

Antibiotic prescribing for lower respiratory tract infections within secondary care

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Introduction Infection and antibiotic resistance are important public health issues and antibiotics are often prescribed in an irrational manner.¹ One aspect of clinical governance involves the implementation of evidence-based guidelines which might facilitate cost-containment and antibiotic resistance control. Pharmacists were identified by the Standing Medical Advisory Committee report² as being well placed to monitor the appropriateness of antibiotic prescribing through audit and formulary control.

Acute exacerbations of chronic bronchitis and pneumonia are common conditions associated with significant mortality and expenditure for which there are recognised prescribing guidelines. The aim of this study was to examine the content of antibiotic formularies and policies within secondary care in order to identify current prescribing practices for lower respiratory tract infections.

Method A systematic content analysis of the treatment guidelines for lower respiratory tract infection was performed on antibiotic formularies and policies obtained (during December 2000 and January 2001) by post from all hospital management units within the West Midlands (22) and all 25 university hospitals from the rest of the United Kingdom.

Results Guidelines were obtained from 12 (55 per cent) of the West Midlands hospitals and six (24 per cent) of the university hospitals. The principal findings of the content analysis are shown in Table 1 with respect to the treatment of chronic bronchitis and pneumonia.

There were clear differences between guidelines. Four hospitals (34 per cent) within the West Midlands gave no guidance regarding treatment of acute exacerbations of chronic bronchitis while three of university hospitals (50 per cent) gave

FOCAL POINTS

- A systematic content analysis of the treatment guidelines for lower respiratory tract infection was performed on antibiotic formularies and policies obtained from hospital management units within the West Midlands and university hospitals from the rest of the United Kingdom
- Analysis of antibiotic formularies and policies demonstrated considerable variation between prescribing guidelines with regard both to the agents and dosages used
- A proportion of hospitals in the West Midlands and university hospitals from the rest of the UK gave no guidance regarding drug dosages, which may result in wide variations in therapy
- These findings have important consequences for quality of patient care, drug budget management and antibiotic resistance

Table 1. Analysis of antibiotic guidelines and policies from West Midland hospitals (WM) and UK university hospitals (U) showing the percentage of formularies containing each feature

Guideline feature	WM	U
Guidance given on treating acute exacerbations of chronic bronchitis	67	100
Severity of community-acquired pneumonia graded	67	100
Community and hospital-acquired pneumonia treated separately	75	100
Guidance given on treatment of hospital-acquired pneumonia	92	50
Guidance included on drug dosage	75	67
Guidance on action for penicillin allergy (using example of bronchitis)	58	83

no guidance regarding hospital-acquired pneumonia. In university hospitals, amoxicillin was included in all guidelines for acute exacerbations of bronchitis and was the sole recommended agent in five such guidelines (83 per cent). In contrast only three hospitals (25 per cent) in the West Midlands recommended amoxicillin as the sole agent of choice in this condition and five hospitals (42 per cent) made no reference to amoxicillin.

Discussion Analysis of the antibiotic formularies and policies demonstrates considerable variation between prescribing guidelines with regard both to the agents and dosages used. A proportion of hospitals in both cohorts gave no guidance regarding drug dosages, which may result in wide variations in therapy.

Whereas all university hospital guidelines for the treatment of acute exacerbations of bronchitis included amoxicillin in line with British National Formulary recommendations, a variety of agents was recommended by hospitals within the West Midlands. These findings have important consequences regarding quality of patient care, drug budget management and antibiotic resistance.

References

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