

# **Novel upper respiratory tract microbiological point-of-care testing in patients presenting to primary care with acute cough: a mixed methods feasibility study.**

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## **Abstract**

### Introduction

One of the biggest challenges faced by primary care clinicians is whether to prescribe an antibiotic to patients with respiratory tract infections (RTIs). Microbiological point-of-care tests (POCTs) are being developed to help, but have never before been used by GPs, so it is unclear how they will fit into primary care systems, and whether they could influence the management of patients.

### Methods

Four GP practices have been provided with highly novel microbiological POCT machines for a 6-week period over the course of one winter. Patients are eligible for POCT use if aged over 3 months and attending with RTI. Dual throat and nose swabs are processed to report 17 common respiratory viruses and three atypical bacteria. After viewing test results (available after an hour), clinicians report any changes to their clinical working diagnosis and treatment. Clinical staff are being interviewed to understand their views on the use and adoption of the POCT.

### Results and Discussion

To date, 85 of the planned 100 to 120 patients have been recruited and seven clinicians interviewed. Quantitative results will report patient characteristics, prevalence of microbes and changes to treatment decisions. Qualitative analysis will focus on practitioners' views of how point-of-care testing influenced the consultation, the clinical management decision-making process, facilitators and barriers to test use, and information and support needs. Findings will inform the design of a future study to investigate the clinical and cost effectiveness of the POCT.

## **Patient and Public Involvement (PPI)**

We conducted pre-application PPI with members of the public at a meeting of the Elizabeth Blackwell Institute's Public Advisory Group at the University of Bristol. Through open discussions, we heard from patients and parents about their confusion over the cause of their respiratory infections ("is it a viral or bacterial infection") and whether antibiotics would make a difference. Although the available funding did not allow a qualitative investigation of patient perceptions of the POCT, prior to publication, we will conduct a final PPI group at which results will be presented and PPI interpretation sought to assist with writing up.