

Antibiotic crisis needs united global response, experts say

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Staphylococcus aureus - Antibiotics Test plate. Credit: CDC

Growing resistance to antibiotics and other drugs demands a coordinated global response on the same scale as efforts to address climate change,

experts say.

Without an international commitment to tackle the issue, the world faces a future in which simple infections that have been treatable for decades become deadly diseases, they warn.

Resistance to antibiotics to tackle bacterial infections and [antimicrobial drugs](#) used to treat parasites, viruses and fungi is spreading at an alarming rate. Treatment for many infectious diseases is now reliant on just one or two drugs.

Professor Mark Woolhouse, of the University of Edinburgh, and Dr Jeremy Farrar, Director of the Wellcome Trust, outlined their concerns at an event hosted by the Royal Society in London and in a Comment piece published online in the journal *Nature* today.

The authors recommend the foundation of a powerful global organisation similar to the Intergovernmental Panel on Climate Change (IPCC) to lead an international response.

They argue that the growing threat of antimicrobial resistance is similar to that posed by climate change because it is a natural process exacerbated by human activity and the actions of one country can have global ramifications.

Yet the international response to this threat – caused by the overuse and misuse of antimicrobial drugs – has been feeble, the authors say.

They are calling for the creation of an independent body to oversee surveillance efforts and set strict evidence-based targets, to stem the loss of drug potency and speed the development of new therapies.

Such an organisation should work closely with the national governments

and international agencies who will be tasked with implementing its recommendations.

In a world without antibiotics, routine surgical procedures would become deadly, scientists say. Treatment for cancer and diabetes, as well as organ transplants, would be impossible in their current form. Industrial agriculture would also suffer, owing to the increased use of antibiotics in animals as growth promoters.

Dr Jeremy Farrar, Director of the Wellcome Trust, a global charitable foundation spending £750 million annually on biomedical research, said: "We have needed to take action against the development of antimicrobial resistance for more than 20 years. Despite repeated warnings, the international response has been feeble. The World Health Organisation has missed opportunities to provide leadership, and very little progress has been made. The result has been the emergence of strains of infections including tuberculosis and malaria, pneumonia and gonorrhoea that resist all known classes of drugs. We need a new independent body that will not only monitor the spread of antimicrobial resistance, but also drive and direct efforts to contain it."

Professor Mark Woolhouse, of the University of Edinburgh's Centre for Immunity, Infection and Evolution, said: "The time has come to stop restating the problems of [antimicrobial resistance](#) and start taking action. We need independent, international leadership on this issue before the massive health gains that have been made since Alexander Fleming's discovery of penicillin are lost forever."

More information: Open access paper in *Nature*:
www.nature.com/news/1.15275

Provided by University of Edinburgh

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