

# Verbal advice plus an information leaflet reduced antibiotic use in acute bronchitis

Macfarlane J, Holmes W, Gard P, et al. Reducing antibiotic use for acute bronchitis in primary care: blinded, randomised controlled trial of patient information leaflet. *BMJ*. 2002 Jan 12;324:91-4.

## QUESTION

In patients presenting with acute bronchitis, does verbal advice plus an information leaflet describing the uncertain value of antibiotics reduce antibiotic use more than verbal advice alone?

## DESIGN

Randomized (unclear allocation concealment\*), blinded (clinicians and data collectors)\*, controlled trial with 4 weeks of follow-up.

## SETTING

3 general practices in Nottingham, England, UK.

## PATIENTS

259 patients  $\geq 16$  years of age who had acute bronchitis (i.e., illness for  $\leq 21$  d; main symptom of cough;  $\geq 1$  of sputum production, dyspnea, wheeze, or chest discomfort or pain; and no alternative explanation) and were not receiving medical attention for an underlying disease, such as asthma, heart disease, or diabetes. 47 patients were judged to need antibiotics immediately. 212 patients were judged not to need antibiotics immedi-

ately and were subsequently randomly allocated (mean age 45 y, 58% women). 205 of these patients (97%) were included in the analysis.

## INTERVENTION

All patients received a prescription for antibiotics. 106 patients were allocated to verbal advice (read from a prompt card) by the general practitioner plus an information leaflet that described the natural course of lower respiratory tract symptoms and the advantages and disadvantages of antibiotic use. 106 patients were allocated to verbal advice alone.

## MAIN OUTCOME MEASURES

Patient use of prescribed antibiotics (self-report) within the next 2 weeks and initiation of further consultation for the same symptoms within the next 4 weeks.

## MAIN RESULTS

Fewer patients who received verbal advice plus the information leaflet took their antibiotics than did patients who received verbal advice alone (Table). The groups did not differ for reconsultation rates at 4 weeks {11% vs 13%,  $P = 0.54$ }†.

## CONCLUSION

Verbal advice plus an information leaflet describing the uncertain value of antibiotics reduced antibiotic use more than did verbal advice alone in patients with acute bronchitis.

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\*See Glossary.

†Calculated from data in article.

### Physician verbal advice plus an information leaflet vs verbal advice alone for acute bronchitis‡

Outcome at 2 wk	Verbal advice plus leaflet	Verbal advice alone	RRR (95% CI)	NNT (CI)
Antibiotic use	47%	62%	24% (3 to 42)	7 (4 to 63)

‡Abbreviations defined in Glossary; RRR and CI calculated from data in article.

## COMMENTARY

Whether to prescribe an antibiotic for a lower respiratory tract infection is a common dilemma in primary care. The precise diagnosis is often unclear (1). Physicians are uncomfortable about prescribing antibiotics (2) when the evidence suggests little benefit (3), but they have concerns about not prescribing them for patients who might benefit. They also wish to maintain good relationships (4) with patients who almost always expect an antibiotic (5).

The "delayed prescription" along with a discussion of the pros and cons of antibiotics provide a useful escape from this dilemma: The technique avoids a power struggle and invites patients to participate in the decision. For patients with pharyngitis or otitis, delayed prescribing has not only decreased antibiotic use but has also changed patient perceptions about respiratory infections and decreased subsequent visits for uncomplicated respiratory illnesses (6).

Although the "delayed prescription" approach is appealing, it is clearly not the final answer. Half of the patients in the trial by Macfarlane and colleagues took the antibiotics that their physicians felt were unnecessary. Nevertheless, many patients respond well to the information that no antibiotic is required and are happy to leave the physician's office without a prescription. For patients who still feel they need an antibiotic, a delayed prescription is a reasonable choice and should be accompanied by written materials.

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