



Research Summary

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Why We Performed Study

Studies show that antineoplastic drug exposures can cause both acute and long-term health effects. The purpose of this study was to assess nursing staff's exposures to antineoplastic drugs. We did this by measuring antineoplastic drug contamination in areas where nurses work and by surveying nursing staff's work practices.

Background Information

Several organizations such as the National Institute for Occupational Safety and Health (NIOSH) issue professional guidelines for administering and handling antineoplastic drugs. Adhering to these guidelines can reduce exposures to antineoplastic agents. Guidelines issued by NIOSH can be found at:

<http://www.cdc.gov/niosh/docs/2004-165/>

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Occupational exposures to antineoplastic drugs in an oncology-hematology department

What We Found

We took 14 wipe samples on various surfaces in patient rooms and common areas where nursing staff spend time. We also invited nursing staff (nurses, aides, and technicians) to complete a questionnaire.

Seven of 14 wipe samples were positive for either methotrexate or cyclophosphamide. Positive samples were detected on the bedside floor, intravenous pole, bathroom floor, and toilet. None of the surfaces outside the patient rooms were positive for methotrexate and cyclophosphamide. Cytarabine was not detected in any of the samples.

Less than 50% of nursing staff reported wearing two pairs of gloves when handling antineoplastic agents. Also, 86% reported wearing chemotherapy gowns, and 87% reported washing hands after coming into contact with these drugs.

Our results underscore the need for a comprehensive training program for nursing staff so that they can prevent unnecessary exposure to antineoplastic agents.

What We Recommend

- We recommend that management develop and implement an antineoplastic drug handling education program to teach nursing staff effective risk-reduction behaviors, and to promote, explain, and discuss OSHA/NIOSH guidelines.
- The program should communicate the health risks associated with antineoplastic drug exposures and how exposures might occur in the workplace to all visitors and employees, including housekeeping and staff.
- The department should develop a medical surveillance program for employees who handle antineoplastic drugs as specified by the Occupational Safety and Health Administration (OSHA).