Welcome to the University of California’s online Hazardous Drugs USP 800 training. This training was developed by Risk & Safety Training for staff in support services such as housekeeping (Environmental Services or Hospitality Services), receiving and transportation who may contact hazardous drugs.
This class will introduce you to the UC hazardous drugs program. Under a new best practices program called USP 800, many commonly used drugs are now classified as hazardous drugs. To protect patients and healthcare workers from potential harm, the UC hazardous drugs program was developed to ensure the safe handling of hazardous drugs throughout the healthcare system. This program is enforceable by CDPH, CMS, the Joint Commission, the Board of Pharmacy (and Cal/OSHA).

This class will introduce you to the hazardous drugs program. Many common drugs are now called hazardous drugs. The hazardous drugs program is enforced by the California Department of Health, Joint Commission, Cal/OSHA and other agencies.
By the end of this class, you should be able to:

- Say what a hazardous drug is and how it can affect your health
- Know what the policies and procedures for hazardous drugs are
- Understand how to protect yourself
- Know what to do and who to contact if you get hazardous drugs on you
- Understand that you need special training for spill cleanup, contaminated body fluids and cleaning contaminated areas
- Know what containers used for disposal of hazardous drugs look like
Hazardous Drugs

- **Say** what a hazardous drug is
- **Know** how hazardous drugs can affect your health
- **Understand** ways you can be exposed

By the end of this section, you should be able to:
- Say what a hazardous drug is
- Know how hazardous drugs can affect your health
- Understand ways you can be exposed
What is a hazardous drug?

- Hazardous drugs (HDs) are drugs that may cause health effects from exposures at work
- Include some commonly used drugs
- Many hazardous drugs can kill cancer cells
- Many hazardous drugs can affect the ability of both men and women to have children

Hazardous drug are drugs that may cause health effects from exposures at work. Hazardous drugs include some commonly used drugs, drugs that can kill cancer cells and many drugs that can affect the ability of both men and women to have children.
How can a hazardous drug affect your health?

Hazardous drugs are drugs that have at least one of these effects:

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carcinogenic</td>
<td>Can cause cancer</td>
</tr>
<tr>
<td>Teratogenic</td>
<td>Can cause a pregnant woman to have a baby that does not develop properly</td>
</tr>
<tr>
<td>Reproductive Toxicity</td>
<td>Can affect the ability of both men and women to have children</td>
</tr>
<tr>
<td>Genotoxic</td>
<td>Can damage your genes (your DNA)</td>
</tr>
<tr>
<td>Organ toxicity at low doses</td>
<td>Can be toxic to your body organs, even if the exposure is low</td>
</tr>
</tbody>
</table>

**Similar Drugs**

*Substances with similar structure/toxicity*

Hazardous drugs are drugs that can do at least one of these:

- Can cause cancer
- Can cause a pregnant woman to have a baby that does not develop properly
- Can affect the ability of both men and women to have children
- Can damage your genes (your DNA)
- Can be toxic to your body organs, even if the exposure is low
Your local hazardous drugs policy classifies hazardous drugs into several groups. The highest hazard group includes cancer cell-killing antineoplastic drugs used in chemotherapy. Some hazardous drugs have special precautions because of reproductive risk (for males or females). **Refer to your local policy for more details.**
Health Effects That Can Happen Quickly

Effects that can happen quickly especially with a high exposure, include:

- A rash on your skin
- Losing your hair
- Feeling sick to your stomach
- May cause a pregnant woman to lose her baby

**These health effects are very unlikely if you use good work practices and personal protective equipment. Also, there are more common causes for all of these problems.**

Hazardous drugs can cause effects that can happen quickly especially with a high exposure, including:

- A rash on your skin
- Losing your hair
- Feeling sick to your stomach
- May cause a pregnant woman to lose her baby

These health effects are very unlikely if you use good work practices and personal protective equipment. Also, there are more common causes for all of these problems. For example, getting older is the most common reason you lose your hair. Skin rashes and feeling sick to your stomach have many common causes. There are many common reasons a pregnant woman may lose a baby.
Risk of Exposure

Who do you think is at increased risk to exposure to hazardous drugs?

a. Distribution  
b. Preparation  
c. Transportation  
d. Administration  
e. Disposal  
f. Clean Up

That's correct! All of the Above.

