Infection Prevention and Control is a system of policies and procedures designed to ensure the use of best practices to enhance safety and reduce the risk of transmitting potentially dangerous microbes from the treatment environment and support areas. An effective infection control program hinges on the understanding of the WHAT, the WHY, and the HOW of the preventive policies and procedures as well as techniques that enhance compliance.

LEARNING OBJECTIVES
After reading this publication, the reader should be able to:

• give examples of regulated and non-regulated medical waste.
• describe the types of regulated medical waste disposed of in red bags.
• describe the EPA’s new regulation related to amalgam disposal.
SCENARIO: The Incident

Kaitlin was a dental assistant temp who had almost completed her first day in Dr. Letty’s practice. Her last responsibility of the day was to clean up operatory two while Dr. L and the main assistant were working late in operatory one. Dr. L asked her if she had any questions, and Kaitlin said, “No, I know about operatory clean-up”.

Kaitlin donned fresh treatment gloves, removed the surface covers, and placed them on top of the instrument cassette on the bracket table. She disconnected the handpieces and placed them on the cassette. She wiped down the hose connectors, the chair arms, and the plastic air/water syringe and high volume evacuator (HVE) tips with disinfectant wipes. Then she placed the used wipes on top of the cassette.

Kaitlin placed the instrument cassette, the handpieces, and the clinical trash (including her gloves) into a leakproof bin marked with a biohazard symbol. She put a lid on the bin and transported it to the reprocessing room. She put on fresh treatment gloves and discarded the clinical trash (gloves, moist gauze pads and cotton rolls, articulating paper, surface covers, and disinfectant wipes) in a large red bag. The sharps container was overflowing, so she wrapped the two capped anesthetic needles in a gauze pad and put them in the red bag. Leaving the cassette and the handpieces in the bin, she added a gel enzyme pre-soak and placed the lid on the bin to ensure the items did not dry before they were cleaned for reprocessing the next day.

Kaitlin removed her protective gown and placed it in the large red bag. Then she removed her gloves and added them to the bag. She twist-tied the bag and took it to the storage cabinet on the bracket table. She disconnected the air/water syringe and high volume evacuator (HVE) tips with disinfectant wipes. She got a fresh red bag and went to the waiting room to empty the waste basket containing tissues and hand wipes used in their cough etiquette program. She twist-tied that bag and placed it in the storage cabinet and left for home.

Potential Consequences and Prevention

(See further details under “Strategies” on page 4)

1. Kaitlin donned fresh treatment gloves, removed the surface covers, and placed them on top of the instrument cassette on the bracket table.

These breaches violated the infection control principles1 to:

Take action to stay healthy
Avoid contacting blood/body fluids

WHAT: Use proper personal protective equipment (PPE) for operatory clean-up. Consider having a trash container for non-regulated medical waste in the operatory.

WHY: PPE is to be used to provide protection against contact with blood, other body fluids, and potentially harmful chemicals. Maximum protection is provided only with the appropriate PPE depending upon the task involved. Treatment gloves do not give the best protection to the hands when performing tasks that include handling sharps...
and contacting chemicals (e.g., when wiping down surfaces with disinfectants). Discarding non-regulated waste (e.g., used surface covers and disinfectant wipes) into general trash containers in the operatory prevents having to transport such items.

**HOW:** Heavy utility gloves are more resistant to sharps injuries and better protect the fingers when wiping down surfaces. Having containers with foot-operated flip-top lids for non-regulated waste in the clinical area makes disposal convenient and avoids double handling of the trash.

2. She wiped down the hose connectors, the chair arms, and the plastic air/water syringe and high volume evacuator (HVE) tips with disinfectant wipes. Then she placed the used wipes on top of the cassette.

This breach violated the infection control principles¹ to:

- **Limit the spread of contamination**
- **Make objects safe for use**

**WHAT:** Disposable items such as the plastic air/water syringe tips and HVE tips are to be used on only one patient and then properly discarded.

