

Purpose

To improve appropriate use of antibiotics in common respiratory and skin conditions presenting to general practice using a clinical audit cycle.

Methods

- Between March and May 2007, participating GPs completed the initial audit by submitting data for 20 patients with a diagnosis of a specified upper respiratory tract infection or skin condition
- Data collected included details of antibiotic(s) when prescribed, whether symptomatic management was prescribed or recommended, provision of information and exploring patient's expectation of antibiotic treatment.
- Participating GPs were sent a detailed feedback report based on best practice clinical indicators which included individualised data, peer-group data for comparison, expert commentary and practice points for the conditions specified.
- Three of these conditions were targeted as the focus of the re-audit due to their high prevalence, and low consistency with guidelines.
- Re-audit was conducted between October and November 2007

Results

- 20 470 patient encounters with 1024 GPs were analysed from the initial phase (see figure 1).
- Consistency with the guidelines (defined as where a recommended antibiotic was prescribed for the recommended duration of therapy, or that where guidelines did not indicate an antibiotic was required that one was not prescribed) was 69% overall, however consistency varied greatly across the diagnoses reviewed (see table 1).
- The re-audit for these targeted conditions showed an increase in consistency with guidelines compared with the initial audit (see table 1).
- In addition there was improvement in patient education and symptom management (see table 2).

Key messages

- An antibiotic should be used only when clinical features that support its use are present.

72% of patients who displayed clinical features suggestive of an infection where antibiotics are recommended were prescribed the recommended antibiotic.

- Unnecessary prescription of antibiotics exposes patients to adverse drug effects, is costly and helps to create conditions favoring the proliferation of resistant organisms in that patient and throughout the community.¹

30% of presentations where an antibiotic was not recommended resulted in the patient being given an antibiotic prescription.

- Where an antibiotic is recommended it is equally important to choose the appropriate dose and frequency as it is to prescribe the recommended antibiotic.

Where amoxicillin was prescribed as recommended (for COPD, acute otitis media, or acute sinusitis) only 44% of the prescriptions specified the appropriate dose and frequency.

