

Kingston Health Sciences Centre

ADMINISTRATIVE POLICY MANUAL

Subject: Safe Management of Hazardous Drugs

Number: 02-095

Issued by: President and Chief Executive Officer

Page: 1 of 12

Original Issue: 2018.03

Revised: NEW

Introduction

Kingston Health Sciences Centre will provide a safe environment for patients, visitors, staff (employees, affiliates, credentialed and appointed staff) and others who may be exposed to hazardous agents. KHSC recognizes that the preparation, handling, administration and disposal of certain drugs considered to be hazardous requires safe work practices and procedures. Through safe work practices and controls, occupational exposure for staff that handle and/or work with hazardous drugs and/or the body fluids be reduced.

To promote safety, it is recommended only visitors 13 years of age and older will be permitted in the high volume Chemotherapy Treatment Unit at the Cancer Centre.

Applicability

This policy applies to all 'workers' including:

- KHSC employees
- Credentialed and appointed staff,
- Affiliates (individuals not employed by the KHSC who perform work at KHSC, including learners, contractors, subcontractors, supplied labour/temp agency staff, vendors, consultants, working visitors, researchers, and volunteers).

Where the worker is an affiliate and is not directly employed by the KHSC, the roles and responsibilities of the 'Employer' and 'Supervisor' identified in this policy apply to the affiliate's Employer. Where the affiliate's Supervisor is not on the premises, the affiliate will be assigned a KHSC contact person. Roles and responsibilities identified for 'Workers' in this policy apply to all individuals, however procedures may vary for those not directly employed by the KHSC.

Please refer to the [KHSC Hazardous Drug List](#) for medications that pertain to this policy.

Policy

The preparation, transport, administration and disposal of hazardous drugs at KHSC will follow the recognized guidelines from the Oncology Nurses Society (2011) "Safe Handling of Hazardous Drugs", the Cancer Care Ontario (CCO) "Safe Handling of Cytotoxics" and the National Association of Pharmacy Regulatory Authorities (NAPRA) Model standards for Pharmacy Compounding of Hazardous Sterile Preparations.

Exception: KHSC administration supports the longer time frame of seven (7) days for safe handling precautions of bodily fluids for Category 1 drugs; this time frame is a reflection of a more accurate drug-specific kinetics and paediatric safe handling standards.

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Procedure

1. Training:

- 1.1. Staff involved in the preparation, transport, administration, or disposal of hazardous drugs, as well as those who handle patient's excreta or are involved in spill management, will receive initial and ongoing training on the possible risks and necessary precautions/procedures to follow when handling hazardous drugs and wastes. Education will be renewed on an annual basis.
- 1.2. Nursing and Pharmacy staff who prepare and administer chemotherapy are required to recertify annually for chemotherapy safe handling practices.
- 1.3. Written procedures for safe handling of hazardous medications must be accessible and adhered to by all staff who handle/work with hazardous medications.
- 1.4. Staff are encouraged to maintain a record of their own training and competency statements.

2. Administration:

- 2.1. For administration of hazardous medications, nursing staff will follow [Clinical Policy & Procedure M-1713 Administration of Hazardous Drugs for non-cancer indications](#) or [M-1710 Administration of Chemotherapy and Biotherapy Agents for Registered Nurses \(RNs\) when Administered for Systemic Cancer Treatment](#)

3. Communication and Documentation:

- 3.1. To prevent exposures, staff providing care need to be aware of whether a patient is receiving any hazardous drug.
- 3.2. Documentation of the need for precautions when handling bodily fluids, including the expected duration in both the interprofessional patient profile (Kardex) and in the medication administration record (MAR) is required.
 - 3.2.1. The nurse will document the need for precautions when handling bodily fluids, and the expected duration (until 7 days after the last dose of hazardous drug).
 - 3.2.2. The nurse will post a sign (see Appendix A), outside the patient's room and document the stop date for hazardous bodily fluid precautions on the sign.

4. Safe Handling

To date there is no recommended safe occupational exposure limit to chemotherapy/ biotherapy agents and no reliable method of monitoring exposure exists. It is therefore imperative that those who work with hazardous drugs adhere to practices designed to minimize occupational exposure to as low as possible.

