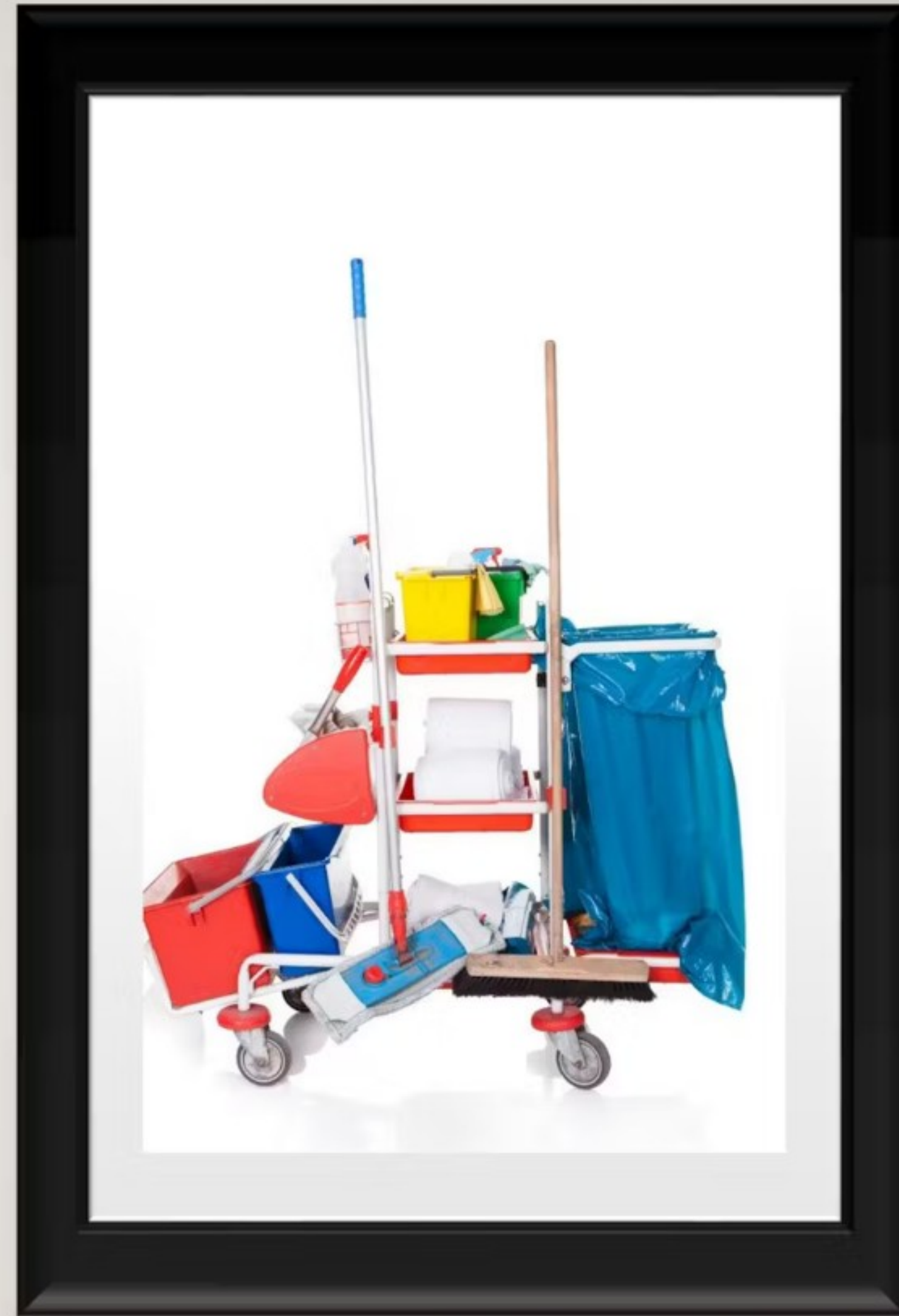


CARTS, CADDIES & WHEELS, OH MY!

INFECTION CONTROL AND
HEALTHCARE ENVIRONMENTAL
CLEANING

Presented by:
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April 24, 2024 North Dakota Infection Prevention State Conference



DISCLOSURES:

- Nothing to disclose



OBJECTIVES

UPON COMPLETION, THE PARTICIPANT WILL BE ABLE TO:

1. Describe common pathogens that can be spread on fomites in healthcare settings
2. Describe the process used by environmental services to reduce the risk of spreading pathogens while performing environmental cleaning
3. Describe 5 best practices used for infection prevention and control related to environmental cleaning

Instructions



FOMITES

- What are they?
- EVS is high risk for fomite involved cross transmission
- Includes
 - Carts, caddies, closets
 - Water buckets
 - Textiles and equipment
 - Floor scrubbers (tanks)
 - Water holding equipment-carpet cleaning machines, etc.
 - Tools and equipment
 - And More!

BACKGROUND

- Is there a difference between Healthcare EVS Cleaning and Home or Hospitality Cleaning?
- Basic principles: Clean to dirty, high to low, one direction, damp dusting, no turbulence, prevent cross contamination
- Requires specialized training, competency of staff and supervisors/managers

CDC RECOMMENDATIONS

- Appropriately train environmental service workers (and others who clean) on proper use of PPE and clean/disinfection of the healthcare environment
- Have environmental service workers use checklists to ensure all room surfaces are cleaned/disinfected
- Assure that nursing and environmental service have agreed what items (e.g., sensitive equipment) are to be clean/disinfected by nursing and what items (e.g., environmental surfaces) are to be cleaned/disinfected by environmental service workers

THE BENEFITS OF EFFECTIVE EVS PROGRAMS IS EVIDENCE-BASED

- Over the past 20 years, substantial scientific evidence has accumulated showing that contamination of environmental surfaces plays an important role in transmission of some healthcare pathogens.
- Study from 2016 (Wei) showed travel of viruses from floor of room to equipment on the unit
- Pathogen transmission most often occurs via **hands of HCP**, as well as on **hospital surfaces** and **medical equipment**
- Routine and terminal cleaning of room surfaces by cleaning staff (EVS) and medical equipment by nursing staff often is inadequate
- ~50% of hospital surfaces were not adequately cleaned and disinfected when they appeared clean

THE RISK IS REAL!

