Louisiana Office of Public Health Project Firstline Webinar

Healthcare-associated Infections & Antibiotic Resistance Program

Topic #3: Cleaning and Disinfection

September 12, 2022 at 11:00 a.m. until 12:00 p.m.

Louisiana Department of Health

Office of Public Health | Infectious Disease Epidemiology Section

Healthcare-associated Infections
HAI Elimination
Louisiana

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About This Activity

1.0 CEU Activity - LSNA

Participants should expect a knowledge check survey at the end of the presentation. Participation in the entire webinar and completion of the post-activity evaluation are required. One contact hour will be awarded. Certificates will be emailed. Speakers' PowerPoint slides will be made available to participants following the presentation. Submit inquiries to Marceia.Walker@LA.gov.

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About This Activity

Disclosure Statement

None of the speakers/planners in control of content for this activity have disclosed relevant financial relationship(s) with ineligible companies.

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About This Activity

CDC Epidemiology and Laboratory Capacity Cooperative Agreement

This call is funded by a cooperative agreement with the Centers for Disease Control and Prevention (award #NU50CK000532). The Centers for Disease Control and Prevention (CDC) is an agency within the Department of Health and Human Services (HHS). The contents of this call does not necessarily represent the policy of CDC or HHS, and should not be considered an endorsement by the federal government.

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Upcoming Calls

Louisiana Office of Public Health Project Firstline Quarterly Webinars

Topic 4: December 13, 2023 - Multi Dose Vials

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Today's Presenter

Louisiana Office of Public Health Project Firstline Coordinator

Altrecia Jackson, BSHA, MSP, LPN - Project Firstline Coordinator, OPH Region 7

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“The speaker does not have a financial or non-financial relationship with a commercial interest that would create a conflict of interest with this presentation.”

Disclosure Statement

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CLEANING AND DISINFECTION

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Presentation Objectives

By the end of the presentation, the learner will be able to:

- Describe the difference between cleaning and disinfection
- Discuss why it is important to follow the label instructions on a disinfectant product

Outline:

- Describe the difference between cleaning and disinfection
- Discuss why is it important to follow label instructions on a disinfectant product
- How to select disinfectants
- Contact time and CDC Environmental Cleaning Evaluation Tools

Poll Question #1:

True or False?

The CDC lists proper cleaning and disinfecting as a Standard Precaution for all patient care.

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Answer:

True

Proper cleaning and disinfection of the environment, as well as patient care equipment, instruments and devices are listed as essential steps in Standard Precautions and Transmission-Based Precautions.

https://www.cdc.gov/infectioncontrol/basics/index.htm

Cleaning and Disinfection of Surfaces in Both Inpatient and Outpatient Setting

Key Areas of Interests:

- Understanding transmission events related to patient room surfaces
- Measuring cleanliness
- Improving cleanliness by focusing on process
- Improving cleanliness by evaluating emerging interventions

WHAT'S THE DIFFERENCE?

Cleaning

- The physical removal of dirt, some germs and organic material with water, cleaning agents and mechanical action.
- Reduces the number of germs present on surfaces
- Essential step prior to disinfection

Disinfection

- A thermal or chemical process that eliminates microorganisms on inanimate objects.
- Kills harmful germs that remain on surfaces after cleaning
- Lowers the risks for spreading disease

