



Team Name: Pharmacy and Therapeutics Team Lead: Regional Director - Pharmacy Approved by: V P – Medical Services	Reference Number: CLI.6010.PL.021 Program Area: Pharmacy and Therapeutics Policy Section: General
Issue Date: January 24, 2019 Review Date: Revision Date:	Subject: Safe Handling of Hazardous Medications (Cytotoxic and Non-Cytotoxic)

POLICY SUBJECT:

Safe Handling of Hazardous Medications (Cytotoxic and Non-Cytotoxic)

PURPOSE:

- To provide direction and describe safety measures for the receipt, storage, preparation, transport, administration, waste management and spill clean up of Hazardous Medications within our sites and facilities.
- To prevent inadvertent Exposure to Hazardous Medications, related waste and blood and body fluids/excreta containing Hazardous Medications

BOARD POLICY REFERENCE:

Executive Limitation (EL-2) Treatment of Clients
 Executive Limitation (EL-3) Treatment of Staff

POLICY:

- Sites shall be responsible for informing and training new and existing Staff about the potential hazards related to the risk of Exposure while Handling Hazardous Medications.
- Refer to the Southern Health-Santé Sud Hazardous Medication List CLI.6010.PL.021.SD.01.
- The procedures outlined in this Safe Handling of Hazardous Medications (Cytotoxic and Non-Cytotoxic) policy shall be used in conjunction with, not instead of, Infection Prevention and Control policies, operational directives, protocols, and best practice documents that can prevent or reduce the risk of transmission of microorganisms to health care providers, clients/patients/residents and visitors.
- Appropriate personal protective equipment (PPE), Cytotoxic Spill Kits, and Cytotoxic Waste Containers shall be available wherever handling of cytotoxic medications occurs.
- Risk of exposure is greatest when handling Cytotoxic Hazardous Medications and Cytotoxic Medication Waste and to a lesser extent when Handling Human Waste of Patients known to have received a Cytotoxic Hazardous Medication in the last 48 hours. The appropriate PPE

shall be worn when Handling Hazardous Medications and Medication Waste and when Handling Cytotoxic Human Waste for the 48 hour time period following Cytotoxic Hazardous Medication administration. Refer to Safe Handling of Hazardous Medications Chart CLI.6010.021.SD.02 and consult appropriate chart: Cytotoxic and Non-Cytotoxic Hazardous Medications List CLI.6010.021.SD.01.

- Gloves shall be changed at a minimum of every 30 minutes of continuous work with Hazardous Medications and immediately if contaminated or if the integrity of the glove is compromised.
- All Injectable Cytotoxic Hazardous Medications shall be prepared by Pharmacy in a Class II Type B biological safety cabinet (BSC) or a negative pressure isolator.
 - Each BSC shall be inspected and recertified on a bi-annual basis.
 - Exception: Injectable Cytotoxic Hazardous Medications doses may be prepared on patient care areas when demonstrating preparation and administration to patients and their caregivers. All Handling instructions outlined in the Safe Handling of Medications Chart for Cytotoxic and Non-Cytotoxic Hazardous Medications shall be followed.
- Parenteral Cytotoxic Hazardous Medications shall be stored in pharmacy separately from all other medications in compliance with provincial standards.
- All liquid preparations of Cytotoxic Hazardous Medications shall be hand-delivered to patient care areas (includes all dosage forms; e.g. parenteral, oral, topical, etc.).
- Outpatient prescriptions for Cytotoxic Hazardous Medications should be labeled or marked as “Cytotoxic” with a request to bubble-pack separately if applicable.
- In accordance with the Manitoba Workplace Safety and Health regulations, Staff Handling Hazardous Medications shall discuss with their site Occupational Health Staff or designate any information regarding pregnancy, breast-feeding or attempt to reproduce in order to discuss risks.
- All diagnostic specimens and accompanying requisitions from patients receiving Cytotoxic Hazardous Medications and for the 48 hour time period following Cytotoxic Hazardous Medication administration shall be labeled as “Cytotoxic” before being submitted to the appropriate laboratory.
- All disposable items used while Handling Cytotoxic Hazardous Medications, regardless of route of administration (e.g. parenteral, oral, inhalation, topical, etc.), are considered Cytotoxic Medication Waste and shall be discarded in a Cytotoxic Waste Container.
 - Cytotoxic Waste Containers should be located as close to point of care as possible (e.g. inside Patient room).
 - Cytotoxic Waste Containers shall be prepared for disposal when three-quarters (3/4) full and not more than approximately 15 kg (35 lb) in weight. Cytotoxic Waste shall not be pushed down into the container to make more room. This practice may increase the risk of Exposure and environmental contamination.
 - Cytotoxic Waste Containers shall have a Cytotoxic label and be sealed prior to collection.
- Disposable items used while Handling Cytotoxic Human Waste (including items used in Patient care (e.g. incontinence products, dressings, urinary catheters and bags) shall be discarded in a Cytotoxic Waste Container.