- 4.1. Staff are at risk of exposure when safe handling measures fail or are not properly used. Exposure may occur at any point of drug preparation, transportation, administration, disposal, when handling bodily fluids or in the event of a spill.
 - 4.1.1. Identified exposure risks include:

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- 4.1.1.1. Inhalation of aerosols and drug particles during drug handling.
- 4.1.1.2. Injection by injury from needle sticks or contaminated sharps.
- 4.1.1.3. Absorption of drug through direct contact (skin, mucous membranes or eyes).
- 4.1.1.4. Handling of bodily fluids/contaminated linens of patients who have received hazardous drugs within the last seven days.
- 4.1.1.5. Ingestion through contaminated food, beverage, tobacco products or other hand-to-mouth behaviour.
- 4.2. Staff who are pregnant, breastfeeding or actively trying to conceive shall not handle Category 1 hazardous drugs or have direct patient care responsibilities for patients receiving a Category 1 hazardous drug. Staff who may require accommodation should consult with Occupational Health, Safety & Wellness or their manager.
- 4.3. The teratogenic potential of many drugs is unknown. Therefore, staff who are pregnant, breastfeeding or actively trying to conceive are encouraged to handle ALL drugs using the precautions outlined for Category 2 hazardous drugs. Note: the KHSC hazardous drug list is not all inclusive for drugs with teratogenic potential.
- 4.4. Engineering controls, such as biological safety cabinets, negative pressure rooms, and personal protective equipment are in place, utilized and maintained for the preparation of hazardous drugs.
- 4.5. Safety needles and/or needleless systems shall be used.

5. Personal Protective Equipment

- 5.1. Staff will consistently and competently use personal protective equipment (PPE) for all activities associated with hazardous drug handling to prevent occupational exposure.
- 5.2. The following tables (Table 1 and Table 2) indicate the requirements for personal protective equipment:

Table 1 Personal Protective Equipment Requirements for Common Tasks

PPE → PROCEDURE ↓	Disposable Chemo- therapy Gown	Gloves	N95 Respirator	Safety Goggles / Face Shield	Plastic Sealable Bag	Cytotoxic Waste container	Chemotherapy Spill Kit
Sterile Drug Compounding (Pharmacy)	✓ and 2 pairs of disposable shoe covers	2 pairs	N95 Respirator	As needed	✓	✓	Readily available
Compounding suspensions/ splitting tablets (Pharmacy)	✓ and 2 pairs of disposable shoe covers	2 pairs	N95 Respirator	✓ Both		✓	Readily available

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PPE → PROCEDURE ↓	Disposable Chemo- therapy Gown	Gloves	N95 Respirator	Safety Goggles / Face Shield	Plastic Sealable Bag	Cytotoxic Waste container	Chemotherapy Spill Kit
Packaging Solid Oral Dose Formats (Pharmacy)	✓ and 1 pair of disposable shoe covers	2 pairs	N95 Respirator	Optiona l		✓	Readily available
Intravenous Push	✓	1 Pair		As needed	✓	✓	Readily available
Intravenous Infusion	✓	1 Pair		As needed	✓	✓	Readily available
IM or SQ	✓	1 Pair				✓	Readily available
Oral – PO/NG	✓for NG	1 Pair		✓for NG	✓	✓	Readily available
Topical Creams/ ointments (application)		2 pairs			✓		Readily Available
Intra-Peritoneal	✓	1 Pair		✓	✓	✓	Readily available
Intrathecal	✓	1 Pair		✓	✓	✓	Readily Available
Bladder Instillation	✓	1 Pair		✓	✓	✓	Readily Available
Changing Contaminated Linen	✓	1 Pair		As needed	✓ cytotoxic linen bags		
Emptying Urine/Emesis/ Feces	✓	1 Pair		✓			Readily Available
Spill Clean-Up*	✓ and 2 pairs of	2 Pairs	✓ Pharmacy spills require a reusable	✓	✓	✓	✓

