

# C. difficile Infection Reduction in Long-Term Care: Environmental Cleaning and Disinfection Bite-Sized Learning



Paula St. Hill, MPH, a-IPC

March 2023

 **ALLIANT**  
HEALTH SOLUTIONS

  
QIN-QIO  
Quality Innovation Network -  
Quality Improvement Organizations  
CENTER FOR MEDICARE & MEDICAID SERVICES  
QUALITY IMPROVEMENT & INNOVATION GROUP

# Paula St. Hill, MPH, a-IPC

## TECHNICAL ADVISOR, INFECTION PREVENTION

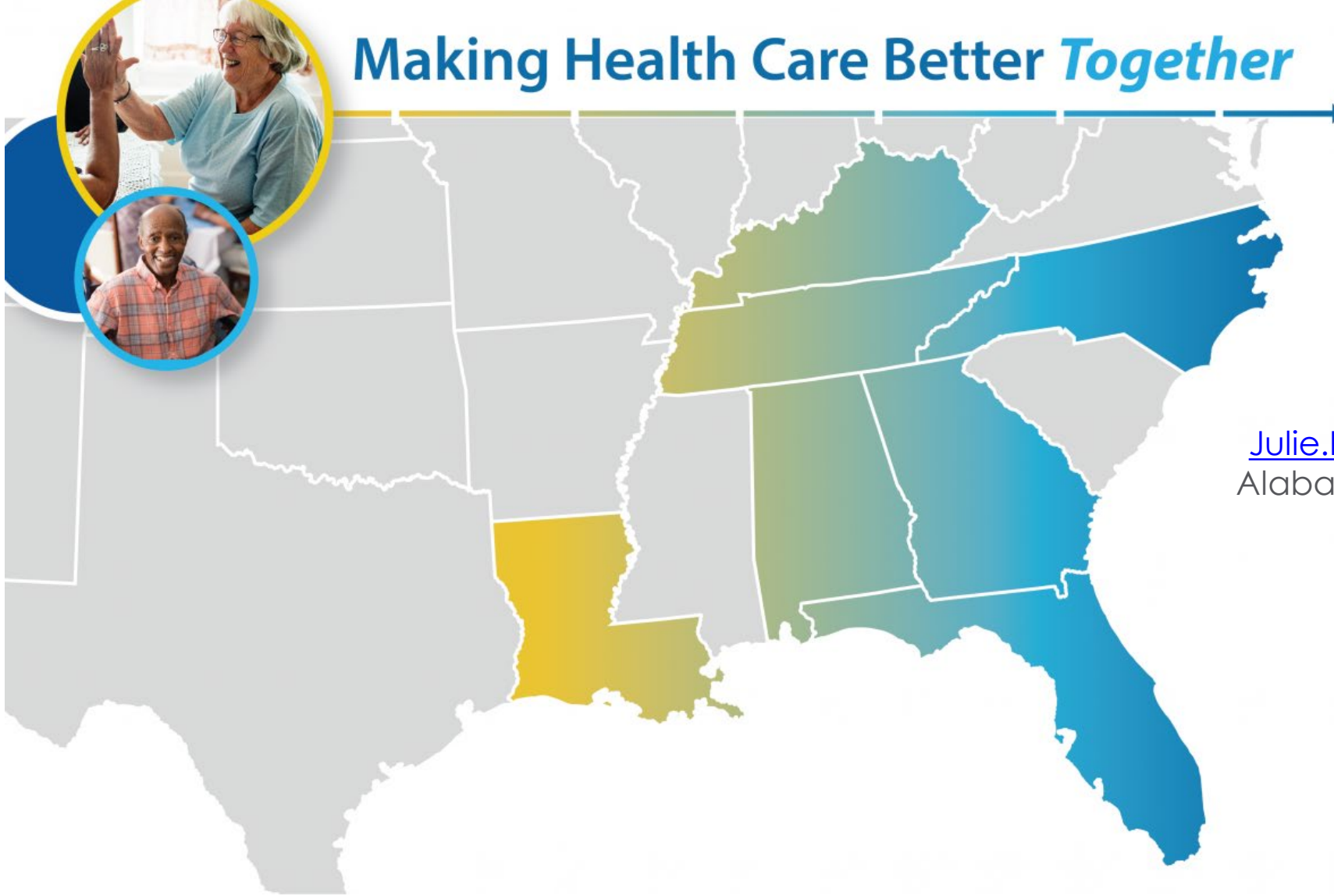
Paula is a doctoral student with a diverse background in public health, infection control, epidemiology and microbiology. She has always enjoyed public health and identifying ways to improve health outcomes, specifically those related to healthcare-associated infections. She has 10 years of health care experience.

