

Many antibiotic courses for common infections not in line with guidelines

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Many antibiotic courses prescribed for common infections treated in English primary care (general practices and community services) exceed the recommended guidelines, reveals a study in *The BMJ* today.

Treatment courses were 1.3 million days beyond the durations

recommended by guidelines, with most excess days due to treatment for [respiratory conditions](#).

Previous studies have found significant over-prescribing of antibiotics in primary care in the UK and elsewhere, write the authors. And [overuse of antibiotics](#) adds to increased antibiotic resistance levels, and puts patients at risk of side effects, they say.

But there has been little research on reducing antibiotic overuse by cutting back on prolonged treatment.

So to explore this, researchers from Public Health England (PHE), University of Oxford, and Brighton and Sussex Medical School compared the durations of antibiotic courses prescribed for common infections in English primary care with the guidelines recommended by PHE in 2013.

They used data from general practices contributing to The Health Improvement Network (THIN) database between 2013-2015, including only prescriptions for oral antibiotics linked to one of 13 [conditions](#), including acute sinusitis, acute sore throat, acute cough and bronchitis, pneumonia and acute cystitis.

They excluded chronic and recurrent conditions, as well as repeat prescriptions.

During this time, 931,015 consultations for the 13 common conditions led to antibiotic prescriptions, making up 20% of the total antibiotics prescribed for any condition. The most common conditions were acute cough and bronchitis (386,972), acute sore throat (239,231) and acute otitis media, a middle ear infection (83,054).

The durations of antibiotic treatment were generally not in line with

guidance and most of the excess days were due to respiratory conditions, where 80% or more of antibiotic courses exceeded guidelines.

But only 1 in 10 (9.6%) of [acute sinusitis](#) prescriptions were longer than the recommended seven days. And for pneumonia 1 in 12 (8.1%) of prescriptions were longer than the recommended 7 days. However, more recent guidance recommends shorter durations for these conditions, the authors say.

For conditions where guidelines recommended longer durations, the proportion of prescriptions beyond the recommendation was significantly lower than for conditions where guidelines advised a [short duration](#).

And although fewer prescriptions exceeded recommended durations for non-respiratory tract conditions, still more than half (54.6%) of the antibiotic prescriptions for acute cystitis among women were for longer than recommended.

There was significant under-treatment for acute prostatitis (inflamed prostate) and acute cystitis among men. For example, over half (52.3%) of courses were shorter than the recommended 28 days for prostatitis and nearly a third (31.8%) of cystitis treatments were under the suggested 7 days.

This is an observational study and the researchers point to some limitations, including that some [prescriptions](#) may have been incorrectly linked to certain conditions in the study. And they can't rule out the possibility that some of their findings may be due to other factors that might underlie decisions to prolong treatment.

But the authors say the results were similar when restricting the analyses to patients without underlying conditions. And for most conditions, three

quarters or more of the prescribed antibiotics were mentioned in treatment guidelines.

The findings indicate "substantial scope" for reducing antibiotic prescribing through better adherence to recommended durations of [treatment](#), they say, but "highlighting the magnitude of this issue is only the first step," they conclude.

In a linked editorial, Alastair Hay at the University of Bristol comments on the "growing evidence base informing policy on antimicrobial stewardship."

"Both clinicians and patients may need convincing to abandon longer courses of antibiotics, and future campaigns by Public Health England to "Keep Antibiotics Working" could usefully emphasise that when [antibiotics](#) are needed, shorter courses are sufficient to kill bacteria and less harmful than longer courses," he concludes.

More information: *BMJ* (2019). [DOI: 10.1136/bmj.l440](https://doi.org/10.1136/bmj.l440)

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