

Antibiotic prescribing influenced by team dynamics within hospitals

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Antibiotic prescribing by doctors is influenced by team dynamics and cultures within hospitals.

This is the finding of a new study, led by Imperial College London, which highlights the need for understanding contextual differences in antibiotic decision making amongst medical and surgical teams.

The work, funded by the National Institute for Health Research, the Economic and Social Research Council, and Public Health England, involved spending over 500 hours with medical and surgical teams and observing and documenting team and individual behaviours around decision making for antibiotic prescribing and infection management.

The researchers also interviewed 23 staff to get further insight of the challenges faced when prescribing [antibiotics](#). This work is part of larger research programme that also considered patient outcomes of the differences in decision making across specialities, by following a group of patients in medicine and surgery.

Dr. Esmita Charani, senior pharmacist and leading the study, Imperial's Department of Medicine, said: "This research builds on our existing work, which focuses on trying to understand how human behaviours influence medical decision making. Understanding culture and context is highly relevant when trying to understand how and why interventions and policies fail to be implemented as expected.

"Antibiotic management in surgery is complex not because there is less attention to infection management in surgical teams, but rather because of the different way in which surgical teams prioritise the care of their patients. Antibiotic prescribing in surgery is driven by a need to prevent infections following a surgical intervention. Understanding how surgical and medical specialties determine risks associated with infection management can lead to developing more tailored solutions which can optimise [antibiotic prescribing](#) and improve patient outcomes"

International collaboration

The study found that risks associated with infections are assessed differently across the specialties and this drives [decision making](#), and there needs to be more focus on addressing antibiotic use in the surgical pathway. The findings of this research have led to an international collaborative research programme: Optimising antibiotic use along surgical pathways: addressing antimicrobial resistance and improving clinical outcomes in India, England, Scotland, South Africa, Rwanda. In early 2019, Imperial will co-host their first Social Science Research Methodologies workshop: tackling Antimicrobial Resistance.

Professor Alison Holmes, from Imperial's Department of Medicine and Principal Investigator of the research, explained: "Between 30-50 per cent of [patients](#) in hospitals undergo surgery. Therefore addressing behaviours related to antibiotic use across the surgical pathway (before, during and after surgery) is key to tackling important drivers of [antimicrobial resistance](#). Our current programme of research is investigating how we can improve [infection](#) prevention behaviours and optimise antibiotic use in [surgery](#) across different healthcare settings.'

More information: E Charani et al. The Differences in Antibiotic Decision-making Between Acute Surgical and Acute Medical Teams: An Ethnographic Study of Culture and Team Dynamics, *Clinical Infectious Diseases* (2018). [DOI: 10.1093/cid/ciy844](https://doi.org/10.1093/cid/ciy844)

Provided by Imperial College London

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