibiotics for acute upper respiratory tract infection should receive the recommended antibiotics, i.e correct choice of antibiotic, correct dose, correct frequency, correct duration of treatment).

(ESAC suggest that 80-100% of patients aged 18-75 years of age who are prescribed antibiotics for acute bronchitis should receive the recommended antibiotics, i.e correct choice of antibiotic, correct dose, correct frequency, correct duration of treatment).

3.

Overall compliance with NICE guidance to share self-help and safety netting advice =

$$\frac{\text{No. in which self-help advice and safety netting advice}}{\text{and leaflet shared with patient/carer}} \times 100$$
$$\frac{\text{Total number of patients in audit}}$$

Actions

This section has been left blank intentionally for the practitioner completing the audit to document any actions required as a result of their findings.

Acknowledgements

This audit was devised by Dr Imran Jawaid with advice from Dr Clodna McNulty and Leah Jones.

References

[National Institute for Health and Care Excellence. 2015. Clinical Knowledge Summaries - Acute Cough. \[ONLINE\] Available at: http://cks.nice.org.uk/cough#!topicssummary. \[Accessed 24 June 15\].](http://cks.nice.org.uk/cough#!topicssummary)

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[Public Health England. 2014. Management of infection guidance for primary care for consultation and local adaptation. \[ONLINE\] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/377509/PHE_Primary_Care_guidance_14_11_14.pdf. \[Accessed 24 June 15\].](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/377509/PHE_Primary_Care_guidance_14_11_14.pdf)

BMJ Qual Saf 2011;20:764e772. doi:10.1136/bmjqs.2010.049049,1,2
Samuel Coenen, Sarah Tonkin-Crine, Theo J M Verheij, Paul Little, Herman Goossens, on behalf of the ESAC Project Group. European Surveillance of Antimicrobial Consumption (ESAC): disease-specific quality indicators for outpatient antibiotic prescribing

Appendix 1

Compliance with the decision to treat a patient with a respiratory tract infection can be determined by using the care pathway present in the [NICE Guidelines CG69: Respiratory tract infections – antibiotic prescribing: Prescribing of antibiotics for self-](#)

limiting respiratory tract infections in adults and children in primary care

