Objectives

- Review current USP800 guidelines on destruction of hazardous medications.
- Illustrate how a local pharmacy demonstrates compliance with USP800 guidelines involving hazardous medication destruction.
- Discuss obstacles for achieving compliance with USP800 guidelines involving hazardous medication destruction.
USP800 - What is it?

- The USP chapter that contains guidelines for hazardous drug handling.
- It is one of a number of compounding-related chapters in USP-NF.
- Does not replace USP795 or USP797
- Since it is below 1000 in the USP chapters it is enforceable by regulatory bodies.
- Officially enforceable July 1, 2018.
Where did USP800 originate?

- Information about risks to personnel from hazardous drugs has been in the medical literature since the 1970’s
- NIOSH published an alert on preventing occupational exposure in 2004.
- OSHA information has evolved since then and is now incorporated into USP800.
Who does USP800 affect?

- Healthcare settings to include pharmacies, physician offices, clinics, veterinary offices, and other locations that handle hazardous drugs.
- The word “entity” in USP800 means your setting if you are handling hazardous medications.
Which of the following is true regarding USP800?

- A. If you follow USP800 then you do not need to follow USP795 or USP797.
- B. ASHP governs USP800
- C. USP800 will be enforceable July 2018
- D. USP800 applies to hazardous medications in the home.
Which of the following is true regarding USP800?

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What medications make “the list”?  

- NIOSH list of antineoplastic and other hazardous drugs in USP800 that pose hazard to health care workers.  
  ▫ Carcinogens, Teratogens, Reproductive toxicity, Organ toxicity, Genotoxicity, Chemical structure and toxicity that mimic existing drugs that are hazardous  
- It is NOT the EPA hazardous materials list which includes materials hazardous to the environment.  
- Agents that are at your facility that are not on the NIOSH list (e.g. antibiotics, some hazardous materials) that may need special handling.
To note: Must vs. Should

- In USP if the word MUST is used then it is a requirement (do it!)
- IF the word SHOULD is used then it is a recommendation (a good idea!)
Containment strategies for USP800

• Engineering controls
• Personal Protective Equipment
• Work Practices
Work Practices for USP800

- Disposal: Section 11 of USP800
- The entity **must** establish SOP’s for the labeling, packaging, transport, and disposal of HD’s.
- 11.4 Disposal: ....Disposal of all HD waste, including, but not limited to, unused HD’s and trace-contaminated PPE and other materials, **must** comply with all applicable federal, state, and local regulation.
Which of the following is true?

- A. The NIOSH list only contains antineoplastics.
- B. SOP’s **must** be established for transport and disposal of HD’s.
- C. PPE is always thrown in the garbage can so that the hazardous disposal bins can be saved for drugs.
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Disposal - What determines the proper disposal method for a medication?

- **RCRA (Resource Conservation and Recovery Act)**
  - P-listed – Warfarin, Arsenic, Nicotine
  - U-listed – all in this category are toxic. Mitomycin, Mercury
- **NIOSH (National Institute of Occupational Safety and Health)**
  - A part of the CDC
  - A list of hazardous medications is published and risk categories are assigned.
- **OSHA (Occupational Safety and Health Administration)**
  - An agency of the US Department of Labor
  - Responsible for providing a safe and healthful workplace
Who regulates and enforces proper medication disposal?

- The **Resource Conservation and Recovery Act** (RCRA) gives EPA the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste.
- NIOSH and CDC may not be actual federal regulations but can be incorporated in state or local law or hospital policies.
- Joint Commission considers proper disposal of hazardous medication waste as part of their Environment of Care standards.
- FDA gives guidance.
- State and federal government can enforce USP.
Hazardous Waste at COA

• We defined what is Trace vs. Bulk RCRA items
• Consistency in coloring of waste bins and hospital-wide vendors for waste bin disposal
Hazardous Medication Waste

- **Trace waste**
  - Empty syringes or infusion bags that contained any hazardous medication, or gowns, gloves, protective padding, masks or goggles used in administration.
  - Must be discarded in a **YELLOW** hazardous waste bin

- **Bulk waste**
  - Any container holding a clearly visible amount of hazardous medication, or any supplies overly contaminated with hazardous medication (via administration mishap or spill management)
  - Hand deliver to pharmacy to be discarded in **BLACK** RCRA hazardous waste bin
Yellow Hazardous Waste Bin
BLACK RCRA Hazardous Waste Bin
Items for Non-RCRA Black Bins???
Black Waste Bins

• Forms are completed for “pick-up”

  USE A SEPARATE FORM FOR EACH WASTE PRODUCT BEING PICKED UP
  PART I – TO BE COMPLETED BY THE DEPARTMENT NEEDING A WASTE PICK UP
  TYPE OF WASTE BEING PICKED
  UP:________________________________________________________
  Date:___________________ Time:________________________
  Destination for waste: ( ) Incinerate Hazardous Waste Storage ( )
  ( ) Other:_________________________________________________________
  Department generating waste:________________________________________
  Amount of waste being picked up: ______________________(circle correct unit)
  pounds / gallons
  Signature of waste generator: _________________________________________
  Signature of waste pick up person:______________________________________
  Engineering Department work order number:_____________________________
  NOTE: WASTE WILL NOT BE PICKED UP UNLESS PART I OF THIS FORM IS FILLED OUT COMPLETELY
Another item for Hazardous Medication Waste
Spill Kit - How much volume does it hold?

- Contact the manufacturer for your kits but most kits hold approximately 750-1500 ml
- The ChemoSafety Spill Kit (CT4004) has a 788 ml capacity
- The ChemoBlock Spill Kit (DP5016K) has a 1624 ml capacity
After Spill is cleaned up remove respirator mask, safety glasses, shoe coverings, ChemoPlus gown, and outer pair of gloves. Discard in same waste bag.
Wearing only the inner gloves, close the bag and place it in the 2nd chemo waste bag. Remove gloves and discard in the chemo waste bag. Close bag with tie wrap.

1st chemo waste bag sealed & inside 2nd bag

2nd chemo waste bag
Dispose of bag properly according to facility regulations.
What are some ways that COA used to organize hazardous waste?

• A. Utilizing the same colors of bins hospital-wide for the PPE waste, trace waste, and bulk waste.
• B. Spill kits are used for hazardous medication spills and then disposed of in yellow bags.
• C. Designation for certain items to be placed in colored bins.
• D. All of the above.
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Most common mishaps with hazardous medication waste in a hospital

- Failure to properly determine what type of hazardous med waste is being disposed of
- Pouring hazardous med waste into a drain
- Improper disposal of chemotherapy meds
Tips for reducing the need for disposing of med waste

- Use the most appropriate vial size to prep doses
- Dispense patient-specific doses of liquid meds
- Double check with a short stability to see if they have been discontinued before preparation
- Manage inventory in order to minimize expired medications
- Utilize a reverse distributor
References

• FDA
• EPA
• USP
• ADEM
• NIOSH
• OSHA
• COA
Questions?