Hazardous Drugs, Body Fluid Handling and Spill Clean-Up

"Health care workers who prepare or administer hazardous drugs or who work in areas where these drugs are used may be exposed to these agents in the workplace."

- The National Institute for Occupational Safety and Health (NIOSH)

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Hazardous Body Fluid Handling and Spill Clean-Up

Course outline

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Welcome to the Hazardous Body Fluid Handling and Spill Clean-Up module!

There are over 8 million U.S. healthcare workers exposed to hazardous drugs in their workplace each day. We want you to be safe and help keep those around you safe.

To complete this module, read the content and pass the post-test with a score of 90% or above.

This course is divided into sections:

- Objectives
- Definition and characteristics of hazardous drugs (HD)
- Potential adverse effects of hazardous drug exposure
- Appropriate use of personal protection equipment (PPE) required when handling body fluids from a patient receiving a hazardous drug
- How to clean and decontaminate hazardous spills

Objectives

- At the conclusion of this module you will be able to:

1. Identify the potential adverse effects of handling HDs.
2. State the required PPE needed when handling body fluids from a patient receiving HDs.
3. Describe how to handle patient's waste when they have received a Table 1A or 1B HD within the past 48 hours.
4. Describe how to clean and decontaminate hazardous body fluid spills.
5. State the key steps to take when an accidental exposure of a Hazardous body fluid occurs (i.e. splashes in eyes or on skin).

- **What are hazardous drugs (HD)?**
  - Drugs that are known or suspected to cause adverse health effects from exposure
  - A drug is classified as hazardous based on guidelines and research by:
    - National Institute of Occupational Safety and Health (NIOSH)
    - Safety Data Sheets from the manufacturer
    - CHI National Assessment of Risk (AOR) Work Group

- **NIOSH states that drugs are classified as hazardous when they possess any one of the following six characteristics**:

1. Genotoxicity
2. Carcinogenicity
3. Teratogenicity
4. Reproductive toxicity
5. Serious organ toxicity at low doses
6. Chemical structure and toxicity profile that mimic existing drugs determined to be hazardous

More information about HDs can be found on the CDC NIOSH website: https://www.cdc.gov/niosh/topics/hazdrug/

Let's break some of those characteristics down:

Genotoxicity can cause a change or mutation in genetic material

- Examples:
  - they can damage your DNA
  - they can cause chromosomal damage
  - they can hinder our bodies ability to repair DNA

Carcinogenicity can cause cancer

- Example:
  - The damage to your DNA can cause a mutation that leads to the formation of a cancer cell that can multiply and become life threatening.

Teratogenicity

- can cause defects or malformations in an unborn child.

Fertility impairment or reproductive toxicity in both men and women

- Can make it difficult for you to reproduce a child

Serious organ toxicity at low doses

- Can harm organs such as your kidneys or liver

The NIOSH List of Antineoplastic and Other Hazardous Drugs in Healthcare Settings, 2016 can be found at:
https://www.cdc.gov/niosh/docs/2016-161/pdfs/2016

Hazardous drugs cover a wide range of indications including:

Chemotherapy medications to treat cancer and other conditions:

- Methotrexate - given for ectopic pregnancies

Some immunosuppressive medications:

- Cyclosporine – used to treat psoriasis, rheumatoid arthritis, and as an antirejection medication for transplant patients

Some antiviral medications:

- Ganciclovir –used to treat viral infections like CMV
- Zidovudine – used in pregnancy to prevent an HIV-infected mother from passing the virus to her baby

Hormones:

- Leuprolide – hormone therapy used to treat cancers such as prostate, breast and ovarian

Some biologically engineered medications:

- Gemtuzumab – used to treat acute myeloid leukemia (AML)

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Adverse health effects

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If you are exposed to hazardous drugs it may affect your health:

Body System	Adverse effects of exposure to hazardous drugs
Skin	Local irritation, dermatitis, mouth and nose sores, hair loss, and hair thinning
Immune	Allergic asthma and eye irritation
Neurologic	Headaches and dizziness
Respiratory	Difficulty breathing
Gastrointestinal	Nausea, vomiting, diarrhea and abdominal pain
Malignancies	Most common: leukemia, lymphoma, bladder, or liver cancer
Reproductive	Difficulty becoming pregnant, infertility, congenital abnormalities, low birth weight, ectopic pregnancy, miscarriage, stillbirth, and learning disabilities

The correct use of PPE reduces the risk of exposure!

