Antibiotic Prescribing in Primary Care

ACUTE SORE THROAT AUDIT

Aim

To audit antibiotic prescribing for sore throat against

1. [***NICE Guidelines NG84***](https://www.nice.org.uk/guidance/ng84)***:***Sore throat (acute): antimicrobial prescribing
2. [***PHE/NICE***](https://www.nice.org.uk/about/what-we-do/our-programmes/nice-guidance/antimicrobial-prescribing-guidelines)Summary of antimicrobial prescribing guidance - managing common infections

**Table 1.** The current PHE Primary Care Guidance for acute sore throats.

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| --- | --- | --- | --- | --- |
| **ILLNESS** | **COMMENTS** | **TREATMENT** | **ADULT DOSE** | **DURATION** |
| **Acute Sore Throat**[NICE NG84](https://www.nice.org.uk/guidance/ng84)[FeverPAIN](https://ctu1.phc.ox.ac.uk/feverpain/index.php) | **All: self-care and safety net;** advise paracetamol; medicated lozenges benefit some people.**Viruses** usually trigger acute sore throats**Most get better within 1 week** without antibiotics whether bacterial or viral. Withholding antibiotics is unlikely to lead to complications, which are rare.Use [FeverPAIN](https://ctu1.phc.ox.ac.uk/feverpain/index.php) or Centor: (1 point for each symptom) to assess as antibiotics more beneficial in people with higher score. **FeverPAIN: Fever** lasts 24h, **P**urulence, **A**ttend 3d or less, severely **I**nflamed tonsils, **N**o cough or coryza. **Centor:** Tonsillar exudate; History of Fever (>38°C); Tender anterior cervical Lymphadenopathy or lymphadenitis; Absence of cough.**Score:****FeverPAIN 0-1, or Centor 2:** no antibiotic.**FeverPAIN 2-3:** No **or** 3-5 day back-up antibiotic.**FeverPAIN 4-5 or Centor 3-4:** immediate antibiotic if severe symptoms, or 48-hour delayed antibiotic. | **Self-care & safety net** **First choice delayed or immediate** **antibiotic** phenoxymethylpenicillin**Child 1–11 months**62.5mg QDS or 125mg BDS for 5-10d**Child 1–5 years**125mg QDS or 250mg BDS for 5-10d**Child 6–11 years**250mg QDS or 500mg BDS for 5-10d**Child 12–17 years**500mg QDS or 1000mg BDS for 5-10d | 500mg QDS (if severe) or 1000mg BD(if less severe) | 5 – 10 days(if recurrent 10 days) |
| Penicillin allergy: clarithromycin **OR** | 250mg to 500mg BD | 5 days |
| erythromycin (preferred ifpregnant) | 250mg to 500mgQDS500mg to 1000 mgBD | 5 days |

How to complete this audit

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

**Step 1**: Search for 20-40 consultation records (minimum 20 consultations) relating to acute sore throat. The Read codes below are a sample of codes that can be used, but consider adding codes that you or your colleagues are likely to use when you see patients with cough. Searching for just a few Read codes may identify all the consultations you require for the audit.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **1C9** | Sore throat Symptom | **H02-3** | Throat infection: pharyngitis | **H036** | Acute viral tonsillitis |
| **H03** | Acute tonsillitis | **H024** | Acute viral pharyngitis | **H037** | Recurrent acute tonsillitis |
| **H040** | Acute laryngitis | **H02z** | Acute pharyngitis NOS | **H03z** | Acute tonsillitis NOS |
| **1C9-1** | Throat soreness | **H03-1** | Throat infection - tonsillitis | **1C92** | Has a sore throat |
| **A340** | Streptococcal sore throat | **H03-2** | Tonsillitis | **1CB3** | Throat pain |
| **H02-2** | Viral sore throat NOS | **H031** | Acute follicular tonsillitis |  |  |

**Step 2**: Compete the data collection table below for each selected patient.

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| **Data Collection Sheet: ACUTE SORE Audit** |
| **Compliance with PHE/NICE guidance for acute sore throat** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** | **23** | **24** | **25** | **26** | **27** | **28** | **29** | **30** | **31** | **32** | **33** | **34** | **35** | **36** | **37** | **38** | **39** | **40** | **% of Total with acute sore throat** | **Your target % for good practice**  |
| 1. FeverPAIN(FP) or Centor(C) used
 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1. **FP 0-1 or C2:** No antibiotic given
 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1. **FP 2-3**: No antibiotic or back-up/delayed antibiotic given with advice about how to access
 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1. **FP4 – 5 or C3-4**Immediate antibiotic or a back-up antibiotic prescription given with advice on adherence
 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1. **Management appropriate for clinical presentation?**
 |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1. Advice given on natural history and average length of illness

 *7 days* |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1. Advice given about managing symptoms including fever

 *Self-care advice* |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1. Information about when to re-consult *Safety netting advice*
 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1. Information shared on antibiotic use and resistance
 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. [Shared the TARGET Treating Your Infection RTI leaflet](http://www.rcgp.org.uk/clinical-and-research/toolkits/~/link.aspx?_id=9FCF9DA4B4A045519593320478DFD9E7&_z=z)
 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| **If antibiotics prescribed** (N=\_\_\_\_\_\_ ) |
| 1. Antibiotic choice correct