**WHY:** Plastic disposable items are not designed to be disinfected or sterilized for reuse. The softer plastic used to make these items may be difficult to clean and/or will melt in a heat-sterilizer. One use of a disposable item also may change its properties (e.g., marring, scratching), which would hinder its subsequent use. Just wiping down these tips does not decontaminate the inner surfaces. If an item labeled and sold as disposable is reused, the user must accept all responsibility for any problems stemming from that reuse.

**HOW:** Discard disposable items at chairside. The majority of disposable items can be discarded in the regular trash. However, some disposables, such as sharps, need to be discarded in proper biohazard containers at chairside (see page 4).

3. Kaitlin placed the instrument cassette, the handpieces, and the clinical trash (including her gloves) into a leakproof bin marked with a biohazard symbol. She put a lid on the bin and transported it to the reprocessing room. She put on fresh treatment gloves and discarded the clinical trash (gloves, moist gauze pads and cotton rolls, articulating paper, surface covers, and disinfectant wipes) in a large red bag. The sharps container was overflowing, so she wrapped the two capped anesthetic needles in a gauze pad and put them in the red bag.

4. Kaitlin removed her protective gown and placed it in the large red bag. Then she removed her gloves and added them to the bag.

5. She got a fresh red bag and went to the waiting room to empty the waste basket containing tissues and hand wipes used in their cough etiquette program.

These breaches violate the infection control principles¹ to:

- **Take action to stay healthy**
- **Avoid contacting blood/body fluids**

**WHAT:** The majority of soiled items in healthcare facilities such as dental offices are no more infective than residential waste. However, some items (see page 4) carry a substantial risk of causing infection and are termed regulated medical waste. These require special handling, storage, and disposal.

**WHY:** The Centers for Disease Control and Prevention (CDC) states that, “although any item that has had contact with blood, exudates, or secretions may be potentially infective, treating all such waste as infective is neither practical nor necessary”.² Federal, state, and local guidelines and regulations have been established that specify categories of medical waste that are subject to regulation, and the items in these categories are referred to as regulated medical waste.

**HOW:** Most of the trash generated in a dental facility can be discarded in the general trash. Examples include gloves, masks, gowns, lightly soiled materials (gauze, cotton rolls, or tissues) and used surface covers and wipes.

Regulated medical waste (see page 4) needs to be handled with appropriate PPE and placed in proper containers for storage, transport, and disposal. Appropriate containers consist of sharps containers and red bags for non-sharp and non-liquid regulated waste.

As demonstrated by Kaitlin, placing capped anesthetic needles in a red bag is dangerous. Such needles have an exposed needle at the other end that can protrude through the gauze and puncture the bag. In some instances the cap could even be dislodged from the contaminated end of the needle. Anyone handling that bag will be at risk for a sharps injury/contaminated exposure. Disposable needles are to be placed in a sharps container that is replaced when ¾ full. Placing non-regulated waste in a red bag (as Kaitlin did) will increase the cost of disposal by waste management companies that charge by volume or weight of the waste picked up. Check your local authorities* for waste management regulations.

*For example: The Solid Waste Management Division of the local Environmental Protection Agency (EPA); State/Regional Occupational Safety and Health Administration (OSHA); (Check out “From the Editor’s Desk on page 8).
How would you score? Use this checklist to evaluate your waste management compliance.

- A waste management plan has been developed that follows federal, state, and local regulations.\(^3\)
  Suggested plan components: documenting compliance with all appropriate regulations; individuals responsible for waste management; staff training and safety; waste segregation; packaging; labeling; procedures for spills; on-site storage; any on-site treatment methods used and related monitoring records; differentiating treated and untreated waste; characteristics of waste hauler used; disposal facility used; recordkeeping for off-site transport.
- Dental healthcare personnel (DHCP) who handle regulated waste have been trained in appropriate handling and disposal procedures and informed of the possible health and safety hazards.\(^3\)
- All DHCP have been trained to recognize the labeled or color-coded biohazard containers used.\(^4\)

