

Daily disinfection of isolation rooms reduces contamination of healthcare workers' hands

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New research demonstrates that daily cleaning of high-touch surfaces in isolation rooms of patients with *Clostridium difficile* (*C. difficile*) or methicillin-resistant *Staphylococcus aureus* (MRSA) significantly reduces the rate of the pathogens on the hands of healthcare personnel. The findings underscore the importance of environmental cleaning for reducing the spread of difficult to treat infections. The study is published in the October issue of *Infection Control and Hospital Epidemiology*, the journal of the Society for Healthcare Epidemiology of America (SHEA).

Researchers from the Cleveland Veterans Affairs Medical Center conducted a prospective, randomized trial comparing regular cleaning protocols of housekeeping staff with daily [disinfection](#) of high-touch surfaces performed by researchers (i.e., bed rail and bedside tables, call button and phone, and toilet seat, and bathroom hand rail) in 34 *C. difficile* and 36 [MRSA](#) isolation rooms. The study assessed hand contamination of physicians, nurses, and research staff six to eight hours after disinfection procedures. In rooms with daily disinfection, there were significant reductions in the amount and frequency of pathogens on the hands of investigators and healthcare personnel caring for the patients (6.4% with daily disinfection versus 30% with standard cleaning).

"These findings add to the growing body of evidence supporting environmental cleaning and disinfection as an important infection control strategy," said Sirisha Kundrapu, MD, a lead author of the study. "The intervention was simple, inexpensive, and well-accepted by patients and staff."

Regular cleaning protocols of housekeeping staff include disinfection of [patient rooms](#) with [sodium hypochlorite](#) after discharge, daily cleaning of

bathrooms and floors, and cleaning of high-touch surfaces only if visibly soiled. During the study period, less than 10 percent of high-touch surfaces in *C. difficile* or MRSA rooms were cleaned daily using regular protocols. Rooms randomized to daily disinfection were cleaned each morning for seven days, or until discharge. The daily disinfection took about 20 minutes per room.

The study highlights the impact small changes in environmental cleaning can have on preventing transmission and patient exposure to harmful pathogens, but has several limitations. Limitations of the study include daily disinfection performed by research staff rather than by housekeeping staff of the medical center, researchers did not measure adherence to hand hygiene and contact precautions for the healthcare workers whose hands were cultured and did not attempt to assess whether healthcare worker hand contamination was due to noncompliance with glove use or lack of proper technique when removing gloves. Molecular typing was not performed to determine whether hand isolates matched environmental isolates.

Provided by Society for Healthcare Epidemiology of America

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