

# Nursing Assistants' Use of Personal Protective Equipment Regarding Contact With Excreta Contaminated With Antineoplastic Drugs

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**PURPOSE:** To examine the feasibility of observing and interviewing nursing assistants about handling of antineoplastic drugs contaminated with excreta, acceptability of a measure of personal protective equipment (PPE) use with nursing assistants, and predictors of PPE use.

**PARTICIPANTS & SETTING:** 27 nursing assistants in an inpatient hematology-oncology unit at an academic medical center in the southeastern United States.

**METHODOLOGIC APPROACH:** This was an exploratory, multimethod study using observation, verbally administered questionnaires, and interviews. Research variables included recruitment rates, acceptability of observation, and understandability of a safe-handling instrument.

**FINDINGS:** Observed use of double gloves, chemotherapy gowns, and face shields was low; use of plastic-backed pads when flushing excreta was high.

**IMPLICATIONS FOR NURSING:** Nursing assistants are willing to participate in research. Standardized training and education about PPE use are needed.

**KEYWORDS** occupational exposure; nursing assistants; personal protective equipment

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Exposure to antineoplastic drugs in the workplace can cause skin rashes, infertility, birth defects, miscarriage, and increased risk of cancer (Connor, Lawson, Polovich, & McDiarmid, 2014; Lawson et al., 2012; McDiarmid, Oliver, Roth, Rogers, & Escalante, 2010; Rogers & Emmett, 1987). Evidence of exposure to antineoplastic drugs in the workplace is mounting. Antineoplastic drug residue in the environment can be used as a proxy for exposure risk. Antineoplastic drug residue has been found on work surfaces (Hon, Teschke, Chu, Demers, & Venners, 2013) and on the hands of those who work near but do not administer the drugs (Hon, Teschke, Demers, & Venners, 2014); antineoplastic drug metabolites have also been found in unit staff's urine (Hon, Teschke, Shen, Demers, & Venners, 2015; Rogers & Emmett, 1987). In addition, family members of patients receiving antineoplastic drugs may have antineoplastic drug metabolites in their urine, and antineoplastic drug residue has been found on bathroom surfaces in homes (Yuki, Sekine, Takase, Ishida, & Sessink, 2013; Yuki, Takase, Sekine, & Ishida, 2014; Yuki, Ishida, & Sekine, 2015). These findings suggest high exposure risk to antineoplastic drugs for family members and healthcare providers.

Like family members, nursing assistants perform intimate personal care duties as part of their role in caring for patients receiving antineoplastic drugs, including feeding, bathing, toileting, dressing, grooming, repositioning, and changing linens, which repeatedly expose them to the bodily fluids of patients (U.S. Bureau of Labor Statistics, 2018). Findings from the limited studies on nursing assistants' exposure to antineoplastic drugs suggest that