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PPE → PROCEDURE ↓	Disposable Chemo- therapy Gown	Gloves	N95 Respirator	Safety Goggles / Face Shield	Plastic Sealable Bag	Cytotoxic Waste container	Chemotherapy Spill Kit
	disposable shoe covers		particulate respirator with a multigas cartridge				
Unpacking and storing suspected damaged drugs from supplier (must be performed inside a Biological Safety Cabinet)	✓ and 2 pairs of disposable shoe covers	2 pairs	Chemical cartridge respirato r with a pre-filter	✓ Both		✓	Readily available
Unpacking and storing undamaged drugs from supplier		2 pairs				✓	Readily available
Cleaning a patient care area/bathroom that has been used by a cytotoxic patient		1 Pair		✓ for chemical protection	✓ with cytotoxic sticker or labelled waste bag		
Surface disinfection and decontaminatio n in Burr 1 Pharmacy Controlled areas.	✓ and 2 pairs of disposable shoe covers	2 pairs	Reusabl e particulat e respirato r, with multigas chemical cartridge	✓ Both		✓	Readily available

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PPE → PROCEDURE ↓	Disposable Chemo- therapy Gown	Gloves	N95 Respirator	Safety Goggles / Face Shield	Plastic Sealable Bag	Cytotoxic Waste container	Chemotherapy Spill Kit
			when risk of splashing (e.g. cleaning ceiling and walls)				
Disinfection, decontaminatio n, and deactivation of Biological Safety Cabinet	✓ and 2 pairs of disposable shoe covers	2 pairs	Chemical cartridge respirato r with a pre-filter	✓ Both		✓	Readily available
Transporting hazardous drugs and/or receiving hazardous drugs from a receiving dock.					✓ and rigid containe r		

* Note: differences in personal protective equipment exist for different levels of hazard. In the pharmacy, staff work with higher concentrations and volumes of the hazardous drugs and thus have more stringent requirements for personal protective equipment when cleaning up a spill.

Table 2 Description of Personal Protective Equipment Properties and Guidelines

Gowns	<p>Long sleeved, disposable, hospital approved chemotherapy gown. Gown should have a solid front, long sleeves, tight cuffs, and back closure. NIOSH recommends disposable gowns for single use. Continuous maximum wear time is no longer than 3 hours unless visibly soiled with medication. Gowns are single use when used in the pharmacy department by following the appropriate departmental standard operating procedure. Nursing Treatment Areas, gowns will be changed at least daily or any time there is suspicion of contamination. When a gown must be re-used, fold the</p>
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	<p>gown inside out or hang it with the contaminated area facing the wall. No other items should be hung on the same hook.</p> <p>Gowns are single use only for any patients on additional precautions.</p> <p>Gown should be disposed of in designated container for soft cytotoxic waste.</p> <p>Gowns shall meet the breakthrough criteria included in Cancer Care Ontario's Standards for Organization and Delivery of Systemic Treatment.</p>
Protective Gloves	<p>Chemotherapy approved gloves should be powder free, disposable, high quality nitrile and latex free.</p> <p>Inspect gloves for defects before use. Change gloves at least every 30 minutes or when gloves are damaged or contamination with a drug is known or suspected. Gowns should be carefully removed and disposed of in designated container for soft cytotoxic waste.</p> <p><u>Double gloves are required for the following tasks: Unpacking medications, preparation of hazardous medication, application of topical creams/ointments, disinfection, decontamination, deactivation within pharmacy controlled areas and spill clean-up.</u></p> <p><u>Single gloves are required for the following tasks: Administration of hazardous drugs, patient care following administration, and routine cleaning (excluding pharmacy controlled areas).</u></p> <p>Wear the inner glove under the gown cuff and the outer glove over the cuff. Hands are to be washed thoroughly with soap and water both before donning and after removing gloves.</p> <p>Gloves shall meet the breakthrough criteria included in Cancer Care Ontario's Standards for Organization and Delivery of Systemic Treatment. Gloves used in Pharmacy will meet the NAPRA standards.</p>
Protective Eye Wear	<p>Safety goggles or face shields are to be worn at all times during administration of hazardous medications when eye contamination is possible, for example by side arm push or administering an oral hazardous drug via nasogastric tube, and when attending to a spill.</p> <p>Pharmacy Considerations: Wear a face shield and goggles in the pharmacy hazardous drug controlled areas when working at or above eye level, when deactivating, decontaminating and cleaning underneath the work surface of a Biological Safety Cabinet (BSC), when cleaning up a spill, when there is risk of splashes to the face and eyes, and when unpacking suspected damaged hazardous drugs.</p>