Being hospitalized in room previously occupied by a colonized or infected patient has been shown to be a risk factor for the next patient admitted to the room

- Example: If the previous patient had *C. difficile*, a new patient has **235 %** increased risk of acquiring the *C. diff* germs during their stay in the room

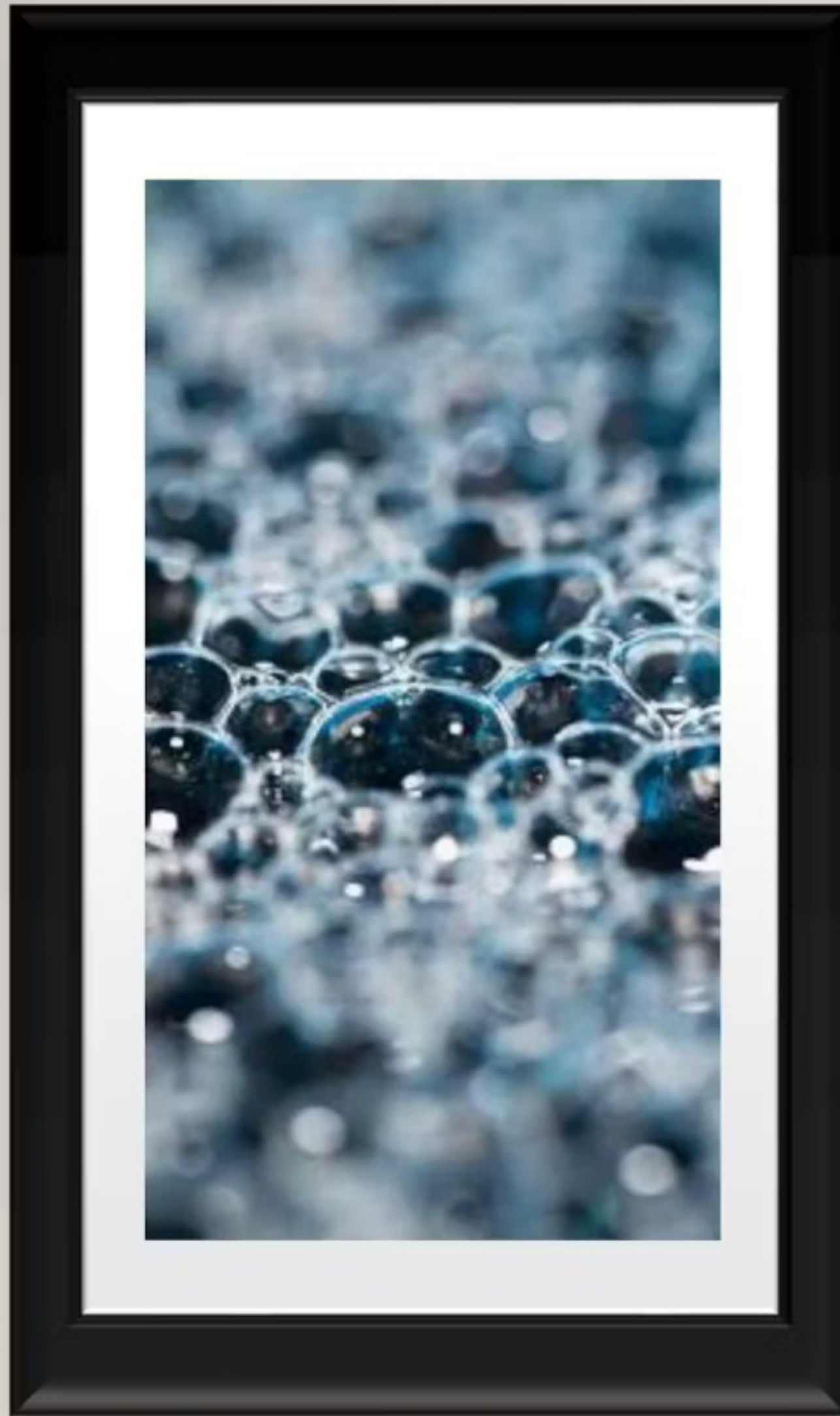


Reference: "Disinfection and Sterilization: The Good, The Bad and The Ugly" Presentation by Dr. Rutala at APIC 2016 www.disinfectionandsterilization.org

ENVIRONMENTAL SURVIVAL

- *Staph aureus* (including MRSA) – < 12 months
- *Enterococcus* (including VRE) – up to ~ 4 years
- *C. difficile* (spores) – up to five months
- Norovirus species – more than 40 days
- *Acinetobacter spp.* – 3 days to 11 months

Adapted from Hota B, et al. Clin Infect Dis 2004;39:1182-9 and
Kramer A, et al. BMC Infectious Diseases 2006;6:130



CLEANING...

