

Call to reduce repeat 'within-episode' antibiotic prescriptions for respiratory tract infections in primary care

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A new study exploring the use of repeat antibiotic prescriptions for the same respiratory tract infection (RTI) episode—known as repeat 'within-

episode' prescriptions—in primary care has found high rates of their use in England, despite evidence that they are of little benefit. The study authors, from the Universities of Bristol and Bath, King's College London, and University Medical Center Utrecht, are calling for a reduction in their use and to make them a target for antimicrobial stewardship interventions.

RTIs are one of the most common reasons people visit a GP in the UK. Many RTIs are caused by viruses and current primary care guidelines recommend a no or delayed antibiotic prescribing strategy in the vast majority of patients.

Despite this, 54% of RTI consultations in UK primary care result in an antibiotic prescription, and RTIs account for 60% of antibiotic prescribing in [primary care](#) worldwide. As such, RTIs are one of the key drivers of antimicrobial resistance.

The study, which analyzed over 900,000 RTI episodes in clinical records from across 530 English general practices, found that nearly 20% of adults and 10% of children received a second course of antibiotics within the same episode of a lower RTI (chest infection). Almost half (48.3%) of these repeat prescriptions involved the same antibiotic class.

The paper is [published](#) in the *Journal of Infection*.

Previous research has shown that for most child and [adult patients](#) with chest infections, particularly those without [chronic lung disease](#), even a single antibiotic course is unlikely to have clinical benefit, raising concerns about antibiotic overuse and resistance.

Twelve factors associated with repeat prescriptions included frequent RTI-related GP visits and prior repeat within-episode RTI [antibiotic prescriptions](#). Age was a significant determinant, with both [young](#)

[children](#) (older adults (65+) more likely to receive repeat prescriptions.

Arief Lalmohamed, senior lecturer at University Medical Center Utrecht and lead author of the study, said, "Repeat within-episode antibiotic use accounts for a significant proportion of all antibiotics prescribed for RTIs. In light of our findings, it's clear that antimicrobial stewardship interventions must extend beyond initial antibiotic prescriptions to address within-episode repeats."

Alastair Hay, a GP and Professor of Primary Care at the Centre for Academic Primary Care, University of Bristol, and Principal Investigator on the study, added, "It seems implausible that repeat antibiotic courses will have any benefit given that there is clear evidence that children and adults without chronic lung disease do not benefit from a first course of antibiotics, and that NICE recommends five-day antibiotic courses for the severest lower respiratory tract infections, such as pneumonia."

More information: Arief Lalmohamed et al, Within-episode repeat antibiotic prescriptions in patients with respiratory tract infections: A population-based cohort study, *Journal of Infection* (2024). [DOI: 10.1016/j.jinf.2024.106135](https://doi.org/10.1016/j.jinf.2024.106135)

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