

Antibiotic reduction can be achieved through low cost information campaigns, find researchers

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A local low-cost information campaign mainly targeted at citizens and involving doctors and pharmacists can significantly decrease total antibiotic prescribing, finds a paper published today in *BMJ*.

The excessive [use of antibiotics](#) is associated with resistance to these drugs and an increasing threat to [global health](#). Antibiotics are also often unnecessarily and inappropriately prescribed. This is an issue that has been frequently addressed by health information campaigns.

Campaigns can be moderately effective in restricting the excessive use of [antibiotics](#) although limits in study design make their evaluation difficult.

Italy has among the highest [antibiotic use](#) in Europe. There has, however, been a decrease in the last few years to coincide with two national information campaigns, but without direct involvement from health professionals.

Researchers from Italy therefore looked to evaluate the feasibility and effectiveness of a local information campaign, aimed at reducing [antibiotic prescriptions](#) by increasing awareness on threats of unnecessary use. They wanted to test the hypothesis that a campaign could be feasibly implemented within Local Health Authorities and reduce antibiotic prescriptions.

The study was a community level, [controlled trial](#): the campaign was implemented in the Italian provinces of Modena and Parma from 2011-2012. Provinces in the same region where no campaign had been implemented were used as the control group. The main target was the general population.

The material used in the campaign suggested that antibiotics are necessary in specific circumstances, do not work in the case of flu or colds and should be used when doctors prescribe them. The campaign motto was: "Antibiotics, solution or problem?". The following material was used: posters; brochures; videos in high accessed places such as pharmacies and [waiting rooms](#); two episodes of a talk TV show; radio segments; advertisements in [local newspapers](#); web sites; and newsletters on antibiotic resistance directed at prescribers.

The main outcome was the average prescribing rate of antibiotics to outpatients during five months. Secondary outcomes included five month change in outpatient antibiotic expenditure per 1000 inhabitants / day and knowledge of, attitudes and reported behaviour about the campaign messages.

The average outpatient prescribing rates corresponded to decreases of 11.9% in the intervention area and 7.4% in the control area, compared with the same five month period of the previous year. The corresponding decrease in the rest of Italy was 3.2%.

A statistical model correcting for baseline differences found a 4.3%, statistically significant difference in [antibiotic prescribing](#) between the intervention and the control area. This difference was not linked to any difference in hospital admissions, or to changes in knowledge and attitudes of the population. As for antibiotic expenditure, an estimate of its reduction ranges from € 200,000 to € 406,000 (€0.17 to €0.35 per resident).

The researchers say that the study shows the effectiveness of a local, small scale information campaign on antibiotics, carried out by local [health authorities](#), and the potential advantage of local implementation such as involving doctors and pharmacists and adapting messages and tools to the local context. They say a "common lesson may be that large decreases in antibiotic prescription should not be expected, especially if a decreasing trend was already apparent since the previous years", but it is reassuring that the decrease in prescribing was "more pronounced than in the remaining parts of the country".

They conclude that reduced prescribing of antibiotics was "mediated by doctors' endorsement of the campaign goals and/or by an 'awareness of the campaign' factor, rather than by decreased patient pressure to get antibiotics". They add that change in people's knowledge and attitudes may require longer term exposure, but the availability of information, put in a proper context, could create a favourable climate for potentially relevant societal changes or changes in decision making even if that information does not influence the population directly targeted.

Provided by British Medical Journal

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