- Cleaning is the physical removal of foreign material (e.g., dust, soil, blood) from a surface
- Cleaning physically removes rather than kills microorganisms using water, detergents, and mechanical action
- Cleaning is always essential prior to disinfection or sterilization
- An item that has not been cleaned cannot be assuredly disinfected or sterilized

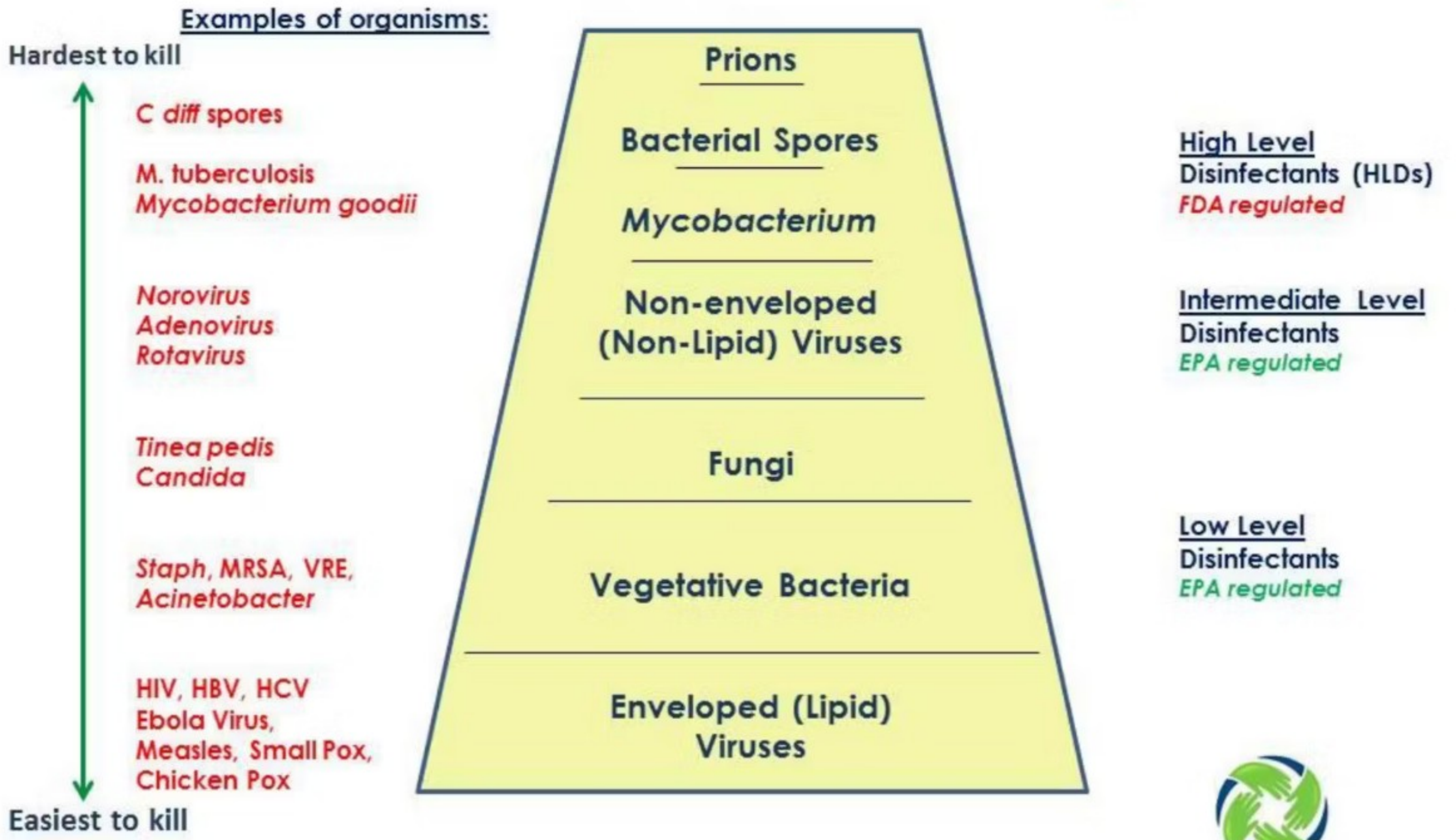
CLEANING AND DISINFECTING IN HEALTHCARE

- EPA registered healthcare disinfectants often are a “one-step” process to both clean and disinfect as they have a detergent included
- Healthcare facilities should use an EPA registered hospital disinfectant and follow manufacturer’s directions for use

SURFACE DISINFECTION IN HEALTHCARE

- Disinfection usually involves chemicals, heat, or ultraviolet light.
- Levels of disinfection vary with the type of product used.
- Disinfectants must be effective against *Staphylococcus aureus* and *Pseudomonas aeruginosa* to be EPA registered hospital disinfectants. In addition, those with tuberculocidal claims must be effective against *Mycobacterium bovis* BCG.

HEALTHCARE: Non-Critical Surface Disinfection Activity



HandsOn IC Consultative Services
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PATHOGENS WITH ADDITIONAL DISINFECTION RECOMMENDATIONS