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	Prescription eye glasses alone do not provide adequate coverage.
Respirators	<p>Wear an N95 respirator when there is a risk of aerosol exposure, such as when administering an aerosolized hazardous drug or cleaning a hazardous spill. Surgical or procedure masks do not provide adequate respiratory protection.</p> <p>Pharmacy Considerations: Wear a chemical cartridge respirator with pre-filter in the pharmacy hazardous drug controlled areas when deactivating, decontaminating and cleaning underneath the work surface of a BSC, during manipulations with splash risk, when cleaning up a spill, and when unpacking suspected damaged hazardous drugs. Continuous maximum wear time is no longer than 3.5 hours unless contamination has occurred or is suspected.</p>

6. Storage

- 6.1. Hazardous drugs received at the loading dock will be moved immediately to the Burr 1 Pharmacy. If box appears to be leaking/damaged, contact Pharmacy Services prior to moving the box.
- 6.2. Hazardous drugs are to be stored in a properly ventilated location and segregated from other supplies. Category 1 and 2 hazardous drugs are stored in a separate negative pressure room with adequate ventilation segregated from other supplies in the Burr 1 Pharmacy.

7. Preparation

- 7.1. Hazardous Drugs are compounded in the hazardous clean room of the Burr 1 Pharmacy within a Biological Safety Cabinet that is externally vented. The exhaust shall be HEPA-filtered, the cabinet shall be certified, and the ventilation shall be tested on a semi-annual basis.
- 7.2. Used PPE must not be worn outside the preparation, administration or storage area. It should be discarded before leaving the chemotherapy suite and new PPE donned if staff need to return to the suite. Contaminated PPE should be disposed of immediately.

8. Transportation of Hazardous Medications:

- 8.1. Training is required prior to transporting hazardous drugs. Volunteers and students must not transport hazardous drugs.
- 8.2. Hazardous drugs are double bagged in a clear seal proof bags (one time use) will be used to transport hazardous drugs. Compounded chemotherapy must be transported in a sealed, rigid, leak proof, semi-transparent container between the Pharmacy and patient care areas. A plastic backed pad must be placed in the bottom of the container. The container must be clearly labelled with a cytotoxic sticker.

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- 8.3. Powder-free, nitrile gloves must be worn during packing and unpacking (i.e. preparing / emptying the container). Staff transporting these containers do not need to wear any gloves during transit.
- 8.4. Pharmacy staff are required to clean the hazardous drug transport containers on a weekly basis as per departmental policy.
- 8.5. Pneumatic tubes must never be used to transport hazardous drugs.
- 8.6. Transport between facilities will be coordinated by an approved courier service with certification in the transportation of dangerous goods.
- 8.7. For all transport, the medication, a spill kit and appropriate PPE will be required.

9. Hazardous Drug Spill Management

- 9.1. Training is required prior to managing a hazardous drug spill. Annual review and practice of hazardous drug spill management is mandatory for staff working with hazardous drugs.
- 9.2. Spill kits and Surface Safe will be stored in all areas where hazardous drugs are unpacked, stored, prepared, administered or manipulated and/or where patients are located.
- 9.3. Refer to Appendix B of this policy for the Safe Handling Procedure for Hazardous Drug Spills.
- 9.4. Clinical staff are responsible for cleaning spills using Surface Safe. Environmental Services staff are responsible for the secondary cleaning of any residues left from the Surface Safe.
- 9.5. Spills and accidental exposures are reported immediately in the Safe Reporting system and to Occupational Health, Safety & Wellness.

10. Waste Disposal

- 10.1. Excess medication and wastes contaminated with hazardous drugs will be disposed of via the red cytotoxic waste stream as per the KHSC Waste Management Program (KHSC administrative policy 05-096 pending)
- 10.2. In patient care unit medication rooms, hazardous drugs & contaminated sharps should be disposed of in the blue/white pharmaceutical waste containers.
- 10.3. In Pharmacy Services, hazardous drugs are disposed of in the red cytotoxic sharp waste containers.
- 10.4. In a patient's room, sharps that have come into contact with a patient's blood or bodily fluids after hazardous drug administration drugs should be disposed of in the red cytotoxic sharp waste containers.
- 10.5. In a patient's room, soft wastes from the administration of hazardous drugs (e.g. tubing, gloves, disposable gowns etc.) should be discarded in the red cytotoxic waste bags.
- 10.6. All linen from patients receiving Category 1 hazardous drugs shall be discarded in the yellow Cytotoxic Linen Bags or linen bags affixed with a cytotoxic sticker. If linens are heavily soiled or very wet, double bag to prevent accidental leaks or spills. Linens from patients on Category 2 hazardous drugs or Reproductive Risk medications should be

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placed in the regular linen bags for cleaning.

