

Vermont Psychiatric Care Hospital Policy and Procedure		
Pharmaceutical Waste		
Effective: September 2014	Revised: September 2024	Due for Review: September 2026

POLICY

The Vermont Psychiatric Care Hospital pharmacy will comply with Federal and State Regulations regarding the handling and disposal of drugs- Hazardous and Non-hazardous- and products by the EPA, OSHA, DOT, NIOSH.

PROCEDURE

There are 4 types of waste.

1. Biohazardous waste
2. Non-Biohazardous / Pharmaceutical waste
3. Hazardous waste regulated by the EPA through the Resource Conservation and Recovery Act- RCRA- Not Applicable-Currently nothing stored within VPCH-
4. Hazardous waste regulated by the NIOSH criteria-Preventing Occupational Exposure to Antineoplastic and other Hazardous Drugs in the Health care setting.

Pharmacy and Nursing will know the 3 types of waste generated and how to dispose of each category. VPCH houses 1 regulated waste container, 1 container for pharmaceutical waste.

- Pharmacy/ Nursing will sort pharmaceutical waste correctly.
 - Designated as Non biohazard/ hazardous waste regulated by NIOSH - pharmaceutical waste- Cactus waste system.
- Pharmacy/ Nursing medication areas will all comply with the same standards of handling and disposal of pharmaceutical waste.
- Education on the proper handling of pharmaceutical waste will occur with all new employees and yearly as deemed necessary.

Proper disposal of pharmaceutical waste.

- 1- **BIOHAZARDOUS WASTE – RED BIOHAZARDOUS CONTAINER-** All waste will be handled in the Red Biohazardous waste bin. Examples of items that will be posted near the waste bucket, Examples: all empty syringes, empty ampules, vials etc. The pharmacy is not responsible for the disposal of this container. See Policy- EOC.

- 2- **NON-BIOHAZARDOUS WASTE- PHARMACEUTICAL WASTE
NIOSH LISTED MEDICATIONS and REGULAR PHARMACEUTICAL WASTE
NISOH Medications are Hazardous to the Health Care Personnel**

-CACTUS WASTE SYSTEM CONTAINER-disposal of whole or partial tablets, patches, liquids are to be wasted.

The Cactus® SMART SINK® located in the Medication Rooms/Pharmacy is to be utilized for the disposal of medication at VPCH including:

- partial doses
- refused (opened) doses.
- expiring medications

The Cactus® SMART SINK® securely captures and renders unused pharmaceutical waste “unusable and unrecoverable”.

The system accepts tablets, capsules, patches, and liquid waste ONLY.

The SMART SINK® has security alerts and alarms and will provide notice when cartridges are full or expired. *

- Liquids: Inject or pour liquids into the open liquid funnel (“Liquids Only”)
- Tablets/Capsules: Insert tablets & capsules into pill funnel (“Solids Only”)
- Patches: Lay patch over slot and press patch plunger into the slot- large patches will need to be cut up to fit the opening for patches.

Note: **The SMART SINK® is not a sharps container**

DO NOT introduce vials, syringes, or trash into the smart sink.

* A red alert light indicates that the cartridge is full or expired.

Call the Pharmacy if the red indicator light turns on and the system alarms. The full/expired cartridge will be returned for final disposal.

NIOSH- Hazardous Drugs- CACTUS WASTE SYSTEM CONTAINER

Table 2 Non-Antineoplastic drugs that meet one or more of the NIOSH criteria for a hazardous drug including those manufacturers’ safe handling guidance (MSHG)

Drug Name	Reason for listing
Carbamazepine	Black Box warning for aplastic anemia; congenital malformations in offspring of mothers who took drug; rapid trans placental passage; FDA Pregnancy Category
Divalproex	Black Box warning for teratogenicity; FDA Pregnancy Category; Tumors seen in Laboratory studies at doses below MRHD
Oxcarbazepine	Tumors; FDA pregnancy category

Table 3 Non-Antineoplastic drugs that primarily have adverse reproductive effects

Drug Name	Reason for listing
Clonazepam	Increased risk of congenital abnormalities when taken in the first trimester; FDA Pregnancy Category
Fluconazole	FDA Pregnancy Category: Case reports describe congenital anomalies in infants exposed in utero to maternal fluconazole during First trimester
Paroxetine	FDA Pregnancy Category, Increased risk of congenital abnormalities when taken in first trimester; complications in pregnancy when taken in third trimester
Topiramate	FDA Pregnancy Category
Valproate/Valproic Acid	Black Box warning for teratogenicity; Congenital malformations; Teratogenic; FDA Pregnancy Category
Ziprasidone	Developmental toxicity; Possible teratogenic effects; FDA Pregnancy Category

Table 4A and 4B Drugs deleted from the 2004 Hazardous drug list for not meeting NIOSH criteria for the hazardous drugs

No drugs are stored at Vermont Psychiatric Care Hospital
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1- HAZARDOUS ENVIRONMENTAL WASTE-RCRA CONTAINER

Hazardous Waste list generated under the Resource Conservation Recovery Act promulgated by the Environmental Protection Agency

Not applicable to VPCH- VPCH only carries OTC Nicotine products not requiring special handling.

OTC nicotine products- Empty containers will be disposed of in regular trash. No wrapping or packaging will need special handling. Unused lozenges can be disposed of in the Cactus sink. Patches will be disposed within the Cactus sink.

New guidelines- OTC nicotine is not considered Hazardous requiring RCRA disposal. 2/1/22 VHWMR Subchapter 10. Hazardous Waste Pharmaceuticals

NIOSH- Antineoplastic Drugs- Not applicable to VPCH- No drugs are stored at Vermont Psychiatric Care Hospital classified as Antineoplastic Drugs 1

REMOVAL OF PHARMACEUTICAL WASTE: from the Nursing Units by Pharmacy personnel

Cactus Container:

The Cactus Smart Sink containers will be removed from the medications rooms when filled to the maximum.


Disposal will be via the properly licensed companies responsible for handling Hazardous and Non-Hazardous Pharmaceutical Waste. All state, federal and local regulations will be followed.

Removal of Pharmaceutical Waste from the Pharmacy Department:

Full Cactus containers from the Units and Pharmacy will be packaged and removed to the Hazard-Biohazard holding room in the loading dock area. Wearing appropriate PPE, Pharmacy staff will encase the containers in plastic and place them in empty strong cardboard boxes. These boxes will be tightly sealed and labeled with the appropriate labels provided and removed from pharmacy. Pharmacy personnel will alert necessary personnel that pharmaceutical waste has been added to the holding room for further destruction.

References

Joint Commission MM 01.01.03, ASHP, NIOSH

Approved by	Signature	Date
Emily Hawes, Commissioner, Vermont Department of Mental Health	 <p>DocuSigned by: Emily Hawes C50275615A62462...</p>	9/25/2024