*1st line: Phenoxymethylpenicillin**Penicillin allergy: clarithromycin or erythromycin**Penicillin allergy in pregnancy: erythromycin* |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1. Dose/frequency correct

*Phenoxymethylpenicillin 500mg QDS OR 1000mg BD* *Clarithromycin 250mg BD* *Erythromycin 250-500mg QDS or 500mg – 1000mg BD (preferred in pregnancy)* |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1. Course length correct

*Phenoxymethylpenicillin 5-10d**Clarithromycin and erythromycin 5d* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

For ease of use you can now summarise your data the Summary table below.

|  |  |
| --- | --- |
| **Total number of patients** | **…………………..** |
| **Row in table below** | **Criteria** | **Number of patients****(N)** | **Total % of Patients** | **Target %[[1]](#footnote-1)** |
| **Management decision** |
| **A** | FEVERPAIN or Centor algorithm used |  |  | >80% |
| **B** | No antibiotic given |  |  | 40% - 60% |
| **C** | Back-up/delayed antibiotic given with advice about how to access |  |  | 20% - 40% |
| **D** | Immediate antibiotic given with advice on compliance |  |  | 20% - 40% |
| **E** | Management appropriate for clinical presentation? |  |  | 100% |

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| **Providing Advice**  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **F** | Advice given on natural history and average length of illness – *7 days* |  |  | 100% |
| **G** | Advice given about managing symptoms (*Self-care advice*) |  |  |
| **H** | Information about when to re-consult (*Safety netting advice*) |  |  |
| **I** | Information given about antibiotic use and resistance  |  |  |
| **J** | [Shared the TARGET Treating Your Infection RTI leaflet](http://www.rcgp.org.uk/clinical-and-research/toolkits/~/link.aspx?_id=9FCF9DA4B4A045519593320478DFD9E7&_z=z) |  |  |

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| **If antibiotics were prescribed: (N= …….. )** |
| **K** | Antibiotic choice correct – *1st line: Penicillin V**2nd line: Clarithromycin* OR *erythromycin* |  |  | 100% |
| **L** | Dose/frequency correct – *Penicillin V 500mg QDS or 1000mg BD**Clarithromycin 250 - 500mg BD**Erythromycin 250 - 500mg QDS;* *500mg – 1000mg BD in pregnancy* |  |  |
| **M** | Course length correct –  *Penicillin V 5-10d* *Clarithromycin 5d**Erythromycin 5d* |  |  |

**Step 3**: How did you do? Use the calculations below to check compliance with NICE / PHE guidance.

1. **Was the FEVERPAIN or Centor algorithm used?** (Total row A)
2. **On whether to prescribe an antibiotic**

$$\left(\frac{Total number of NICE/PHE antibiotic prescribing guidance followed (row E)}{Total number of patients in audit}\right) X 100$$

1. **Overall compliance with NICE/PHE guidance to share self-help, safety netting advice and antibiotic advice (FGHI) OR if TARGET Treating Your Infection RTI leaflet shared(J)**

$$\left(\frac{\begin{array}{c}Number of patients where self help advice, safety netting advice \\OR the TARGET Treating your infection leafelt was shared\\AVG\left[\left(AVG rows FGHI\right)+Row J\right]\end{array}}{Total number of patients in audit}\right) X 100$$

1. **If antibiotics were used, total number given correct antibiotic, dose/frequency and course length (KLM )**

$$\left(\frac{All parameters of antibiotic prescribing correct (rows K+L+M)}{Total number of patients prescribed an antibiotic (rows C+D)}\right) X 100$$

**What can you do to improve guidance compliance?**

1. Promote use of PHE or local antimicrobial / management of infection guidelines by all in practice
2. Encourage use of TARGET Treating Your Infection – Respiratory Tract infection (TYI-RTI) leaflet.
3. Share TARGET TYI-RTI leaflet on clinical system.
4. Encourage consistent message from different staff and when patients re-attend.
5. Encourage others to preform audit.
6. Re-audit in 4 months - identify a date when you will repeat the audit.
7. Record actions required, especially when compliance with primary care guidance is less than 80%.
8. Make use of TARGET toolkit.
9. Consider developing a target for antibiotic prescribing rate. e.g. 1 in 3 immediate, 1 in 3 delayed, 1 in 3 no antibiotic)
10. Make use of FeverPAIN or Centor algorithm.
1. Target % for appropriate management depends on whether the FEVER pain or Centor score is used. About 43% of patients with sore throat in general practice will have a score of Centor 3-4 in indicates and immediate antibiotic, compared to only 17% with FEVER pain 4+.

Little P, Moore M, Hobbs FDR, et al PRImary care Streptococcal Management (PRISM) study: identifying clinical variables associated with Lancefield group A β-haemolytic streptococci and Lancefield non-Group A streptococcal throat infections from two cohorts of patients presenting with an acute sore throat BMJ Open 2013;3:e003943. doi: 10.1136/bmjopen-2013-003943 [↑](#footnote-ref-1)