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## Doctors' and Nurses' Hospital Uniforms Contain Dangerous Bacteria a Majority of the Time, Study Shows



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More than 60 percent of hospital nurses' and doctors' uniforms tested positive for potentially dangerous bacteria, according to a study published in the September issue of the American Journal of Infection Control, the official publication of APIC -- the Association for Professionals in Infection Control and Epidemiology.

A team of researchers led by Yonit Wiener-Well, MD, from the Shaare Zedek Medical Center in Jerusalem, Israel, collected swab samples from three parts of the uniforms of 75 registered nurses (RNs) and 60 medical doctors (MDs) by pressing standard blood agar plates at the abdominal zone, sleeves' ends and pockets.

The researchers at this 550-bed, university-affiliated hospital found that exactly half of all the cultures taken, representing 65 percent of the RN uniforms and 60 percent of the MD uniforms, harbored pathogens. Of those, 21 cultures from RN uniforms and six cultures from MD uniforms contained multi-drug resistant pathogens, including eight cultures that grew methicillin-resistant *Staphylococcus aureus* (MRSA). Although the uniforms themselves may not pose a direct risk of disease transmission, these results indicate a prevalence of antibiotic resistant strains in close proximity to hospitalised patients.

"It is important to put these study results into perspective," said APIC 2011 President Russell Olmsted, MPH, CIC. "Any clothing that is worn by humans will become contaminated with microorganisms. The cornerstone of infection prevention remains the use of hand hygiene to prevent the movement of microbes from these surfaces to patients." "New evidence such as this study by Dr. Wiener-Well is helpful to improve the understanding of potential sources of contamination but, as is true for many studies, it raises additional questions that need to be investigated," added Olmsted.

According to the World Health Organisation, the risk of healthcare-associated infection (HAI) in some developing countries is as much as 20 times higher than in developed countries. Even in hospitals in developed countries like Israel, the site of this investigation, and the U.S., HAIs occur too often, can be deadly, and are expensive to treat. HAI prevention is therefore the best approach for patient safety. Infection preventionists, in collaboration with direct care providers, can prevent more than half of HAIs by applying proven prevention practices as part of a comprehensive infection prevention and control program.

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PHOTO: Medical professionals performing a procedure. More than 60 percent of hospital nurses' and doctors' uniforms tested positive for potentially dangerous bacteria. (Credit: © astoria / Fotolia)

### Journal Reference:

Yonit Wiener-Well, Margalit Galuty, Bernard Rudensky, Yechiel Schlesinger, Denise Attias, Amos M. Yinnon. Nursing and physician attire as possible source of nosocomial infections. American Journal of Infection Control, 2011; 39 (7): 555 DOI: 10.1016/j.ajic.2010.12.016

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