The greatest risk of exposure to hazardous drugs is through the skin during the preparation of drugs for use. However, there are also many other routes of exposure, therefore it is important to follow workplace policies when caring for patients who have received hazardous drugs.

How does exposure occur?

Ways you could be exposed to a hazardous drug:

Inhalation
- Breathing contaminate air (aerosols and vapors)

Absorption through skin or mucous membranes
- Touching contaminated surfaces
- Direct contact with HD or body fluids

Ingestion
- Chewing gum
- Hand-to-mouth
- Eating and drinking in the workplace

Injection
- Needle sticks

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Exposure to hazardous drugs

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Exposure risk depends on the manner in which the exposure happens. For example, cleaning a HD spill has a higher level of risk, as compared to handling patient's waste. However, even low-level exposure over time may lead to poor health effects, so correct use of PPE is very important.

Low levels of exposure such as handling patient's linen or wastes without appropriate PPE can lead to long-term side effects.

High levels of exposure such as cleaning up a Hazardous Drug spill without PPE may cause severe acute symptoms.

The level of risk is related to the concentration of the HD at the time you are handling it and length of exposure time.

Managing spills	**Administering drug**	**Handling patient waste, laboratory specimens, and linens**
HIGH	MEDIUM	LOW
Level of potential exposure risk		

Are you at risk?

Working in an environment where HDs are prepared or administered can lead to unintended exposure for healthcare workers including:

- Certified nursing assistants
- Nursing personnel
- Unit secretaries
- Physicians
- Pharmacists and pharmacy technicians
- Environmental services
- Shipping and receiving personnel

Common tasks with a risk for HD exposure:

- Handling body fluids (urine, stool, emesis)
- Handling/transporting contaminated waste or HDs
- Clean-up and decontamination of a spill
- Removal and disposal of PPE after exposure (testing or spill clean up)

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Exposure to hazardous drugs

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Accidental Exposure

Even with the diligent use of PPE and meticulous attention to safe handling techniques, accidental exposure to HDs or body fluids from a patient recieveing an HD drug can occur.

Type of exposure	What do I do?

Skin	• Immediately wash skin thoroughly with soap and water
	• If HD or samples containing HD get on clothing:
	  • Put on gloves, remove contaminated clothing, and place in plastic bag to wash at home, remove gloves and wash hands with soap and water.
	  • When home: put on gloves to handle contaminated clothing, wash clothing twice, by themselves, in hot water. Dispose of gloves and plastic bag in regular trash.

Eye	• Immediately flush eyes for 15 minutes in nearest eye wash station • Then seek emergency treatment
Inhalation	• Move away from spill area • Seek emergency treatment
Ingestion	• Do not induce vomiting unless directed by Safety Data Sheet (SDS) • Seek emergency treatment

For more information refer to:

1. **Safety Data Sheet (SDS) on the Intranet under 'Tools and Applications'**
2. **Hazardous Drug Exposure, 530.10 policy**

For all Exposures:

- Print a copy of the SDS for the HD
- Complete an IRIS and Hazardous Material Spill form
- Forward all to your department manager

HDs at CHI Franciscan are classified into four categories based on the type of drug and risk of occupational exposure.

- Precautions for administration, handling of body fluids, and spill clean-up for each category will vary and depend on the hazardous risk level.

- The four categories of HDs at CHI Franciscan are:
  - Table 1A & 1B: Antineoplastic Hazardous Drugs
  - Table 2A & 2B: Non-Antineoplastic Hazardous drugs
  - Table 3A: Reproductive Risk Hazardous Drugs
  - Table 3B: Reproductive Risk Hazardous Drugs – Pregnancy Category X

Controlling exposure:

- **At CHI Franciscan our policies on the management of hazardous medications are based on Washington State laws (WAC 296-62) and federal regulations including NIOSH and the United States Pharmacopeia (USP) <800>.**

