

Contaminated Stethoscopes Are Common in Era of Antibiotic Resistance

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A study that tested several hospital settings has confirmed that stethoscopes are a major carrier of potentially hazardous microorganisms. This finding is especially important today, as hospitals care for more immunocompromised patients and as bacteria grow resistant to available antibiotics. "I think that finding potential nosocomial pathogens on stethoscopes is more important today than 20 years ago, since hospitalized patients are more acutely ill, invasive technologies have increased, and problems with antimicrobial resistance have worsened," said Michael B. Edmond, MD, MPH, an assistant professor of internal medicine at the Medical College of Virginia in Richmond. Two hundred stethoscopes from four hospitals were tested for contamination. Eighty percent were contaminated with microorganisms, many of which are known to cause serious infections in hospitalized patients. Physicians in the study, published earlier this year in *Archives of Internal Medicine* (1), had the highest percentage of contaminated stethoscopes (90%) (see table). Assigning stethoscopes to designated areas reduced contamination, but half still carried infectious agents. Seventeen distinct species of microorganisms were isolated from the stethoscopes; more than half of the staphylococci isolated were resistant to methicillin.

"Methicillin-resistant staph is a huge problem," said John J. Mathewson, PhD, coauthor of the study. The only line of defense against them is vancomycin, a potentially toxic drug. "And if staphylococci become resistant to vancomycin, we're in real trouble, because we've got nothing else to treat it with," warned Mathewson, a microbiologist at the Center for Infectious Diseases, University of Texas at Houston.

"It should be standard practice to either swab stethoscopes with alcohol after each use or to use disposable covers," Mathewson said. "This is particularly important in areas of the hospital that house many patients with antibiotic-resistant organisms, such as critical care units, transplant units, and hematology/oncology units," Edmond added. "Patients infected with antibiotic-resistant organisms should be placed in contact isolation," he said. "In such cases, stethoscopes should not be shared, but dedicated to a single patient and left at the bedside. "It will take a lot of reminders to get health care workers to regularly disinfect their stethoscopes," Edmond said. "It's 1996 and we haven't convinced health care workers that they need to wash their hands yet, a precaution more intuitively obvious than cleaning stethoscopes. Health care workers wash their hands only 40% as often as they should," he added. "We'll need to repeat the message over and over."