Public would obey major changes to antibiotic advice, research shows

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The public would comply with major changes to medical advice—but would then be less likely to follow other new guidelines in the future, research shows.

High levels of deference towards doctors means most people would obey

reformed advice about taking antibiotics. However, the study suggests reforms to public health policy should be made sparingly as this risks undermining future compliance.

The research also shows people who think they know better than scientists and medics are less likely to follow new medical guidelines, and this group would benefit from health messages being communicated in a different way.

Academics from the University of Exeter, the University of Utah, and Stony Brook University ran an experiment to test if people would be willing to change the way they take antibiotics—stopping when they feel better instead of the long-standing advice to complete a full course. Recently experts have argued for this revision as there is little evidence taking a full pack prevents bacteria from developing resistance to antibiotics. This advice is not a current medical recommendation. The aim of the study was not to advocate for or against any position, but to understand how the public may respond to a possible dramatic shift in official health advice.

A total 1,263 people took part in the experiment, which was conducted online. Half were given a message that patients should complete their course no matter what. The other half were given a message that patients should stop treatment when they feel better.

Researchers found the UK public would follow this changing advice about antibiotic use. Compared to the standard "complete the course" message, telling people to stop early on average shifted personal beliefs (a shift of 16%) and behavioural intent (a shift of 19%) in the intended direction towards this instruction. This was particularly the case if they had more respect for doctors. The change in advice had no effect on perceived credibility of experts.

Participants rated their own medical knowledge relative to both scientists and doctors. People with a high degree of deference to experts in these ratings were more likely to follow the new advice. Those who didn't have much respect for experts were less likely to update factual beliefs about antibiotics and less likely to take up new recommendations. More generally, they were less likely to respond to either the old or new advice.

Dr. Ben Lyons, from the University of Utah, who led the study, said: "Our research shows changes to medical advice need to be made sparingly, something the medical profession already aims to do. We have found people will take new instructions on board, despite their previous beliefs, but they also don't like uncertainty.

"Resistance to new guidelines is strongest among members of the public who believe they know more than experts. As a result, some messages may need to be tailored to better reach this group, as they won't be receptive to advice which only suggest they defer to authority."

Professor Jason Reifler, from the University of Exeter, a member of the research team, said: "Given the existential threat to global health posed by antibacterial resistance it is essential to measure public opinion about antibiotics. We have found the public would be willing to follow important, specific health recommendations even if they represent a shift from current practice, but this may make them less likely to comply with other advice in the future."

Before taking part in the experiment 64 per cent of people correctly agreed that antibiotics can kill bacteria, but 38 per cent incorrectly agreed that they can kill viruses, and 20 per cent incorrectly agreed that they work on most coughs and colds. Concern about antibacterial resistance was high; just over two-thirds—67.5 per cent agreed that they are worried about this issue, with 20.51 per cent strongly agreeing.

More information: Benjamin A. Lyons et al, Shifting medical guidelines: Compliance and spillover effects for revised antibiotic recommendations, *Social Science & Medicine* (2020). DOI: 10.1016/j.socscimed.2020.112943