*Paula enjoys spending time with her friends and family.*

Contact: [paula.sthill@allianthealth.org](mailto:paula.sthill@allianthealth.org)



# Making Health Care Better *Together*



Julie Kueker  
[Julie.Kueker@AlliantHealth.org](mailto:Julie.Kueker@AlliantHealth.org)  
Alabama, Florida and Louisiana



Leighann Sauls  
[Leighann.Sauls@AlliantHealth.org](mailto:Leighann.Sauls@AlliantHealth.org)  
Georgia, Kentucky, North Carolina and Tennessee

## Program Directors

# Environmental Cleaning and Disinfection

In this session, the learner should be able to:

- Differentiate between cleaning and disinfecting
- Identify EPA List K cleaning agents effective against *C. difficile*
- Utilize a basic guideline to describe who cleans what in the nursing facility



# Cleaning vs. Disinfecting: What Is Cleaning?

- Cleaning is the process of physically removing germs, dirt and other impurities from surfaces.
- To clean a surface, use an all-purpose cleaning agent and a microfiber cloth or terry rag to lift soils away.
- Cleaning only removes germs and soils from the surface. It does not kill them. Germs that were not removed will continue reproducing and spreading.

<https://www.epa.gov/coronavirus/whats-difference-between-products-disinfect-sanitize-and-clean-surfaces>



# Cleaning vs. Disinfecting: What Is Disinfecting?

- Disinfection describes the process of eliminating many or all pathogenic microorganisms, except bacterial spores, on inanimate objects.
- Disinfectants do not clean soils from surfaces.
- Disinfectants must be used after cleaning agents because they can not break through the soil on surfaces.
- To kill germs, most disinfectants contain either quaternary ammonium chloride (QUATS), peroxide (Hydrogen-Peroxide-based), or hypochlorite (bleach-based).

<https://www.epa.gov/coronavirus/whats-difference-between-products-disinfect-sanitize-and-clean-surfaces>



# EPA List K

## **Products on List K:**

- Products on list K are registered for use against *Clostridium difficile* spores (*C. diff*). EPA has reviewed required laboratory testing data demonstrating that these products kill *Clostridium difficile* spores (*C. diff*).

## **How to Check if a Product is on List K:**

- First, find the EPA registration number on the product label. Look for “EPA Reg. No.” followed by two or three sets of numbers (ex. 1234-12 or 1234-12-123).
- On the Disinfectant list, search for the registration number exactly as it appears on the label.
- Once you see the results on the disinfectant list, make sure to check that the product's label includes directions for use against *C. diff*.
- Regardless of whether you are using a primary registration product or a supplemental distributor product, always check the label has the corresponding directions for use for the relevant pathogen.