Both clinical and non clinical workers may be exposed during transportation, distribution, preparation, administration, disposal, and cleanup of hazardous drugs or waste containing hazardous drugs.

Who do you think is at increased to exposure to hazardous drugs?

a. Distribution  
b. Preparation  
c. Transportation
d. Administration

e. Disposal

f. Clean Up
Ways You Can Be Exposed.

**Through your skin.** For example, this can happen if you touch a wall or floor that is contaminated with a hazardous drug or touch urine from a patient who has been given a hazardous drug in the last two days.

**Breathing air that contains hazardous drugs.** This is most likely if you are nearby when a large hazardous drug spill is being cleaned up.

**Getting stuck with a needle or other sharp object** that is contaminated with a hazardous drug.

**Through your mouth.** For example, this can happen if you get hazardous drugs on your hand and then put your hand to your mouth, or if you put things such as a contaminated pen in your mouth.
Higher Risk Tasks

- Compounding or preparing hazardous drugs
- Receiving broken or leaking containers
- Drawing up a dose or reconstitution if not in a hood
- Administration when there is a risk of splashing (e.g., IV or feeding tube administration)
- Handling contaminated waste and linens
- Cleaning up spills

Higher risk tasks that may expose workers to hazardous drugs may include, but are not limited to:

- Compounding or preparing hazardous drugs
- Receiving broken or leaking containers
- Drawing up a dose or reconstitution if not in a hood
- Administration when there is a risk of splashing (e.g., IV or feeding tube administration)
- Handling contaminated waste and linens
- Cleaning up spills
You will receive the following health attestation at the end of your quiz to sign and submit to your supervisor.

Please check the box below to verify you have understood the information on health effects. If you need to review the information again, please review this training before proceeding. If you need more information you may contact your supervisor, EH&S, or Employee Health/Occupational Health Center.

☐ Yes, I have read and understood the information provided on the health effects of hazardous drugs in the workplace.

You will receive the following health attestation to sign and submit to your supervisor.

Please check the box below to verify you have understood the information on health effects. If you need to review the information again, please use the navigation button to go back to those pages before proceeding. If you need more information you may contact your supervisor, EH&S, or Employee Health/Occupational Health Center.

Yes, I have read and understood the information provided on the health effects of hazardous drugs in the workplace.
You should now be able to:

- **Say** what a hazardous drug is
- **Know** how hazardous drugs can affect your health
- **Understand** ways you can be exposed
Policies and Procedures

- **Know** where you can read a copy of the hazardous drugs policy
- **Know** where you can read a copy of other hazardous drugs procedures for your department
- **Understand** that you will need more training if you have specific hazardous drugs duties

By the end of this section you should:

- Know where you can read a copy of the hazardous drugs policy
- Know where you can read a copy of other hazardous drugs procedures for your department
- Understand that you will need more training if you have specific hazardous drugs duties
Policy

You can learn more information about the Hazardous Drugs Handling Plan or Policy for your location on your location’s website.
Policies and procedures are in place for:

- Hazard communication program
- Occupational safety program; Designation of HD areas; Receipt; Storage; Compounding; Use and maintenance of proper engineering controls; Hand hygiene and use of PPE based on activity; Deactivation, decontamination, cleaning and disinfection; Dispensing; Transport; Administering
- Disposal; Spill control

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- Hazard communication program
- Occupational safety program; Designation of HD areas; Receipt; Storage; Compounding; Use and
maintenance of proper engineering controls; Hand hygiene and use of PPE based on activity; Deactivation, decontamination, cleaning and disinfection; Dispensing; Transport; Administering

- Disposal; Spill control
Training

This is an awareness course. Other classes in addition to this or on-the-job training are required for tasks such as:

- Cleanup of spills or contaminated areas
- Handling urine or other body fluids or contaminated bed linens from a person who has been given a hazardous drug in the last 48 hours.
- Receiving or transporting hazardous drugs.
You should now be able to:

- **Know** where you can read a copy of the hazardous drugs policy
- **Know** where you can read a copy of other hazardous drugs procedures for your department
- **Understand** that you will need more training if you have specific hazardous drugs duties

**Know** where you can read a copy of the hazardous drugs policy

**Know** where you can read a copy of other hazardous drugs procedures for your department

**Understand** that you will need more training if you have specific hazardous drugs duties
By the end of this section, you will be able to:

- Recognize signs for hazardous drugs work areas
- Understand equipment used to prevent hazardous drugs exposure
- Know personal protective equipment requirements
Signs

- There will be signs posted where hazardous drugs are received and unpacked and where drugs are mixed for patient use.
- Do not go into these areas unless you have been told you are allowed to enter.

