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ASIA EDITION

Australia finds antimicrobial resistance making UTIs more deadly

07 April 2022 | News

CSIRO is conducting further research to understand the clinical implications of AMR, its health and economic burden

A new study led by Australia's national science agency, Commonwealth Scientific and Industrial Research Organisation (CSIRO), has found the spread of drug-resistant bacteria in the community is increasing the risk of death for common infections such as urinary tract infections (UTIs), which affect around one in two women and one in 20 men in their lifetime.

Antimicrobial resistance (AMR) occurs when bacteria and other microbes become resistant to the drugs designed to kill them, generally through misuse or overuse of the drugs.

There are two ways resistant bacteria can be passed between humans: hospital transmission and community transmission. Hospital acquired resistance is well researched, but this study is one of the few that looks at the burden of community transmission.

The study, a collaboration between CSIRO, Queensland *University* of Technology (QUT) and the University of Queensland, analysed data from 21,268 patients across 134 Queensland hospitals who acquired their infections in the community.

It found patients were almost two and a half (2.43) times more likely to die from community acquired drug-resistant UTIs caused by *Pseudomonas aeruginosa* and more than three (3.28) times more likely to die from community acquired drug-resistant blood stream infections caused by *Enterobacteriaceae* than those with drug-sensitive infections.

The study's findings will provide further guidance for managing AMR in the community, such as developing AMR stewardship programs that draw on data from the population being treated.