- *C. difficile*
- *Norovirus*
- *Acinetobacter*
- *Candida auris*

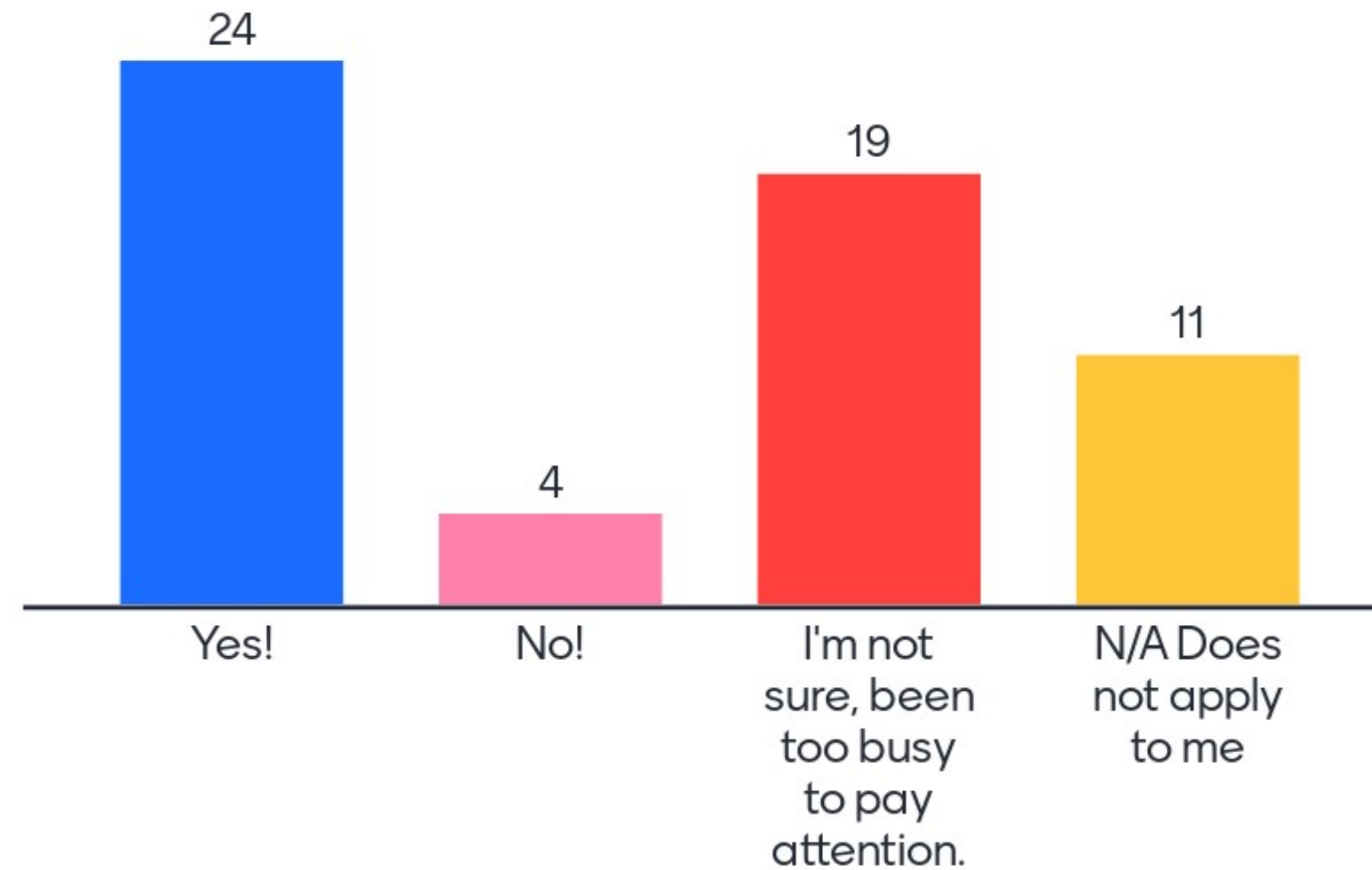


ENHANCED CLEANING/DISINFECTION RECOMMENDATIONS DURING OUTBREAKS

Organism	Category: Bacteria Virus Fungi	Route of spread	Note	Survives in environment	Special Cleaning Recommendations for Outbreaks?
C. difficile	Bacteria	Fecal/ Oral	Spore forming	Weeks-months	Sporicidal claims for Outbreak/as needed for hyper-endemic
Norovirus	Virus	Fecal/ Oral, aerosol. droplets (vomit)	Highly contagious	Days - months	EPA hospital registered disinfectant with Norovirus claims,
Acinetobacter spp	Bacteria	Contact	MDRO strains = outbreaks, Mortality <50%	Days - months	Use EPA hospital registered disinfectant, "Bundle approach", possible unit closures
Candida auris	Fungi	Contact	Emerging pathogen	Unknown, persists on surfaces	C. diff spore claim for daily/terminal cleaning/disinfection or EPA List P



Do your facility EVS carts meet with the Infection Control needs of your program?



CARTS

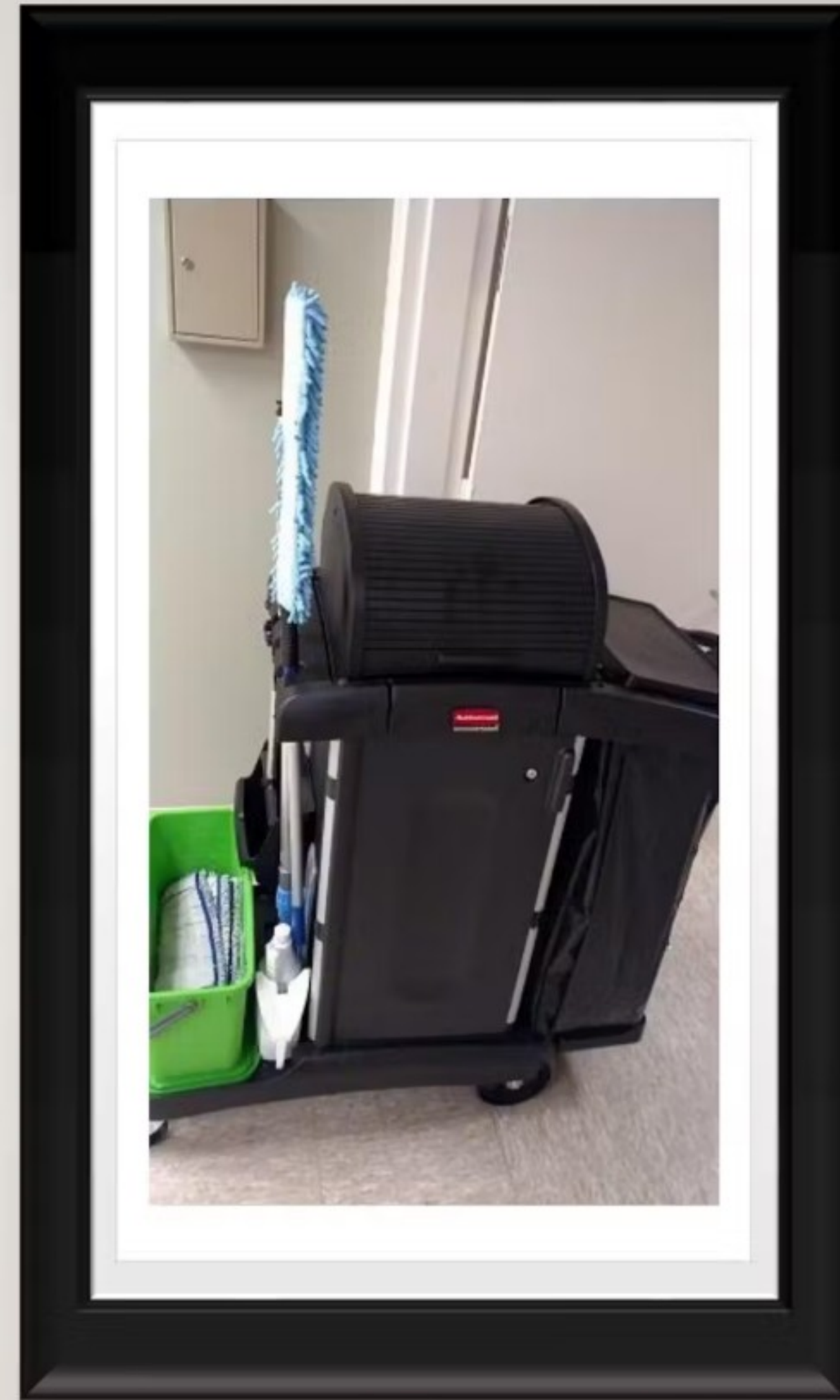
Best Practices include:

