

# Module 4. Decontamination & Environmental Cleaning

***Ministry of Health Liberia***  
***Division of Environmental & Occupational Health***

WASH & EH Package – Early recovery & Resilience Building from EVD outbreak

This module is an adaptation from the Safe & Quality Health Services (SQS) Package, 2015



# Learning Objectives

1. Define the 3 steps of decontamination
2. List and describe the process for cleaning and disinfecting
3. Discuss safe management of used linen
4. Discuss cleaning of reusable PPE



# Why is cleaning and disinfection important?

- Germs can survive:
  - on medical equipment (e.g. instruments)
  - on surfaces (such as floors and tables)
  - on clothing (including PPE)
  - in body fluids (such as blood and vomit)
- If done correctly, cleaning & disinfection removes and kills most germs



# What is Decontamination?

**Decontamination** ensures an item or object is safe for reuse.

There are three different steps:

- Cleaning – physical removal of dirt and germs
- Disinfection – kills almost all germs (i.e. 0.5% chlorine)
- Sterilization – kills ALL germs using special type of equipment (i.e. autoclave)



# Decontamination Process

1. **CLEAN** and remove visible waste using soap or detergent and water
2. **DISINFECT** using an effective disinfectant
3. **WASH OFF** any remaining disinfectant using clean water
4. Let air **DRY** or take outside to dry in the sun



# Classification of Instruments

## ■ NON-CRITICAL

- Any instrument that comes in contact with intact skin (i.e. blood pressure cuffs)
- Always be sure to clean between uses using towels/cloth soaked with disinfectant



# Classification of Instruments (2)

## ■ Semi-critical

- Any instrument that comes in contact with mucous membranes or non-intact skin (i.e. vaginal speculae)
- Always be sure to disinfect between uses,
- High level disinfection = Boiling Pot OR soaking in appropriate disinfectant



# Classification of Instruments (3)

## ■ Critical

- Any instrument that comes in contact with sterile tissue (i.e., delivery sets, surgical kits, catheters)
- Always be sure to sterilize critical items between uses (i.e. autoclave)





# Risks During Cleaning and Disinfection

- Poor cleaning & disinfection can spread infection to:
  - Patients
  - Cleaners
  - Visitors
  - Staff
- You should always:
  - Wear appropriate PPE based on risk of exposure
  - Follow recommended steps exactly



# Materials for Cleaning & Disinfection

- **Appropriate PPE**

- Often includes gown, rubber gloves, boots and face protection

- Soap and water

- Cloths and towels

- Bucket and mop

- Disinfectant

- General waste bin

- Medical waste bin



# Principles of Cleaning and Disinfection



# Why must we clean before disinfecting?

- All dirt and visible waste (e.g., body fluids) must first be removed/cleaned before using a disinfectant
- If we don't clean first, the disinfectant will not work



# Principles of Cleaning

- The basic principles of cleaning and disinfecting apply to all patient care areas
- Where possible, dedicate cleaning supplies in higher risk areas (e.g., delivery, OR)
  - Cleaning supplies for isolation should be kept and only used in isolation
- Always move from cleanest area to dirtiest area
- Always be sure to clean patient care equipment between each patient use



# DO NOT Spray Spills

- NEVER spray disinfectant directly on body fluid spills
  - It can create splashes or make the spill bigger
- Instead use towel or cloth to remove visible waste
- Once visible waste has been removed, clean area with disinfectant



# Decontaminating Reusable Cleaning Supplies

- Any reusable item (cleaning towels, buckets, mops) should be appropriately disinfected after use:
  1. **Clean**
  2. **Disinfect**
  3. **Wash off** using clean water
  4. **Dry**
- When possible, use disposable towels. Throw towels away in a medical waste bin immediately after use



# Recommended Cleaning Frequency

Item	Frequency
<b>Surfaces</b> (floors, tables, chairs)	<ul style="list-style-type: none"><li>• At least twice daily</li><li>• When visibly soiled</li></ul>
<b>Medical equipment</b> (axillary thermometers)	<ul style="list-style-type: none"><li>• After every patient</li></ul>
<b>Plates and utensils</b>	<ul style="list-style-type: none"><li>• After every patient</li></ul>
<b>Reusable PPE</b> (aprons, boots)	<ul style="list-style-type: none"><li>• After procedures</li><li>• After exiting an isolation area</li><li>• When visibly soiled</li></ul>
<b>Linens and mattresses</b>	<ul style="list-style-type: none"><li>• After every patient</li><li>• When visibly soiled</li></ul>





# Recommended Cleaning Frequency

Place	Frequency
<b>Screening area</b>	<ul style="list-style-type: none"><li>• At least twice daily</li><li>• After a patient with a suspected infectious disease</li></ul>
<b>Isolation area</b>	<ul style="list-style-type: none"><li>• At least once daily</li><li>• After every patient</li></ul>
<b>Non-Patient care areas</b>	<ul style="list-style-type: none"><li>• At least twice daily</li></ul>
<b>Latrines/toilets</b>	<ul style="list-style-type: none"><li>• At least twice daily</li><li>• When visibly soiled</li></ul>
<b>All areas</b>	<ul style="list-style-type: none"><li>• Immediately following possible contamination with blood or bodily fluids</li></ul>



# Cleaning in Isolation Areas

- Cleaners should be VERY careful when cleaning the isolation area
- Isolation areas should have their own cleaning supplies that are separate from clean patient care areas
- All waste from the isolation area is considered very contaminated and should be burned



# Management of Used Linen



# How to Manage Used Linen

- Use gown & gloves when handling used linen
- Scrape off excess blood and/or waste carefully into bucket
- Place linens into leak-proof bags or buckets labeled “soiled” for transport to laundry
  - **Linens used in isolation should be clearly labeled and kept separate from other used linens**



# How to Clean Used Linen

- When handling used laundry appropriate PPE should be worn
  - Gloves
  - Gown
  - Face shield OR mask and goggles
- Use of a washing machine for cleaning used linens is preferred



# SCENARIO



# How to Clean Reusable PPE



# How to Clean Reusable PPE

1. Collect PPE items (boots, rubber glove, aprons, goggles and face shields) from the PPE doffing area
2. Rinse any excess blood and/or waste carefully into waste bucket
3. Clean with soap and water to wash any soiled areas
4. Soak in appropriate disinfectant (
5. Rinse with clean water
6. Hang to dry
7. Dump used disinfectant into latrine





# One Bucket = One Job

- There are many buckets that are used for cleaning and removing waste
- A single bucket should not be used for more than one job because this can spread germs
  - For example, do not use a bucket as a commode one day and the next day use it to store chlorine solution
  - Buckets for specific purposes must be labeled and, if possible, color



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Questions?

