

Compliance Training

Hazardous Drug Safety

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Hazardous Drug Safety

If hazardous drugs, as they are defined by OSHA, are administered for any therapeutic purpose, the employer must develop and implement a Hazardous Drug Safety and Health Plan (HDSHP). The purpose for which a hazardous drug is used does not make a difference in determining the applicability of a HDSHP. For example, a chemotherapy drug that is used to treat a condition other than cancer will still pose the same dangers to the employee administering the drug as it would during chemotherapy. Therefore, OSHA will not exempt an employer from this requirement due to the specific use of a hazardous drug. In addition, even if the drug is used very infrequently or the quantity used is minimal, a HDSHP must still be implemented.

You may identify the hazardous drugs used in your facility using the Hazardous Drug List on page D.

Elements of a Hazardous Drug Safety and Health Plan

The American Society of Hospital Pharmacists has identified the following elements as critical to an effective HDSHP:

1. Standard Operating Procedures

Policies and procedures must be developed and implemented for the safe handling, storage, preparation and administration of hazardous drugs (HDs). These policies and procedures should include:

- a. *Establishment of designated areas for the handling and preparation of HDs.* Unauthorized personnel should not be allowed to enter these areas during preparation.
- b. *Signage to alert personnel of the HD area as a potential hazard.* Signage is also used to keep unauthorized personnel from entering restricted areas.
- c. *Use of containment devices such as a biological safety cabinet for preparation of hazardous drugs.* An alternative method (as described in the following section) is allowed for preparation of drugs containing Estradiol, Ethinyl Estradiol, and Medroxyprogesterone only.
- d. *Use of personal protective equipment, such as powder-free gloves; disposable lint-free gowns of low-permeability fabric with closed front, long sleeves and elastic or knit cuffs; NIOSH-approved respirators where a biological safety cabinet is not available; and eye and face protection, including an emergency eyewash station.*

THIS TRAINING SESSION IS RECOMMENDED FOR:

All employees that may experience exposure to hazardous drugs, items contaminated by hazardous drugs, hazardous drug waste, and/or items contaminated by excreta of patients treated with hazardous drugs.

Training Objectives

The goal of this training module is to:

- Explain the requirements for working with hazardous drugs; and
- Describe the elements of a hazardous drug safety and health plan.

Interactive Training Reminder

Compliance Training is an interactive training program in which you can address questions with other staff members or supervisors.

Write down any questions that you have about the training topic and address them with your Safety Training Coordinator or supervisor.

- e. *Procedures for preparation and administration of HDs.* Use of proper personal protective equipment and engineering controls (in the case of preparation) are mandatory during preparation and administration.
- f. *Procedures for the care of patients receiving HDs.* All items contaminated with excreta or urine from a patient who has received hazardous drugs must be handled only with proper protective equipment.
- g. *Procedures for proper disposal of personal protective equipment as well as other disposable items which may be contaminated, and procedures for the decontamination of reusable equipment.* Refer to the section below titled “HD Waste Management.”
- h. *Procedures for labeling, handling and safe removal of contaminated items* (these should not be mixed with your general office or other biohazardous waste).
- i. *Spill cleanup procedures for HDs.*

2. Personal Protective Equipment

A written policy should be maintained that requires implementation, use and maintenance of ventilation systems and other personal protective equipment.

3. Responsible Individual

An individual responsible for the plan and its maintenance should be designated (normally this is the Safety Training Coordinator).

4. Medical Evaluation/Records

Provisions must be made for medical examinations of potentially exposed personnel. The frequency of use, along with the potential for exposure to hazardous drugs, based on the duties performed, will be considered in the identification of employees for participation in a medical surveillance program. The practice must ensure that proper employee medical and exposure records are maintained.

5. Employee Training

Training must be provided for employees with exposure to HDs. The practice should maintain employee training documentation to prove that this is accomplished on an

annual basis. New employees must be properly trained prior to working with HDs and/or in the designated HD area.

6. Authorized Personnel

A listing of personnel authorized to work with HDs, along with individuals who may be present in the designated preparation and administration areas should be maintained.

7. Hazardous Drug Identification/Chemical Inventory

A list of the HDs used in the practice should be maintained. Alternatively, the hazardous drugs may simply be identified within the chemical inventory that is maintained to comply with the Hazard Communication Standard.

8. Annual Review

At a minimum, the plan should be reviewed annually to ensure that it has been implemented, and that elements of the plan have been reviewed for deficiencies.

