

Hazardous drugs, a safety blind spot

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Know the risks of handling many commonly administered drugs.

WARFARIN, OXYTOCIN, CLONAZEPAM—registered nurses administer millions of these drugs daily with little awareness that they are hazardous, as defined by the Centers for Disease Control and Prevention/National Institute for Occupational Safety and Health (CDC/NIOSH). Interestingly, not all hazardous drugs come with a hazard label.

An evolving awareness

Since the 1960s, reports indicated that certain drugs may pose health risks to healthcare workers who handle them. Routes of unintentional exposure to hazardous drugs include dermal and mucosal absorption, inhalation, injection, and ingestion (such as through contaminated food, spills, or oral contact with contaminated hands or equipment). Both clinical and nonclinical personnel may be exposed to hazardous drugs when handling or touching contaminated surfaces. Healthcare risks associated with handling hazardous drugs may have acute or long-term consequences. Acute health effects may include nausea, rashes, hair loss, liver and kidney damage, hearing loss, and cardiac toxicity, while long-term effects may include cancer, infertility, and other reproductive health issues.

In 2004, CDC/NIOSH started publishing a sample list of drugs that are known to be hazardous to those who handle them. Although NIOSH defines criteria and identifies hazardous drugs, the United States Pharmacopeia (USP), a nonprofit, nongovernmental standard-setting organization, develops standards for safe handling of hazardous drugs in healthcare settings. The goals of these standards are to help increase awareness, provide uniform standards to help reduce the risk of managing hazardous drugs, and help reduce the risk they pose to patients and the healthcare workforce.

USP General Chapter <800> Hazardous Drugs—Handling in Healthcare Settings

USP first published General Chapter <800> in February 2016, with the official date anticipated for December 2019. The goal of the standard is to help protect healthcare workers from the risks associated with handling

hazardous drugs. USP General Chapter <800> contains sections related to types of exposure; personnel and facility responsibilities for handling hazardous drugs; appropriate use of personal protective equipment; and deactivation/decontamination, cleaning, and disinfection.

More than 200 drugs are listed in the NIOSH publication as hazardous. These drugs represent more than 1,000 commercially available drugs, most of which may not be labeled as hazardous. The hazardous drugs are categorized into three distinct groups: antineoplastic drugs, nonantineoplastic drugs, and nonantineoplastic drugs that primarily have adverse reproductive effects.

Hazardous drugs can be found across all healthcare settings, such as hospitals, pharmacies, physicians' offices, skilled nursing facilities, and outpatient surgical centers. Many activities may expose healthcare workers to hazardous drugs across the entire chain of care delivery.

Activities that may expose you to hazardous drugs are receipt, storage, dispensing, compounding or other manipulation, administration, patient care activities, spills, transport, disposal, and managing waste. To protect yourself:

- review and familiarize yourself with the NIOSH list at [cdc.gov/niosh/topics/antineoplastic/pdf/hazardous-drugs-list_2016-161.pdf](https://www.cdc.gov/niosh/topics/antineoplastic/pdf/hazardous-drugs-list_2016-161.pdf)
- read USP General Chapter <800> at [usp.org/compounding/general-chapter-hazardous-drugs-handling-healthcare](https://www.usp.org/compounding/general-chapter-hazardous-drugs-handling-healthcare)
- contact your employer to ensure safety mechanisms are provided to help reduce the risk that may be associated with handling hazardous drugs.

Caring for *your* health is as important as caring for your patients' health. ★

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Selected references

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USP analysis. Information available upon request.

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