# EPA List K (continued)

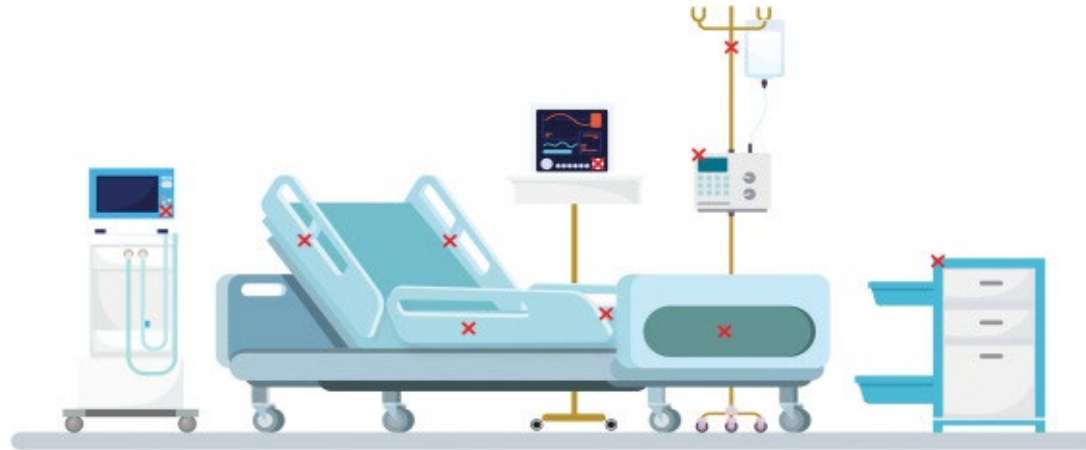
Registration Number	Active Ingredients/s	Product Name	Company	Contact time (time surface should remain wet)	Formulation Type	Surface Types	Use sites (Hospital, Institutional, Residential)
75266-1	Sodium Hypochlorite	Activate 5.25% Institutional Bleach	Deardorff Fitzsimmons Corporation	4	Dilutable	Hard Nonporous (HN)	Hospital; Institutional
777-83	Sodium Hypochlorite	Lysol Brand Disinfectant Bleach Plus	Reckitt Benckiser	5	Ready to Use	Hard Nonporous (HN)	Hospital; Institutional; Residential
84526-6	Hydrogen Peroxide; Silver Nitrate	Halomist	Halosil International, Inc.	10	Ready to Use	Hard Nonporous (HN)	Hospital; Institutional; Residential
84697-2	Sodium Hypochlorite	Regular Scent Concentrated Bleach	GS Liquid Technologies, Inc.	10	Dilutable	Hard Nonporous (HN)	Hospital; Institutional; Residential
87518-6	Sodium Hypochlorite	Sporex	HSP USA, LLC	3	Ready to Use	Hard Nonporous (HN)	
88089-2	Hydrogen Peroxide; Peroxyacetic Acid (Peracetic Acid)	Peridox	Contec, Inc.	3	Ready to Use	Hard Nonporous (HN)	Hospital; Institutional; Residential
88089-4	Hydrogen Peroxide; Peroxyacetic Acid (Peracetic Acid)	Peridox RTU	Contec, Inc.	3	Ready to Use	Hard Nonporous (HN)	Hospital; Institutional; Residential





# Who Cleans What?

It has been long known that numerous environmental sites and devices can become contaminated with *C. diff*. While the risk of room contamination is highest for patients with CDI, patients with asymptomatic *C. diff* colonization can also contaminate their environment. Routine cleaning and disinfecting of beds, commodes and other frequently touched surfaces remain important.