Alternative Method for Preparation and Administration of Selected Drugs

An alternative method for administration of drugs containing Estradiol, Ethinyl Estradiol and Medroxyprogesterone **only** is acceptable in settings where there is no biological safety cabinet available.

During preparation of these drugs, the individual performing the process must utilize the following personal protective equipment:

- safety glasses with side-shields;
- a mask that covers the nose and mouth;
- gloves; and
- a long-sleeved, impermeable, closed-front gown or lab coat that overlaps the cuff of the glove to be worn.

When the drug is drawn from the vial into a syringe, the individual performing the process will use a gauze pad to cover the top of the vial after the needle has been inserted into the vial. The purpose of the gauze covering is to contain any

splattering, spraying or aerosolization that might occur when the needle is withdrawn from the vial. The PPE worn by the individual is considered a second level of protection during preparation of the drug.

The PPE is also worn during the process of administration to protect the employee from potential exposure when expelling air from the syringe and for any spills or other emergencies that might occur. While this alternative method provides a level of protection, it does not eliminate all of the risk existing in the preparation and administration of HDs.

If a biological safety cabinet (BSC) is not available, and the hazardous drug to be administered is not one of the three mentioned above, it might be possible to obtain pre-filled syringes (i.e., from a hospital pharmacy) to eliminate the need for a BSC. Many practices have begun to use pre-filled syringes of HDs to limit the potential exposure for their staff members.

HD Waste Management

Thick, leak-proof plastic bags of a color different than either general waste bags or biohazardous waste bags should be used for routine collection of disposable supplies that have been contaminated with HDs. Yellow is generally recognized as the color to identify HD waste.



You will also need a sharps container that is dedicated to HD waste. The container can either be the standard red in color, in which case you will add an HD label, or yellow in color with biohazard identification. When full, HD sharps containers can be placed into yellow HD waste disposal bags.

HD waste bags should be kept inside a covered waste container that is clearly labeled “HD Waste Only.” At least one such

receptacle should be placed in every area in which the drugs are prepared or administered. The bag should be sealed when filled, and the covered waste container taped. Unsealed HD waste should not be moved from one area to another.

Every precaution should be taken to prevent contamination of the exterior of HD waste containers. Personnel disposing of HD waste should wear gowns and protective gloves when handling waste containers with contaminated exteriors. Containers with contaminated exteriors must be placed into a secondary container in a manner that prevents contamination of the secondary container.

HD waste should be handled separately from other trash, and disposed of in accordance with applicable EPA, state and local regulations. Your biohazardous waste hauler will provide specific instruction on HD waste segregation and packaging for pick-up. While awaiting removal, waste should be held in a secure area in covered, labeled containers with plastic liners.

Implementation and Maintenance

Once a HDSHP has been developed, it is the responsibility of the employer to ensure that the plan is properly implemented and that all staff members comply with the policies and procedures. ●

NIOSH Hazardous Drug List (last updated 2016)