Exception: Long Term Care facilities please see Procedure #20

- Site-specific procedures related to disposal of Cytotoxic Waste Containers shall be available at all facilities.
- Staff shall respond immediately to a Cytotoxic Spill and effectively control and minimize further contamination of the environment. Refer to the Cytotoxic Spill Management Algorithm CLI.6010.PL.021.SD.03.
- Eyewash equipment shall be available in all areas involved in the Handling of Hazardous Medications.
- Staff shall report all Hazardous Medication/Waste Exposure (including Direct and Indirect Contact and skin puncture) to their immediate supervisor. Appropriate site-specific reporting documentation shall be completed (e.g. Patient Safety Event Report, work related injury near miss forms).
Staff may also file a claim with the Worker's Compensation Board (WCB) to document the Exposure incident in case of a future concern. Complete an Employee's Report of Injury Form and send the information to the WCB. See <http://www.wcb.mb.ca/how-to-file-a-claim-employer>.
- Hazardous Medications and Waste received and transported off site shall be packaged according to Transportation of Dangerous Goods Federal Regulations. See www.tc.gc.ca

DEFINITIONS:

Chemotherapy (Chemo) Gloves: Chemotherapy resistant gloves approved by Cancer Care Manitoba (CCMB).

Chemotherapy (Chemo) Gown: A disposable, lint-free gown made of a low-permeability fabric, such as polyethylene-coated materials.

Closed System: A commercial system for preparing and administering liquid medication without risk of aerosolization of the product or contamination of the worker and/or their surroundings.

Compromised Dosage Form: Any solid dosage form (tablet or capsule) that is changed in any way (e.g. splitting or crushing a tablet, opening a capsule to empty the powder, preparing a suspension from tablets). For the purposes of this policy all liquid medications (oral, inhalation, and topical; including commercial preparations) and all topical medications are considered compromised dosage forms.

Cytotoxic Hazardous Medications: Medications which are potentially detrimental or destructive to cells within the body. Cytotoxic Hazardous Medications are a category of Hazardous Medications deemed to pose maximal risk in the event of occupational Exposure. The term is commonly used when referring to antineoplastic medications that non-selectively damage or destroy dividing cells but is not limited to this purpose. This includes all dosage forms and routes of administration (e.g. parenteral, oral, topical, inhalation).

- A list of Cytotoxic Hazardous Medications adopted by reference from the WRHA is a supporting document to this policy. Cytotoxic and Non-Cytotoxic Hazardous Medications List CLI.6010.PL.021.SD.01

Cytotoxic Spill; Contained: Cytotoxic Hazardous Medication or Cytotoxic Human Waste in an unintended location that is confined in such a manner that it cannot be spread or dispersed (see CLI.6010.PL.021.SD.03)

Cytotoxic Spill; Uncontained: Cytotoxic Hazardous Medication or Cytotoxic Human Waste in an unintended location not confined within a container or on absorbent material; which exists in such manner that it can be spread or dispersed (see CLI.6010.PL.021.SD.03)

Cytotoxic Spill Kit: An approved kit used to clean up large and/or uncontained Cytotoxic Spills. Contents include: instructions; absorbent material; and protective equipment

Cytotoxic Waste:

Medication Waste: Containers, needles, syringes, gloves, pads, empty IV sets and any other disposable supplies or equipment used in the preparation, administration and/or disposal of a Cytotoxic Hazardous Medication.

