
TITLE: Pharmaceutical Waste – Non-Hazardous and Hazardous

POLICY: Pharmaceutical waste must be disposed of according to Federal, State and other regulatory standards. Compliance is necessary to 1) protect human health and the environment by proper identification, management, handling, and disposal of pharmaceutical or hazardous waste, 2) comply with The Joint Commission Environment of Care Standard, and 3) comply with all applicable federal, state, and local government regulations.

DEFINITIONS:

1. **PHARMACEUTICAL WASTE:** All pharmaceuticals that have been identified as: outdated but not returnable for credit, used in compounding or IV preparation, spilled or broken product no longer reusable for intended purpose, and any items used in cleaning up a spill (vermiculite, paper towels, etc.) must be treated as a waste pharmaceutical, either hazardous or non-hazardous.
2. **HAZARDOUS PHARMACEUTICAL WASTE:** In order to be considered hazardous pharmaceutical waste, the waste needs to be:
 - A. Listed as a hazardous waste (P and U list), and/or
 - B. Possess hazardous waste characteristics (ignitability, corrosivity, reactivity, flammability, or toxicity)
 1. Ignitability – Alcohol content greater than 24%. Examples include: alcohol, ammonia inhalants, amyl nitrate, Anbesol, benoxyl peroxide, benzoin tincture, Cleocin T topical solution, collodion based preparations, Compound W, bronchodilators (Tornolate), methiolate tincture, mouthwash (>24% alcohol), peppermint spirit, Rein A gel, silver nitrate, erythromycin topical solution, and some cough medicines (Nyquil).
 2. Flammability– How easily something will burn or ignite. Examples include: alcohol, clindamycin, dexamethasone, phenylephrine nasal spray, levoalbuterol
 3. Corrosivity – Highly acidic (pH<2) or highly basic (pH>12.5) compounds. Examples of acids include: glacial acetic acid and liquid phenol. Example of bases include: potassium hydroxide and sodium hydroxide.
 4. Reactivity – Unstable compounds which include Clinatest and nitroglycerin containing products.
 5. Toxicity – Compounds that contain organic chemicals or heavy metals, such as chromium, lead, mercury, or cadmium. Examples include: arsenic, barium enemas, chloroform, lindane, mercury, selenium, silver nitrate, thimerosal, and vaccines containing mercury as a preservative.
3. **HAZARDOUS CONTROLLED SUBSTANCE PHARMACEUTICAL WASTE (North Campus ONLY):** There are currently four controlled substances deemed by the EPA to be hazardous: (1) Diazepam 10mg/2ml Injection, (2) Phenobarbital 130mg/2ml Injection, (3) Hydrocodone/APAP Oral Solution, and (4) Methadone Oral Solution.

PROCEDURE:

1. If the medication vial/container is intact and has not been used (i.e. not a partial/has not been opened), it should be returned to stock for re-use.
2. **For any pharmaceutical (except chemotherapy), if there is <3% by volume remaining (i.e. it is "empty"), it should be disposed of in the regular trash.** It does not need to be discarded in a specific pharmaceutical waste bin. "Empty" chemotherapy should be disposed of in a yellow bin.
3. If no notice from pharmacy and it is a partial container (i.e. the vial/package has been opened and more than 3% remains), it should be discarded in a **BLUE** waste bin. These **BLUE** waste bins are located in all patient care and pharmacy areas.
4. If pharmacy has indicated that special handling is required and it is a partial container, return the medication to pharmacy for sorting and disposal. The partial container should be placed in the "Pharmacy Return Bin" located inside Omnicell (same section as the Patient Med Bin). Pharmacy will indicate that this process is necessary via a message in Omnicell and/or a special auxiliary label on the medication.

****Note:** TPNs should be treated like regular IV fluids when disconnected from a patient. They do not require special handling by pharmacy.

****Note:** Used nicotine patches may be discarded in the regular trash. Unused (but open) nicotine patches should be returned to pharmacy for disposal.

Pharmacy personnel will empty the "Pharmacy Return Bin" and remove any remaining medications in the Patient Medication Bin and/or Respiratory Medication Bin when a patient is discharged. All such medications are returned to the Central Pharmacy where they are sorted into the following bins as appropriate:

- A. Hazardous Aerosol Waste – BLACK AEROSOL bin
- B. Hazardous Compatible Waste – BLACK COMPATIBLE bin
- C. Hazardous Non-compatible Waste – BLACK NON-COMPATIBLE bin
- D. Hazardous Oxidizer – BLACK OXIDIZER bin
- E. Hazardous Chemotherapy Waste (trace only-see below) – YELLOW bin

A list of medications is posted that defines which medications should be disposed of in what specific BLACK bin. The disposal bin lids should remain closed at all times. In addition, each bin should have an **accumulation date** on the bin indicating when it was first used. Once the container is full or 6 months has lapsed, the vendor will remove the containers from the pharmacy and transport them to an approved facility for hazardous waste disposal.

