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## **SIMILAR RATES OF ANTIMICROBIAL RESISTANCE IN TERTIARY CARE HOSPITALS AND COMMUNITY HOSPITALS**

### ***Increasing antimicrobial resistance trends in both settings indicates continued need to improve infection control and antimicrobial stewardship***

Researchers from the Center for Disease Dynamics, Economics & Policy find that rates of antimicrobial resistance (AMR) are similar between large tertiary care hospitals and small community hospitals, in a study published in *Clinical Infectious Diseases*.

This runs contrary to the widely held assumption that rates of AMR would be higher in tertiary care hospitals (TCHs) than small community hospitals (SCHs), because they typically treat more severe and complex illnesses with greater risk of resistant infection.

Understanding the dynamics of antimicrobial resistance within specific contexts is essential for developing effective strategies to prevent increasing AMR and preserve the effectiveness of lifesaving antibiotics. This is the largest study to date comparing AMR rates between SCHs and TCHs.

Using a national antimicrobial susceptibility database, researchers compared annual and aggregated rates of AMR in community and tertiary care hospitals from 1999 to 2012 for multidrug-resistant *Escherichia coli*, *Staphylococcus aureus*, *Klebsiella pneumoniae*, *Acinetobacter baumannii*, and *Pseudomonas aeruginosa*.

The study's findings suggest that there was no significant overall variation in rates of AMR between TCHs and SCHs. While in inpatient settings, *S. aureus*, *K. pneumoniae*, *A. baumannii* were higher in SCHs, and *S. aureus* and *P. aeruginosa* were higher in TCH outpatient settings, after accounting for time trends and hospital-level variability, no significant variation had occurred.

The authors conclude that increasing trends among all pathogens, particularly *E. coli*, indicate a continued need to improve infection control and antimicrobial stewardship in all settings. A clear increasing trend of AMR in both settings and all pathogens was further confirmation of a growing national problem.

According to CDDEP scholar and study author Dr. Sumanth Gandra, "It is the lack of overall difference in resistance rates between SCHs and TCHs that suggests the need for improvement in infection control activities and antimicrobial stewardship programs in SCHs."

The article is published in *Clinical Infectious Diseases*, available here:  
<https://academic.oup.com/cid/article-abstract/doi/10.1093/cid/cix413/3796324/Is-Antimicrobial-Resistance-a-Bigger-Problem-in?redirectedFrom=fulltext>

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The [Center for Disease Dynamics, Economics & Policy \(CDDEP\)](#) produces independent, multidisciplinary research to advance the health and wellbeing of human populations around the world. CDDEP projects are global in scope, spanning Africa, Asia, and North America and include scientific studies and policy engagement. The CDDEP team is experienced in addressing country-specific and regional issues, as well as the local and global aspects of global challenges, such as antibiotic resistance and pandemic influenza. CDDEP research is notable for innovative approaches to design and analysis, which are shared widely through publications, presentations and web-based programs. CDDEP has offices in Washington, D.C. and New Delhi and relies on a distinguished team of scientists, public health experts and economists.

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