Signs may be posted in patient care areas.

There will be signs posted where hazardous drugs are received and unpacked and where drugs are mixed for patient use. Do not go into these areas unless you have been told you are allowed to enter.
Preparing drugs
Hazardous drugs are usually prepared in the pharmacy inside a piece of equipment that is used just for hazardous drugs. This equipment is designed to prevent contamination from spreading or getting in the air.

Cutting and Crushing Pills
The most hazardous drugs must be cut or crushed in the pharmacy. If cutting or crushing of other hazardous drugs is allowed, you may need to use a special bag for control.
IV Administration

For antineoplastic or chemotherapy, a closed system transfer device (CSTD) must be used whenever practical (e.g. as a part of the IV tubing assembly).
Depending the job people are doing with hazardous drugs, they may wear personal protective equipment including:

- Gloves approved for work with hazardous drugs
- Gowns approved for work with hazardous drugs
- Face and eye protection
- Head and hair covers
- Shoe covers
- Sleeve covers
- N95 mask or other hazardous drugs approved mask such as a powered air purifying respirator (PAPR)

You will need more training or information for each type of PPE you need before you work with hazardous drugs.
Gowns Approved for Hazardous Drugs Work
Most isolation gowns are not approved. Gowns approved for hazardous drugs work are usually made of several layers and will not absorb water. They have a cuff at the end of the sleeve.

Gloves Approved for Hazardous Drugs Work
Do not go just by the color of the gloves. Gloves approved for hazardous drugs work must meet special testing requirements. Ask your supervisor if you are not sure if your gloves are approved. Change your gloves at least every 30 minutes, or when they are torn, punctured or contaminated.

Masks
The most common mask to protect from hazardous drug dust in the air is an N95 mask. You may only use an N95 mask if you have been fit-tested. For cleanup of large spills you need a rubber mask or a hood such a powered air purifying respirator. NEVER use a surgical mask for protection from hazardous drugs.
Controlling Exposure

You should now be able to:

- **Recognize** signs used in hazardous drugs work areas
- **Understand** equipment used to prevent hazardous drugs exposure
- **Know** personal protective equipment requirements

You should now be able to:

- Recognize signs used in hazardous drugs work areas
- Understand equipment used to prevent hazardous drugs exposure
- Know personal protective equipment requirements
Response to Hazardous Drugs Exposure

- **Know** what to do if you are exposed to a hazardous drug
- **Understand** who to contact if you are exposed to a hazardous drug
- **Know** how to make a report if you are exposed to a hazardous drug

By the end of this section, you will be able to:

- Know what to do if you are exposed to a hazardous drug
- Understand who to contact if you are exposed to a hazardous drug
- Know how to make a report if you are exposed to a hazardous drug
If you are exposed to a hazardous drug,

Remove gloves or clothing that are contaminated.

Wash your contaminated skin with soap and lukewarm water. Hot water will increase skin absorption.

If you get hazardous drugs in your eyes, immediately flush your eyes with water using an eyewash for at least 15 minutes.
For direct skin or eye exposure, obtain medical attention as soon as possible. Be sure to contact your supervisor or tell someone before you go.

Employees should go to the Occupational Health Center or Employee Health during operating business hours.

After hours, please immediately seek medical attention in the After Hours Clinic or Emergency Room (rules vary by location).

*Please note that procedures may vary by location. Refer to your location’s Injury and Illness Prevention Program (IIPP).*
Reporting Exposures

• Make sure all incidents are reported in the Incident Reporting System.

• Make the report after affected people are taken care of.

Make sure all incidents are reported in the Incident Reporting System.

Make the report after affected people are taken care of.
You should now be able to:

- **Know** what to do if you are exposed to a hazardous drug
- **Understand** who to contact if you are exposed to a hazardous drug
- **Know** how to make a report if you are exposed to a hazardous drug
Waste Disposal and Spills

- **Know** what a spill of a hazardous drug usually looks like
- **Identify** a spill kit
- **Know** special training is needed for spill cleanup
- **Know** what containers used for disposal of hazardous drugs look like

By the end of this section, you should be able to:

- Say what a hazardous drug is
- Know how hazardous drugs can affect your health
- Understand ways you can be exposed
What does a spill usually look like?