# Environmental Cleaning Data Tool Sample

ENVIRONMENTAL CLEANING DATA TOOL					
SAMPLE ENVIRONMENTAL CHECKLIST - SUMMARY FORM					
FOR DAILY AND TERMINAL CLEANING ROOM OBSERVATIONS					
<<Modify instructions as needed to comply with data collection protocol or internal policies.>>					
Observe eight daily cleanings per month (try to observe about two per week) and one terminal cleaning per month. Report your results in the highlighted cells.					
Your hospital _____		→			
Reporting period _____		→			
Enter number of <b>routine</b> cleanings _____		→			
Enter number of <b>terminal</b> cleanings _____		→			
TOTAL CLEANINGS					
Instruction	Component	# Times Task Performed	# Times Task NOT Performed	# Times Not Applicable	Enviro-Score
At start, perform hand hygiene				Applicable to ALL	
Put on PPE					
Needed supplies/equipment					
High-touch surfaces: Disinfect w/hypochlorite-based disinfectant	Door knobs				
	Door surface				
	Light switches				
	Window sills				
	Spot clean walls with disinfectant cloth				
	Medical equipment (e.g., IV controls)				
	Bed rails				
	Call button				
	Phone				
	Over bed table & drawer				
	Countertop				
	Furniture				
	Arms of patient chair				
	Seat of patient chair				
All other misc. horizontal surfaces					
Damp Dust:	Overhead light (if the bed is empty)				
	TV & stand				
Clean:	Lights				
	Bathroom door knob				
	Mirror				
	Tub/shower				
Bathroom:	Faucets (at sink)				
Disinfect w/hypochlorite-based disinfectant	Bathroom handrails				
	Sink				
	Toilet lever/flush				
	Toilet horizontal surface/seat				
Clean Floor:	Dust mop tile				
	Wet mop tile				
	Bed frame				
For TERMINAL CLEANING, damp dust:	Mattress covers				
	Pillows				
	Blood pressure cuffs, as per hospital policy				
	Remove unused linen and other such items				
EXIT ROOM AFTER CLEANING IS COMPLETE:					
Remove trash, mops, soiled curtains, discard wipes/cloths, etc.					
Dispose of gloves, gown, wash hands					
RE-STOCK ROOM with SUPPLIES and EQUIPMENT as needed:					
After Daily Cleaning (Replace as needed)	Hand sanitizer				
RE-ENTER with PPE - GOWN & GLOVES	Paper towels				
	Replace curtains as needed				
	Replace trash liner				
	Remake bed with clean linen				
After TERMINAL CLEANING, gowns/gloves not needed; it's a clean room	Replace as needed: Pillows, mattresses, pillow covers, mattress covers				
	Replace curtains as needed				
Other:					
Change mop heads after each room				Applicable to ALL	
Remove PPE before walking in hallway					
Perform hand hygiene					
Overall Enviro-Score					



# Don't Forget Hand Washing!

Washing with soap and water is the best way to prevent the spread from person to person. *C. diff* spores are resistant to alcohol; therefore, hand washing with soap and water remains important.



# Thank you!

## Please contact any member of the Patient Safety Team for further questions!



**Paula St. Hill, MPH, A-IPC**  
Technical Advisor, Infection Prevention  
[Paula.Sthill@AlliantHealth.org](mailto:Paula.Sthill@AlliantHealth.org)



**Amy Ward, MS, BSN, RN, CIC, FAPIC**  
Patient Safety Manager  
[Amy.Ward@AlliantHealth.org](mailto:Amy.Ward@AlliantHealth.org)



**Erica Umeakunne, MSN, MPH, APRN, CIC**  
Infection Prevention Specialist  
[Erica.Umeakunne@AlliantHealth.org](mailto:Erica.Umeakunne@AlliantHealth.org)



**Donald Chitanda, MPH, CIC, LTC-CIP**  
Technical Advisor, Infection Prevention  
[Donald.Chitanda@AlliantHealth.org](mailto:Donald.Chitanda@AlliantHealth.org)

# Making Health Care Better Together



ALABAMA • FLORIDA • GEORGIA • KENTUCKY • LOUISIANA • NORTH CAROLINA • TENNESSEE



This material was prepared by Alliant Health Solutions, a Quality Innovation Network – Quality Improvement Organization (QIN – QIO) under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services (HHS). Views expressed in this material do not necessarily reflect the official views or policy of CMS or HHS, and any reference to a specific product or entity herein does not constitute endorsement of that product or entity by CMS or HHS. Publication No. 12SOW-AHS-QIN-QIO TO1-PCH--3540-04/07/23