https://www.cdc.gov/hai/pdfs/resource-limited/environmental-cleaning-RLS-H.pdf

CLEANING

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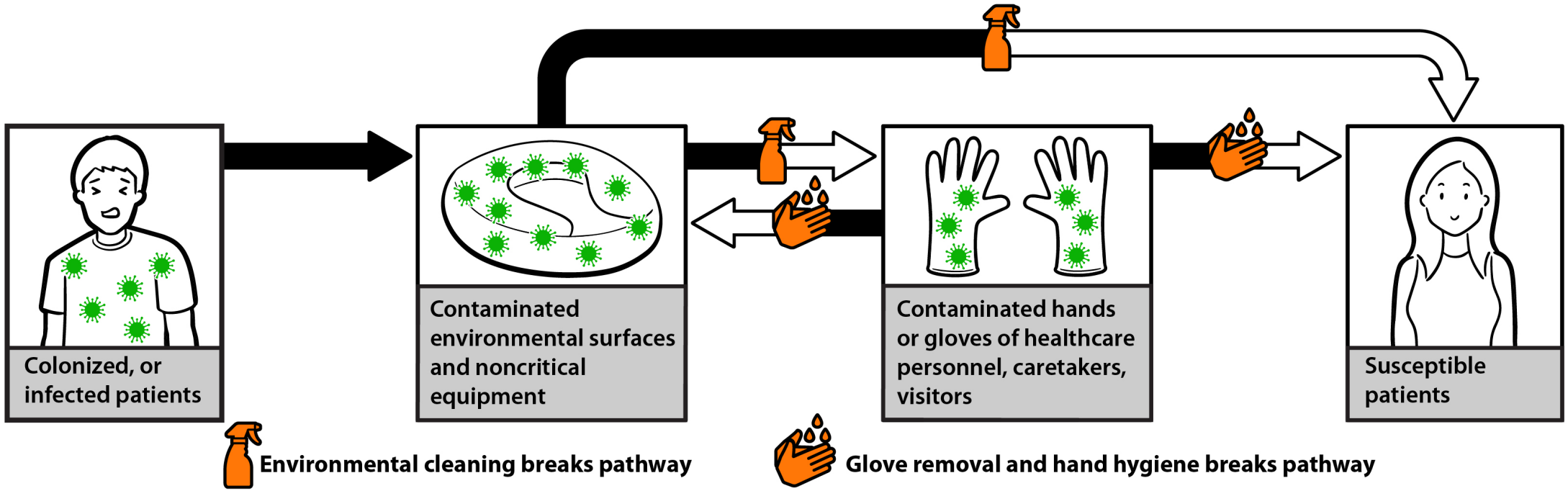
Cleaning:

Who is responsible?

- Healthcare regulators provide clear advice and guidance on cleaning standards, and how organizations can demonstrate cleaning services to meet these standards.
- Institutions must adopt a collaborative approach to assigning responsibility for cleaning
- Clinical staff play a major role in environmental decontamination.

Understanding Transmission Events Related to Patient Room Surfaces



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High Touch Surfaces and Equipment

- **Surfaces** found in patient rooms or care areas that are **frequently touched**
- May differ by room, ward, and facility
- Cleaning and disinfection of these surfaces is **critical** to prevent the spread of pathogens

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Routine Cleaning Steps

- Assess-Inspect area
- Assemble Supplies
- Hand Hygiene
- Patient Care Area
- Disposal
- Hand Hygiene

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Terminal Cleaning Steps

- Assess-Inspect area
- Assemble Supplies-clea
- Hand Hygiene
- Patient Care Area
- Disposal
- Hand Hygiene

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Blood and Body Fluid

Small Spills

- Wear gloves
- Wipe area immediately with paper towel or absorbent cloth (discard towels as infectious waste).
- Disinfect area with 10,000 ppm of hypochlorite (bleach) solution.
- Dry surface with disposable paper towels.
- Discard gloves and paper towels as infectious waste.
- Perform hand hygiene, preferably with soap and water given exposure to body fluid risk.

Blood and Body Fluids

Large Spills

- Don gloves and appropriate PPE
- Block off area to avoid accidents
- Cover area of spill with disposable towels or cloth soaked in bleach solution for 3-5 minutes
- Pick up soiled paper towels/cloths and discard into infectious waste bag.
- Clean the area with detergent solution.
- Wipe the surface area with fresh bleach solution to disinfect.
- Rinse with water
- Dry surface with disposable paper towels.
- Remove gloves and other PPE
- Perform hand hygiene, preferably with soap and water

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Contamination Sources During Cleaning

- Cleaning generates dust or aerosols
- Used cleaning solutions
- Used cleaning cloths and mop head
- Wet mop buckets
- Sinks and drains

Improving Cleanliness By Focusing on Process

Best Practices:

- Use fresh cleaning cloths at the start of each cleaning session (e.g., routine daily cleaning in a general inpatient ward).
- Change cleaning cloths when they are no longer saturated with solution, for a new, wetted cloth. Soiled cloths should be stored for reprocessing.
- For higher-risk areas, change cleaning cloths between each patient zone (i.e., use a new cleaning cloth for each patient bed).
- Ensure adequate supply of cleaning cloths to complete the required cleaning session.
- Never double-dip cleaning cloths into portable containers (e.g., bottles, small buckets) used for storing environmental cleaning products (or solutions).
- Never shake mop heads and cleaning cloths
- Never leave soiled mop heads and cleaning cloths soaking in buckets.

Poll Question #2:

What are high touch areas?

A. Light switches

B. Door handles

C. Bedrails

D. Faucet handles

E. All of the above

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ANSWER:

E. All of the above

Poll Question #3:

Which of the following details the general order for cleaning up large body fluid spills?

