

Singapore-based study suggests short-course antibiotics to revolutionise healthcare

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The clinical trial examined over 450 patients across intensive care units in Singapore, Thailand, and Nepal.

Antibiotic overuse is a key driver in the rise of antimicrobial resistance (AMR), a major global health crisis. Researchers from the Yong Loo Lin School of Medicine, National University of Singapore (NUS Medicine) and Duke-NUS Medical School have provided compelling evidence that short-course antibiotic treatments can be a gamechanger in tackling ventilator-associated pneumonia (VAP), a serious infection common in critically ill patients.

The findings from the landmark REGARD-VAP trial, published in *Lancet Respiratory Medicine*, and the accompanying economic analyses published in *Lancet Global Health*, highlight how prudent antibiotic use can curb resistance, effectively safeguarding patients as well as combatting the global threat of antimicrobial resistance while reducing healthcare costs.

Led by the NUS Medicine research team, the clinical trial examined over 450 patients across intensive care units (ICUs) in Singapore, Thailand, and Nepal. Results revealed that short course antibiotics—carefully tailored to individual patients' recovery—are just as effective as traditional longer treatments in preventing death and recurrence of pneumonia.

"By shortening the duration of antibiotics, we can reduce the risks of side effects and resistance without compromising patient outcomes," added Dr Mo Yin, Junior Academic Fellow at the Department of Medicine, NUS Medicine, and principal investigator of the clinical trial, and co-author of the economic analysis.

In Singapore, the strategy is cost-saving, reducing hospital expenditure while maintaining excellent outcomes for patients. In Thailand and Nepal, short-course antibiotics were highly cost effective, with health gains outweighing the modest additional costs incurred.

The REGARD-VAP study's findings have practical implications for hospitals worldwide. Short course antibiotics can streamline treatment in ICUs, where managing infections efficiently is vital. The approach is effective across high-income (Singapore), middle-income (Thailand), and low-income (Nepal) settings, making it a scalable solution for diverse healthcare systems. These results provide robust evidence including cost-effectiveness data for policymakers to adopt short-course antibiotics into national and institutional guidelines.