11. Hazardous Drug Safety Committee:

- 11.1. The Hazardous Drugs Safety Committee is responsible for the maintenance of the Hazardous Drug program at KHSC. The committee will review training materials, the KHSC Category 1 and 2 Hazardous Drugs listing and this policy on an annual basis.
- 11.2. The committee will include (but will not be limited to) representation from Nursing (Oncology, Surgical and Medicine), Pharmacy, Oncology (Physician), Regional Cancer Program, Joint Health and Safety Committee, Environmental Services, Occupational Health, Safety and Wellness.
- 11.3. The Committee will report to the Joint Health and Safety Committee and the Medication Safety Committee along with the Systemic Treatment Program Committee within the Cancer Program.

Definitions

Antineoplastic/Chemotherapeutic agent – any agent/drug that inhibits the maturation and proliferation of malignant cells. The terms chemotherapy, antineoplastic and cytotoxic are often used interchangeably.

Biotherapy – the use of agents derived from biologic sources or agents that affect biologic responses. Treatment with biotherapeutics can boost or restore the immune system, lessen the side effects associated with cancer therapy, or have an anti-tumour effect. Agents include monoclonal antibodies, growth factors, vaccines and others. Some of these drugs are considered hazardous drugs.

Hazardous Drug – a hazardous drug is any drug that has the capability of causing toxicity to personnel and others who come in contact with them. Hazardous drugs may include anti-neoplastics, cytotoxic, biologic, antiviral or immunosuppressive agents. US National Institute for Occupational Safety and Health (NIOSH) (2016) recommends that all investigational drugs be regarded as potentially hazardous until information establishes their safety.

Drugs may be classified as hazardous when they possess any one of the following characteristics.

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1. Genotoxicity - the ability to cause a change or mutation in genetic material; a mutagen.
2. Carcinogenic - the ability to cause cancer in animal models, humans, or both; a carcinogen.
3. Teratogenicity - the ability to cause birth defects in fetal development or fetal malformation.
4. Fertility impairment in either men or women.
5. Serious toxicity at low doses in experimental animal models or treated patients.
6. Chemical structure and toxicity profile that mimic existing drugs as treated as hazardous by the five previous criteria, until properly classified.

Formulary and non-formulary hazardous drugs supplied by pharmacy will be labeled as indicated on the Hazardous Drug List. The KHSC Hazardous drug list is reviewed periodically to ensure the US National Institute for Occupational Safety and Health (NIOSH) recommendations are incorporated.

Hazardous drug categories

1. CATEGORY 1 MEDICATIONS (labeled as “Hazardous, Category 1” or “Chemotherapy”)
Cytotoxic Hazardous Medications [mutagenic, genotoxic, carcinogenic]
 - 1.1. Handling precautions are required for drug preparation, administration and disposal.
 - 1.2. Handling precautions are required for bodily fluids.
2. CATEGORY 2 MEDICATIONS (labeled as “Hazardous, Category 2”)
 - 2.1. Non-cytotoxic hazardous medications [may affect the reproductive system (e.g. teratogenic, impaired fertility), endocrine system, immune system, respiratory system, and/or have the potential to transmit infection]
 - 2.2. Handling precautions are required for drug preparation, administration, and disposal. (Safe handling precautions for bodily fluids are NOT required for category 2 hazardous drugs)
3. REPRODUCTIVE RISK MEDICATIONS
 - 3.1. Medications that are considered hazardous primarily due to adverse reproductive effects are designated as “Reproductive Risk” on the [KHSC Hazardous Drug List at https://kghtoday.kgh.on.ca/pharmacy/document/2667](https://kghtoday.kgh.on.ca/pharmacy/document/2667). This should not be considered to be an all-inclusive listing of drugs that may be of risk to staff who are pregnant, breastfeeding or actively trying to conceive.

