‘Antibiotic stewardship teams’ must be planned and paid for worldwide to halt the spread of dangerous infections

There is an urgent need to plan and fund teams of specialist health workers to promote appropriate use of antibiotics, according to an expert commentary in *Clinical Microbiology and Infection* [1].

The authors say that these so-called antibiotic stewardship teams are needed in hospitals and in the community, and should ideally be made up of different specialists such as infectious diseases specialists, clinical microbiologists, nurses and pharmacists. Working together, they could improve diagnosis and treatment of infections for patients, and prevent the rise of drug-resistant bacteria.

The commentary says that these specialist teams will ensure we get the best use out of existing treatments for infectious diseases, such as pneumonia, sepsis and gonorrhoea, as well as ensuring that any new treatments remain effective.

The work of antibiotic stewardship teams would include giving expert guidance and education to health workers on prudent antibiotic use, issuing guidelines, monitoring antibiotic use and resistance, and feeding back these results to prescribers to help improve practices.

The lead author of the report is Professor Céline Pulcini, secretary of the European Society of Clinical Microbiology and Infectious Diseases’ (ESCMID) Study Group for Antimicrobial stewardship (ESGAP) and an infectious diseases specialist based at Nancy University Hospital and University of Lorraine, France.

She explained: “Bacteria are becoming increasingly resistant to antibiotic treatment and there is a growing realisation that we must do all we can to keep antibiotics effective. An important way to do this is to ensure that the right treatments are given to the right patients at the right dose and for the shortest possible duration. By giving antibiotics to those who need them most and, importantly, not giving them to those who will not benefit, we can help more patients now and in the future.”

“We know that individually, health workers prescribing antibiotics are trying to do this, but we also know that it takes specialist knowledge of antibiotics and infectious diseases and an overview of all the patients in a hospital or community to have the greatest impact.

“In this report, we highlight the scale of this problem and lay out some urgent first steps.”

The report, which examines human resources for antibiotic stewardship teams around the world, found widespread agreement that these multidisciplinary teams...
are needed. However, in most countries they are non-existent and where they do exist, they are often understaffed. They also tend to be only in hospitals, even though the vast majority of antibiotics are prescribed in the community [2].

The report says that some countries, such as Belgium, France, Australia, Canada and the USA, have brought in regulations to make hospital stewardship teams mandatory, but even these are not always enforced. The vast majority of countries do not have any national recommendations.

In the commentary, Prof. Pulcini and her co-authors say that an important first step is to identify an international minimum number of staff for antibiotic stewardship teams, set according to the size of the population. For example, there should be at least four team members from different specialties per 1,000 hospital beds. But, this should go beyond hospitals to include community settings and nursing homes.

Alongside this, they say there is a need for global estimates of funding needs for basic antibiotic stewardship activities across all healthcare settings. They recognise that securing funding will be challenging, even in wealthier nations. However, they say the cost of stewardship teams will be very small compared to the dramatic sums of public money that will be needed to bring new antibiotics to market.

Co-author of the report, Professor Evelina Tacconelli, is an executive committee member of ESCMID and Chair of ESCMID’s European Committee on Infection Control (EUCIC). She is based at the University Hospital Tübingen, Germany.

She said: “Global and coordinated efforts are essential to drive funding to organise and train antibiotic stewardship teams in every hospital. These teams play an essential role in increasing patients' safety and curbing the burden of drug-resistant infections. This work is essential not only to preserve the drugs we have now but, even more, to preserve any new ones we develop in the future.

“This will not come cheap but the cost pales into insignificance compared to the costs associated with developing new antimicrobial drugs, not to mention the human cost if we do not take action on antibiotic resistance.”

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Notes to Editors

[1] Céline Pulcini et al., Commentary: Human resources estimates and funding for antibiotic stewardship teams are urgently needed, Clinical Microbiology and Infection, https://doi.org/10.1016/j.cmi.2017.07.013
Please note: the commentary will be published at the above link within 48 hours of the embargo lifting.


**About ESCMID**

The European Society of Clinical Microbiology and Infectious Diseases (ESCMID) is a non-profit organisation dedicated to improving the diagnosis, treatment and prevention of infectious diseases in Europe and beyond. The society promotes and supports research, education, training and good medical practice in infection-related disciplines with a special focus on antimicrobial resistance to build capacity throughout the world. ESGAP is one of ESCMID’s study groups working on antimicrobial stewardship.

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**About Clinical Microbiology and Infection**

*Clinical Microbiology and Infection* (CMI) is a monthly publication of the European Society of Clinical Microbiology and Infectious Diseases, publishing peer-reviewed papers that present basic and applied research relevant to therapy and diagnostics in the fields of clinical microbiology, infectious diseases, virology, parasitology, immunology and epidemiology.

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