Restrictions for staff who are pregnant, lactating, or actively trying to conceive (male or female)			
Table 1A & 1B: Antineoplastic HD	Table 2A & 2B: Non-Antineoplastic HD	Table 3A: Reproductive Risk HD	Table 3B: Reproductive Risk HD – Pregnancy Category X
Will not handle or administer drugs or handle body fluids within 48 hours of drug administration	**Will not** handle or administer drugs	**Should not** handle or administer drugs	**Should not** handle or administer drugs

Reproductive restrictions:

- **Staff who are pregnant, lactating, or actively trying to conceive (male or female): Will NOT:**
  1. **Handle or administer Table 1A/B or Table 2A/B hazardous drugs.**
  2. **Handle body fluids of a patient who has received a Table 1A/B HD within the past 48 hours.**

  Should not: handle or administer Table 3A/B hazardous drugs.

Appropriate PPE is required when handling HDs during activities which include: receiving, storage, transport, drug preparation and administration, *handling body fluids 48 hours post administration of Table 1A/B HDs, spill and decontamination management, and waste disposal*.

Guidelines for PPE

The use of PPE and other hazardous management measures by all employees can significantly reduce the risk of exposure to hazardous materials in the workplace.

PPE key points include:

1. **Wash hands before donning PPE and immediately after PPE removal.**
2. **Consider ALL used PPE contaminated and dispose of it in an appropriate designated hazardous container.**

Hazardous Body Fluid Spill Clean-Up

PPE for hazardous spills

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Types of PPE used during handling of body fluids of patients receiving HDs will depend on the type of HD and may include:

Gloves	• Laboratory gloves are appropriate for HD body fluid handling • Remove and discard gloves immediately after use if a tear, puncture, or drug spill occurs or every 30 minutes of wear. • When wearing two pairs with a chemo gown – have one glove under the gown cuff, and one over the gown cuff.
Gown	• Use only disposable, polyethylene-coated polypropylene, impermeable gown with a solid front, with a closure in the back, long sleeved, and with knit or elastic cuffs. • Gowns are single use only and should be carefully removed and discarded appropriately after use.
Shoe covers	• Must be impermeable • Worn when spill is on the floor
Face shield and goggles	• Worn together whenever there is risk of splashing
NOTE: Code Orange	The EVS Spill Cart is supplied with everything you need for a spill. EVS performs a final mopping once lab completes their part.

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How to handle body fluids?

After HDs are given to a patient, various amounts of HD or HD metabolites are passed from the body in their urine, stool, sweat, or emesis. The level of HD in the urine is highest in the **48 hours immediately after drug administration.** Although the risk for HD exposure is low during the handling of body fluids, exposure is possible, and PPE is required.

Table 1A & 1B: Antineoplastic Hazardous Drugs

In addition to standard precautions, special PPE and additional precautions must be taken for the first 48 hours after administration of Table 1A & 1B antineoplastic HDs

- **PPE required for handling body fluids during lab testing**:
  - Chemotherapy gown
  - Double chemotherapy gloves (one under the gown cuff and one over the gown cuff)
  - If risk of splashing: Face mask and face shield

- **A Table 1A & 1B Hazardous Precautions sign is required to be placed outside the room of a patient** who has received a Table 1A or 1B HD in the past 48 hours. The front page of the sign alerts staff to special precautions during administration and handling of body fluids. The back page of the sign provides a summary of spill clean-up procedures.
- The Table 1A & 1B Hazardous Precautions sign can be found in the Hazardous Drugs: Administration, Handling and Disposal Policy, 918.50.

Specimens received into the laboratory from patients who have received an HD drug in the last 48 hours will be labeled with a Cytotoxic label by oncology staff.

What is considered hazardous waste?

Hazardous Waste includes ALL materials and supplies used to:

- Handle and administer HDs
- Clean up a HD spill
- Handle body fluids or body fluid spills of a patient who has received a Table 1A/B HD in the past 48 hours
- Specimens designated with Cytotoxic labels

CHI Franciscan separates hazardous waste into either ‘Trace’ or ‘Bulk’ waste.

All body fluids from patients receiving HD (Table 1A or 1B, 2A or 2B, and 3A or 3B) drugs with in the last 48 hours must be contained and decontaminated immediately using a Chemotherapy Spill Kit.