Figure 1. Conditions specified in the initial phase clinical audit

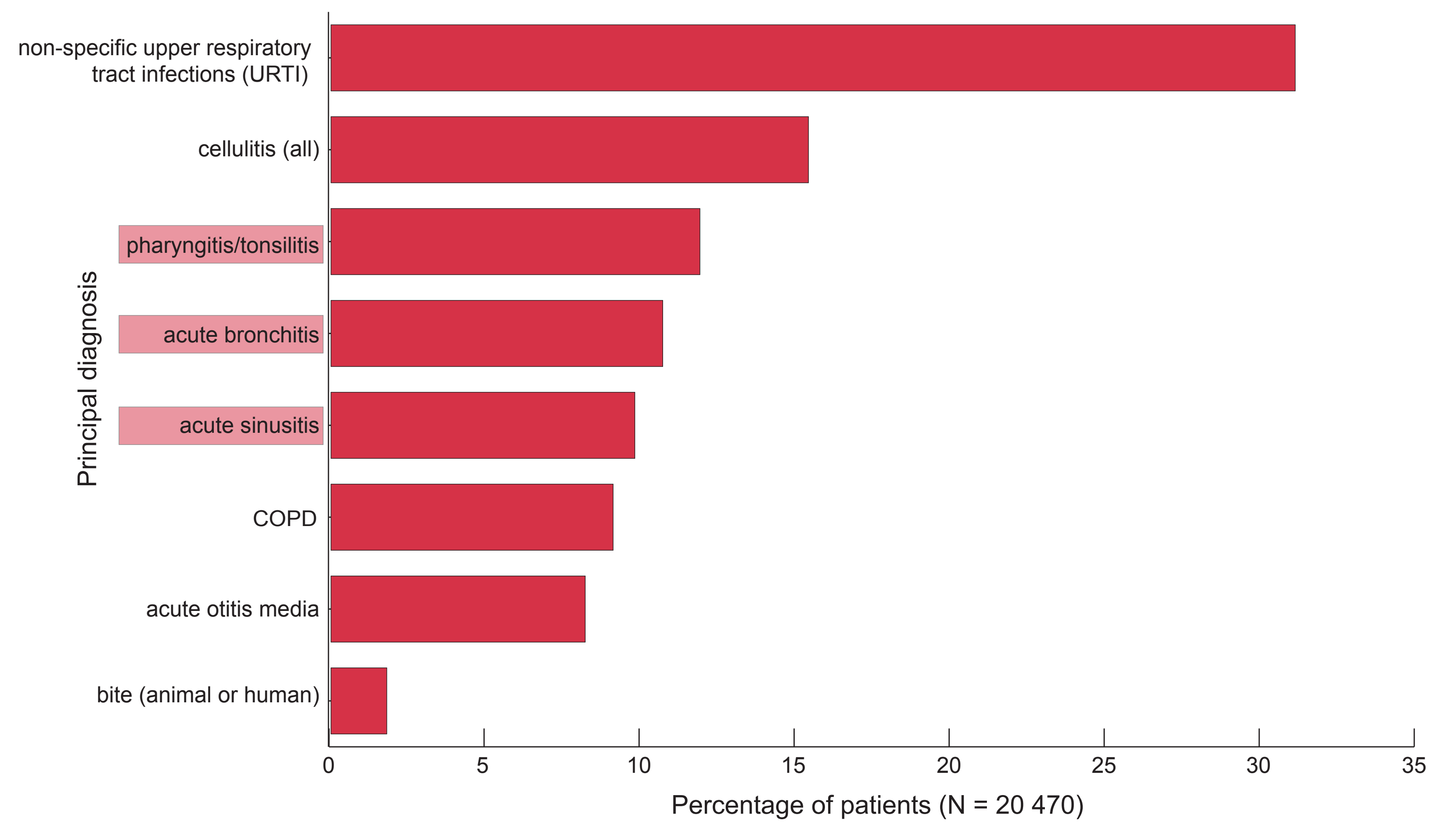


Table 1. Consistency with Guidelines¹

| Principal diagnosis | Consistency with guidelines* (clinical features present + recommended antibiotic + recommended duration OR clinical features absent + no antibiotic) | |
|--|--|------------------------------|
| | Group data (initial phase) | Group data (review phase) |
| Acute bronchitis | 34% (752/2195) | 82% (1133/1375) |
| Pharyngitis/tonsillitis | 58% (1275/2206) | 87% (1419/1624) |
| Acute otitis media | 59% (916/1584) | |
| Acute exacerbation of COPD | 59% (923/1561) | |
| Cellulitis (all) [†] | 61% (1145/1870) | |
| Acute sinusitis | 66% (1270/1937) | 87% (847/976) |
| Bite (animal or human) | 71% (257/363) | |
| Non-specific upper respiratory tract infections (URTI) | 93% (5930/6367) | |

* Prescribing was not considered consistent with the guidelines where clinical features were not specified, these were excluded from the analysis.
† Excludes 'other cellulitis' e.g. water-related infection.

Table 2. Patient education and symptomatic management

| | Group data (initial phase) | Group data (review phase) |
|---|-------------------------------|------------------------------|
| Symptomatic management was prescribed or recommended | 86% (17639/20470) | 97% (3959/4080) |
| Patient's expectation of antibiotic treatment was discussed | 77% (15823/20470) | 92% (3765/4075) |
| Consumer medicine information (CMI) was recommended/given to the patient where an antibiotic was prescribed | 28% (3484/12601) | 52% (1191/2282) |

Conclusion

Repeated assessment of consistency with guideline recommendations through the clinical audit process increases appropriate use of antibiotics by general practitioners.

References

1. Therapeutic Guidelines: Antibiotic. Antibiotics: version 13. Melbourne: Therapeutic Guidelines, 2006.