- Ability to enclose supplies and lock (functional)
- Made from cleanable material
- Provides ways to separate clean from soiled, paper from liquid, etc.
- Portable, easy to maneuver, designed for efficiency
- Large enough to contain supplies and tools but small enough to fit through the halls!



STANDARD CART SET UP PROCEDURE

- Includes list of items to stock
- To be cleaned daily at end of shift
- To be treated as a “clean” area/item
- No food, drinks, personal storage
(lockers should be provided to staff)

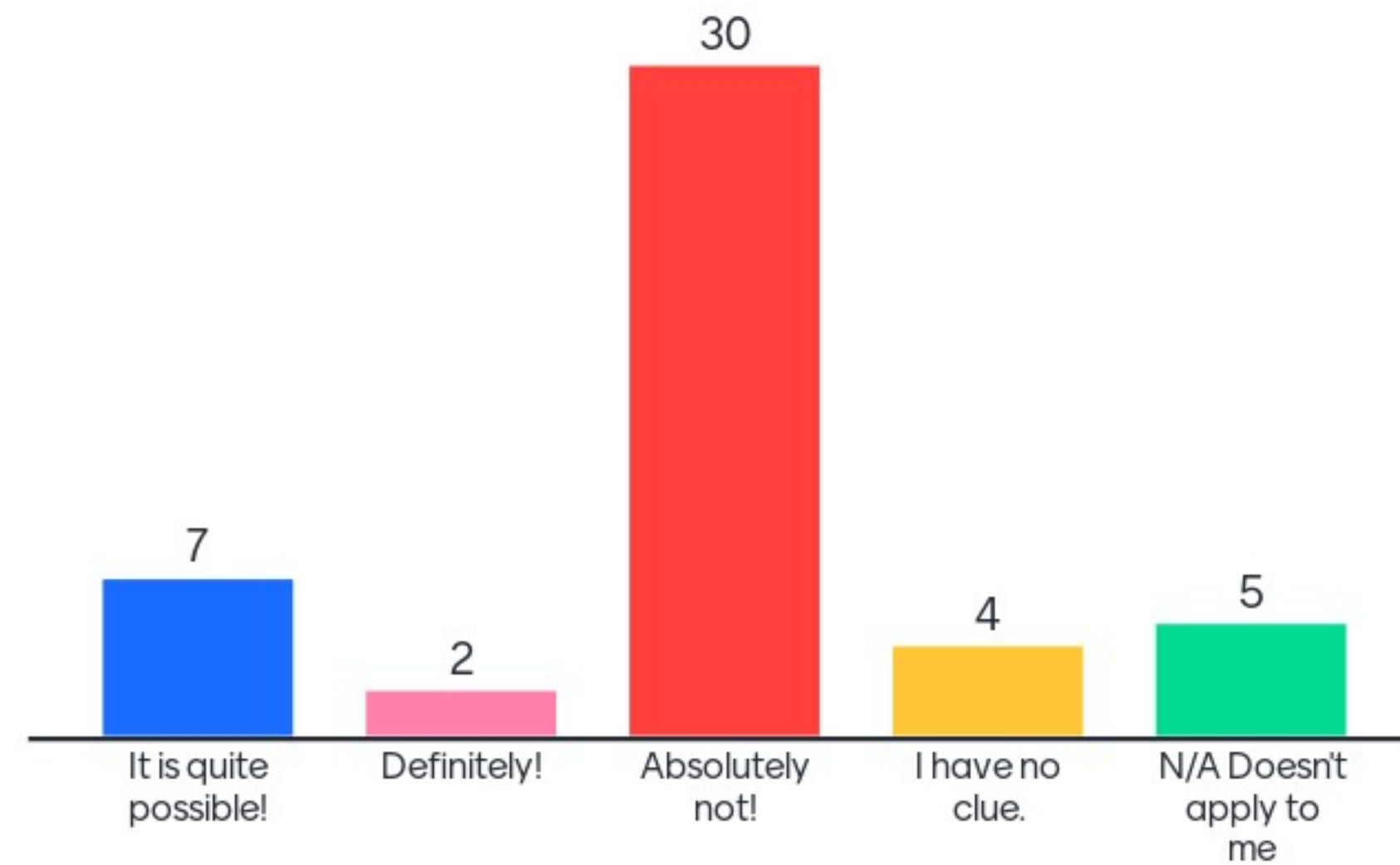


TOOLS

- Designed for the job of healthcare cleaning
- Clean, in good repair and can be easily cleaned and disinfected as needed.
- Maintained in a clean and sanitary manner (i.e. water reservoirs in floor scrubbers, carpet cleaning equipment, etc.)



