

University Health Network Policy & Procedure Manual

Administrative: Disposal of Pharmaceutical Waste

Policy

At University Health Network (UHN), all non-cytotoxic pharmaceutical waste must be segregated and disposed of in a manner that is safe for patients and health care providers, environmentally sensitive and in compliance with UHN policies, government regulations and legislation.

Definitions

Controlled waste: Expired partially used and unused controlled drugs, as defined by Canada's [Controlled Drugs and Substances Act](#).

General waste: The following items are considered general (i.e. non-hazardous) waste:

- unopened or partially used saline, dextrose and other IV solution bags not containing medications

Note: These IV bags can be drained into the sanitary sewer and the empty bags thrown into general waste.
- unopened or partially used parenteral nutrition bags not containing drugs

Note: These IV bags can be drained into the sanitary sewer and the empty bags thrown into general waste.
- empty IV bags (all kinds, except those used for [hazardous – cytotoxic drugs](#))
- empty medicine bottles and containers (all kinds, except those used for [hazardous – cytotoxic drugs](#))
- empty, needleless syringes used in the preparation of non-cytotoxic, non-biohazardous medications

Note: Syringes with needles or sharps must be disposed of as biomedical waste in accordance with [Disposal of Biomedical Waste](#) policy 1.120.005.

The following items are **not** classified as pharmaceutical waste:

- cytotoxic waste (classified as biomedical waste and covered under [Disposal of Biomedical Waste](#) policy 1.120.005)
- [hazardous – cytotoxic drugs](#) (classified as biomedical waste and covered under

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Policy Number	1.120.007	Original Date	06/01
Section	Energy & Environment	Revision Dates	06/02; 05/03; 10/03; 07/05; 07/06; 10/11; 01/13; 09/14; 11/15; 05/17; 12/18; 07/20
Issued By	Energy & Environment	Review Dates	
Approved By	Executive Vice-president, Clinical Support & Performance	Page	1 of 9

- [Disposal of Biomedical Waste](#) policy 1.120.005)
- live vaccines and “biologics” that are used in viral, cell-based therapy (classified as biomedical waste and covered under [Disposal of Biomedical Waste](#) policy 1.120.005)

Hazardous drugs: As defined in [Administration of Hazardous Drugs](#) policy 3.50.018.

- Drugs with a product monograph approved by Health Canada or the US Food and Drug Administration (FDA) that identifies special handling precautions.
- Drugs that, in the opinion of UHN clinician experts, pose an occupational risk requiring special handling precautions.

Hazardous – cytotoxic drugs: As defined in [Administration of Hazardous Drugs](#) policy 3.50.018. Further defines hazardous drugs. Identifies drugs designed specifically to destroy certain cells and include anti-cancer drugs that selectively kill dividing cells.

Healthcare professional: For the purpose of the destruction of narcotic, controlled or targeted waste, and for the purpose of this policy, a healthcare professional is a **pharmacist, registered pharmacy technician, or nurse.**

Narcotic waste: Expired partially used and unused narcotics; a subset of [controlled waste](#).

Non-narcotic pharmaceutical waste: Any chemical compound used on, or administered to, humans or animals as an aid in the diagnosis, treatment, or prevention of disease or other abnormal condition, for the relief of pain or suffering or to control or improve any physiologic or pathologic condition. Non-narcotic pharmaceutical waste includes expired, unused and partially used non-narcotic medications such as:

- oral medications with opened packaging
- oral partial doses (e.g. half tablets)
- punctured intravenous (IV) bags, IV vials, or punctured/open ampoules containing medication
- partial pre-filled syringe doses
- medications brought in by patients and are no longer needed, including cannabis, being managed under [Patient’s Own Medication](#) policy 3.50.031
- [hazardous drugs](#)

Targeted pharmaceutical waste: Benzodiazepines and other drugs listed by Health Canada in the [Guidance Document for Hospitals](#).

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Issued By	Energy & Environment	Review Dates	
Approved By	Executive Vice-president, Clinical Support & Performance	Page	2 of 9

Procedures

Disposal of Pharmaceutical Waste from Clinical Areas

1. For all areas generating pharmaceutical waste, keep it separate from [general waste](#) or biomedical waste for disposal. (See [Disposal of Biomedical Waste](#) policy 1.120.005.)
2. Remove as much packaging as possible from the pharmaceutical waste and recycle or dispose of as appropriate. For example:

- Drain unopened or partially used **saline bags or other IV bags not containing medications** and dispose of in the regular garbage as [general waste](#).
- Recycle or dispose of **empty medicine bottles and containers, including IV bags** in accordance with [Recycling & Disposal of Non-hazardous Waste](#) policy 1.120.003).

Note: Foil seals should be removed from containers before recycling. Lids from bottles are recyclable. Plastic bottles from suspensions/syrups for oral use do not need to be rinsed prior to recycling.

- Place all cardboard **packaging and other paper** in the appropriate recycling bins.