Note: Since the teratogenic / fetal toxicity potential of many drugs is unknown, staff who are pregnant, breastfeeding or actively trying to conceive may wish to consider handling all drugs using the precautions outlined for category 2 hazardous drugs.

NIOSH - the National Institute of Occupational Safety and Health. An American safety institute which

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publishes standards related to many topics including hazardous drugs.

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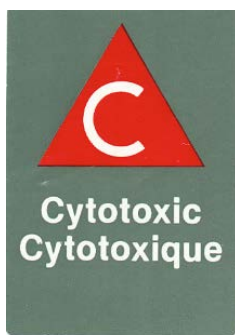
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Related Documents

Authorizing Signature:

Dr. David Pichora
President and Chief Executive Officer

Special Handling Precautions



Room _____

Bed _____

Precautions Initiated On (DD/MM): _____ / _____
Precautions Discontinued On (DD/MM): _____ / _____

Those who are pregnant, breastfeeding or actively trying to conceive are **NOT** to handle hazardous drugs or have direct patient care responsibilities (i.e. exposure to body fluids) for patients receiving a Category 1 hazardous drug.

Refer to back of sign for Personal Protective Equipment →
Ensure a Chemo Spill Kit is readily available

Refer to Admin Policy #02-095 *Safe Management of Hazardous Drugs*

Personal Protective Equipment requirements for Safe Handling of Category 1 Hazardous drugs Quick Reference Guide

PPE → PROCEDURE ↓	Disposable Chemotherapy Gown	Gloves	N95 Respirator	Safety Goggles & Face Shield	Plastic Sealable Bag	Cytotoxic waste container	Chemotherapy Spill Kit
Intravenous Push	✓	1 Pair		As needed	✓	✓	Readily available
Intravenous Infusion	✓	1 Pair		As needed	✓	✓	Readily available
IM or SQ	✓	1 Pair				✓	Readily available
Oral – PO/NG	✓ for NG	1 Pair		✓ for NG	✓	✓	Readily available
Topical creams/ointments		2 pairs			✓		Readily Available
Intra-peritoneal	✓	1 Pair		✓	✓	✓	Readily available
Intrathecal	✓	1 Pair		✓	✓	✓	Readily Available
Bladder Instillation	✓	1 Pair		✓	✓	✓	Readily Available
Changing contaminated Linen	✓	1 Pair			✓ cytotoxic linen bags		
Emptying Urine/Emesis/ Feces	✓	1 Pair		As needed			Readily Available
Spill Clean-up	✓ and booties	2 Pairs	✓	✓	✓	✓	✓
Cleaning a patient care area/bathroom that has been used by a cytotoxic patient		1 Pair		✓ for chemical protection	✓ with cytotoxic sticker or labelled waste bag		
Transporting Hazardous Drugs					✓ and rigid container		

Safe Handling Procedure for Hazardous (Cytotoxic) Drug Spills

Kingston Health Sciences Centre

Policy 02-095, Appendix B

Hazardous drug spills can occur during Drug Preparation, Transport, Administration, or Disposal. Wherever there is the potential for a Hazardous (Cytotoxic) Drug Spill, Spill Kits must be readily accessible. Replacement kits are available from Stores.

NOTE: For spills that occur within KHSC and CCSEO pharmacies, please refer to "Hazardous Drugs- Accidental Spill Clean Up" Standard Operating Procedure for more detailed information.

