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O01 Rapid respiratory microbiological POCTs and antibiotic use in primary care: the RAPID-TEST RCT

Alastair Hay[1], Samantha Abbs[1], Matthew Ridd[1], Stephen Granier[1], Athene Lane[1], Peter Muir[1], Jodi Taylor[1], Grace Young[1], Kathy Eastwood[1], Hayly Dash[1], Lynne Bradshaw[1], Rebecca Clarke[1], Mandy Lui[1], Emma Bridgeman[1], Rachel Brierley[1], Emily Brown[1], Hannah Thornton[1], Lucy Yardley[1], Chris Metcalfe[1]
[1]*University of Bristol, Bristol, UK*

Background: Antibiotics are prescribed for over 50% of RTIs in primary care, despite good evidence most patients do not benefit. Rapid multiplex microbiological point-of-care-tests (POCTRM) determine the presence/ absence of respiratory pathogens in 15 min. Whether POCTRM reduce antibiotic prescribing without worsening patient outcomes is not known.

Objectives: To investigate whether POCTRM can (i) reduce same-day antibiotic prescribing for children and adults presenting to primary care with RTIs; and (ii) change symptom severity on Days 2 to 4.

Methods: Patients 12+ months with a RTI where the clinician and/or patient believed antibiotic treatment was, or may have been necessary, presenting to 16 GP practices in SW England. Patients individually randomized to BioFire® FilmArray® Torch 1 testing for 19 viruses and four atypical bacteria; or usual care.

Results: Recruitment opened December 2022 and ended April 2024. A total of 552 participants were randomized: 63% female; 86% aged 16+ years; 95% self-reported white ethnicity; 26% had chronic lung disease; 5% reported a temperature >38°C; 14% reported tachycardia (age-adjusted); 8% reported tachypnoea (age-adjusted); 1% had oxygen saturation <94%. Ninety-five percent provided a dual throat and nasal swab, and clinician diagnoses included: acute cough (17%); common cold (14%); acute pharyngitis/ tonsillitis (13%); acute lower RTI (11%); chest infection (9%); sore throat (9%); and infective exacerbation of chronic lung disease (7%). Outcome data completeness: 548 (99%) with antibiotic prescribing; 414 (76%) with Day 2 to 4 symptom severity.

Conclusions: Full results will be available for conference. This globally original RCT will provide important evidence regarding the role of rapid multiplex microbiological point-of-care-tests in primary care.