Note: Empty containers or IV bags labelled with personal health information (PHI) must be disposed of in accordance with UHN's [Privacy](#) policy 1.40.007 and cannot be disposed of as general waste or recycled.

Disposal of such waste in pharmaceutical waste disposal bins for eventual incineration is considered to be appropriate for adequately destroying PHI.

3. For pharmaceutical waste **acceptable** for return to the Inpatient Pharmacy (e.g. expired medications from Pyxis, unused doses, etc.):
 - For **inpatient areas using Pyxis**, place non-narcotic unopened Pyxis medications into the grey Pyxis return bin. Leave non-punctured patient-specific IV medication bags in the fridge or in room temperature bins for pick up by Pharmacy staff.

Note: Inpatient Pharmacy staff will work with UHN's Energy and Environment department to schedule and implement pharmaceutical waste disposal days for the collection of pharmaceutical waste from Hospital clinics, outpatient areas, and physicians' offices.

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Issued By	Energy & Environment	Review Dates	
Approved By	Executive Vice-president, Clinical Support & Performance	Page	3 of 9

For safety reasons, Inpatient Pharmacy does **not** accept pharmaceutical waste from the Hospital's outpatient areas, clinics, physicians' offices or retail pharmacies.

4. Dispose of pharmaceutical waste that is **not acceptable** for return to the Inpatient Pharmacy (e.g. partial and/or open doses, etc.) as follows:

- Place pharmaceutical waste from patient care areas in white pharmaceutical waste disposal bins located in the medication room or other designated area.

Note: Disposal of narcotic waste must be done by a [healthcare professional](#) while being witnessed by another healthcare professional, and into a waste bin where disposed drugs are irretrievable.

Note: Staff disposing pharmaceutical waste must ensure that pharmaceutical waste bins are not overfilled.

- Expel or empty contents of partially filled syringes, open ampoules and other containers of liquid medications into the pharmaceutical waste disposal bin. If appropriate (e.g. open ampoules that may present a safety hazard if disposed of as general waste), dispose of the entire container, once emptied, into the pharmaceutical waste disposal bin.

Note: Disposal of narcotic waste must be done by a [healthcare professional](#) while being witnessed by another healthcare professional, and into a waste bin where disposed drugs are irretrievable.

- Seal IV bags containing medications, where possible, before putting them into the pharmaceutical waste disposal bin.

Note: Bags spiked with an IV set may be put into the pharmaceutical waste disposal bin.

- Nursing staff:**

- Seal full pharmaceutical waste disposal bins.
- Prepare full pharmaceutical waste disposal bins for pick up by Environmental Services, through either regularly scheduled service or other arrangements.
- Ensure an empty pharmaceutical waste disposal bin is assembled and placed in the collection area.

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Issued By	Energy & Environment	Review Dates	
Approved By	Executive Vice-president, Clinical Support & Performance	Page	4 of 9

- **Environmental Services staff:**
 - a. Securely transport full pharmaceutical waste disposal bins to the biomedical waste storage room.
 - b. Prepare the bins for pick up by the selected Ministry of the Environment, Conservation and Parks (MOECP)-approved pharmaceutical waste hauler, directly from the biomedical waste storage room.

Note: Over-packing of the bins is not required.

- c. Forward all copies of the MOECP Waste Generator Manifest to the appropriate manifest administrator as detailed in [Waste Generator & Environmental Compliance Approval](#) policy 1.120.002.
5. Dispose of all pharmaceutical waste according to the procedures outlined in this policy with the following exceptions:

Note: Partial doses of liquid [narcotic waste](#) that cannot be resealed may be disposed of directly into the sanitary sewer where no other disposal option, such as a pharmaceutical waste disposal bin, is available. Disposal of narcotic waste into the sanitary sewer must be done by a health care professional, be witnessed by another health care professional, and include all documentation required for disposal of narcotic waste.

Note: Partial doses of **IV medications** that cannot be resealed may be disposed of directly into the sanitary sewer where no other disposal option, such as a pharmaceutical waste disposal bin, is available.

Disposal of Non-narcotic Pharmaceutical Waste from Inpatient Pharmacy

1. Inpatient Pharmacy:

- Remove as much packaging as possible from the pharmaceutical waste and recycles or disposes of as appropriate.
- Store pharmaceutical waste collected in the Inpatient Pharmacy in disposable white drums that are pre-labeled with the "Rx" symbol and are provided by the selected MOECP approved pharmaceutical waste hauler.
- Where possible, send expired medications back to the manufacturer.
- Call the selected MOECP-approved pharmaceutical waste hauler directly and speaks with the customer service dispatcher for the disposal of non-narcotic pharmaceutical waste when collection pails are full. (Refer to the [Appendix: Current Selected Pharmaceutical Waste Haulers.](#))

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Issued By	Energy & Environment	Review Dates	
Approved By	Executive Vice-president, Clinical Support & Performance	Page	5 of 9

