Cleaning and Disinfection and Reprocessing Reusable Equipment

Infection Preventionist Training for Skilled Nursing Facilities

Healthcare-Associated Infections Program
Center for Health Care Quality
California Department of Public Health

Objectives

- Describe the role of the environment in transmitting infections
- Discuss strategies to ensure effectiveness of cleaning and disinfection
- Demonstrate use of adherence monitoring tools and feedback
- List areas where infection prevention environmental assessments should be performed
- Identify determinants for low, intermediate, and high-level disinfection and the Spaulding classification system
- Review examples of non-critical, semi-critical, and critical devices

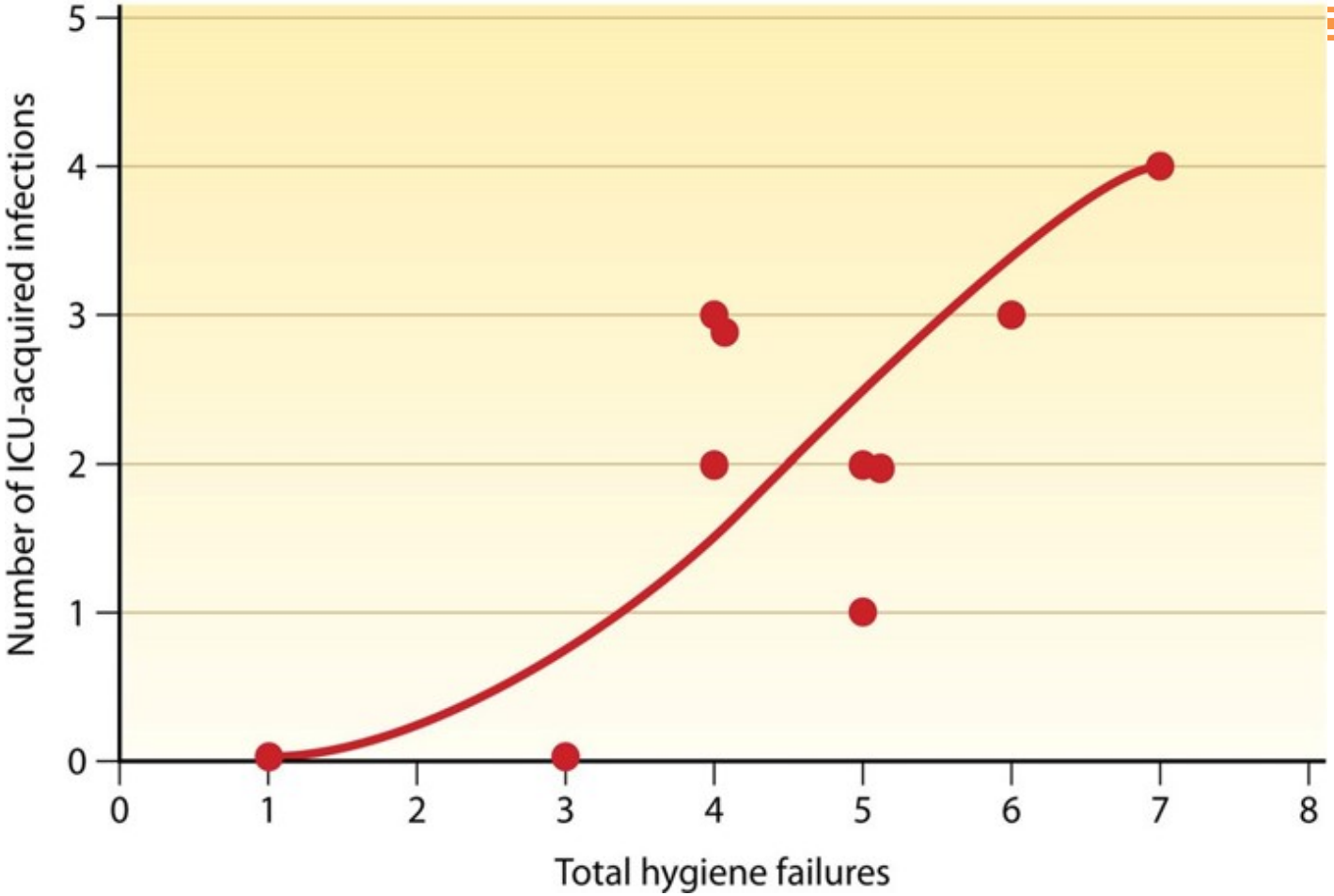
ROLE OF ENVIRONMENTAL SURFACES IN DISEASE TRANSMISSION

Contaminated Environmental Surface Leading to Patient or Resident Infection

1. Surface becomes contaminated by contact or droplet spread
2. Organisms survives on the surface
3. Surface touched by a second person, who picks up enough organisms (sufficient inoculum)
4. Second person omits, or poorly performs, hand hygiene
5. Person transmits the organism to a third person or another object, in sufficient quantity, to cause disease