### The following OSHA-defined materials are handled as regulated waste:

- [ ] Liquid or semi-liquid blood or other potentially infectious materials (OPIM) such as saliva;
- [ ] Non-sharp contaminated items that would release blood or OPIM in a liquid or semi-liquid state if compressed (e.g., blood- or saliva-saturated gauze pad or cotton rolls);
- [ ] Items that are caked with dried blood or OPIM and are capable of releasing these materials when handled;
- [ ] Contaminated sharps (anything that could puncture the skin, e.g., needles, broken hand instruments, orthodontic wires, matrix bands, scalp blades, burs);
- [ ] Pathological (e.g., biopsy specimens, extracted teeth) and microbiological wastes containing blood or OPIM.\(^4\)

- Extracted teeth are handled as regulated waste and placed in a sharps container unless they are returned to the patient.\(^5\)
- Extracted teeth containing amalgam are not discarded in waste intended for incineration.\(^5\)
- Extracted teeth for transport to educational institutions or a dental laboratory are cleaned and placed in a leakproof container that is labeled with a biohazard symbol and are covered with water.\(^5\)
- Teeth that do not contain amalgam are heat-sterilized before they are used for educational purposes.\(^5\)
- Use a sharps container that has been cleared by the Food and Drug Administration (FDA). This helps assure the product’s safety and effectiveness.
- Disposable sharps are placed in sharps containers that are puncture-resistant, closable, leakproof on sides and bottom, labeled with a biohazard symbol or color-coded, located where sharps are used (chairside) and may be found (reprocessing room), maintained upright when in use, not overfilled, and closed when transported.\(^2,4\)
- Non-sharp solid regulated waste (e.g., blood- or saliva-saturated gauze pad) is discarded in a color-coded or labeled container that prevents leakage (e.g., red biohazard bag) that is closed when transported.\(^4,6\)
- Regulated waste containers that are contaminated on the outside are placed in a second container that is closable, prevents leakage, labeled or color-coded, and closed when transported.\(^4\)
- Heat sterilizing regulated waste containers using appropriate methods\(^7\) is considered prior to disposal where permitted.
- Blood, suctioned fluids, or other liquid regulated waste is poured down a drain connected to a sanitary sewer system if local sewage discharge requirements are met and the state has declared this an acceptable method of disposal. Personal protective equipment is worn while performing this task.\(^4\)
- Dental amalgam disposal is or will be compliant with the EPA’s new federal regulation\(^8\) that requires the installation of amalgam separators or other devices which capture amalgam waste preventing its release into sewer systems. Existing dental facilities must comply by July 14, 2020, and new facilities must comply immediately. Details include exemptions and reporting requirements.\(^9\)
What’s Wrong With This Picture?
Can you identify the breach(es) in sharps safety and infection prevention in this photo of dental waste management?

Answer:
The sharps container is overfilled. Non-regulated waste (treatment gloves) should not be placed in sharps containers.

Educational Spotlight

Advance your infection control knowledge!
As you may have heard, OSAP is working with the Dental Auxiliary Learning Education (DALE) on a new Dental Infection Prevention and Control Certificate Program™. This exciting four-step educational program can help you take your infection control knowledge to the next level. With patient and provider safety on the line, there’s no time to delay!

Benefits To You
• Elevates your infection control expertise
• Validates your knowledge
• Demonstrates your commitment to patient safety
• Offers flexible education options to fit your schedule

Program Highlights
• Developed by experts in infection control
• Based on federal standards and evidence-based guidelines
• Reviewed and trusted information that is accurate and validated

GET STARTED TODAY
To learn more about how you can get started, visit https://dentalinfectioncontrol.org/

Thanks to our sponsors
OSAP thanks the following companies that help to underwrite each issue of this special series of Infection Control in Practice: Team Huddle™ in 2019.

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OSAP appreciates the commitment of our sponsors in supporting the safestdentalvisit™
Take the Micro-Learning Silent Video Challenge!
Can you identify the actions in this short video that breach infection control?
Challenge your knowledge and compare to the lesson below.
https://osap.org/2019-06video

The Scenario: Dental exam

TEAM HUDDLE DISCUSSION GUIDE
1. Are you distinguishing between regulated and non-regulated medical waste?
2. Are you properly disposing of sharps and non-sharp regulated medical waste?
3. Are you in compliance with EPA’s new regulation on the use of amalgam separators?

