



VOLUME 9: PHARMACY SERVICES	Effective Date: 01/2009
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9.24 HANDLING OF HAZARDOUS DRUGS PROCEDURE	Attachments: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

I. PROCEDURE OVERVIEW

Hazardous drugs shall be prepared, labeled and disposed of according to recommended practices to protect staff and the environment. Parenteral hazardous drugs shall be administered only by persons trained in the safe use of such agents.

Sterile hazardous drugs shall only be compounded by pharmacies with appropriate licensure from the California State Board of Pharmacy.

II. PURPOSE

To promote safety in handling of hazardous drugs to reduce the risk of environmental or personal exposure and to prevent exposure to hazardous drug waste.

III. DEFINITIONS

Antineoplastic: Inhibiting or preventing the development, maturation, and proliferation of malignant cells.

Biohazardous: Containing infectious or potentially infectious substances that pose a threat to humans or the environment.

Carcinogenicity: The power, ability, or tendency to produce a malignant new growth made up of epithelial cells tending to infiltrate the surrounding tissues and give rise to metastases.

Chemotherapeutic: Pertaining to the treatment of disease by chemical agents.

Cytotoxic: Pertaining to, resulting from, or having the action of a toxin or antibody that has a specific toxic action upon cells of specific organs.

Hazardous Drugs: Any drug identified by at least one of the following five criteria: carcinogenicity, teratogenicity, reproductive toxicity in humans, organ toxicity at low doses in humans or animals, mutagenic properties, or new drugs that mimic existing hazardous drugs in structure or toxicity. This encompasses drugs that are antineoplastic, chemotherapeutic, and cytotoxic.

Mutagenic: Capable of inducing genetic mutation.

Reproductive Toxicity: Destructive to the ability to reproduce.

Teratogenicity: The tendency to produce anomalies of formation or development.

IV. PROCEDURE

A. Parenteral Hazardous Drugs

1. Recommended practices for handling parenteral hazardous drugs
 - a. The Pharmacist-in-Charge (PIC) shall ensure that pharmacy staff engaged in the preparation of parenteral hazardous drugs are properly trained and equipped to perform their duties.
 - b. Parenteral hazardous drugs shall only be prepared in a Class II Vertical Laminar Flow Hood or Biological Safety Cabinet.

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- 1) The surface shall be covered with plastic backed absorbent paper to reduce the dispersion of droplets and spills and to facilitate clean up.
- 2) The plastic backed absorbent paper shall be replaced after any overt spills.
- 3) After completing the medication preparation, a disposable towel with 70 percent alcohol shall be used to wipe down the interior.
- c. Pharmacy staff shall wear:
 - 1) Two pairs of surgical gloves while preparing the medication. Fresh gloves shall be used when beginning any new task or batch.
 - 2) A protective disposable surgical gown made of lint-free, low-permeability fabric with a solid front and long sleeves with tight-fitting elastic cuffs. Pharmacy staff shall immediately replace overtly contaminated outer protective garments.
 - 3) A protective eye shield or splash goggles.
- d. In the event of skin or eye contact with hazardous drugs, pharmacy staff shall:
 - 1) Wash any area of the skin that comes into contact with the medication thoroughly with soap and water.
 - 2) Flush the eye(s) with copious amounts of water for at least 15 minutes while holding the eye lid(s) open.
 - 3) Seek evaluation by a physician.
- e. Pharmacy staff shall reduce the risk of personal or environmental exposure by aerosol generation, spraying, and/or spillage of parenteral hazardous drugs when handling vials, needles, syringes, glass ampules, and intravenous (IV) bottles or bags by ensuring the following:
 - 1) Pressure-equalize vials containing reconstituted parenteral hazardous drugs to reduce the possibility of spraying when a needle is withdrawn from the septum of the cap.
 - 2) Use syringes and IV sets with Leur-Lok fittings.
 - 3) To open a glass ampule, wipe the ampule with alcohol before opening, tap down the contents gently from the neck and top portion of the ampule, and wrap the neck of the ampule with a sterile gauze pad when opening.
 - 4) Venting devices with 0.2µm hydrophobic filters and 5µm needles may be used.
 - 5) External surfaces of syringes and IV bottles should be wiped clean of any drug contamination.
- f. A special chemotherapy label will be attached to IV bottles, IV bags, or pre-filled syringes prepared in the pharmacy prior to transporting to the nursing units (e.g., "Caution: Chemotherapy-Dispose of Properly").
2. Handling of hazardous drugs in the nursing units
 - a. Only persons trained in the safe use of hazardous drugs as determined by the Chief Nurse Executive, PIC, or designees shall administer hazardous drugs.
 - b. Gloves, gowns, and masks shall be utilized when hazardous drugs are administered.
 - c. Chemo spill kits shall be readily available when hazardous drugs are administered.