Chemotherapy Spill Kits:

A chemotherapy spill kit includes:

- 1 chemotherapy gown
- 2 pairs of chemotherapy gloves
- 1 pair of shoe covers
- 1 pair goggles
- 1 disposable dustpan and brush
- 2 yellow hazardous waste bags
- Absorbent material
- HD waste labels
- Chemotherapy spill caution sign

Universal Spill Kits

Universal spill kits are required for large spills that can not be absorbed using materials in the chemotherapy spill kit alone.

Universal spill kits include:

- (10) 15 X 19 inch absorbent pads
- (2) absorbent socks – 3 inch X 4 feet
- (2) chemotherapy gloves
- (2) yellow hazardous waste bags

CODE ORANGE INTERNAL

Call a **CODE Orange Internal** by dialing 5555 when:

1. There is a spill of ANY HD during drug preparation, handling, or administration
2. There is a body fluid spill of a patient who has received a Table 1 A or 1B HD within the past 48 hours

Who responds to a 'CODE Orange Internal'?

- **Environmental Services (EVS):**
  - EVS brings the **CODE Orange** cart with spill response supplies: chemo spill kit, large black RCRA container, impermeable shoe covers, and decontamination solution (PeridoxRTU) for the clinical staff to clean and decontaminate the spill area with.
  - EVS will then mop the area 3 times, each with a different mop head.
- **Security** – provides traffic control, if needed
- **House Supervisor** – calls outside hazardous spill clean-up contractor if needed

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How to clean a body fluid spill of a patient who has received a Table 1A or 1B HD in the last 48 hours

- Determine if direct exposure has occurred and seek treatment per Hazardous Drug Exposure Policy
- Limit access to spill area – remove unnecessary staff
- Call a **CODE ORANGE INTERNAL** by dialing 5555
- EVS will bring a Code Orange cart supplied with a Chemotherapy Spill Kit

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Hazardous body fluid spill clean-up

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How to clean a body fluid spill of a patient who has received a Table 1A or 1B HD in the last 48 hours

- Don appropriate personal protective equipment (PPE):
  - Chemotherapy gown
  - 2 pairs of chemotherapy gloves (one under and one over the gown cuff)
  - Face mask and face shield
  - Non-permeable shoe covers, if spill is on the floor
- Prepare decontamination wipes:
  - Place 2 dry napkins in a ziplock bag – use more for larger spills
  - Pour PeridoxRTU decontamination solution in ziplock bag until napkins are saturated

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How to clean a body fluid spill of a patient who has received a Table 1A or 1B HD in the last 48 hours

- Absorb and decontaminate body fluid spill:
  - Using absorbent material – dry spill area.

  - Using a PeridoxRTU soaked napkin, wipe dried spill area to decontaminate the surface. **REPEAT** this step using a second PeridoxRTU soaked napkin.

  - Use an alcohol wipe to do a final wipe of the spill area.

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Hazardous body fluid spill clean-up

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How to clean a body fluid spill of a patient who has received a Table 1A or 1B HD in the last 48 hours

- Place all absorbent material and wipes used in body fluid spill clean up in red hazardous waste bag
- Place any **contaminated linen** in a **yellow** hazardous waste bag and then place in a soiled linen bag

- Remove PPE (outer glove first, then gown, then inner glove) and place in red hazardous waste bag

- Wash hands with soap and water
- EVS will then mop the decontaminated spill area 3 times – each with a new disposable mop head from the **CODE ORANGE** cart
- Complete spill form and IRIS. Print Safety Data Sheet (SDS) and attach to spill form – turn form into your manager.

