

people want, it is surely part of their duty to tell the public in return which of the activities requested are worthless, and which cannot be afforded, at least at this level of funding.

Whenever commentators want to criticise some initiative as too interventionist they invoke the overworked metaphor of the nanny state. But real nannies habitually told their charges that many of the things they wanted were not allowed. Here we have the Department of Health telling the public that they can have anything they

want, regardless of cost. It is government as Fairy Godmother. It is unsustainable, and in the end dishonest. No doubt we should all like to go to the ball, but I want to know who is going to pay.

**David Jewell**  
Editor, BJGP

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## ADDRESS FOR CORRESPONDENCE

**David Jewell**  
Editor, *British Journal of General Practice*,  
RCGP, 14 Princes Gate, Hyde Park,  
London SW7 1PU.  
E-mail: [david.jewell@bristol.ac.uk](mailto:david.jewell@bristol.ac.uk)

# Prescribing antibiotics to patients with acute cough and otitis media

The question of unnecessary antibiotic prescription is still in focus, both in Europe and other parts of the world. Studies have demonstrated that there is more than a threefold difference in prescribing rates between countries, without any good reason to explain the variation.<sup>1</sup> Respiratory tract infections (RTIs) are the reason for 60% of all antibiotic prescribing in general practice and seem to be target conditions where antibiotics can be reduced most without increasing complications. Guidelines emphasise the need both for total reduction and increasing use of narrow spectrum antibiotics. A close relationship between use of antibiotics and resistance has been demonstrated for the most common airway pathogens, especially pneumococci.<sup>1,2</sup> The dilemma in clinical practice is this: we know that we generally overprescribe and that's bad for everyone. At the same time we know that a small number of patients with RTI or otitis media will, if given antibiotics, benefit with shorter illnesses, and a tiny number potentially with fewer complications. So far there is little evidence of how to select patients for whom we should be prescribing.

## EPIDEMIOLOGICAL CLUES

Fleming *et al* demonstrated a fall both in respiratory tract infections (of 48%, winter; and 38%, summer) and antibiotic prescription (by 34%, winter; 21%, summer) in the UK between 1994 and 2000.<sup>3</sup> It is debatable whether this is due to a lower incidence of RTIs in the population or a higher threshold for help-seeking among patients. Norwegian data in the same period suggests a stable incidence of respiratory tract infections of 14% of all general practice consultations, but also a significant fall in patients seeking help for otitis media of 30%.<sup>4</sup> Data indicate a similar situation in Holland<sup>5</sup> (T Verheij, personal communication, 2006). The fall in consultation rates in patients with otitis media is confirmed in the study by Williamson *et al* in this Journal.<sup>6</sup>

## DIAGNOSTIC CLUES

The uncertainty of distinguishing between acute bronchitis and pneumonia and between bacterial and viral causes based on clinical clues have been demonstrated in many studies.<sup>7,8</sup> Use of near patient tests such as C-reactive protein (CRP) has been expected to improve this

situation in general practice. CRP is widely used in Nordic countries and has a good ability to exclude bacterial infection, but it is still open whether it can contribute to lower antibiotic prescription.<sup>7</sup> Hopstaken *et al* showed that CRP was capable of separating infections with no serological response versus viral/bacterial infections with response.<sup>8</sup>

## OTITIS MEDIA AND OTITIS-PRONE CHILDREN

In acute otitis media it has been concluded that otitis-prone children (defined as having three episodes last 6 months and four episodes in the last 12 months) are susceptible to complications, and should be treated with liberal antibiotic use.<sup>9</sup> Few countries have guidelines for this subgroup of children, and when they exist they don't show a consistent approach. Little *et al* demonstrate in their study in this issue that delayed antibiotic prescription is not likely to have adverse longer term consequences. However, otitis-prone children are more likely to have poorer outcomes. Other studies with liberal use of antibiotics to otitis-prone children

show conflicting results, and further studies of this topic are needed.<sup>10</sup>

Clinicians may worry that reducing antibiotics prescriptions will lead to higher rates of complications. A study using population data between 1993–2003, when there were significant falls in antibiotic prescriptions, both in total and for otitis media, found no rise in hospital admissions for peritonsillar abscess or rheumatic fever, with a small rise in mastoiditis, limited to the smallest children.<sup>11</sup>

## PATIENT FACTORS

The study of Williamson *et al*<sup>6</sup> in this issue demonstrates that re-attendance rates are related to antibiotic prescribing. The effect is moderate. They furthermore demonstrate that although the fall in consultations is high, the proportion of antibiotic prescription is still high and constant. Although the figures from different countries can be hard to compare directly due to different data collection, it seems that the antibiotic prescription rate is higher for otitis media in UK than in the Nordic countries. This may be due to cultural factors in the population and among doctors.<sup>6</sup> The re-attendance rate has similarly been studied for sore throat.<sup>12</sup> In this study the authors found that antibiotic prescription was associated with the rate of re-attendance in the first year after the initial consultation.

In this Journal, Coenen *et al* have evaluated the perceived patient demand for antibiotic in patients with acute cough.<sup>13</sup> They found that the perceived demand had a significant, independent and clinically relevant effect on antibiotic prescribing. Macfarlane *et al*<sup>14</sup> studied patients' expectations for antibiotic prescribing in lower respiratory tract infections. Over 70% of patients presenting with acute lower respiratory symptoms expected and wanted antibiotics. Patients' expectations had a significant influence on prescribing, even when their doctor judged that antibiotics are not indicated. A Norwegian study<sup>15</sup> performed in an emergency room demonstrated that 38% of the patients had expectations for antibiotic prescriptions for upper and lower

respiratory tract infections. There were no significant differences between Nordic patients and patients from the third world. Patients who reported that they were very/quite ill wanted antibiotics more often than those who reported they were quite well. Age above 30 years was also associated with expectation of antibiotics. The doctors perceived correctly the expectations of 41% of the patients who wanted antibiotics and of 69% of those who didn't.<sup>15</sup> Further studies on this topic are needed in order to reduce antibiotic prescriptions.

## DELAYED PRESCRIPTION OF ANTIBIOTIC

Delayed prescription seems to be a good alternative for patients with otitis media and acute bronchitis in order to lower antibiotic prescription rates. Studies have showed a reduction of 30–50% for sore throat. Delayed prescription seems to be an adequate strategy for a number of other conditions, such as acute sinusitis, otitis media and acute bronchitis.<sup>16–18</sup>

Otitis media in children and acute bronchitis/cough in adults are the diagnoses that most often lead to antibiotic prescribing in general practice. If we aim at reducing antibiotic prescription further on, they are key conditions. Further research is needed to single out the groups of patients that may benefit from antibiotic prescription. Furthermore we need more knowledge about patients' expectations and attitudes towards antibiotic prescribing in respiratory tract infections and two of the articles presented in this issue are valuable contributions.

### Morten Lindbæk

Associate professor, Department of General Practice and Community Medicine, University of Oslo

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## ADDRESS FOR CORRESPONDENCE

**Morten Lindbæk**,  
Associate professor, Department of  
General Practice and Community  
Medicine, University of Oslo. PO Box  
1130 Blindern, NO-0317 Oslo, Norway.  
E-mail: morten.lindbak@medisin.uio.no