- Close, seal, and label full waste collection pails.
2. At **Toronto General, Princess Margaret and Toronto Western**, the selected MOECP approved pharmaceutical waste hauler picks-up the pharmaceutical waste directly from the Inpatient Pharmacy and drops-off more pails and labels.
 3. At **Toronto Rehab**, Environmental Services picks-up pharmaceutical waste from the Inpatient Pharmacy and transports to holdings areas for off-site disposal.
 4. The Environmental Services site supervisor/manager at Toronto Rehab and the Pharmacy site operations managers at Princess Margaret, Toronto General and Toronto Western, forwards all copies of the MOECP Waste Generator Manifest to the appropriate manifest administrator as detailed in [Waste Generator & Environmental Compliance Approval](#) policy 1.120.002.
 5. Upon destruction of the waste, the MOECP-approved pharmaceutical waste hauler sends an invoice to Environmental Services for payment.

Disposal of Narcotic, Controlled or Targeted Pharmaceutical Waste from Inpatient Pharmacy

1. Store [narcotic](#) and [targeted wastes](#) in a secure location such as the narcotic vault or Pyxis CII safe.
2. Clearly identify the waste as being for disposal.
3. The Pharmacy operations manager at each Hospital ensures that:
 - Pharmacy maintains a list of all collected narcotic, [controlled](#) and targeted wastes.
 - At the time of destruction of narcotic, [controlled](#) or targeted waste, the physical count is verified against the list.
 - Narcotic, controlled or targeted waste is kept separate from [non-narcotic pharmaceutical waste](#) or biomedical waste (see [Disposal of Biomedical Waste](#) policy 1.120.005 for definitions).
4. A pharmacist must destroy narcotic, controlled or targeted waste in the presence of another [healthcare professional](#).

Note: Both witnesses must record their names and destruction date on a statement indicating they witnessed the destruction.

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Issued By	Energy & Environment	Review Dates	
Approved By	Executive Vice-president, Clinical Support & Performance	Page	6 of 9

5. Destruction of [narcotic](#), [controlled](#) or [targeted waste](#) must involve:
- Releasing liquid narcotic waste directly to the sanitary sewer for partial doses that cannot be resealed, or where no other disposal option (such as a pharmaceutical waste disposal bin) is available, or
 - Altering or denaturing the narcotic, controlled or targeted waste to such an extent that its consumption has been rendered impossible or improbable. This can be achieved by mixing narcotic or targeted waste with antiseptic detergent (or equivalent) in a bottle, small container, or the white pails provided by the MOECP approved pharmaceutical waste hauler as follows:
 - a. **Solid doses:** Remove all packaging and place dose in white pail, bottle or container.
 - b. **Doses in a vial:** Remove aluminum seal/crimp.
 - i. For vials containing powder for reconstitution, place opened vial in a white pail, bottle or container.
 - ii. For vials containing liquids, pour the contents into white pails bottle or container. If the stopper cannot be removed, withdraw the contents with a syringe and expel into pails. Add antiseptic detergent to inactivate.
 - c. **Doses in an ampoule:** Open each ampoule and place in a white pail, bottle or container. Add antiseptic detergent to inactivate.
 - d. **Doses in an IV bag:** Cut open the bag and drain it into a white pail, bottle or container. Add antiseptic detergent to inactivate.
 - e. **Doses in a cassette:** Withdraw the drug into a syringe and expel it into a white pail, bottle or container. Add antiseptic detergent to inactivate.
 - f. **Doses in a syringe or syringe reservoir:** Expel the contents into a white pail, bottle or container. Add antiseptic detergent to inactivate.
 - g. **Doses in a transdermal patch:** Remove from packaging and fold the patch onto itself with the adhesive sides facing each other. Add antiseptic detergent to inactivate.
6. The Pharmacy site operations manager or designate keeps on file a list of the drugs destroyed, dated and signed by the two UHN [healthcare professionals](#) who took part in the disposal for ten years.

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Issued By	Energy & Environment	Review Dates	
Approved By	Executive Vice-president, Clinical Support & Performance	Page	7 of 9

7. Upon destruction, seal the white pails containing the deactivated narcotic or targeted waste and place them with the [non-narcotic pharmaceutical waste](#) for disposal by a registered [waste hauler](#).

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Issued By	Energy & Environment	Review Dates	
Approved By	Executive Vice-president, Clinical Support & Performance	Page	8 of 9

Appendix

Current Selected Pharmaceutical Waste Haulers

Item	Selected Pharmaceutical Waste Hauler
Reusable pharmaceutical waste disposal bins collected by Environmental Services	Daniels: 1-888-793-2966
Disposable pharmaceutical waste disposal bins collected by Environmental Services	Stericycle: 416-644-3545, ext. 0
Provision of disposal of pharmaceutical waste disposal bins to and pick-up of full, sealed bins from Inpatient Pharmacy	Stericycle: 416-644-3545, ext. 0

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Issued By	Energy & Environment	Review Dates	
Approved By	Executive Vice-president, Clinical Support & Performance	Page	9 of 9