Human Waste: Patients' blood and body fluids/excreta including specimens; items used in Patient care (e.g. incontinence products, dressings, urinary catheters and bags); and clothing and linen contaminated with the patient's blood and body fluids/excreta for 48 hours following completion of the Cytotoxic Hazardous Medication.

Cytotoxic Waste Container: Designated plastic, leak proof, puncture resistant containers labeled with a Cytotoxic Symbol

Cytotoxic Symbol:



Dissolve-and-Dose: A technique where an intact dosage form (e.g. tablet) is dissolved inside a closed container (e.g. syringe) immediately prior to administration. Contact pharmacy for a list of applicable medications and for specific procedures.

- *Crush-Dissolve-and-Dose:* A technique where an intact dosage form (e.g. tablet) is first crushed inside a closed container (e.g. syringe) and then dissolved immediately prior to administration. Contact pharmacy for a list of applicable medications and for specific procedures.

Examination (Exam) Gloves: Non-sterile disposable medical gloves

Examination (Exam) Gown: Back-closing, lint-free, long-sleeved gown with tight-fitting cuffs

Exposure: Refers to the exposure to Hazardous Medications which can occur through various routes, including dermal absorption, absorption through mucous membranes, inadvertent ingestion, inhalation, or injection. It can occur through direct and indirect contact with a Hazardous Medication:

- *Direct Contact:* Contact of Hazardous Medication or Hazardous Medication Waste with skin or mucous membranes, via inhalation, or by injection or with equipment or material contaminated with a Hazardous Medication.
- *Indirect Contact:* Contact with blood or body fluids/excreta or blood or body fluids/excreta-contaminated items such as bed linens, gloves, objects in patient's bed space or environment, medical equipment, instruments etc.

Handling: Any manipulation of a Hazardous Medication by Staff that may result in exposure (e.g. receipt, storage, preparation, transport, administration, waste management and spill clean-up)

Hazardous Medications: Medications that exhibit one or more of the following six characteristics in humans or animals: carcinogenicity; teratogenicity or other developmental toxicity; reproductive toxicity; organ toxicity at low doses; genotoxicity; or structure and toxicity profiles of new medications that mimic existing medications determined hazardous by the above criteria. For the purposes of this policy, Hazardous Medications are further classified as Cytotoxic Hazardous Medications and Non-cytotoxic Hazardous Medications and include all dosage forms and routes of administration (e.g. parenteral, oral, topical, inhalation).

N95 Respirator: Personal protective equipment that is worn on the face, covers the nose and mouth, and is used to reduce the wearer's risk of inhaling hazardous airborne particles (including dust particles and infectious agents), gases or vapours. N95 respirators shall be certified by the National Institute of Occupational Safety and Health (NIOSH) with an N95 efficiency rating or better and require fit testing as directed by Occupational Health.

Non-Cytotoxic Hazardous Medications: Medications (other than Cytotoxic Hazardous Medications) which are deemed to pose a potential risk in the event of occupational Exposure and require special Handling precautions. This includes all dosage forms and routes of administration (e.g. parenteral, oral, topical, inhalation).