The Inanimate Environment., Bennett & Brachman's Hospital Infections 6th Ed. 2014
Chou. APIC Text of Infection Control & Epidemiology. 2013
HICPAC /CDC Isolation Guidelines. 2007

Relationship Between Bioburden and HAIs



American Society for Microbiology (2014)
(dx.doi.org/10.1016/j.idc.2016.04.010)

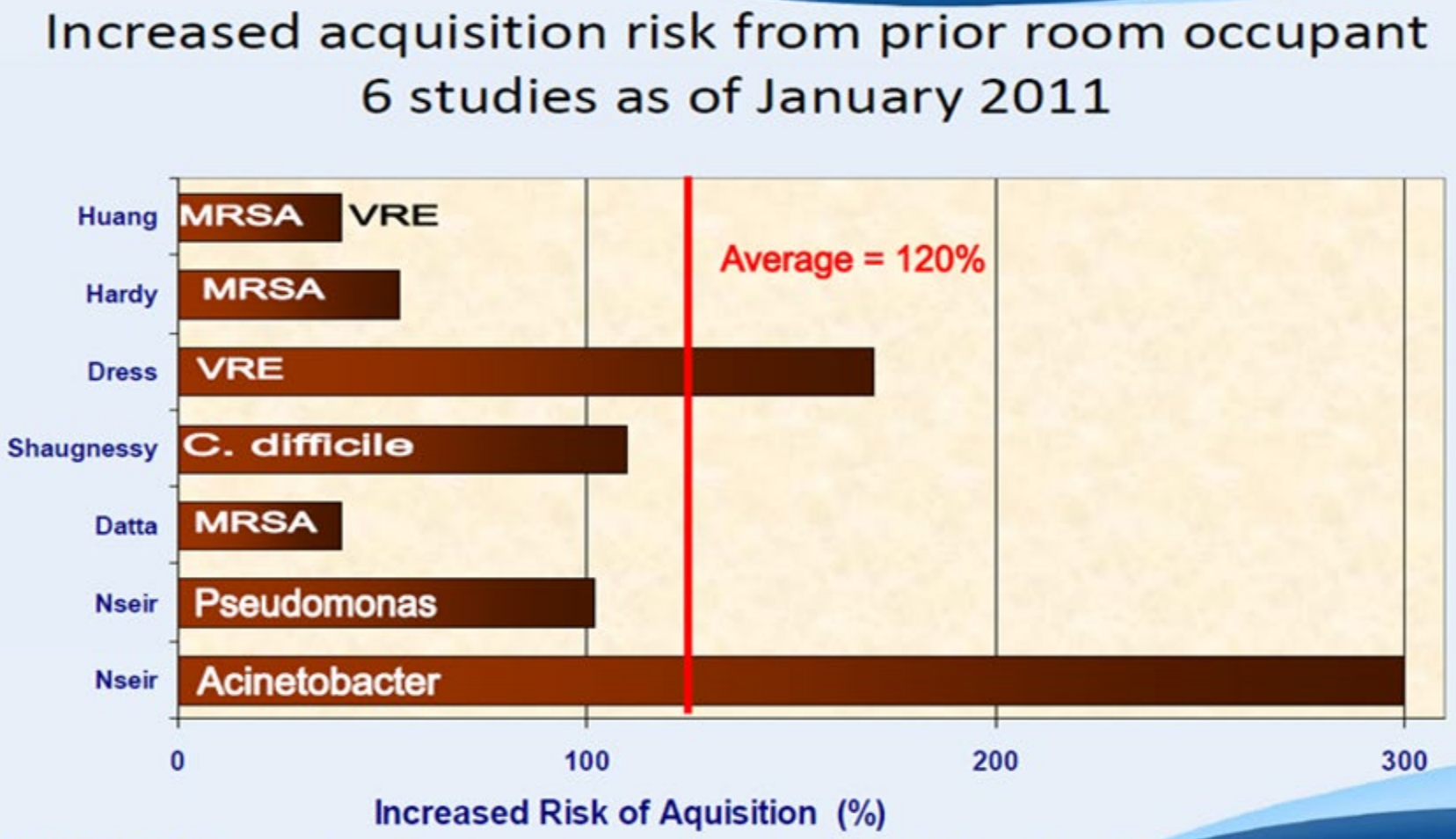
Evidence of Environment and Disease Transmission