If Debbie visited my facility today she would find similar feather dusters like the one pictured.



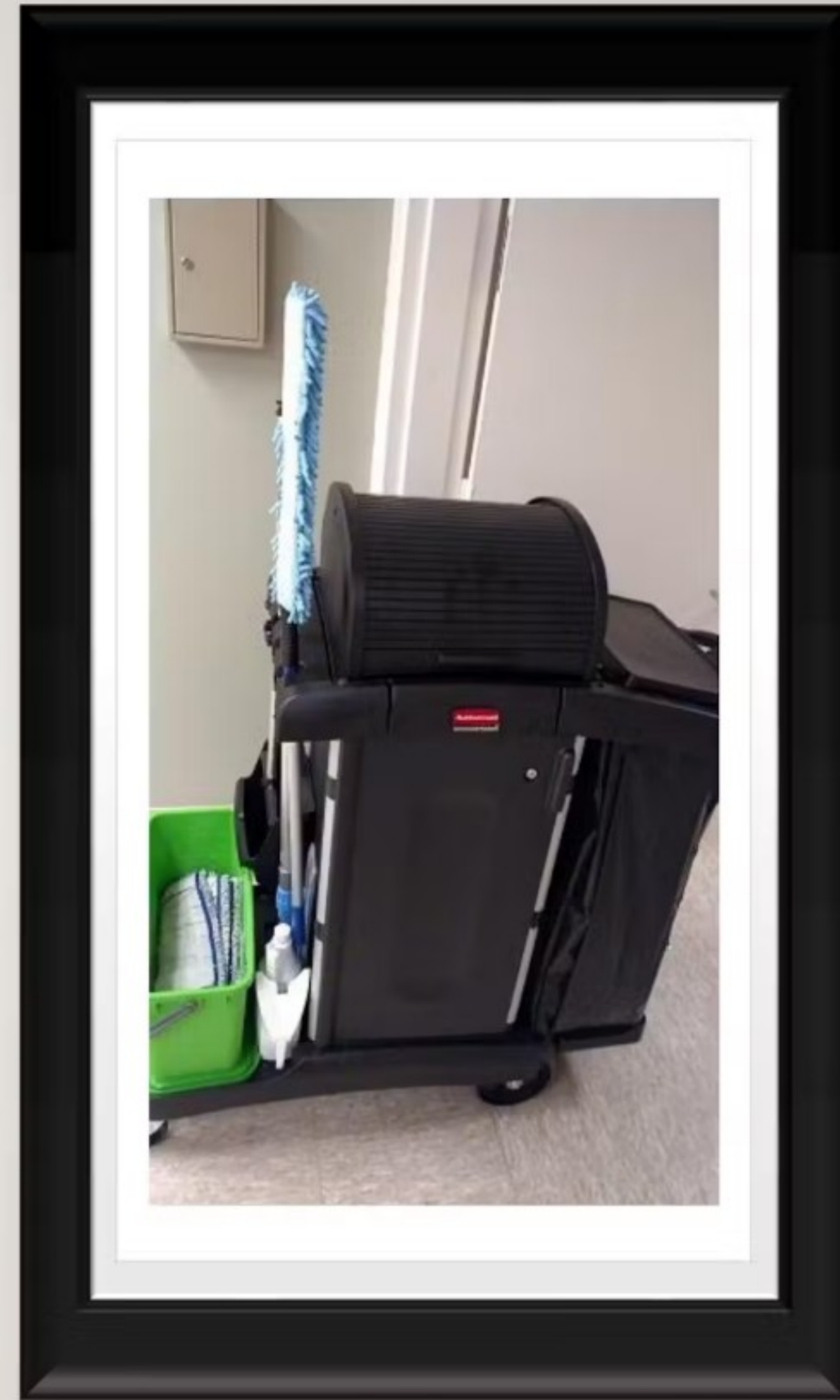
CADDY USE BY EVS TEAMS

- Portable
- Cleanable Surface
- Has handle for carrying
- Intended to carry supplies from cart into work room
- Intended to prevent workers working from cart (clean) when cleaning rooms (soiled gloves)
- Separate from Toilet Bowl Caddy (i.e. Jonny Mop set up)