- A list of Non-Cytotoxic Hazardous Medications adopted by reference from the WRHA is supporting document to this policy. Cytotoxic and Non-Cytotoxic Hazardous Medications List CLI.6010.PL.021.SD.01

Patient: Any individual receiving health care at a facility, site or program regardless of whether referred to as a patient, client or resident

Personal Protective Equipment (PPE): Devices and clothing designed to be worn or used for the protection or safety of an individual (e.g. gloves, gowns, masks, shoe covers, protective eyewear)

Procedure Mask: Hypoallergenic, latex or latex-free single-use disposable tissue mask with adjustable nose strip

Routine Practices: Basic infection prevention and control measures expected for the care of all patients, residents, and clients at all times in any healthcare setting

Staff: All persons employed by the our facilities or funded facilities, as well as members of the medical staff, residents, clinical clerks, volunteers, board members, students and others associated through contracts

Vesicant: Any Cytotoxic Hazardous Medication that can cause pain, erythema, swelling, blistering, tissue necrosis, ulceration and/or progressive tissue damage over time

IMPORTANT POINTS TO CONSIDER:

- The list of high alert medications will be guided by the Institute for Safe Medication Practices (ISMP)
- Verbal orders for high alert medications should be discouraged

PROCEDURE:

Preparation:

1. All staff shall don appropriate PPE prior to Hazardous Medication preparation
 - Refer to Safe Handling of Hazardous Medications Chart and consult appropriate chart: Cytotoxic and Non-Cytotoxic Hazardous Medications List
2. All Hazardous Medications prepared by pharmacy shall be labeled and packaged to reflect the hazardous nature of these medications.
 - All Cytotoxic Hazardous Medications shall be labeled as “Cytotoxic”
 - All Cytotoxic Hazardous Medications shall be transported in sealable plastic bags (e.g. Ziploc bag)
 - Parenteral Cytotoxic Hazardous Medications shall be packaged for transport individually in double sealable plastic bags (e.g. Ziploc bags)
3. Non-cytotoxic Hazardous Medications shall be labeled with “Wear Gloves” and “Do Not Crush” (if appropriate to the dosage form)
4. Parenteral infusion bags containing Cytotoxic Hazardous Medications shall have tubing sets attached and primed by pharmacy with a solution not containing the Cytotoxic Hazardous Medication and shall be sealed with a dead end device.
Exception: Pediatric preparations
5. Syringes containing Cytotoxic Hazardous Medications shall be sealed by pharmacy with a dead-end device
6. Waste generated from the preparation of Cytotoxic Hazardous Medication shall be discarded in the appropriate Cytotoxic Waste Container

7. If a vendor delivers damaged Cytotoxic Hazardous Medication packages, the receiver shall don PPE and segregate (may place into another container or in a separate area) or dispose of the damaged package and inform the vendor of the status of the damaged package.

Administration in Patient Care Area:

8. All staff shall don appropriate PPE prior to Hazardous Medication administration
 - Refer to Safe Handling of Hazardous Medications Chart and consult appropriate chart: Cytotoxic Hazardous Medications or Non-Cytotoxic Hazardous Medications
9. A Cytotoxic Symbol shall be posted in the administration area and on the patient chart and kardex or care plan during the administration and for 48 hours after the end of administration of Cytotoxic Hazardous Medications (includes all routes; e.g. parenteral, oral, inhalation, topical)
10. Once a Cytotoxic Hazardous Medication is removed from the sealable plastic bags all manipulations of infusion bags/tubing/syringes shall take place on a plastic-lined absorbent pad with the absorbent side up
11. Infusion bags containing Cytotoxic Hazardous Medications shall not be spiked at the patient bedside
12. Following an infusion of Cytotoxic Hazardous Medication using a secondary set, the infusion line shall be flushed with a plain IV solution to ensure it is clear of all Cytotoxic Hazardous Medication before disconnecting
13. When disconnecting syringe/IV line, a 2X2 inch gauze/alcohol pad shall be used to absorb any droplets of Cytotoxic Hazardous Medication and then disposed of in a Cytotoxic Waste Container
14. *Transport of Patients:*
 - Transport Staff and the receiving department shall be notified when a Patient is under Cytotoxic precautions
 - Transport of Patients with Cytotoxic Hazardous Medications infusing out of their Patient care area should be avoided. If the reason for transport is essential, a Cytotoxic Spill Kit and Staff trained in Cytotoxic Spill management shall accompany the patient
 - Patients should not be transferred between facilities with Cytotoxic Hazardous Medications infusing. If the need for inter-facility transport is essential, the Cytotoxic Hazardous Medication should be interrupted or discontinued
 - Cytotoxic Hazardous Medications that are discontinued or temporarily stopped partway through administration shall have the tubing clamped and/or a dead-end device applied. Storage of interrupted Cytotoxic Hazardous Medication infusions should be discussed with the pharmacy if necessary
 - Cytotoxic Hazardous Medication infusions that are not resumed shall be sealed (e.g. dead-end capped, sealable plastic bag) and discarded in a Cytotoxic Waste Container
15. Hazardous Medication tablets or capsules shall not be split or crushed in a patient care area prior to administration due to the risk of exposure and environmental contamination. Contact pharmacy for assistance and recommendations.