- Admission to a room previously occupied by a colonized or infected patient is a significant risk factor for infection
- *C.difficile* acquisition
  - 11% patients admitted to an ICU room previously occupied by a CDI patient, developed CDI infection afterward
  - 4.6% patients admitted to a room without a prior CDI positive occupant developed CDI

Weber DJ et.al. AJIC 2013 .Shaughnessy et al. Infect Contr Hosp Epidemiol. 2011 (PDF)

(www.idse.net/download/HAI_IDSE13_WM.pdf)

Increased Acquisition Risk from Prior Infected Room Occupant



·Carling PC, Bartley JM. Am J Infect Control 2010;38 S41-50.

Pathogen Survival in the Environment

- Multiple factors influence duration of survival:
  - Type of microbe – spore formation ability
  - Temperature
  - Humidity

- *Clostridioides difficile* (*C. diff*) spores are shed in high numbers, are resistant to drying (desiccation) and some disinfectants, and survive on surfaces for months to years

ASM (2018)

(doi.org/10.1128/CMR.00021-17)

How to Reduce Environmental Bioburden

Bioburden is the number of organisms on an object or surface

To reduce bioburden:

- Perform hand hygiene
- Clean and disinfect high-touch surfaces daily
- Improve cleaning and disinfection of rooms after discharge of patients/residents known to carry healthcare-associated pathogens
- Clean and disinfect portable equipment
- Ensure thorough cleaning and disinfection of all rooms

Donskey. AJIC. 2013

EFFECTIVE CLEANING STRATEGIES

Terminology

- Cleaning: removal of all visible and invisible soil and other foreign material – for instruments, rinsing and/or using an enzymatic detergent per manufacturer's IFU
- Disinfection: destruction of nearly all pathogenic microorganisms on a non-living surface
- Sterile/Sterilization: completely devoid of all microorganisms; the process by which bacteria, viruses, spores, and fungi are completely destroyed
- Instructions for use (IFU): manufacturer's instructions for cleaning, disinfection, and sterilization of their equipment or product. Using disinfectants not on the IFU could void the warranty or cause irreparable damage. Must check for the latest version of the IFU.

Wet, Contact, or Dwell Time

- Wet or contact times is the time required for a disinfectant to kill microorganisms on a pre-cleaned surface
- Disinfectant must remain wet on the surface long enough to achieve the claimed level of surface disinfection
- Follow manufacturer's guidelines for achieving the appropriate wet contact time

Rutala et al. ICHE. 2014

Clean *Before* Disinfection

- Cleaning removes large numbers of microorganisms from a surface that would otherwise interfere with the disinfection process
- Some material, like dried blood, is difficult to remove
- Disinfectants are not as effective in the presence of organic material (like blood)

Disinfectants can't work if cleaning doesn't happen first!

HICPAC /CDC 2017

Detergents and Disinfectants

- Detergent
  - Used for cleaning
  - Contains surfactants; lifts dirt
  - Can become easily contaminated, does not kill microorganisms
  - Less toxic, generally less odor, less costly than disinfectant
- Disinfectant
  - Inhibits growth or kills microorganisms
  - More toxic, more costly than detergent

CDC HICPAC Core Practice Recommendations
(www.cdc.gov/hicpac/recommendations/core-practices.html)

Environmental Protection Agency (EPA) Label Claim for Disinfectant

- The EPA label claim states if the product is
  - Virucidal
  - Bactericidal
  - Tuberculocidal
  - Fungicidal
  - Sporicidal
- Clarifies manufacturer's instructions for use (IFU), including wet or contact time required to achieve the desired degree of microbial killing

Environmental Protection Agency (EPA) (2020)

(www.epa.gov)

