

CZH/4/1145 – The impact of antimicrobial exposure on subsequent antimicrobial resistance in patients with COPD and bronchiectasis

Antimicrobial resistance (AMR) is a major public health problem exacerbated by antimicrobial use. One third of the UK population have at least one antimicrobial prescription each year with respiratory tract infection the most common indication. Patients with bronchiectasis and chronic obstructive pulmonary disease (COPD) frequently have infective exacerbations that require antimicrobial treatment, and they have other risk factors for AMR.

In this study we will combine AMR data, including from genomic microbiological techniques, with epidemiological analysis, incorporating bespoke patient registries and biobanks linked to routine data, to explore relationships between antimicrobial exposure, in combination with other risk factors, and AMR among patients with bronchiectasis and COPD.

Elucidating the risk that a patient's current infection is due to resistant bacteria, and on the risk that the antimicrobial chosen for the current infection will drive AMR, will inform clinicians' prescribing decisions to improve patient care while reducing the impact on future AMR.