

Local and Tribal Health Department Infection Prevention Pilot Program Workbook

Section 6: Disinfection and Sterilization

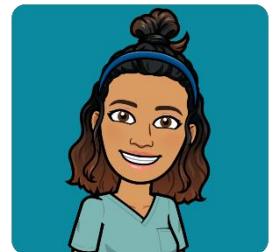
How to Use this Workbook

The Local and Tribal Health Department (LTHD) Healthcare-Associated Infection (HAI) and Infection Prevention Training Program covers a variety of topics and experiences to increase basic healthcare-associated infection and infection prevention and control (IPC) knowledge. Each section of the program has a corresponding workbook with self-paced learning activities and links to additional resources to help supplement your learning. Each workbook includes a list of learning objectives for the section, a tentative meeting and presentation schedule, and self-paced learning activities.

The scenarios and questions included in this workbook are for your own learning and will not be graded. They are intended to supplement group activities and underscore key points in the provided resources. Be prepared to discuss questions, concepts, and scenarios introduced in the self-paced learning sections of this workbook with your regional infection preventionist (IP) or other participants during various follow up activities.

Meet Izzy

Throughout the program, you will follow Izzy, an infection preventionist (IP) at a nursing home, as she encounters IPC scenarios at her facility. Using what you learn in each section, you will help Izzy make decisions that reduce the risk of spreading HAIs in her facility.



Section 6 Objectives

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

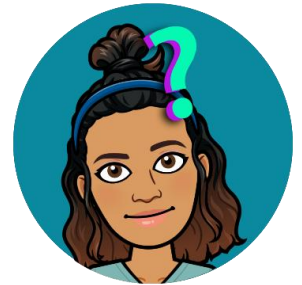
- Explain the importance of cleaning, disinfection, and sterilization in health care.
- Correctly interpret dwell or contact time.
- Identify appropriate cleaning and disinfection agents.
- Interpret the Spaulding classification.

Week 1 Activities

Activity 1: Frequently touched surfaces 5 minutes

Infection preventionists may conduct audits to ensure cleaning and disinfection done by environmental services staff is done correctly. When observing environmental services staff clean a resident room, Izzy the IP wants to make sure they are cleaning and disinfecting frequently touched services in the room.

Review the photo below. Which frequently touched surfaces in the room would Izzy be paying attention to while observing?



Activity 2: Understanding where germs live and how they spread 10 minutes

Explore the [CDC \(Centers for Disease Control and Prevention\) Project Firstline interactive infographic](#) to learn where germs live and how environmental infection control can stop the spread of germs.

- a. How can germs in water spread through medical devices?
- b. What infection control actions should be used when coming in contact with dry, high-touch surfaces?
- c. What types of viruses are spread in the health care setting through blood?
- d. What infection control actions should be used when coming in contact with gastrointestinal system germs?

Activity 3: The complexity of clean 45 minutes

Listen to the [5 Second Rule podcast](#) from the Association for Professionals in Infection Control and Epidemiology (APIC) on cleaning in a health care setting.

- a. What does “EVS” refer to?
- b. True or false: Items considered critical under the Spaulding classification should be sterilized.
- c. What cleaning and disinfection challenges in the health care setting were discussed in the podcast?
- d. How can patients or visitors help ensure their health care environment is clean?

- d. True or false: The hardest organisms to kill are enveloped viruses such as HIV or hepatitis B.

- e. How long can *Clostridioides difficile* (*C. diff*) survive on surfaces?

- d. True or false: This disinfectant is registered with the Environmental Protection Agency (EPA).
2. Review the [cleaning product label](#) carefully and answer the following questions.
- a. What is the contact time for this product?

 - b. This is not the full product label. What other information not included on this label would be helpful for environmental cleaning staff to know when using this product?

Activity 3: Introduction to the Spaulding classification 45 minutes

Read about the [Spaulding classification and rationale](#) for disinfecting and sterilizing patient care items and equipment from CDC.

Answer	Item	Classification
	Stethoscope	a. Critical
	Vascular forceps	b. Semi-critical
	Abdominal ultrasound probe	c. Non-critical
	Vaginal ultrasound probe	
	Scalpel	

Activity 4: Behind the scenes of central processing 45 minutes

Go behind the scenes of an instrument reprocessing area in this [NC SPICE video](#).

- a. Why is it important that organic and inorganic material be removed from instruments prior to sterilization?

- b. What kinds of instruments must be cleaned by hand?

c. What are three types of indicators used to monitor the effectiveness of a sterilization cycle? Name an example for each indicator.

d. What is a load identification number used for?

Activity 5: Quality control and auditing 30 minutes

Review the quality control portion of the [CDC Guideline for Disinfection and Sterilization in Healthcare Facilities](#).

a. What components should be included in a quality control program for sterilized items?

b. What should be recorded in a log for each sterilization cycle?

Week 3 Activities 30 minutes

Activity 1: Evaluating infection control breaches

Review [steps for evaluating infection control breaches](#) from the CDC.

Fill in the blanks on the figure below.

1. Identification of infection control breach

2. Additional data gathering

- Determine the time frame of the breach and number of patients who were exposed
- Identify exposed patients with evidence of HBV, HCV, or HIV infections through medical records and or public health surveillance data
- Conduct literature review and consult experts

3. Notify and involve key stakeholders

4. Qualitative assessment of breach

- If possible, classify the breach as Category A or B

5. Decision regarding patient notification and testing

- Develop communication materials
- Consider post-exposure prophylaxis, if appropriate
- Determine who will conduct testing, obtain consent, and/or perform counseling, if appropriate
- Determine if follow-up testing is needed
- Facilitate public inquiry and communication
- Address media and legal issues

Additional Resources

The following are optional readings, articles, and other resources for information on the topics covered in Section 6.

Cleaning, disinfection, and sterilization

- View the [CDC Guidelines for Environmental Infection Control in Health-Care Facilities, 2003](#).
- Refer to standards from the [Association for the Advancement of Medical Instrumentation \(AAMI\)](#) for disinfection and sterilization.
- Refer to the FDA's [selected EPA-registered disinfectants lists](#).
- Review or share the [interactive infection prevention and control training](#) for EVS workers from CDC.
- Refer to the [HICPAC recommendations](#) on flexible endoscope reprocessing.

Monitoring and auditing

Review a [sample checklist for monitoring terminal cleaning](#) from CDC.

Outbreak investigations and patient notification

- See the [CDC Healthcare-Associated Infection \(HAI\) Outbreak Investigation Toolkit](#) for resources to systematically collect data during an outbreak.
- Review the [CDC fact sheet](#) on steps for approaching infection control breaches with potential bloodborne pathogen transmission.

Notes, questions, and comments