Waste Handling:

16. Safe Handling precautions of Cytotoxic Human Waste shall be followed during administration period and for 48 hours after the last dose of Cytotoxic Hazardous Medication regardless of route of administration (e.g. parenteral, oral, inhalation, topical)
 - Refer to Safe Handling of Hazardous Medications Chart and consult appropriate chart: Cytotoxic Hazardous Medications or Non-Cytotoxic Hazardous Medications
17. Contaminated laundry items shall be bagged at the point of care in a waterproof laundry bag (plastic bag) and sent to laundry service or home for cleaning as per site-specific practice.
 - Laundry bags shall be sealed for transport to laundry service or home immediately after use to prevent access by other Staff or caregivers
18. Toilets shall be covered before flushing after use by Patients under Cytotoxic Hazardous Medications Handling precautions.
 - In areas without toilet lids, the bowl shall be covered with a disposable plastic-lined pad prior to flushing. The pad shall be disposed in a Cytotoxic Waste Container. Long Term Care facilities please see #20.
19. Non-disposable items that come in contact with Cytotoxic Hazardous Medications, Cytotoxic Medication Waste or Cytotoxic Human Waste shall be washed with a non-antiseptic detergent or soap solution (e.g. dishwashing or hand soap) and rinsed with copious amounts of water while wearing Chemo Gloves. Electric equipment shall be wiped down thoroughly; first with a damp cloth and then disinfected using site-specific Routine Practices
20. Long Term Care facilities are regarded as patients' place of residence. The disposal of Patient Cytotoxic Human Waste, including disposable items used for Patient care (e.g. incontinence products, gloves) may be discarded in general waste.

Spill and Exposure Management:

21. Following all Hazardous Medication Exposures, Direct or Indirect, staff shall immediately take the following precautions, as appropriate:
 - Eyes - Flush affected eye(s) with copious amounts of clean water or normal saline for a minimum of 15 minutes
 - Skin - Remove contaminated clothing immediately. Wash affected area with soap and running water for a minimum of 15 minutes.
 - Skin Puncture - Wash puncture site thoroughly with soap and running water for a minimum of 15 minutes. Squeeze puncture site to encourage bleeding.
 - In the event of exposure with a Hazardous Medication that is a vesicant; treat as an extravasation as per site specific policy.
22. Refer to Cytotoxic Spill Management Algorithm CLI.6010.PL.021.SD.03.

SUPPORTING DOCUMENTS:

CLI.6010.PL.021.SD.01	Cytotoxic and Non-Cytotoxic Hazardous Medications List
CLI.6010.PL.021.SD.02	Safe Handling of Hazardous Medications Chart
CLI.6010.PL.021.SD.03	Cytotoxic Spill Management Algorithm

REFERENCES:

WRHA Regional Pharmacy Program Directive

http://home.wrha.mb.ca/prog/pharmacy/files/Dir_900_08_60_Safe_Handling.pdf

WRHA Hazardous Medications List

http://home.wrha.mb.ca/prog/pharmacy/files/DrugList_20160201.pdf

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