

NIOSH alert warns against hazardous exposures

The National Institute for Occupational Safety & Health (NIOSH) has issued an alert on the hazards of working with chemotherapeutics and other pharmaceutical products. The alert warns hospitals and other healthcare facilities that certain drug products pose a hazard for pharmacists, technicians, nurses, housekeepers, janitors, and other workers. According to NIOSH, more than 5.5 million workers are exposed to hazardous drugs that are prepared, stored, mixed, and administered in healthcare facilities nationwide.

"The alert is a very positive move," said Roger Anderson, head of pharmacy services at M. D. Anderson Cancer Center, Houston. It will help everyone understand the potential for contamination, and "every hospital will have to assess its procedures to reduce exposures."

A prepublication version of *Preventing Occupational Exposures to Antineoplastic and Other Hazardous Drugs in Healthcare Settings* was posted on-line at www.cdc.gov/niosh/docs/2004-HazDrugAlert/ in March. The final print version is scheduled for publication later this year. It will include a pull-out poster highlighting the dangers posed by more than 130 pharmaceutical products in the workplace as well as measures that should be taken to protect workers.

"We are happy the alert is out," said Joseph Deffenbaugh, director of public health and quality for ASHP. "We have been pushing NIOSH for close to

three and a half years to get this statement produced and published."

NIOSH warns that laminar flow workstations that move air from the drug toward the worker should never be used in preparing hazardous drugs. Instead, the agency calls for ventilated cabinets such as biological safety cabinets and containment isolators. Cabinet exhaust should be HEPA-filtered and exhausted to the outdoors away from air intake locations. Closed-system drug transfer devices, glove bags, and needleless systems can further protect workers from exposures to drug hazards. The closed-system devices are in addition to familiar measures such as double gloves, gowns, caps, and face protection.

The initial NIOSH list of hazardous drugs ranges from aldesleukin (Proleukin, Chiron), a colony-stimulating factor used as an adjunct to cancer chemotherapy, to zidovudine (Retrovir, GlaxoSmithKline), one of the first anti-AIDS retroviral drugs to hit the market.

About 60% of the listed drugs are antineoplastic agents. The warning also includes anti-infectives, contraceptives, estrogens, gonadotropins, oxytocics, skin and membrane agents, and other therapeutic agents. NIOSH said the list of dangerous drug products would be updated annually.

"We need to make healthcare people aware of the dangers in the places they work," NIOSH senior fellow Tom Connor, who drafted the alert, told *DT* earlier this year.

It's not for lack of trying. Anderson has been moving to publicize

the dangers of antineoplastics and other pharmaceutical products since the late 1970s. His early calls to action are largely responsible for current ASHP guidelines that mandate gloves, gowns, safety cabinets, and other worker safety measures that have become commonplace in health care.

Studies in U.S. and Canadian hospitals helped focus attention on workplace hazards. A 1999 study found contamination in 75% of pharmacy sites and 65% of treatment areas tested. Studies also found intact alkylating agents in the urine of hospital personnel who prepare and administer chemotherapy. The NIOSH alert provides a basic road map that every healthcare facility should be following, said Deffenbaugh. "The alert should spark facilities to do their own risk assessment and analysis to determine what steps, if any, are needed to minimize exposures," he explained.

Facilities already in full compliance with ASHP guidelines on handling antineoplastics should need few changes, Deffenbaugh added. The only additions would be closed-system transfer devices to eliminate accidental spills while products are being prepared and administered. For now, he noted, the only closed-system transfer device on the U.S. market is PhaSeal, marketed by Baxa.

"Everyone knows these drugs are dangerous," said Baxa marketing VP Marian Robinson, "but I'm not sure they knew just how dangerous." The United States accounts for about half of PhaSeal's worldwide sales, Robinson said. Health systems can expect to pay about \$12 per dose for PhaSeal transfer devices.

Separately, Baxa recently announced a new PhaSeal infusion adapter that simplifies the connection between an IV bag and a patient's IV line. It added that this redesign was made in response to customer feedback.

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