Hazardous Body Fluid Handling and Spill Clean-Up

Handling hazardous body fluid spill clean-up guide

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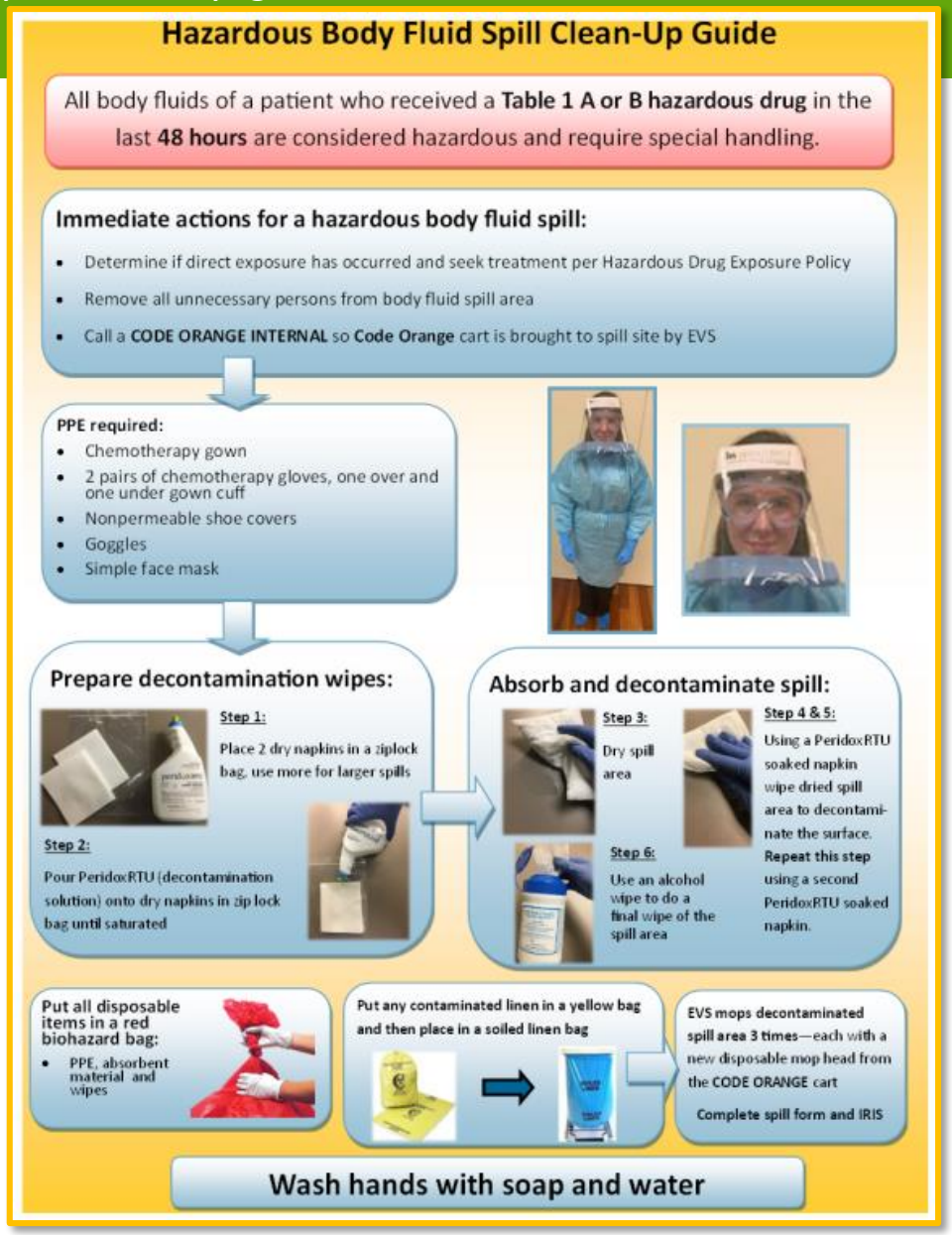
This guide is found in the Hazardous Materials Spill Response Procedures, 530.00



CHI Franciscan relevant policies for HD spills can be located online on the CHI Intranet homepage under 'Policies & Procedures':

- **Hazardous Drug Exposure, 530.10**
  - Has links to Safe Handling Table and Hazardous Drug List
- **Hazardous Materials Spill Response Procedures, 530.00**
  - Has links to Safe Handling Table and spill guides for HD and body fluids
- **Code Orange (Internal), 535.00**

Safety Data Sheets (SDS) for each HD are located online on the CHI Intranet homepage under 'Tools and Applications'

Special procedure steps should be taken for spill cleanup of:

- Hazardous Drug spills (Table 1A or 1B, 2A or 2B, and 3A or 3B)
- Body fluid spills within 48 hours of administration of a Table 1A or 1B HD