D	Abacavir	Degarelix	Macitentan	Sirolimus
	Abiraterone	Dexrazoxane	Mechlorethamine	Sorafenib
	Acitretin	Diethylstilbestrol	Medroxyprogesterone	Spironolactone
	Adotrastuzumabem-tansine	Dinoprostone	acetate	Streptozocin
	Afatinib	Divalproex	Megestrol	Sunitinib
	Alefacept	Docetaxel	Melphalan	Tacrolimus
	Alitretinoin	Doxorubicin	Mentropins	Tamoxifen
	Altretamine	Dronedarone	Mercaptopurine	Televancin
	Ambrisentan	Dutasteride	Methimazole	Temazepam
	Amsacrine	Entecavir	Methotrexate	Temozolomide
	Anastrozole	Enzalutamide	Methyltestosterone	Temsirolimus
	Apomorphine	Epirubicin	Mifepristone	Teniposide
	Arsenic trioxide	axitinib	Mipomersen	Teriflunomide
	Azacididine	Eribulin	Misoprostol	Testosterone
	Azathioprine	Erlotinib	Mitomycin	Thalidomide
	Bacillus Calmette-Guerin	Eslicarbazepine	Mitotane	Thioguanine
	Belinostat	Estradiol	Mitoxantrone	Thiotepa
	Bendamustine	Estramustine	Mycophenolate mofetil	Tofacitinib
	Bexarotene	Estrogen/ progesterone combinations	Mycophenolic acid	Topiramate
	Bicalutamide	Estrogens, conjugated	Nafarelin	Topotecan
	Bleomycin	Estrogens, esterified	Nelarabine	Toremifene
	Bortezomib	Estropipate	Nevirapine	Trametinib
	Bosentan	Etoposide	Nilotinib	Tretinoin
	Bosutinib	Everolimus	Omacetaxin	Trifluridine/Tipiracil (combination only)
	Brentuximab vedotin	Exemestane	Ospemifene	Triptorelin
	Busulfan	Finasteride	Oxaliplatin	Ulipristal
	Cabergoline	Fingolimod	Oxycarbazepine	Uracil mustard
	Cabazitaxel	Floxuridine	Oxytocin	Valganciclovir
	Cabozantinib	Fluconazole	Paclitaxel	Valporate/Valproic acid
	Capecitabine	Fludarabine	Palifermin	Valrubicin
	Carbmazepine	Fluorouracil	Paliperidone	Vandetanib
	Carboplatin	Fluoxymesterone	Pamidronate	Vemurafenib
	Carfilzomib	Flutamide	Panobinostat	Vigabatrin
	Carmustine	Fosphenytoin	Paroxetine	Vinblastine
	Cetorelix	Fulvestrant	Pasireotide	Vincristine
	Chlorambucil	Ganciclovir	Pazopanib	Vinorelbine
	Chloramphenicol	Ganirelix	Peginesatide	Vismodegib
	Choriogonadotropin	Gemcitabine	Pemetrexed	Voriconazole
	Cidofovir	Gemtuzumab	Pentetate calcium trisodium	Vorinostat
	Cisplatin	Ozogamicin	Pentostatin	Warfarin
	Cladribine	Gonadotropin, Chorionic	Pertuzumab	Ziprasidone
	Clofarabine	Goserelin	Phenoxybenzamine	Zivafibercept
	Clomiphene	Histrelin	Phenytoin	Zoledronic acid
	Clonazepam	Hydroxyurea	Pipobroman	Zidovudine
	Colchicine	Icatibant	Plerixafor	Zonisamide
	Crizotinib	Idarubicin	Pomalidomide	
	Cyclophosphamide	Ifosfamide	Ponatinib	
	Cyclosporine	Imatinib	Pralatrexate	
	Cytarabine	Irinotecan	Procarbazine	
		Ixabepilone	Progesterone	
	Dabrafenib	Ixazomib	Progestins	
	Dacarbazine	Leflunomide	Propylthiouracil	
	Dactinomycin	Lenalidomide	Raloxifene	
	Dasatinib	Letrozole	Rasagiline	
	Daunorubicin	Leuprolide	Regorafenib	
	Degarelix	Liraglutide recombinant	Ribavirin	
	Decitabine	Lomitapide	Riociguat	
	Deferiprone	Lomustine	Risperidone	
			Romidepsin	

Compliance Training Test

Hazardous Drug Safety

E

NAME: _____

DATE: _____

SIGNATURE: _____

STAFF POSITION: _____

There are 10 questions to the test for Hazardous Drug Safety. There is no pass or fail grade to the test. Review the training information to find the correct answers to any questions that may have been missed.

1 If your practice uses a Hazardous Drug very minimally, and experiences little exposure, you are exempt from the need for a Hazardous Drug Safety and Health Plan.

Select One T F

2 The practice should maintain a listing of personnel authorized to work with HDs, along with individuals who may be present in the designated preparation and administration areas.

Select One T F

3 New employees must be properly trained prior to working with HDs and/or in the designated HD area.

Select One T F

4 Provisions must be made for medical examinations of potentially exposed personnel.

Select One T F

5 Bright green is generally recognized as the color to identify HD waste.

Select One T F

6 Hazardous drug waste should not be mixed with your general office or other biohazardous waste, but should be segregated as a separate waste stream.

Select One T F

7 Employees that are simply working in the HD designated area, but are not handling the drugs, are not required to complete hazardous drug training.

Select One T F

8 All items contaminated with excreta or urine from a patient who has received hazardous drugs must be handled only with proper protective equipment.

Select One T F

9 You must establish designated areas for the handling and preparation of HDs. Unauthorized personnel should not be allowed to enter these areas during preparation.

Select One T F

10 Standard personal protective equipment for HDs includes items such as powder-free gloves, disposable lint-free gowns of low permeability fabric with closed front, long sleeves and elastic or knit cuffs, NIOSH-approved respirators where a biological safety cabinet is not available, and eye and face protection, including an emergency eyewash station.

Select One T F