Selection of Disinfectant

Disinfectant	Strengths	Concerns
Quaternary Ammonium Products (Quats)	• Non-critical items such as floors and furniture • Bactericidal, fungicidal, virucidal against lipophilic viruses	• Not effective against some gram negatives • Not sporicidal • Inactivated by cotton and charcoal • Not compatible with soap • Deactivated by organic material
Phenolics	• Bactericidal, virucidal, fungicidal, tuberculocidal • Not sporicidal	• Absorbed by porous materials • Can irritate tissue • Unsafe for use in nurseries
Chlorine-based	• Broad antimicrobial activity, effective against gram-negatives, tuberculocidal, fungicidal, virucidal • Does not leave toxic residues • Inexpensive • Fast acting • Removes dried organisms, biofilms	• Can cause eye irritation, gastric burns • Inactivated by organic matter • Discolors fabrics • Relatively unstable • Corrosive in high concentrations • Can release toxic chlorine gas when mixed with ammonia
Hydrogen peroxide, Accelerated H_2O_2	• Effective, broad spectrum kill • Bactericidal, virucidal at 30- 60 sec • Fungicidal at 10 min • Low EPA toxicity rating	• Expensive • Corrosive to some materials ***Always consider duration of contact time***

Don’t Swap out Disinfectants!

Disinfectants such as isopropyl (rubbing alcohol) used to disinfect skin are **not used** to disinfect equipment or surfaces UNLESS the manufacturer IFU states it must be used

- Isopropyl alcohol could cause damage and is flammable
- Some homeopathic disinfectants do not have a disinfectant claim supported by study

Why Use Bleach for *C. difficile*?

- *C. difficile* spores are difficult to kill and adhere to environmental surfaces for extended periods

- Use of a 1:10 dilution of bleach (500 ppm) for disinfection
  - Reduces surface contamination
  - Instrumental in outbreak control

- Alternatives to bleach are available
  - EPA-approved disinfectants with label claims for killing *C. difficile* spores
    (www.epa.gov/pesticide-registration/list-k-epas-registered-antimicrobial-products-effective-against-clostridium)

Strategies to Prevent *Clostridioides difficile* Infection in Acute Care Facilities
(www.cdc.gov/hai/prevent/cdi-prevention-strategies.html)

