

C-reactive protein point-of-care testing for safely reducing antibiotics for acute exacerbations of chronic obstructive pulmonary disease: the PACE RCT

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Plain English summary

The PACE RCT

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Plain English summary

People with chronic obstructive pulmonary disease (COPD) often experience flare-ups known as acute exacerbations of chronic obstructive pulmonary disease. Antibiotics are prescribed for most flare-ups, but they do not always benefit patients and may cause harm, such as side effects or subsequent infections that are resistant.

Rapid point-of-care tests (POCTs) can be used to help determine when antibiotics are more likely to be needed. C-reactive protein (CRP) is a marker of inflammation that can be measured with a POCT. Patients with flare-ups and a low CRP value are less likely to benefit from antibiotics. The PACE trial asked whether or not measuring CRP with a POCT could lead to fewer antibiotics being consumed for flare-ups, without having negative effects for patients.

We aimed to recruit 650 patients with a COPD flare-up from primary care. Patients were randomly assigned to either (1) usual care with the addition of a CRP POCT, or (2) usual care without the addition of the test. Antibiotic use over the first 4 weeks and patients' self-assessment of their health 2 weeks after enrolment were measured in both groups.

Patients in the CRP test group used fewer antibiotics than those managed as usual, and had improved patient-reported outcomes. Costs were a little higher in the CRP POCT group. Interviews with patients and clinicians found that they appreciated the CRP test being included in the decision-making process.

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This report

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