Links to Resources
8. EPA. Dental Office Point Source Category. Electronic Code of the Federal Register. 40CFR Part 403. Accessed April 2019 at: https://www.ecfr.gov/cgi-bin/retrieveECFR?gp=&SID=e64bfc647a6ca0a5a1df23b3e42fc546&mce=1&r=PART&m=00:04:03:00&pt40.32.441.

Glossary
Medical waste: Waste generated during patient diagnosis, treatment, or immunization.
Regulated medical waste: Medical waste shown to have disease-causing potential and must be handled in a specified fashion to ensure proper containment and disposal.
QUESTIONS FOR ONLINE QUIZ

1. An example of non-regulated medical waste is:
   a. an anesthetic needle.
   b. an orthodontic wire.
   c. a damp cotton roll.
   d. a bur.

2. How should used exam gloves be discarded?
   a. In the general trash
   b. In a red bag
   c. In a sharps container
   d. Disinfect them and place in a red bag

3. How should a disposable clinic gown be discarded at the end of the day?
   a. In a red bag
   b. In the general trash
   c. In a sharps container
   d. Washed then placed in a red bag

4. How do you discard an extracted tooth that is not returned to the patient?
   a. In a red bag
   b. In the general trash
   c. In a sharps container
   d. Disinfect it and place in a red bag

5. When doing existing dental offices need to comply with EPA's rule on use of amalgam separators?
   a. By July 14, 2022
   b. By July 14, 2021
   c. By July 14, 2020
   d. By July 14, 2019

6. The majority of soiled items in healthcare facilities such as dental offices are:
   a. all to be discarded in biohazard containers.
   b. no more infective than residential waste.
   c. twice as infective as residential waste.
   d. never infective.

7. What does OSHA require must be done to all sharps containers before they are transported?
   a. They must be closed
   b. They must be disinfected
   c. They must be heat sterilized
   d. They must be placed in a red bag

8. Which rules must be followed for disposal of regulated medical waste?
   a. State rules
   b. Local rules
   c. Federal rules
   d. State, local, and federal rules

9. What federal agency regulates the manufacturing and labeling of sharps containers?
   a. FDA
   b. OSHA
   c. CDC
   d. EPA

10. When does a new dental facility have to comply with the EPA amalgam separator rule?
    a. The same time for already existing dental facilities
    b. As soon as the facility is opened for business
    c. After 6 months
    d. After one year

KEY TAKEAWAYS

1. Know the difference between regulated and non-regulated medical waste.
2. Save money by not disposing of non-regulated waste in regulated waste containers.
3. Save time and resources and increase safety by disposing waste at source whenever possible.
4. Know the timing for compliance with EPA’s new regulation for the use of amalgam separators.
Moving Forward!
Updates on the New Dental Infection Control Education and Certification Programs

OSAP, the Dental Assisting National Board (DANB) and the DALE Foundation are collaborating on a dental infection control education program and two professional certifications.

The initiative establishes three main elements:

- **OSAP-DALE Foundation Dental Infection Prevention and Control Certificate Program™**
  — A standardized dental infection control educational program

- **Certified in Dental Infection Prevention and Control™ (CDIPC™)**
  — A clinically-focused professional certification

- **Dental Industry Specialist in Infection Prevention and Control™ (DISIPC™)**
  — An industry (dental trade)-focused professional certification

These collaborative initiatives advance the organizations’ missions of enhancing patient and practitioner safety. For more information, visit: [https://dentalinfectioncontrol.org](https://dentalinfectioncontrol.org)

FROM THE Editor’s Desk

Do you know your state requirements for managing hazardous wastes? Check out the following link.

EPA. Links to Hazardous Waste Programs and U.S. State Environmental Agencies.


In Case You Missed This!

The following EPA document describes waste characterization as well as the generation, transport, treatment, and disposal of waste.

EPA. Model Guidelines for State Medical Waste Management


QUICK BITES

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