Johns Hopkins Awarded \$16 Million Contract in Effort to Improve Antibiotic Prescribing and Fight Superbugs

Researchers embark on nationwide initiative to optimize use of antibiotics across all health care settings

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Superbugs are causing a super problem in health care, but combating these drug-resistant bacteria presents quite a challenge. Many antibiotic prescriptions administered in the U.S. are either unnecessary or inappropriate and can lead to antibiotic-resistant infections or other adverse events. In an effort to improve antibiotic use, the Agency for Healthcare Research and Quality within the U.S. Department of Health and Human Services has awarded the Johns Hopkins Armstrong Institute for Patient Safety and Quality a \$16 million contract, which will be spread over a period of five years — two initial years, plus three optional years. The Armstrong Institute will collaborate with the Chicago-based research institute NORC to identify which approaches are most helpful and to operationalize efforts to optimize antibiotic prescribing.

"Antibiotics have revolutionized health care and saved millions of lives, so it is critical that we preserve their effectiveness," says Sara Cosgrove, M.D., professor of medicine at the Johns Hopkins University School of Medicine and principal investigator for the project. "Improved prescribing in all health care settings can prevent the emergence and spread of antibiotic-resistant bacteria and make health care safer for patients."

Cosgrove and Pranita Tamma, M.D., M.H.S., assistant professor of pediatrics at Johns Hopkins and co-principal investigator, are leading efforts to incorporate use of the Comprehensive Unit-based Safety Program, or CUSP, — which helps clinicians translate science into practice — to investigate and develop tools to tackle the issue of antibiotic overuse while also integrating best practices previously established at The Johns Hopkins Hospital. The team will develop tools and educational modules to help health care personnel make decisions to better optimize antibiotic use, such as suggested steps in patient care, possible tests to order and more. The investigators will also create tools to educate patients and families on when antibiotics may or may not be indicated. The modules and tools will be piloted, and then implemented in up to 1,500 hospitals, nursing homes and ambulatory clinics nationwide.

"It's important for everyone, from health care providers to patients and families, to understand the importance of properly prescribing antibiotics," Tamma says. "We want to ensure each person involved in the care process is aware that antibiotics are essential for certain infections, but they can actually do more harm than good if they are improperly prescribed."

Funding for the contract is provided by the Agency for Healthcare Research and Quality within the United States Department of Health and Human Services