

Giving GPs feedback on their prescribing habits can reduce excessive use of antibiotics

February 19 2016

Sending general practitioners (GPs) in England a letter giving feedback on their antibiotic prescribing habits could cut unnecessary prescriptions of antibiotics, according to the first nationwide randomised trial of its kind involving over 1500 GP practices, published in *The Lancet*.

The results show that giving feedback to GPs with the highest antibiotic prescribing rates cut prescribing by an average of 3.3% over 6 months. The [letter](#) led to over 73000 fewer prescriptions and direct savings of over £92000 in prescription costs. The trial was a collaboration between England's Chief Medical Officer, Public Health England, the Department of Health, and the Behavioural Insights Team.

Overuse of [antibiotics](#), which is dominated by primary care prescribing, has contributed to the development of resistance to these drugs. The UK has a 5-year (2013 to 2018) aim of reducing antibiotic prescribing in primary care by 4%. Effective solutions are urgently needed, and one area of growing interest is using behavioural science to help GPs to improve their prescribing.

"We know that drug resistant infections are one of the biggest health threats we face. This innovative trial has shown effective and low cost ways to reduce unnecessary prescribing of antibiotics which is essential if we are to preserve these precious medicines and help to save modern medicine as we know it," says Professor Dame Sally Davies, Chief Medical Officer for England.

"Giving tailored feedback to prescribers isn't complicated," adds lead author Michael Hallsworth, from the Behavioural Insights Team, London, UK. "We estimate that this simple intervention could reduce England's antibiotic prescribing by 0.85% overall, despite costing just 6p per prescription saved. This kind of feedback could also be provided for many other kinds of drugs, and by anyone who is interested in doing so, since all this information is publicly available online."

The researchers assessed two mail-based interventions targeting 1581 practices across England who had [antibiotic prescribing](#) rates in the top 20% for their area. In one half of the trial, they sent GPs a letter saying that, "80% of practices in their local area prescribe fewer antibiotics per head than yours", and gave three simple ways to make sure prescriptions were necessary. These letters were signed by the Chief Medical Officer. The second half of the trial tested the effect of an education campaign targeted at patients that promoted reduced use of antibiotics (posters and leaflets for GP practices).

Over six months in Winter 2014-2015, GPs who were randomly selected to receive the feedback letter cut their rate of antibiotic items dispensed per 1000 population to 126.98, compared to 131.24 for those who did not receive the letter. This is a relative difference of 3.3%, equivalent to 73406 fewer antibiotic items dispensed (table 2). The letters were effective but inexpensive. The material costs of the letters were just £0.06 per prescription prevented, with estimated savings in direct prescribing costs to the public sector of £92356. In contrast, the study did not see any significant impact on the rate of antibiotic items dispensed for the patient-focused education campaign (135.00 vs 133.98 antibiotic items dispensed per 1000 population).

According to Dr Tim Chadborn, Behavioural Insights Lead Researcher at Public Health England, London, UK, "This intervention demonstrates two key points, the importance of behaviour in protecting the public's

health and the cost-effectiveness of the evidence-based behavioural insights approach. Tackling antimicrobial resistance is a priority for Public Health England and we are actively developing the potential for behavioural science to be applied more widely in the coordinated national response to this threat."

Writing in a linked Comment, Ian Gould from Aberdeen Royal Infirmary, Aberdeen, UK, and Timothy Lawes from Royal Aberdeen Children's Hospital, Aberdeen, UK point out that there is a clear case for integrating behavioural approaches into antibiotic stewardship. However, it is also important to see the effect size in perspective. They write, "The investigators highlight that their [feedback](#) intervention could reduce primary-care prescribing in England by 0.85%, against a 5-year aim of reducing prescribing in primary care by 4%. Between 2000 and 2014, UK primary-care antibiotic use expanded by 46%, from 14.3 to 20.9 defined daily doses per 1000 inhabitant days. During the same period, antibiotic use fell in several European countries, and UK consumption is now twice that of the Netherlands. Inpatient consumption also continues to increase."

More information: *The Lancet*, www.thelancet.com/journals/lan... (16)00215-4/abstract

Provided by Lancet

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