

High Impact

A 2006 NORA Partnering Award Winner



Collaborative Partnerships and Products of the NIOSH Hazardous Drug Working Group

About 5.5 million U.S. healthcare workers are potentially exposed to hazardous drugs, including pharmacy and nursing personnel, physicians, environmental services workers, workers in research laboratories, veterinary care workers, and shipping and receiving personnel. Published studies have shown that workplace exposures to hazardous drugs can cause both acute and chronic health effects such as skin rashes, adverse reproductive outcomes, and possibly leukemia and other cancers. Healthcare workers who prepare or administer hazardous drugs or who work in areas where these drugs are used may be exposed to these agents in the workplace.

The NIOSH Hazardous Drug Working Group consisted of representatives from government, labor, pharmacy, nursing, academia, research, pharmaceutical and safety equipment manufacturing, and trade associations. This group charged themselves to develop a NIOSH policy document that made a clear statement about the presumed health effects associated with hazardous drugs. They also identified the need for better information on glove material selection and for informative resources on the selection and use of engineering controls for protection against hazardous drug exposures. The group developed the following goals: 1) to enhance awareness of the problem; 2) to provide protective recommendations based upon current knowledge and 3) to identify, research and address gaps.

The following are some of the products and impacts that help the group achieve significant success in improving the health and safety of healthcare workers exposed to hazardous drugs.

1. The Working Group developed the NIOSH Alert, *Preventing Occupational Exposure to Antineoplastic and Other Hazardous Drugs in Health Care Settings* that summarizes the known health risks associated with handling hazardous drugs and provides guidance for their safe handling and administration. Some results of the Alert include the following:

- The Alert defines the properties of a hazardous drug and includes a list of drugs that meet the definition.
- To enhance the Alert's value into the future, NIOSH established a scientific peer-review process for updating the hazardous drug definition and associated list on an annual basis. The Alert also introduces clear and concise engineering control recommendations focused on worker protection.
- The Alert successfully expands this focus from traditional focus on

sterile product protection to incorporating design and operational concepts for worker protection that do not compromise sterility.

- Engineering equipment manufacturers to introduce new engineering control products into the marketplace. Since the Alert was released in March 2004, six out of seven equipment manufacturers began marketing engineering controls specific to the guidance in the Alert.
- 2. Working Group members also assisted NIOSH in partnership with the FDA to update the safe handling warning on the FDA package inserts for antineoplastic drugs.
- 3. The Working Group continues to work with NIOSH to develop and finalize several reader-friendly NIOSH Workplace Solution documents covering subjects related to the safe handling of hazardous drugs.
- 4. Collaboration between NIOSH researchers, key Working Group Members and the National Institutes of Health (NIH) resulted in a manuscript entitled, *Surface Contamination of Chemotherapy Drug Vials and Evaluation of New Vial-Cleaning Techniques: Results of Three Studies*, which was published in March 2005.
- 5. NIOSH is also partnering with Sandia National Laboratories in developing cleaning and decontamination methods for antineoplastic drugs. Discovery of a safe decontamination agent effective against many/most antineoplastic drugs will be a valuable contribution toward reducing such occupational exposures to both healthcare workers and associated maintenance personnel.

Conclusion

The Working Group formed a unique and powerful partnership that has greatly improved the health and safety of healthcare workers exposed to hazardous drugs. By developing and implementing a multi-faceted approach for reducing exposures of healthcare workers to hazardous drugs, the Working Group sought to raise awareness of the problem, to better define exposures, and to make recommendations to reduce the exposures. Although much has been accomplished, the group is continuing to address new problems and issues in this challenging, complex, and ever-evolving field. Through this partnership, a comprehensive culture of safety in healthcare has been crafted and promoted that allows the provision of life-saving therapies to patients, while protecting and ensuring the health, lives, and livelihood of the caregivers who treat them.

For a listing of partners and a full project description, go to www.cdc.gov/niosh/nora and click on the "2006 NORA Awards" link.

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