Hazardous Body Fluid Handling and Spill Clean Up

Safe Handling Table – front page

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Safe Handling Table for Hazardous Drugs

	Table 1A & 1B ANTINEOPLASTIC HAZARDOUS DRUGS	Table 2A & 2B: NON-ANTINEOPLASTIC HAZARDOUS DRUGS	Table 3A: REPRODUCTIVE RISK HAZARDOUS DRUGS	Table 3B: REPRODUCTIVE RISK HAZARDOUS DRUGS – PREGNANCY CATEGORY X
Reproductive Restrictions: Staff who are pregnant, lactating, or actively trying to conceive (male or female)	Will not handle or administer drugs or handle body fluids within 48 hours of drug administration. **POST 'Table 1A and 1B Hazardous Drug' SIGN AT PATIENT DOOR**	Will not handle or administer drugs.	Will not handle or administer drugs.	Will not handle or administer drugs.
Training requirements for administration	**Cancer diagnosis:** ONLY CHI Franciscan Chemotherapy certified RN's may administer[1] **Non-cancer diagnosis:** Providers or staff trained by CHI Franciscan to administer hazardous drugs	Providers or staff trained by CHI Franciscan to administer hazardous drugs[1]	Providers or staff trained by CHI Franciscan to administer hazardous drugs[1]	Providers or staff trained by CHI Franciscan to administer hazardous drugs[1]
Spiking/Priming/Use of closed system transfer device (CSTD)	· IV bag must be spiked and tubing primed by pharmacy prior to administration · CSTD for administration when dosage form allows	· IV bag must be spiked and tubing primed by pharmacy prior to administration · CSTD for administration when dosage form allows	Standard medication preparation & administration	Standard medication preparation & administration
Handling & Administration of liquid formulations *(Oral, IV, SQ, IM, intrathecal, intravesicular)*	**Handling** · No manipulation of product prior to administration **Required PPE** · 2 pairs of chemo gloves* · Chemotherapy gown · Face shield and goggles (if risk of splashing)	**Handling** · No manipulation of product prior to administration **Required PPE** · 2 pairs of chemo gloves* · Chemotherapy gown · Face shield and goggles (if risk of splashing)	**Handling** · No manipulation of product prior to administration **Required PPE** · 2 pairs of chemo gloves* · Chemotherapy gown · Face shield and goggles (if risk of splashing)	**Handling** · No manipulation of product prior to administration **Required PPE** · 2 pairs of chemo gloves* · Chemotherapy gown · Face shield and goggles (if risk of splashing)
Handling & Administration of tablets or capsules	**Handling** · No crushing, splitting, or manipulation (RX only) **Required PPE** · 2 pairs chemo gloves*	**Handling** · No crushing, splitting, or manipulation (RX only) **Required PPE** · Single pair chemo gloves*	**Handling** · Crushing of medication is allowable in a designated patient care area as long as a containment system is utilized · Splitting of tablets is allowable in a designated patient care area utilizing a disposable tablet splitter and immediately discarded after use **Required PPE** · Single pair chemo gloves*	**Handling** · No crushing, splitting, or manipulation (RX only) **Required PPE** · Single pair chemo gloves*
Handling Body Fluids – Routine Handling *(PPE 48 hours post-last dose)*	**Required PPE** · 2 pairs of chemo gloves* · Chemotherapy gown · Face shield and goggles, if risk of splashing · Dispose of PPE and disposable materials in red biohazard waste ·Dispose of contaminated linen in yellow cytotoxic bag and then place into blue linen bag	· Standard universal precautions for handling body fluids · Dispose of PPE in regular trash	· Standard universal precautions for handling body fluids · Dispose of PPE in regular trash	·Standard universal precautions for handling body fluids · Dispose of PPE in regular trash
Body Fluid Spill Clean-Up[3] (PPE 48 hours post-last dose)	**Required PPE** · 2 pairs of chemo gloves* · Chemotherapy gown · Face shield and goggles, if risk of splashing · Dispose of PPE and disposable materials in red biohazard waste · Dispose of contaminated linen in yellow cytotoxic bag and then place into blue linen bag	· Standard universal precautions for handling body fluids · Dispose of PPE and disposable materials in red biohazard waste · Routine handling of linens contaminated with body fluids	· Standard universal precautions for handling body fluids · Dispose of PPE and disposable materials in red biohazard waste · Routine handling of linens contaminated with body fluids	· Standard universal precautions for handling body fluids · Dispose of PPE and disposable materials in red biohazard waste · Routine handling of linens contaminated with body fluids

*Chemo gloves are required to be ASTM D6978 tested (stated on packaging).