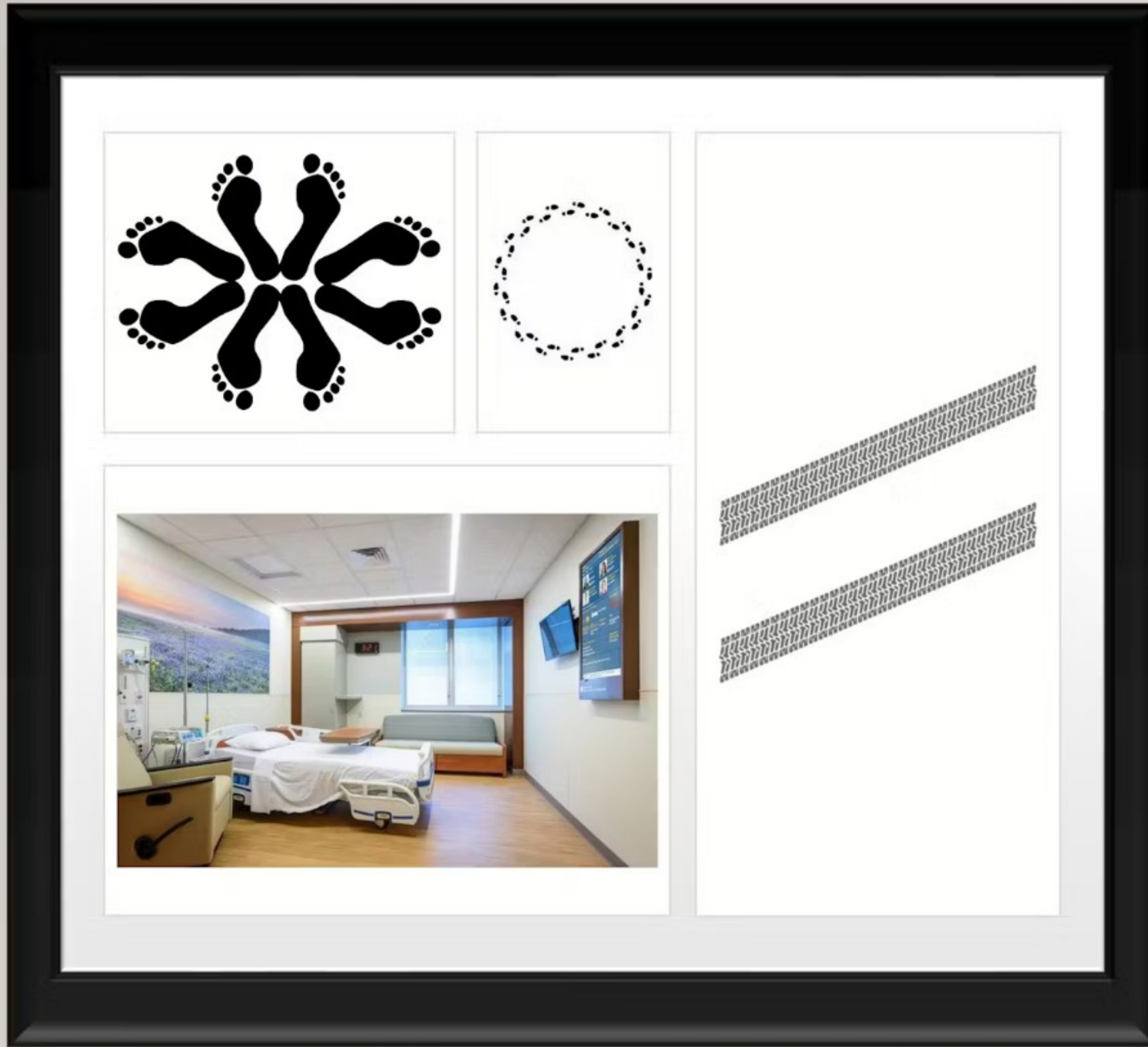
STANDARD CART SET UP PROCEDURE

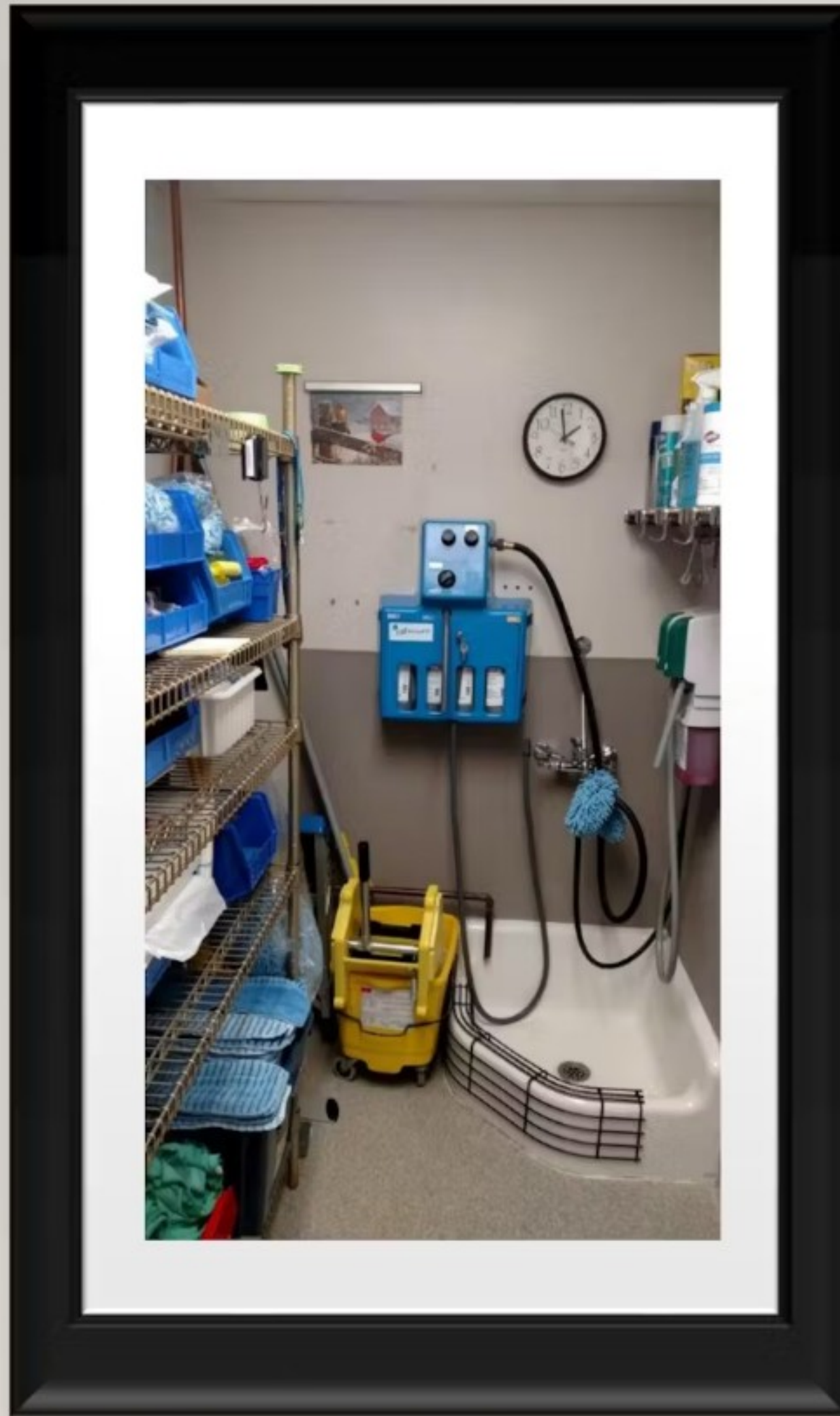
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WHEELS

How germs move
in busy healthcare
environments...