A. Cover area of spill with disposable towels, block off area, clean the area with detergent solution, wipe the surface area with fresh bleach solution & perform hand hygiene

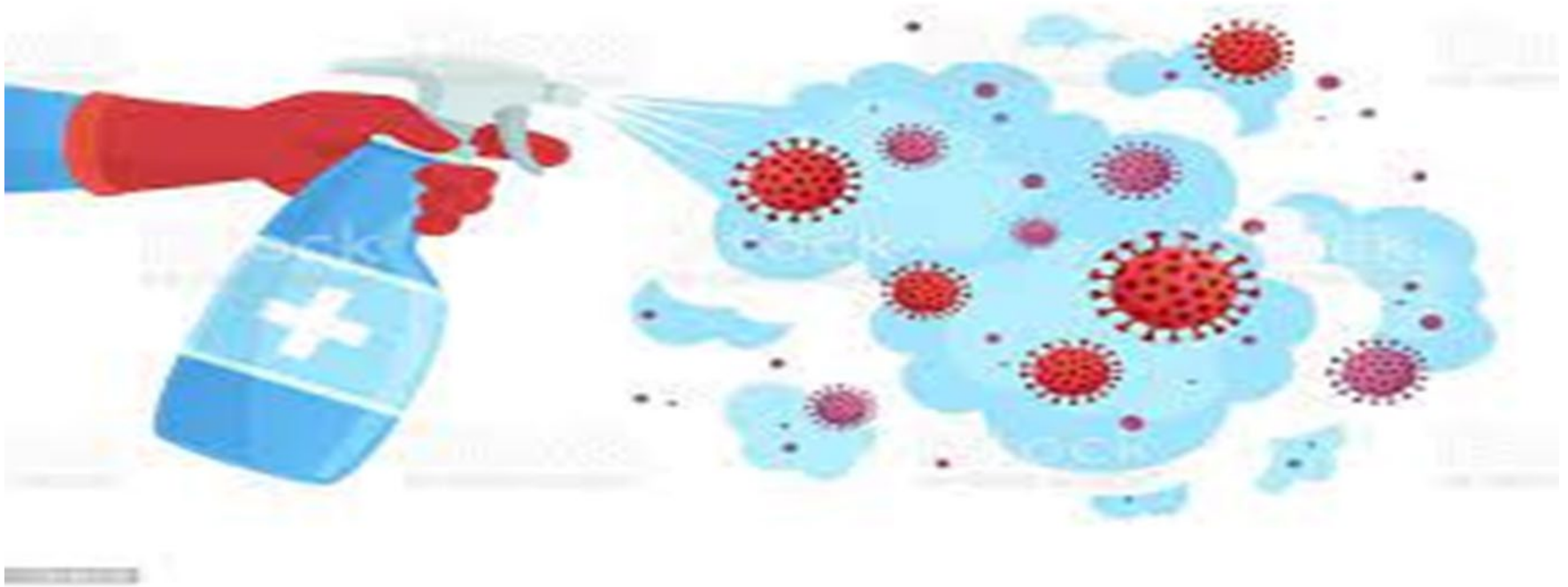
B. Block off area, cover area of spill with disposable towels, dispose of soiled towels, clean the area with detergent solution, wipe the surface area with fresh bleach solution & perform hand hygiene

C. Block off area, cover area of spill with disposable towels, wipe the surface area with fresh bleach solution, clean the area with detergent solution & perform hand hygiene

ANSWER:

B. Block off area, cover area of spill with disposable towels, dispose of soiled towels, clean the area with detergent solution, wipe the surface area with fresh bleach solution & perform hand hygiene

Disinfecting



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Choosing the Right Disinfectant

- Safety of staff and patients.
- Targeted microbes (hepatitis, HIV, C. Difficile, etc.)
- Surface type (cloth, metal, plastic, etc.)
- Disinfectant compatibility with surfaces and materials.
- Cost and ease of use.

Contact Times:

Sometimes called “dwell time or wet time,” is the amount of time a disinfectant needs to sit on a surface to effectively kill germs.

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Top 5 Chemical Disinfectants Used In Hospitals