Hazardous Body Fluid Handling and Spill Clean Up

Safe Handling Table – back page

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Safe Handling Table for Hazardous Drugs

	Table 1A & 1B ANTINEOPLASTIC HAZARDOUS DRUGS	Table 2A & 2B: NON-ANTINEOPLASTIC HAZARDOUS DRUGS	Table 3A: REPRODUCTIVE RISK HAZARDOUS DRUGS	Table 3B: REPRODUCTIVE RISK HAZARDOUS DRUGS – PREGNANCY CATEGORY X
Hazardous Drug Spill Clean-Up[3]	<u>Required PPE</u> · Chemo gown · 2 pairs of chemo gloves* · Face shield and goggles, if risk of splashing · Non-permeable shoe covers, if spill on floor · Chemical cartridge respirator (PAPR) for all volatile drug spills[2] <u>Disposal</u> · All disposable materials and PPE used in spill cleanup must be put in a YELLOW cytotoxic waste bag and then placed in a bulk HD (BLACK) waste container	<u>Required PPE</u> · Chemo gown · 2 pairs of chemo gloves* · Face shield and goggles, if risk of splashing · Non-permeable shoe covers, if spill on floor <u>Disposal</u> · All disposable materials and PPE used in spill cleanup must be put in a YELLOW cytotoxic waste bag and then placed in a bulk HD (BLACK) waste container	<u>Required PPE</u> · Chemo gown · 2 pairs of chemo gloves* · Face shield and goggles, if risk of splashing · Non-permeable shoe covers, if spill on floor <u>Disposal</u> · All disposable materials and PPE used in spill cleanup must be put in a YELLOW cytotoxic waste bag and then placed in a bulk HD (BLACK) waste container	<u>Required PPE</u> · Chemo gown · 2 pairs of chemo gloves* · Face shield and goggles, if risk of splashing · Non-permeable shoe covers, if spill on floor <u>Disposal</u> · All disposable materials and PPE used in spill cleanup must be put in a YELLOW cytotoxic waste bag and then placed in a bulk HD (BLACK) waste container
Hazardous Drug Disposal  Trace YELLOW Waste  Bulk BLACK Waste	<u>Trace HD waste container (Yellow)</u> · PPE & materials used for drug administration that is not visibly contaminated with drug and contains < 3% residual · Empty drug packages, vials, IV bags, tubing that is not visibly contaminated with drug and contains < 3% residual <u>Bulk HD waste container (Black)</u> · Any hazardous drug container that has 3% or more of the original drug · Vials, IV Bags, tubing, syringes, outer packaging with visible drug residue · All disposable PPE used during spill cleanup	<u>Trace HD waste container (Yellow)</u> · PPE & materials used for drug administration that is not visibly contaminated with drug and contains < 3% residual · Empty drug packages, vials, IV bags, tubing that is not visibly contaminated with drug and contains < 3% residual <u>Bulk HD waste container (Black)</u> · Any hazardous drug container that has 3% or more of the original drug · Vials, IV Bags, tubing, syringes, outer packaging with visible drug residue · All disposable PPE used during spill cleanup	<u>Trace HD waste container (Yellow)</u> · PPE & materials used for drug administration that is not visibly contaminated with drug and contains < 3% residual · Empty drug packages, vials, IV bags, tubing that is not visibly contaminated with drug and contains < 3% residual <u>Bulk HD waste container (Black)</u> · Any hazardous drug container that has 3% or more of the original drug · Vials, IV Bags, tubing, syringes, outer packaging with visible drug residue · All disposable PPE used during spill cleanup	<u>Trace HD waste container (Yellow)</u> · PPE & materials used for drug administration that is not visibly contaminated with drug and contains < 3% residual · Empty drug packages, vials, IV bags, tubing that is not visibly contaminated with drug and contains < 3% residual <u>Bulk HD waste container (Black)</u> · Any hazardous drug container that has 3% or more of the original drug · Vials, IV Bags, tubing, syringes, outer packaging with visible drug residue · All disposable PPE used during spill cleanup
Basic First Aid Measures **Seek emergency treatment for medical evaluation and/or treatment**	<u>Skin Exposure</u> Remove contaminated clothing immediately and place in plastic bag. Wash affected skin thoroughly with soap and water. <u>Eye Exposure</u> Perform 15 minute eyewash with water or isotonic eyewash solution and then seek emergency treatment.	<u>Skin Exposure</u> Remove contaminated clothing immediately and place in plastic bag. Wash affected skin thoroughly with soap and water. <u>Eye Exposure</u> Perform 15 minute eyewash with water or isotonic eyewash solution and then seek emergency treatment.	<u>Skin Exposure</u> Remove contaminated clothing immediately and place in plastic bag. Wash affected skin thoroughly with soap and water. <u>Eye Exposure</u> Perform 15 minute eyewash with water or isotonic eyewash solution and then seek emergency treatment.	<u>Skin Exposure</u> Remove contaminated clothing immediately and place in plastic bag. Wash affected skin thoroughly with soap and water. <u>Eye Exposure</u> Perform 15 minute eyewash with water or isotonic eyewash solution and then seek emergency treatment.