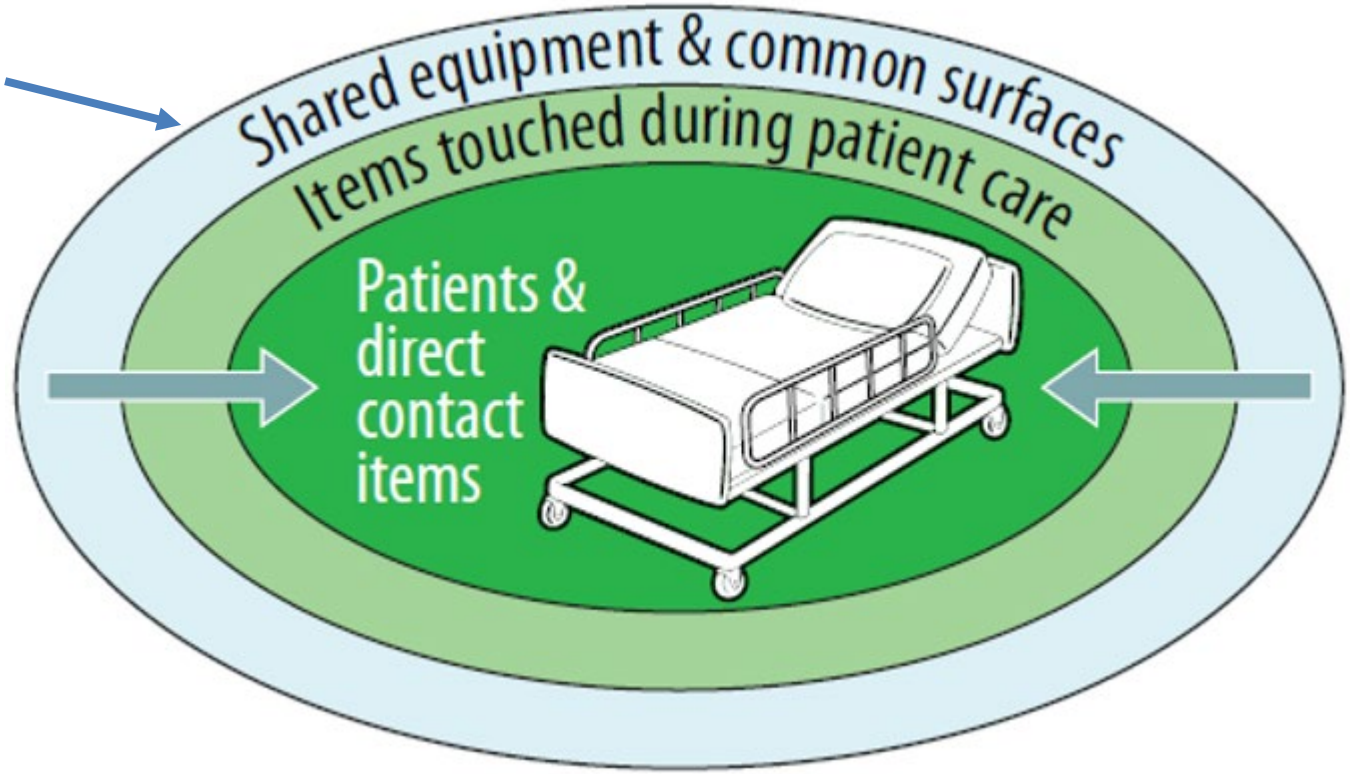
Best Practices for Room Cleaning

- Ensure cleaning **equipment and supplies are clean**
- Ensure **proper use of cleaning and disinfecting products**
- Ensure proper **hand hygiene** and use of **gloves**
- Focus on **frequently touched surfaces**
  - See example list in CDC Environmental Cleaning Toolkit (www.cdc.gov/hai/toolkits/Evaluating-Environmental-Cleaning.html)

CDC Guidelines for Environmental Infection Control in Health-Care Facilities (www.cdc.gov/hai/toolkits/Evaluating-Environmental-Cleaning.html)

Working From Clean to Dirty

Start here



CDC Healthcare-associated Infections: Environmental Cleaning Procedures
(www.cdc.gov/hai/prevent/resource-limited/cleaning-procedures.html)

Best Practices for Cleaning a Room (continued)

- Avoid generating aerosols
- Change cleaning cloths between rooms
- Work from cleaner to dirtier
- Work from high to low, top to bottom
- ***Remember***: A surface must be physically cleaned before it can be disinfected
- **Communicate** issues to your supervisors

CDC Healthcare-associated Infections: Environmental Cleaning Procedures
(www.cdc.gov/hai/prevent/resource-limited/cleaning-procedures.html)

Hand Hygiene Performance by Environmental Cleaning Staff

- Emphasize the importance of hand hygiene for all staff in infection prevention
- Change perception that hand hygiene is to protect staff to hand hygiene is to protect the resident
- Orient EVS staff thoroughly to infection control principles and practices prior to starting work in a clinical area

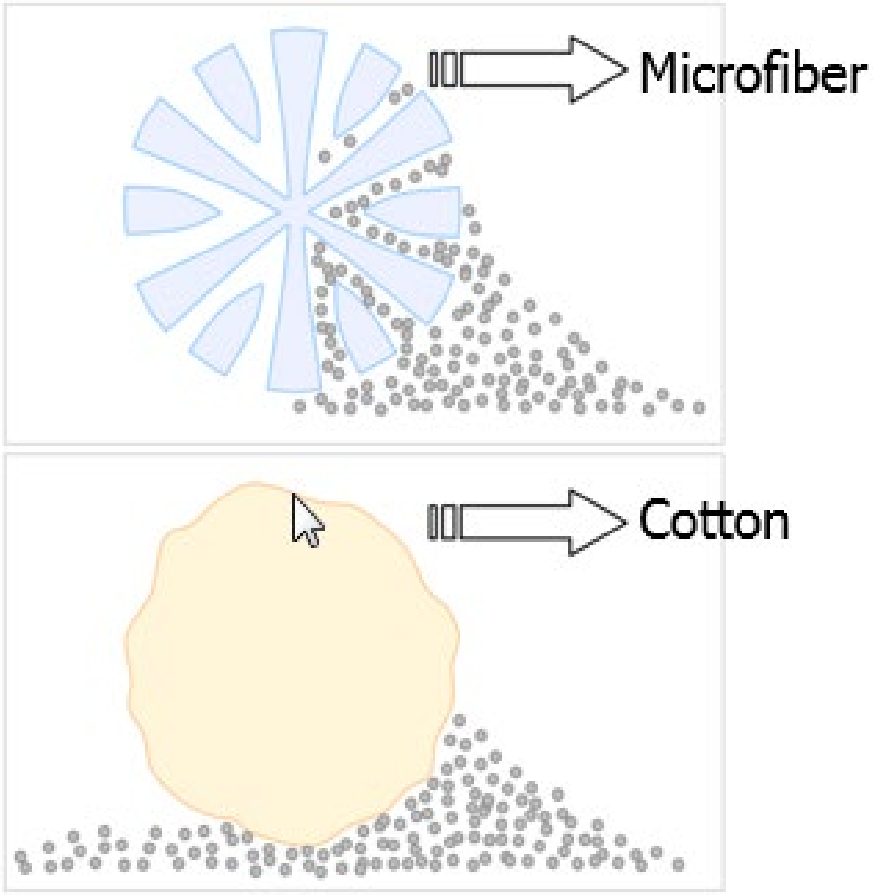
APIC (2016)
(doi.org/10.1016/j.ajic.2016.04.082)
CDC STRIVE
(www.cdc.gov/infectioncontrol/training/strive.html)