5. **Chemotherapy** - Chemotherapy that has >3% volume remaining (i.e. it is NOT empty) should be disposed of in the **BLACK COMPATIBLE BIN**. For any chemotherapy items (e.g. gloves, empty administration bags/tubing, etc.) and any vials that are "empty" (i.e. <3% volume), they should be disposed of in the **YELLOW CHEMOTHERAPY BIN**.
6. **North Campus ONLY - Controlled Substances** - All controlled substances (with the exception of hazardous controlled substances) are wasted in a CsRx container
 - A. **Container (CsRx) Activation** - Prior to utilization on the floors, Stericycle will fill the container with water to the marked line. They will also complete the Witness Verification Form. Pharmacy personnel will sign this form as a witness that water has been placed into the container. The Witness Verification Form will be in the CsRx Information binder
 - B. A CsRx container is located on all nursing units that stock controlled substances and the Pharmacy.
 - C. Disposal includes all dosage forms: tablets, capsules, liquids, injectable products, patches and infusions.
 - D. The controlled substance should be removed from the container and then disposed of in the CsRx container.
 - E. Once the CsRx container is full, Stericycle will add an additional agent that solidifies the liquid in the container.
 - F. Replacement of the containers is maintained by Stericycle. The full CsRx container will be placed in a pre-labeled box and shipped to Stericycle for disposal. An empty container will be brought down to Pharmacy.
 - G. **Hazardous Controlled Substances** - These products must be placed into a Hazardous CsRx. This container can be identified by having a Universal Waste Label on the container. Pharmacy will house the Hazardous CsRx container and Nursing will send the hazardous controlled substance waste to pharmacy. Nursing will be directed by Omnicell when removing the controlled substance to return the hazardous controlled substance to Pharmacy for disposal. However, some nursing units may have an overclassified container (Hazardous CsRx) if deemed appropriate by Pharmacy. When the container full, Stericycle will retrieve the full container, place it in the 55 gallon hazardous drum, and replace with a new container.
6. **Reverse Distributor** - A process exists to return some medications to a Reverse Distributor for credit. This process can only be used for the following medications:
 - A. **Unopened**, expired (or soon to expire) medications (non-hazardous or hazardous)
 - B. Opened, non-hazardous bulk oral medications (i.e. bulk liquids and tablets)

Any medications that are prepacked by the pharmacy (M&P item) must be discarded in the appropriate BLUE or BLACK bin as described above – they cannot be returned to the reverse distributor.

7. Investigational Medications - Investigational medications that are approved by the FDA should be disposed of according to the usual practice and/or manufacturer recommendations.

Investigational drugs that are not yet FDA approved (this includes all partial containers) should be disposed of in the **BLACK COMPATIBLE BIN**.

8. Ambulatory Pharmacy - Medications and preparation materials disposed of in the Ambulatory Pharmacy will be an exception. Partial bottles and/or preparation supplies (i.e. gloves) will be over-classified and disposed of in a black compatible bin. Empty bottles will be disposed of in the regular trash as usual (except for warfarin containers which must go in the black compatible bin). There will not be a need for any blue or yellow bins in the Ambulatory Pharmacy.
9. Empty Containers of P Listed Medications - The empty containers of P listed medications (e.g. warfarin, nicotine patch, physostigmine) should be returned to pharmacy for proper disposal in the black compatible waste container. Nurses will be alerted at the Omnicell that the item may require special disposal and must be returned to the pharmacy
10. Regulated Medical Waste - Any pharmaceutical items that have been exposed to or contaminated by bodily fluids are biohazardous materials and are to be placed in a **red** bag labeled "*Biohazard*" which will alert the environmental services department to treat its contents accordingly.
11. Sharps Waste - All sharp objects (i.e. needles, syringes (non-oral), ampules, and broken glass etc.) that have the potential to harm individuals if not handled appropriately will be placed in the appropriate sharps container.
12. Regular Trash - Pharmaceutical waste that is defined as empty (<3% by volume) can be discarded in regular trash. General waste (i.e. paper, labels, empty containers, empty oral syringes, empty 60cc Toomey syringes, office supplies, etc.) are also discarded in regular trash receptacles.

REFERENCES: None

APPROVED BY: Director of Pharmacy