

Awareness campaigns not enough to stop superbug crisis in developing countries

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In a landmark study of health behaviours in developing countries, Global Sustainable Development research at the University of Warwick has found that awareness campaigns alone are not enough to reduce unnecessary antibiotic use and, in fact, could risk making the superbug crisis worse.

Antimicrobial resistant [superbugs](#) are a global [health](#) crisis arising from widespread use of antibiotics and other antimicrobials in medicine, agriculture, and their leakage into the environment. Tolerance built up by this exposure is making it increasingly difficult to treat common infectious diseases and has been described as potentially "the end of modern medicine as we know it."

The research, published in special issues on antimicrobial resistance (AMR) in the journals *Palgrave Communications* and *Antibiotics*, involved more than 2,000 people in five villages in Thailand and Laos. It is part of an innovative project using social science methods to explore public health issues. The findings challenge conventional wisdom that massive global public [awareness](#)

campaigns are one of the best tools to address the problem of drug resistance.

For the study, lead researchers Asst Prof Marco J Haenssngen and Ms Ern Nutch Charoenboon and their team implemented half-day [educational workshops](#) and evaluated their success alongside their social consequences.

They found:

- People who participated directly in the workshops reported greater awareness of drug resistance as a concept but did not change their attitudes or behaviour in positive ways as a result.
- Key messages from the events did not circulate within the villages as a whole but only within more privileged groups, limiting the indirect benefits of the educational activities.
- Unwanted behavioural change included an increase in antibiotic uptake from formal healthcare providers.
- One participant felt so much more confident in her antibiotic knowledge after the workshop that she began selling antibiotics from her village shop.

Asst Prof Marco J Haenssngen said: "Our research suggests that current global health policies overemphasise the positive impact of awareness campaigns as a means to tackle the superbug crisis in developing countries.

"On the face of it, the educational activity appeared successful, for example, increasing the awareness of the words "drug resistance" from 56% to 86% (+30%) among all participants, compared to an improvement from 46% to 63% (+17%) in the villages more generally.

"But the link between awareness, attitudes and behaviour was weak and should lower our

expectations about awareness raising to change behaviour.

"Factors outside of health knowledge – like the support that villagers receive from their social networks – might be similarly if not more effective in promoting healthy behaviours."

Ern Nutch Charoenboon, Research officer and leader of the Thai research paper, commented: "We all have heard about being 'lost in translation', but it is something easily forgotten in educational programmes or awareness-raising campaigns.

"Our project enabled us to observe the process and the outcomes of lay people translating AMR knowledge into their own concepts and practices. It turns out that we might have to redefine and approach public problems differently because mass education campaigns could create more harm than good."

Project leader Marco J Haenssger added: "As the field of global health is gradually developing into 'planetary health,' we will depend increasingly on transdisciplinary research, comprehensive evaluation methods, and the voices of local populations. Projects like ours enable us to challenge established wisdom in health policy, understand social and contextual aspects of health behaviour, and to find [innovative solutions](#) for global challenges."

More information: Marco Haenssger et al. The Consequences of AMR Education and Awareness Raising: Outputs, Outcomes, and Behavioural Impacts of an Antibiotic-Related Educational Activity in Lao PDR, *Antibiotics* (2018). [DOI: 10.3390/antibiotics7040095](#)

Translating AMR: A case study of context and consequences of antibiotic-related communication in three northern Thai villages. *Palgrave Communications*. [DOI: 10.1057/s41599-019-0226-9](#)

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