

original data on publication bias. A funnel plot of effect size versus sample size of 26 studies included in the analysis showed no significant asymmetry in the data,

indicating no evidence of publication bias. However, because only 26 studies were included, the authors warn that the power to detect asymmetry in a funnel plot is low.

## POEM\*

### Antibiotics aren't needed for lower respiratory tract infection

**Question** What is the optimal management strategy for acute uncomplicated lower respiratory tract infection?

**Synopsis** The investigators enrolled 807 adults and children presenting to their primary care clinician with cough and at least one other symptom referable to the lower respiratory tract (coloured sputum, chest pain, dyspnoea, or wheezing). Patients with asthma, other chronic lung diseases, or suspected pneumonia were excluded. Participants were randomly assigned (concealed allocation assignment) in a factorial design to one of six groups. They received an educational leaflet on cough or no leaflet, and were then placed in one of three antibiotic groups (immediate antibiotics, no offer of antibiotics, or delayed antibiotic). Antibiotic treatment included amoxicillin 250 mg three times daily or erythromycin 250 mg four times daily. The delayed prescription could be picked up from the receptionist up to 14 days later without further contact with the doctor. Patients were similar to those seen with acute bronchitis in primary care practice: two in three patients reported fever and more than 40% reported production of coloured sputum. Patients not blinded to treatment group assignment self reported symptoms for three weeks. At three weeks, 70% were followed up. Intention to treat analysis showed no significant difference in the duration of cough or severity of cough or other symptoms between patients receiving or not receiving antibiotics. The duration of "moderately bad symptoms" was shorter in the immediate antibiotic group, but only by one day. Cough lasted a mean of 12 days regardless of treatment, with 25% of patients reporting a cough lasting more than 17 days after they saw a doctor (which is usually 7-10 days after the cough began). Children and adults with coloured sputum did not benefit more than other groups, and elderly patients were less likely to benefit from antibiotics. Compared with the immediate antibiotic group, fewer patients in the delayed and control groups used antibiotics (96% v 20% and 16%, respectively). The leaflet had no effect on any outcomes. The study was 80% powered to detect an 11% difference in reconsultation rates.

**Bottom line** After patients with chronic lung disease or clinically suspected pneumonia are excluded, antibiotics provide little or no benefit for patients with cough and lower respiratory tract symptoms, including fever and green sputum. Regardless of treatment method, cough will last about three weeks in most patients and for at least a month in 25%. Patients given an immediate prescription for an antibiotic are more likely to expect antibiotics in the future. Providing a verbal explanation about the expected course and potential complications of cough during the consultation is most likely to assure optimal patient satisfaction.

**Level of evidence** 2b (see [www.infoPOEMs.com/levels.html](http://www.infoPOEMs.com/levels.html)). Individual cohort study or low quality randomised controlled trial with <80% follow-up.

Little P, Rumsby K, Kelly J, et al. Information leaflet and antibiotic prescribing strategies for acute lower respiratory tract infection. A randomized controlled trial. *JAMA* 2005;293:3029-35.

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\* Patient-Oriented Evidence that Matters. See editorial (*BMJ* 2002;325:983)

## Editor's choice

### Let's call it cardiac impairment

When a label confuses doctors and impairs communication with patients, it is time to change the label. So say Richard Lehman and colleagues this week in their editorial on heart failure (p 415). They argue that, for doctors, the term "heart failure" covers a confusingly wide spectrum of illness and is something we have difficulty defining, while for patients it can sound like "the end of hope"—something they try to forget or allow to dominate their lives. Either way the result is likely to be damaging psychologically and reduce adherence to treatment. As an alternative name, Lehman et al suggest cardiac impairment.

The editorial also usefully reminds us that the best basis for defining—why not start now?—cardiac impairment, is B-type natriuretic peptide (BNP). This one-off blood test is a better prognostic marker than even systolic ejection fraction. It may also, the authors suggest, prove useful for detecting people at risk of cardiac impairment, and for sequentially monitoring a patient's response to treatment, providing for the first time a tool for chronic disease management in this common and deadly condition.

While evidence is accruing for these other potential uses for BNP, trialists in Argentina present a simple and scalable method for managing outpatients with cardiac impairment, which, in this large, inclusive, multicentre trial at least, improved patients' lives (p 425). In fortnightly telephone conversations, trained nurses based at a central point provided education, counselling, and monitoring. The calls focused on how well the patients were adhering to their diet and drug treatment, whether they were taking daily exercise, what their symptoms were, and whether they had signs of salt retention. The nurses were able to adjust the dose of diuretics and refer patients for additional medical visits. The calls reduced readmissions to hospital by about a quarter compared with usual care, as well as improving adherence to treatment and quality of life. The paper doesn't analyse costs, but the intervention looks likely to be highly cost effective.

The telephone gets less good press from Suzanne McEvoy and colleagues (p 428)—the mobile phone to be exact, and when used in cars to be entirely accurate. We may have thought we knew that using a mobile phone while driving was dangerous. This study puts a figure on how dangerous it is. Drivers interviewed after a crash were four times more likely to have been on the phone when they crashed than during a similar period when they didn't crash. Using hands-free phones was no safer, and the extension of hands-free technology could, by making it easier to phone while driving, increase the number of accidents.

Will this information stop us making that seemingly essential call while driving down the motorway? And what about those of us who, like Nick Taffinder (p 463), admit to having used our phones while being a patient in hospital? Is there evidence that doing this is dangerous? I would love to know.

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