1. Quaternary Ammonium
   - Low-level disinfectant
   - Kills most bacteria, enveloped viruses and some fungi

2. Hypochlorite
   - Most commonly used chlorine disinfectant
   - Kills bacteria, fungi and viruses

3. Phenolics
   - Disinfects non-porous surfaces and non-critical devices
   - Skin irritant
   - Dangerous to newborns

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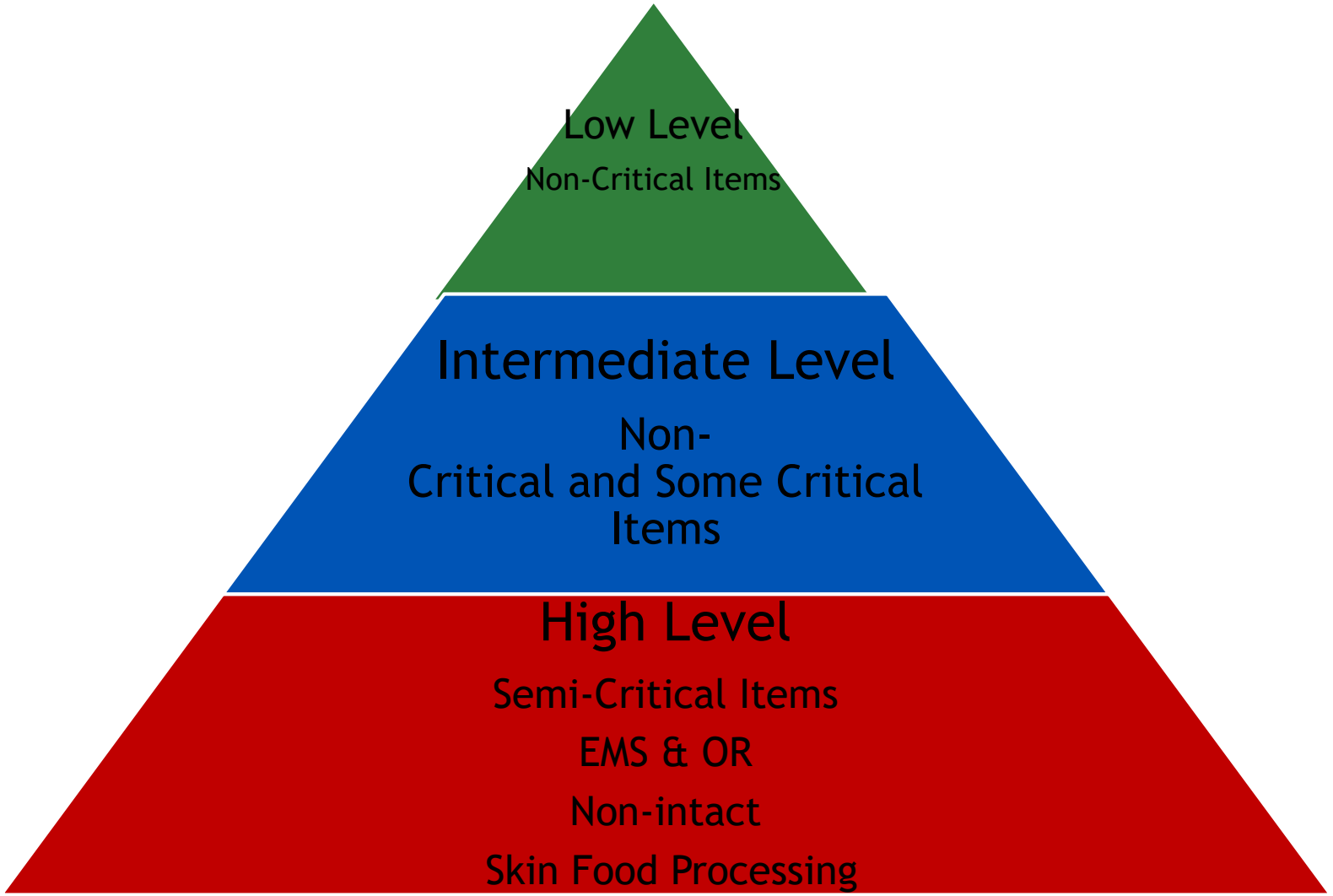
Top 5 Chemical Disinfectants Used In Hospitals (cont'd)

4. Peracetic Acid
   - Rapid acting disinfectant
   - Kills bacteria, viruses, fungi, mycobacteria and spores

5. Accelerated Hydrogen Peroxide
   - Safe for cleaning staff and the environment
   - Kills bacteria, viruses, pathogenic fungi, mycobacteria and blood borne pathogens

Levels of Disinfection



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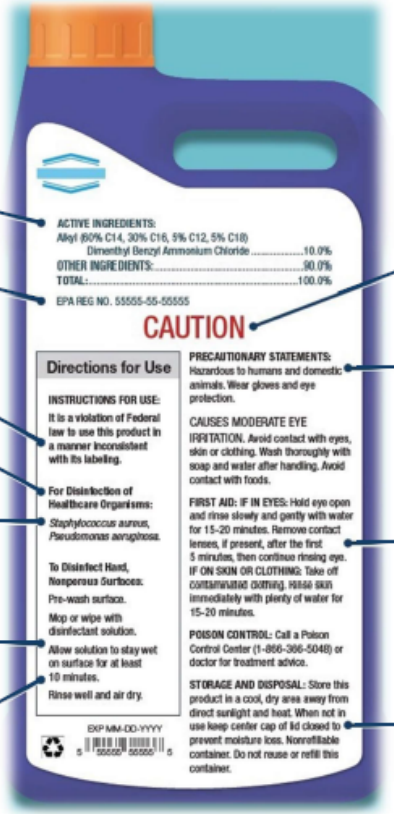
Key Components of A Disinfectant Product Label

Active Ingredients:
What are the main disinfecting chemicals?