Step 1: Assessment & Immediate Management of Patient & Staff

- 1) Nurses or pharmacy technicians who have received hazardous drug spill training are responsible for cleaning hazardous drug spills.
- 2) **Access "Spill Kit"** and place "Caution-Hazardous Drug Spill" signage on perimeter of spill.
- 3) **Isolate** the spill area, determine the extent of the exposure, and **isolate** individual(s) from spill as able.
- 4) **For Eye exposure: Promptly remove contact lenses. Flush affected eye(s)** immediately for 15 minutes at the closest eyewash station. If an eyewash station is not available, use 1 L of normal saline with IV tubing attached. Following irrigation, staff should go to the emergency department for an immediate eye assessment.
- 5) **For Skin exposure: Remove any contaminated personal protective equipment (PPE) or contaminated clothing and wash** affected skin (including patient's) immediately with soap and water. Continue to flush under tepid tap water for 15 minutes. Staff should go to Occupational Health, Safety and Wellness (OHSW) during regular business hours for follow up with the Occupational Health Nurse or if necessary the nearest Emergency Department after hours.
- 6) **For Needle stick Injuries:** Wash needle stick injury puncture site with soap and running water for 15 minutes and squeeze the puncture site to bleed freely. Staff should go to OHSW during regular business hours for follow up with the Occupational Health Nurse or if necessary the nearest Emergency Department after hours.
- 7) **Change clothing/linens** as appropriate (follow safe handling of linen guidelines).

Step 2: Notification and Spill Clean up

- 1) Notify Security (x4142) if assistance is required to isolate the area. If the spill is very large and cannot be contained, call switchboard (x4444) to report a Code Brown (KGH/HDH intranet, Departments, Security and Life Safety, Emergency Codes, Code Brown).
- 2) Dispose of gloves, leaking syringes or vials, gowns, etc. that are contaminated with hazardous drug in a red cytotoxic waste container. Leaking syringes, bags or vials should first be placed in a plastic zip-lock bag and sealed before prior to putting in the cytotoxic waste container.
- 3) **Don** new PPE, including a disposable chemotherapy gown, an N95 respirator (that you've been fit tested on), shoe covers, safety goggles, and double glove with nitrile gloves.
*Note: the N95 respirator provided in the chemotherapy spill kit are **NOT** to be used.*
- 4) **Small spills (< 5 mL):**
 - a. Use 4" x 4" gauze squares and/or 16"x21" prep mat, plastic side up to wipe up the spill and dispose of in the hazardous waste bags in kit.
 - b. Use Surface Safe to decontaminate the area. One double packet is required for every 2 square feet (0.19 m²) area. Carefully open packet number 1 and apply the pre-moistened towelette vigorously to the area to be treated. Allow to set for at least 30 seconds. Open packet number 2 and apply the pre-moistened towelette to the same area. (Streaking or a salt residue may appear after this application).
- 5) **Large spills (≥ 5 mL):**
 - a. Use 4" x 4" gauze squares and/or 16"x21" prep mat, plastic side up to wipe up the spill and dispose of in the hazardous waste bags in kit.
 - b. Use Surface Safe to decontaminate the area. One double packet is required for every 2 square feet (0.19 m²) area. Carefully open packet number 1 and apply the pre-moistened towelette vigorously to the area to be treated. Allow to set for at least 30 seconds. Open packet number 2 and apply the pre-moistened towelette to the same area. (Streaking or a salt residue may appear after this application).
- 6) Dispose of all cleaning materials, and contaminated gloves, gowns, shoe covers, etc in the disposal bag found in the spill kit. Place this bag in a red cytotoxic waste container. Ensure all non-disposable items are placed into a double clear bag & labeled as "Cytotoxic".
- 7) For carpeted surfaces:
 - a. Clean up spill as per above procedures AND
 - b. Notify the Maintenance Dept to organize replacement of carpet tiles affected by the spill.
- 8) **Remove PPE in this order:** Remove outer gloves and gown (untie the ties, remove gown and outer gloves concurrently, rolling them into a small bundle to be disposed). Remove shoe covers and discard gloves (glove to glove, skin to skin). Perform hand hygiene. Remove safety glasses and respirator. Perform Hand Hygiene.
- 9) **Notify** KGH site Central Processing Services (x4020)/HDH site Central Sterilization Reprocessing (x2520) for collection of non-disposable items and KGH site Environmental Services (x2309)/HDH site Facilities Management (x2386) for removal of contaminated items, such as linens from the patient care area.
- 10) After nursing/pharmacy staff has cleaned up the spill, **Notify** KGH site Environmental Services (x2309)/ HDH site Facilities Management (x2386) to complete a final clean and remove any Surface Safe residue.

Step 3: Documentation

- 1) **Report & Document** the spill as per hospital protocol- Employee Incident Reporting for unprotected staff exposure; Patient Incident Reporting for potential patient exposures.
- 2) **In case of patient exposure-** inform patient of potential hazards, notify physician, and document on patient record.