B. Oral Hazardous Drugs

1. A single pair of gloves is recommended for dispensing or administering an intact single tablet/capsule.

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2. Additional personal protective equipment (PPE) including double gloves, protective gown, and respiratory protection is recommended with repeated counting, cutting or crushing tablets considered hazardous.
3. When a “crush/open and float” order is received by pharmacy, the pharmacist shall refer to both the California Correctional Health Care Services (CCHCS) Statewide Pharmacy and Therapeutics Committee’s “crush/open and float” list and the National Institute for Occupational Safety and Health Hazardous Drug List before authorizing dispensing of such an order.
4. Where a “crush/open and float” order is received for a drug considered hazardous, the prescriber shall be contacted to determine whether the medication can be given intact. If a “crush/open and float” instruction is considered essential, the Supervising Registered Nurse II shall be notified of the need for additional PPE.

C. Hazardous Waste Disposal Precautions and Handling

1. Hazardous waste including, but not limited to, needles and syringes, disposable gowns, gauze, bottles, vials, IV bags, tubing, gloves, and absorbent paper must be kept isolated in leak-proof, puncture-resistant, burnable containers properly labeled as hazardous waste.
2. Chemotherapy waste must be disposed of in a yellow hazardous waste container marked “Chemotherapy.” Chemotherapy hazardous waste that contains needles must be placed in a Yellow Chemotherapy Sharps Container.
3. The date when the first hazardous waste is deposited into the container shall be marked on the container as the “Start of accumulation date.” Waste shall not be stored longer than 90 days from the labeled start of accumulation date.
4. Every institution shall have a local procedure for the handling of medical waste which shall include hazardous waste disposal. Hazardous waste disposal is under the authority of the fire chief and shall be removed by the facility’s licensed hazardous waste disposal company.

D. Hazardous Products Excluded From Use in CDCR

Biohazardous medications which are biologically active and potentially infectious to patients and staff will not be purchased or administered in CCHCS (e.g., TICE® BCG for intra-vesicular injection [urinary bladder instillation]). This exclusion does not apply to use of FDA-approved live attenuated vaccines (e.g., oral polio vaccine [OPV], varicella [chicken pox], measles, mumps and rubella [MMR combined vaccine], influenza [nasal spray], zoster [shingles], rotavirus, yellow fever [YF]).

V. REFERENCES

- California Code of Regulations, Title 22, Division 4.5, Chapter 12, Article 3, Section 66262.34. Accumulation Time
- Medical Waste Management Act, September 2015, California Health and Safety Code, Sections 117600-118360
- California Department of Corrections and Rehabilitation, Department Operations Manual, Section 52030.4.7
- National Institute for Occupational Safety and Health (NIOSH) List of Antineoplastic and other Hazardous Drugs in Healthcare Settings, 2014
- UC DAVIS Health System, Policy and Procedures - Chemotherapy Agents

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- California Correctional Health Care Services, Inmate Medical Services Policies and Procedures, Volume 9, Chapter 16, Expiration Dates, Beyond-Use Dates and Disposition of Outdated, Contaminated, Mislabeled, or Overstocked and Recalled Medications
- Dorland's Medical Dictionary