

# Antibiotic prescribing should be standardized across Europe to help tackle resistance

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Antibiotic prescribing for respiratory illnesses should be standardised across Europe to help reduce inappropriate prescribing and resistance, say experts in a study published on [bmj.com](http://bmj.com) today.

Antibiotic resistance is a growing problem worldwide. In Europe, 39% of invasive bacteria were resistant to penicillin in 2006 and unnecessary antibiotic prescribing, particularly for [respiratory illnesses](#), has been blamed for increasing antibiotic resistance.

Some evidence also suggests that most antibiotic prescriptions do not help these [patients](#) get better any quicker, although the results are still unclear.

So a team of researchers set out to describe variation in antibiotic prescribing for acute cough across Europe, and its impact on recovery.

The study involved 3,402 adults with a new or worsening cough or a possible lower respiratory tract infection. Patients were recruited from 14 primary care research networks in 13 European countries (Wales, England, The Netherlands, Spain, Germany, Hungary, Belgium, Poland, Italy, Sweden, Norway, Finland and Slovakia).

Medical history, existing conditions, symptoms and their management, including antibiotic prescription, and temperature were recorded for each patient. Clinicians then rated the severity of their symptoms using a recognised scoring scale.

Patients also recorded and rated the severity of their symptoms for 28 days using symptom diaries.

Overall, [antibiotics](#) were prescribed for 53% of patients, but prescribing ranged from 20% to nearly

90% across the networks. For example, patients in Slovakia, Italy, Hungary, Poland and Wales were at least twice as likely to be prescribed antibiotics than the overall average, while patients in Norway, Belgium and Sweden were at least four times less likely to be prescribed antibiotics than the overall average.

Major differences in the decision whether or not to prescribe an antibiotic remained, even after the researchers adjusted for symptoms, duration of illness, smoking, age, temperature, and existing conditions (co-morbidity).

Furthermore, this variation in antibiotic prescribing was not associated with clinically important differences in patients' recovery.

There were also marked differences between networks in the choice of antibiotic. Amoxicillin was overall the most common antibiotic prescribed but this ranged from 3% of prescriptions in Norway to 83% in England. These differences may be due to different guidelines and habits in different countries, say the authors.

This is the largest study of its kind, and the results suggest that management of acute cough is an issue that is appropriate for standardised international care pathways promoting conservative antibiotic prescribing, conclude the authors.

Professor Chris Butler, of Cardiff University, who led the study, said: "This international collaborative research showed that the big differences in antibiotic prescribing between countries are not justified on clinical grounds. It therefore identifies a major opportunity for greater standardisation of care across Europe."

Professor Herman Goossens of the University of

Antwerp who coordinates the GRACE Network of Excellence added, "This threat of [antibiotic resistance](#) is likely to be more acute as GPs face increasing demands to prescribe antibiotics for acute cough amidst the current global H1N1 flu pandemic. This new evidence should prove instrumental in containing antibiotic prescribing."

Source: British Medical Journal ([news](#) : [web](#))

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