CLOSETS

- Keep well organized
- Clean area, no storage or waste or soiled items or equipment in this area
- Sink should “look clean enough to do your dishes in”
- Stored items off floor
- Ceiling integrity intact
- Paper away from water sources
- Paper stored over liquids, chemicals, etc.
- Clean and disinfect on regular basis.
- Utilize goggles when working with concentrate disinfectant in dispensing cabinets
- NEVER use disinfectants unless dispensed from cabinet mixer or equivalent.

REACH STUDY

The Researching Effective Approaches to Cleaning in Hospitals (REACH) study

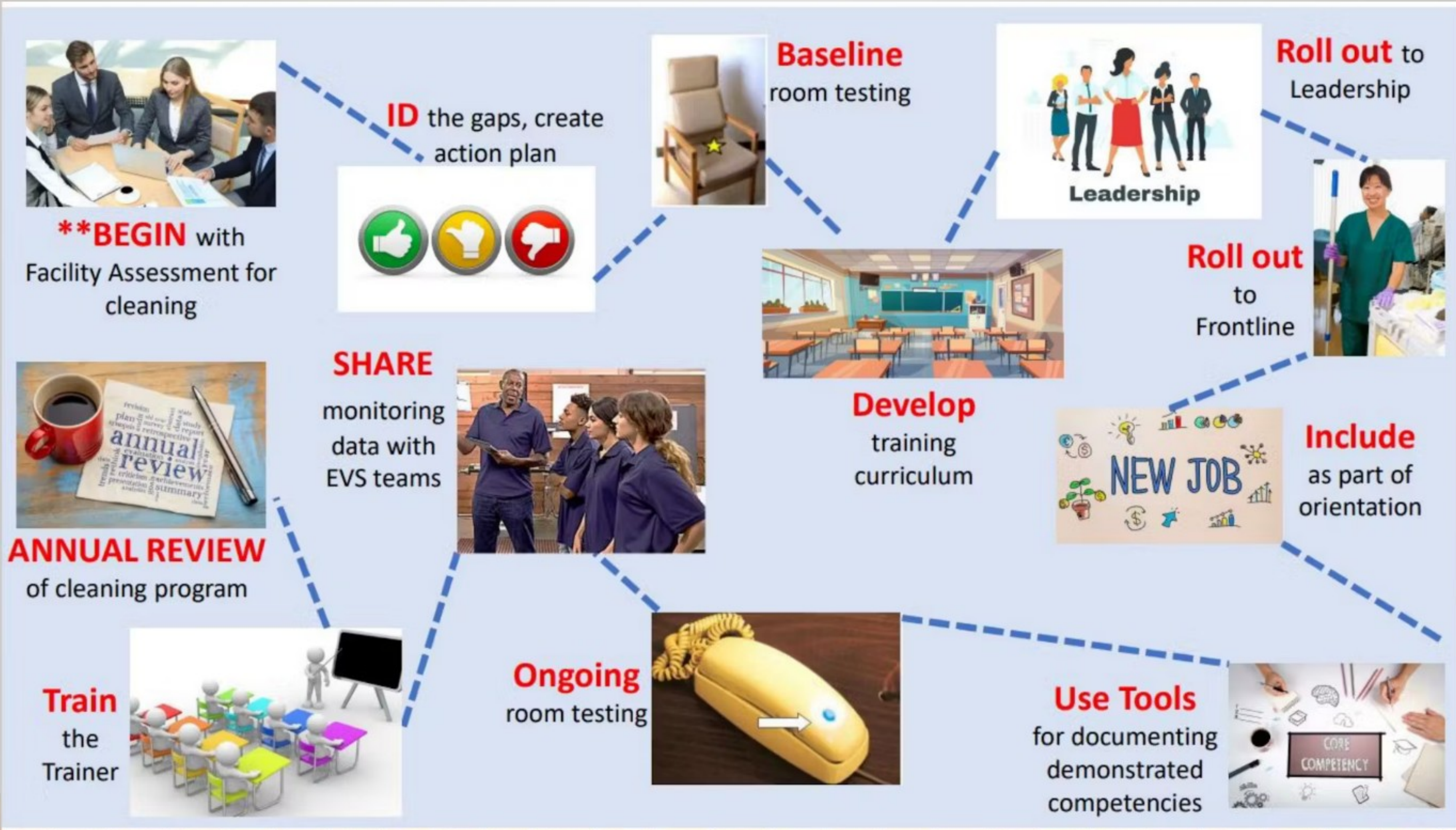
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Published 2019 in the Lancet. Included 11 hospitals in Australia. The REACH cleaning bundle was successful at improving cleaning thoroughness and showed great promise in reducing vancomycin-resistant enterococci infections. Our work will inform hospital cleaning policy and practice, highlighting the value of investment in both routine and discharge cleaning practice.

Published: March 08, 2019 DOI: <https://doi.org/10.1016/S1>



REACH STUDY CONCEPT



PROGRAM OF EXCELLENCE

- Training and competencies starting with leaders then out to their teams on the front lines
- Weekly and Monthly on-going educational sessions in huddles and Poster board IC training centers
- Validation by use of demonstrated competencies for key processes
- Quality Improvement program includes validation measures for cleaning efficacy that is reported back to the front-line team.
 - Inspections
 - FM
 - ATP

THANK YOU!

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