- If you see a powder or liquid on a counter or floor where hazardous drugs are handled this may be a sign of a spill.
- Do not expect that there will be a smell.
- Ask someone if you are not sure.

If you see a powder or liquid on a counter or floor where hazardous drugs are handled this may be a sign of a spill.
Do not expect that there will be a smell.
Ask someone if you are not sure
Spill Clean Up

Do not clean up a hazardous drugs spill unless:

- You have been *trained* on spill procedures
- You have the *correct PPE* and clean up equipment
- The spill is a *size* you have been trained to clean up

Do not clean up a hazardous drugs spill unless:
1. You have been trained on spill procedures
2. You have the correct PPE and clean up equipment
3. The spill is a size you have been trained to clean up
Spill Kit Contents

- Hazardous drugs gloves
- Goggles/Face shield
- Sealable waste bags
- Hazardous drugs gown
- Shoe covers
- N-95 Respirator (surgical masks not approved)

Spill Kit should be available where Hazardous Drugs are handled.

- Hazardous drugs gown
- Shoe covers
- Goggles/face shield
- Hazardous drugs gloves
- N-95 Respirator (surgical masks are not approved)
- Sealable waste bags
Responding to a Spill

When there is a spill, responders should immediately:

Alert nearby people about the spill and obtain a spill kit.

Place warning signs in the hallway or on the door to the room where the spill occurred.

Follow local policy on spill cleanup.

Alert nearby people about the spill and obtain a spill kit.

Place warning signs in the hallway or on the door to the room where the spill occurred.

Follow local policy on spill cleanup.
**Hazardous Waste Disposal**

Red
- Red containers will not normally have waste from drugs. These containers are for infectious waste.

Blue
- Blue containers contain waste from lower hazard drugs or nonhazardous drugs.

Yellow
Yellow containers are for waste that has only a very small amount of contamination but is from the most hazardous drugs. For example (all wastes from the most hazardous drugs)
- gowns, gloves, masks that do not have any sign of contamination
- empty IV bags/bottles
- empty syringes
- empty drug vials
- empty packaging

Black
Waste from the most hazardous drugs is put in black containers, as well as many other chemical wastes. For example (all wastes from the most hazardous drugs):

- Gowns, gloves, masks that are clearly contaminated
- IV bags/bottles that are not empty
- Syringes that are not empty
- Drug vials that are not empty
- Packaging that is not empty
You should assume that urine, feces, vomit and other body fluids are hazardous if they are from patients the have been treated with the most hazardous drugs (such as chemotherapy) in the last 48 hours (and even longer for some drugs). Follow any posted information.

Do not clean up a hazardous body fluid unless:
- You have been trained on procedures
- You have the correct PPE and clean up equipment

You should assume that urine, feces, vomit and other body fluids are hazardous if they are from patients the have been treated with the most hazardous drugs (such as chemotherapy) in the last 48 hours (and even longer for some drugs). Follow any posted information.

Do not clean up a hazardous body fluid unless:
- You have been trained on procedures
- You have the correct PPE and clean up equipment
Cleaning Contaminated Areas

Do not clean up an area contaminated with hazardous drugs unless:

- You have been trained on procedures
- You have the correct PPE and clean up equipment

Do not clean up an area contaminated with hazardous drugs unless:

- You have been trained on procedures
- You have the correct PPE and clean up equipment
You should now be able to:

- Know what a spill of a hazardous drug usually looks like
- Identify a spill kit
- Know that special training is needed for spill cleanup
- Know what containers used for disposal of hazardous drugs look like

You should now be able to:

- Know what to do if you are exposed to a hazardous drug
- Understand who to contact if you are exposed to a hazardous drug
- Know how to make a report if you are exposed to a hazardous drug
Summary

You should now be able to:

- Say what a hazardous drug is and how it can affect your health
- Know what the policies and procedures for hazardous drugs are
- Understand how to protect yourself
- Know what to do and who to contact if you get hazardous drugs on you
- Understand that you need special training for spill cleanup, contaminated body fluids and cleaning contaminated areas
- Know what containers used for disposal of hazardous drugs look like
You will now be given a short quiz on the material presented.
After you finish the quiz, please take the time to fill out the course evaluation and submit it to the instructor.
Thank You

For more information, please visit:

www.training.ucr.edu