

# Nursing home workers often fail to change gloves, risking spread of infection

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The failure to change gloves is common among certified nursing assistants, and may be a significant cause of the spread of dangerous pathogens in nursing homes and long-term healthcare settings, according to a new study published in the September issue of the *American Journal of Infection Control*, the journal of the Association for Professionals in Infection Control and Epidemiology (APIC).

Certified nursing assistants (CNAs) are often the main providers of care in long-term care facilities (LTCFs), with significant patient contact. If a CNA uses gloves incorrectly, pathogens can easily be spread to [patients](#) and the environment, leading to healthcare-associated infections (HAIs). Researchers estimate that between 1.6 million and 3.8 million infections occur in LTCFs annually. Infections in LTCFs cause approximately 388,000 deaths per year and cost between \$673 million and \$2 billion annually.

"Gloves are an essential component of standard precautions, and proper use of gloves is a critical component of best practices to prevent HAIs," said Linda Greene, RN, MPS, CIC, FAPIC, 2017 APIC president. "This is especially important in long-term care, where residents are more vulnerable to infection and stay for extended periods. Facilities must continually educate healthcare providers about the importance of appropriate glove use to prevent infection and monitor adherence to this practice."

In the first-of-its-kind prospective study by Deborah Patterson Burdsall,

PhD, RN-BC, CIC, of the University of Iowa College of Nursing, researchers examined the degree of inappropriate glove use in a random sample of 74 CNAs performing toileting and perineal care at one LTCF. Inappropriate glove use—defined as a failure to change gloves, and when surfaces were touched with contaminated gloves—was frequently observed in this study.

The Centers for Disease Control and Prevention (CDC) recommends standard precautions requiring all CNAs to wear personal protective equipment, especially gloves, to avoid contact with blood, secretions, excretions, or other potentially infectious materials that may contain pathogens. CNAs must change gloves as a standard precaution at the following glove change points during patient care: when the gloves have touched blood or body fluids; after the CNA completes a patient task; after the gloves touch a potentially contaminated site; and in between patients.

"Glove use behavior is as important as hand washing when it comes to [infection prevention](#)," said lead study author Deborah Patterson Burdsall. "These findings indicate that glove use behavior should be monitored alongside hand hygiene. The observations should be shared with staff to improve behaviors and reduce the risk of disease transmission."

While CNAs wore gloves for 80 percent of touch points, they failed to change gloves at 66 percent of glove change points. More than 44 percent of the gloved touch points were observed as contaminated, with all contaminated touches being with gloved hands. Of note, gloves were readily available on all units in public areas, shower rooms, patient rooms, and patient bathrooms to enhance availability and workflow.

To measure inappropriate glove use, the PI developed and validated the glove use surveillance tool (GUST), allowing them to record the type of surface, the sequence in which they touched surfaces during a patient

care event, whether they wore gloves, and whether they changed [gloves](#).

The frequency of contaminated gloved touches illustrates the significant potential for cross-contamination between patients and the healthcare environment from inappropriate glove use. This study supports the findings of earlier studies that describe inappropriate glove use by healthcare personnel. Based on information from such studies, [infection](#) prevention staff and educators should develop training programs using adult learning principles and evidence-based instructional methods to improve glove use.

**More information:** Deborah Patterson Burdsall et al, Exploring inappropriate certified nursing assistant glove use in long-term care, *American Journal of Infection Control* (2017). [DOI: 10.1016/j.ajic.2017.02.017](#)

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