

# Can we reduce antibiotics in COPD?

Targeting antibiotics for chronic obstructive pulmonary disease – getting antibiotics to the people who need them



**Key message:** A simple blood test in GP surgeries can help ensure we only prescribe antibiotics for COPD patients who really need them.

## Why do the PACE study?

- **2/3** of flare ups not caused by bacterial infection. **Antibiotics often do not benefit patients**
- To test whether a quick fingerprick CRP blood test at GP surgeries could help GPs safely reduce antibiotic use for COPD flares
- C-reactive protein (CRP) is a protein found in blood that increases rapidly when the body is experiencing a serious bacterial infection
- **People who have a flare of their COPD and a low CRP level probably do not benefit from antibiotics**
- **The first randomised controlled trial** to address the question of whether measuring CRP with a point of care test in people with AECOPD in primary care could lead to **fewer antibiotics being used** without having negative effects for patients

## Results of the study

Using the CRP fingerprick test at the point of care safely **reduces antibiotic use** for COPD flare ups.

Safely reducing the use of antibiotics in this way may help in the battle against antibiotic resistance.



## Background

- People with COPD **often** experience flare-ups
- Symptoms of flare-ups include: **breathlessness, coughing, and phlegm**
- Flare-ups can be **triggered** by bacterial or viral infections, and other factors
- **Majority** of people who see their GP with a flare of COPD are given antibiotics
- To test whether a quick fingerprick CRP blood test at GP surgeries could help GPs safely reduce antibiotic use for COPD flare-ups

## What was learnt about the CRP test?

**653 patients**

with COPD took part from

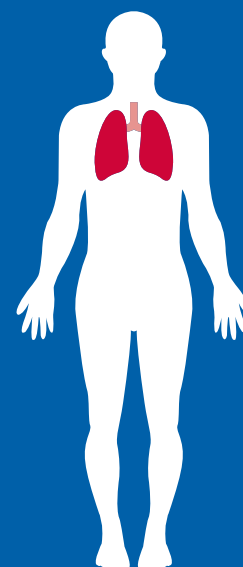
**86 GP surgeries**



In the 4 weeks following initial consultation:

**Without CRP test:**  
**Three quarters**  
of patients  
took antibiotics

**With CRP test:**  
**Just over half**  
of patients  
took antibiotics



**20% reduction**  
in antibiotic use when using the test

Fewer antibiotics used **was not** at the expense of worse recovery from the flare-up



Patients and doctors **appreciated having a test** available as part of the decision-making process



Costs were **reduced** without significantly affecting other COPD medication costs and healthcare related quality of life



This study was a collaboration between Cardiff University, Oxford University and King's College London. Led by co-chief investigators Professor Nick Francis from Cardiff University and Professor Chris Butler from the University of Oxford. Funded by the National Institute of Health Research Health Technology Assessment Programme. [www.pace-study.co.uk](http://www.pace-study.co.uk)

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