EPA Registration Number:
U.S. laws require that all disinfectants be registered with EPA

Directions/Instructions for Use:
- Where should the disinfectant be used?
- What organisms does the disinfectant kill?
- What types of surfaces can the disinfectant be used on?
- How do I properly use the disinfectant?

Contact Time:
How long does the surface have to stay wet to kill organism listed on the label?



Signal Words (Caution, Warning, Danger):
How risky is the disinfectant if swallowed, inhaled or absorbed through the skin?

Precautionary Statements:
What PPE is required?

First Aid:
What should I do if I get the disinfectant in my eyes or mouth, my skin, or if I breathe it in?

Storage and Disposal:
- How should the disinfectant be stored and disposed when expired?
- What should I do with the container?

Tip:
Prior to infection control assessments, it can be helpful to request photos of disinfectant product labels

Always request the EPA registration number

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Properties of Ideal Cleaning and Disinfectant Products

Both Types of Products

- Nontoxic & environmentally friendly
- Easy to use with clear instructions for use
- Acceptable odor or odorless
- Stable and soluble in water
- Economical/low cost

Cleaning Products

- Efficacious and remove dirt, soil, and various organic substances

- Combined (one-step) cleaning-disinfectant products can generally be used in place of a two-step process when disinfection is indicated
- Review product label and adhere to contact time

Disinfectant Products

- Broad spectrum
- Fast acting (i.e., shorter contact time)
- Not affected by environmental factors
- Material compatibility & persistence
- Nonflammable
- Cleaning properties

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First Aid

- Follow any first aid instructions on the label.
- For more information call Poison Control at 1(800)222-1222.
- Have the product container or product label with you when calling a Poison Control Center, or doctor, or going for treatment.

COMPREHENSIVE PROGRAM FOR CLEANING AND DISINFECTING IN HEALTHCARE SETTINGS

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Measuring Cleanliness

Objective Methods for Evaluating Environmental Hygiene:

1. Direct Practice Observation
2. Swab Cultures
3. Agar Slide Culture
4. Fluorescent Markers
5. ATP Bioluminescence

Environmental Cleaning Programs

- Structured set of elements or interventions
- Standardized and multi-modal approach
- Demonstrates the best practices including the key program elements of:
  - organization/administration
  - staffing and training
  - infrastructure and supplies
  - policies and procedures
  - monitoring, feedback and audit

CDC Environmental Cleaning Tools

Evaluating Environmental Cleaning Toolkit:

- Options for Evaluating Environmental Cleaning Available for download pdf icon[PDF – 389 KB]
- CDC Environmental Checklist for Monitoring Terminal Cleaning pdf icon[PDF – 99KB]
- CDC Environmental Checklist word icon[Word – 52 KB]
- Environmental Cleaning Eval Worksheet excel icon[Excel – 63 KB]

Corrective Interventions

- Use A Cleaning Cart Setup Checklist
- Use Methodical Cleaning
- Color coded cleaning cloths or disposable
- Verify Use of Right Product At the Right Time

Reinforcement Strategies

- **System change:** easily accessible products at the right concentrations
- **Training and education:** all relevant staff are trained
- **Monitoring and feedback:** checking and providing feedback
- **Reminders in the workplace:** posters and signage
- **Institutional safety climate:** fostering a culture that values the importance of cleaning.

Facility Cleaning and Disinfection Program Challenges

- Staffing Challenges- Burnout and critical shortages
- Supply Chain Issues-Availability of healthcare approved products
- Lack of Standardize Practice and Protocols

https://www.infectioncontroltoday.com/view/ips-challenges-facility-cleaning-disinfection-programs

Certain core components can help create and sustain a clean, safe environment for patients, HCP, and visitors

Poll Question #4:

What type of environmental monitoring is visually inspecting an area after it is cleaned?

- ❑ Environmental marking
- ❑ Indirect observation
- ❑ Direct observation

Poll Question #4 Answer

Direct observation

Questions

Evaluation Reminder

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