*Chemo gloves are required to be ASTM D6978 tested (stated on packaging).

[1]Exceptions:

- <u>**Oral medications:**</u> a chemotherapy certified nurse must administer first dose of new therapy and first dose after any dosage change after therapy is started (to verify dosage and ensure patient teaching completed). Subsequent doses may be administered by RN or LPN trained in safe handling of hazardous drugs.
- <u>**Intramuscular Methotrexate for ectopic pregnancy:**</u> – may be administered by Providers or RN's trained in safe handling of hazardous drugs.
- <u>**Intrathecal and hepatic artery embolization**</u>: may be administered in IR by trained providers.
- <u>**Intravesicular**</u>: may be administered in OR, PACU, or urology clinics by trained providers.

[2]**Volatile drugs** that require chemical cartridge respirator for liquid drug spill clean-up (Table 1A/1B Antineoplastic Drugs):

• Carmustine	• Cyclophosphamide	• Fluorouracil	• Thiotepa
• Cisplatin	• Etoposide	• Ifosfamide	• Mechlorethamine
Chemical cartridge respirators (PAPR) are located in pharmacy, outpatient oncology infusion clinics, and inpatient oncology units (SJMC 10th floor & Harrison 2W)			

[3]**Initiate a 'Code Orange Internal' for any hazardous drug or hazardous body fluid spill**

CHI Franciscan Health Policies:		
Hazardous Drugs: Administration, Handling, and Disposal	Hazardous Materials and Waste Spill Response Guidelines	Code Orange Internal Response

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In this course, we have reviewed the safe management of body fluid samples containing a HD . Lab Staff should be able to:

- ❑Identify the potential adverse effects of handling HDs
- ❑List the recommended PPE needed when handling a specimen from a patient receiving HDs
- ❑Describe how to handle patient samples when they have received HDs within the last 48 hours
- ❑Describe the HD Spill cleanup process for body fluid spills
- ❑State the key steps to take when there is an accidental exposure (i.e.: contact) to a HD or a body fluid sample from a patient receiving an HD within 48 hrs

- United States Pharmacopeia (USP) chapter <800>. (2019).
- Polovich, M., & Olsen, M. M. (2018). *Safe Handling of Hazardous Drugs* (3rd ed.). Pittsburgh, PA: Oncology Nursing Society.
- *NIOSH List of Antineoplastic and Other Hazardous Drugs in Healthcare Settings.* (2016). The National Institute for Occupational Safety and Health (NIOSH).
- *Personal Protective Equipment for Health Care workers Who Work with Hazardous Drugs. Publication No. 2009-106* (2008). The National Institute for Occupational Safety and Health (NIOSH).
- Washington Administrative Code (WAC), part R – Hazardous Drugs, chapters 296-62-500 thru 296-62-50055.
- Washington Administrative Code (WAC) chapter 296-842, Respirators.