Improving antibiotic prescribing is an urgent priority: how low can we go?

Increasing antibiotic resistance is a major threat to public health. What can professionals and the public do about antimicrobial resistance and prescribing? That was the question posed at this meeting. **Eleanor M. Woodford**, a PhD student at the School of Pharmacy, London, reports

Pharmacists are key deliverers of interventions for improved antibiotic prescribing, said Phil Wiffen, UK Cochrane Centre, Oxford, who also highlighted the paucity of well-designed studies to identify which interventions are effective for improving antibiotic prescribing in clinical practice. There is great need for evaluation of the efficacy of interventions, such as "automatic stop orders" (where hospital policy authorises automatic termination of an antibiotic course after a pre-defined time). Pharmacists have a key role in performing objective data analysis from time series studies as an integral part of the multidisciplinary team. Studies should be conducted for at least a year and include drug, microbiological and clinical outcomes to further enhance the evidence base.

Roles for pharmacists in improving antibiotic prescribing were further expanded by Hayley Wickens, St Mary's Hospital, London, who outlined the professional activities of specialist "infectious diseases pharmacists", including the education of professional colleagues and participation on ward rounds. Dr Wickens emphasised that such specialist pharmacists are increasingly an integral part of the infection control team. "Pharmacists are ideally placed to promote interaction between microbiology and clinicians," she said. Queries relating to antibiotic prescribing are referred to her by ward pharmacists and complex cases are discussed at regular multidisciplinary team meetings as well as on the weekly antibiotic round with the consultant microbiologists. Education at the induction of new medical staff is also an important part of her job, as well as providing regular training for other clinical staff. The specialist infection management group of the UK Clinical Pharmacy Association has over 130 members and always welcomes interested pharmacists (www.ukcpa.org). It was announced in 2003 that the pharmacy departments of hospitals in England would receive £12m to encourage improved antibiotic prescribing. A preliminary survey has identified that some hospitals have used the funding to employ part-time antimicrobial specialists, and others have freed existing staff for audit activities. Some of the funding is also being used to purchase reference sources and information technology to facilitate teaching and research.

We need to educate the public

One of the barriers to reducing antibiotic prescribing is the substantial expectations that patients have for antibiotic prescriptions, both in the community and in hospital. In order to decrease the pressure on doctors to prescribe antibiotics it is important that patients are aware of the problems associated with the over-use of these drugs. Several campaigns have been used to educate the public about issues involved with antibiotic prescribing.

Herman Goossens, University Hospital, Antwerp, described a public information campaign that aimed to encourage rational antimicrobial prescribing in Belgium, which involved the use of leaflets, television and posters. After approximately two months, 46 per cent of interviewed members of the public remembered that they had seen the campaign, and television appeared to be the most effective communication medium. However, only 12 per cent of those surveyed remembered that overuse of antibiotics leads to resistance. A similar survey of GPs revealed that 100 per cent of respondents remembered the campaign, and 80 per cent believed that reducing their antibiotic prescribing was an urgent priority. Following the campaign, outpatient antibiotic prescribing decreased by around two-thirds, which resulted in a saving of approximately €8m.

In the UK the Standing Medical Advisory Committee report "The path of least resistance" has emphasised the importance of education of patients about the problems associated with antibiotics. Web-based technology is a medium used by patients to investigate medical conditions, and this prompted the development of a UK website about antibiotic resistance (www.antibioticresistance.org.uk) by members of the Institute of Health Sciences, City University, London. The website aims to provide the public with evidence-based guidelines on antibiotic prescribing.

Patty Kostkova, Institute of Health Sciences, described a study which examined the knowledge and attitudes of members of the public about antibiotic resistance and the use of antibiotics (specifically for otitis media) before and after access to the website. Statistically significant improvements in knowledge about antibiotics were identified, including an increase in the number of users (from 57 to 75 per cent of respondents) stating that antibiotics do not cure most sore throats. Approximately one-third of respondents said they were less likely to expect an antibiotic prescription from their GP for acute otitis media after accessing the website ($P<0.01$). More research is required to investigate whether such improvements are reflected in patient behaviour.

Details

The meeting was jointly organised by the **British Society for Antimicrobial Chemotherapy**, the **Specialist Advisory Committee on Antimicrobial Resistance** and the **Alliance for the Prudent Use of Antibiotics**. It took place in London on 30 November

A debate: can we reduce antibiotic prescribing without causing danger?

This house believes there would be minimum danger in substantially reducing antibiotic prescribing in the UK, was a motion proposed by Peter Davey, chairman, Alliance for the Prudent Use of Antibiotics, UK, and Mike Sharland, St George's Hospital, London. Approximately 90 per cent of the 80 or more meeting participants agreed with this motion before the debate.

"Antibiotic prescribing — how low can we go," asked Dr Sharland and Professor Davey who emphasised that "minimising unnecessary community antibiotic use is important to public health". However, the challenge remains in identifying and targeting patients who require antibacterial therapy.

In opposing the motion Paul Little, Southampton University, and Richard Mayon-White, Institute of Health Sciences, Oxford, asked whether more complications would occur with a global decrease in antibiotic use. They suggested that a large reduction would represent a step into the dark, with vulnerable groups suffering most from withholding antibiotic treatment. They also reinforced the need for adequate diagnostic techniques for infections, clinical scoring tools and controlled studies in withholding antibiotic treatment.

Following the debate the views of the audience were unchanged, with the same proportion of participants agreeing with the motion as had at the start..

Correction

Eleanor M. Woodford is a PhD student at Aston University, not at the School of Pharmacy, University of London.