What to Wear: PPE Used in Cleaning

- Select PPE based on:
  - Type of infection prevention precautions assigned to the resident
  - Chemicals to be used to clean the room
  - Refer to the Safety Data Sheet (SDS), manufacturer's IFU, and facility policy
- Appropriate use of PPE is critical
  - Inappropriate use may result in contamination of the HCP hands and the environment

Microfiber vs. Cotton

- Microfiber cleans 50% better than comparable cotton
  - Attracts dust
  - Easier to use, lighter
  - Designed for repeat usage
- Microfiber was initially more expensive than cotton, but cleaned better, used less water and chemicals, and decreased labor costs.



UC Davis Case Study. Nov 2002;
Trajtman. AJIC. 2015; CDC.gov

California Department of PublicHealth

Linen

- New laundry technologies allow linen washing without requirements for hot water and chlorine
  - Hot water: 160°F x 25 minutes
  - Cold water: 71-77°F with 125ppm chlorine bleach rinse or equivalent detergent
  - Detergents not required to have stated antimicrobial claims
    - Follow manufacturers instructions for use (IFU)

CDC Guidelines for Environmental Infection Control in Health-Care Facilities (PDF)
(www.cdc.gov/infectioncontrol/pdf/guidelines/environmental-guidelines.pdf)
Title 22, Division 5, Chapter 1, Article 8 §70825.
Laundry Service
(govt.westlaw.com/calregs/Document)

Bedside Curtains

- Bacteria and fungi can survive on polyester, cotton, wool, and other fabrics
- Privacy curtains are considered high-touch surfaces and can become rapidly contaminated especially when used in transmission-based precautions isolation rooms
- Hands can become contaminated after handling curtains

Fabrics, Floors and Carpets

- Fabrics – upholstered chairs are difficult to clean, consider reupholstering with wipeable material such as vinyl
- Non-carpeted floors
  - Floor disinfection offers no advantage over regular detergent and water cleaning
    - Soap and water is acceptable for floors and is less expensive
- Carpets
  - Evidence linking carpets to HAI rates is limited
  - Vacuuming and steam cleaning temporarily reduces the number of organisms
  - Difficult to clean with blood/body fluid spills

CDC Infection Control Guidelines
(www.cdc.gov/infectioncontrol/guidelines/)
Dancer, S.J. Clin Microbiol Rev. 2014 Oct;27(4):665-90
(DOI: 10.1128/CMR.00020-14)

MONITORING THE THOROUGHNESS OF CLEANING

How Do You Know a Patient Room is Clean?

- Appears **visually** clean or finger-swipe clean
  - Fast and inexpensive, but lacks objectivity
- Confirmed via **technology**
  - Increasingly becoming the community standard
    - **Fluorescence:**
      Environmentally stable marker is visible to UV light if still present after cleaning ("Glo-Germ")
    - **Adenosine Triphosphate** (**ATP**) monitoring:
      Measures residual organic matter left on a surface after cleaning

Lillis. ATP Testing: A Proven Method to Measure Cleanliness 2015 (www.cdc.gov/hai/toolkits/Evaluating-Environmental-Cleaning.html)

Methods to Monitor Cleaning

Comparison of Methods

Method	Visual	Fluorescence	ATP
1. What is measured?	impression of cleanliness	whether fluorescent residual has been removed	biological matter remaining on surface after cleaning
2. Can it be used by persons of differing skill levels?	no technical training required	some technical training needed	some technical training needed
3. How objective is the method? (Can results be changed to appear more positive?)	can be subjective	objective, but marks could have been removed prior to reading	very objective
4. Can the amount of time spent on monitoring be minimized?	yes	room must be pre-marked and read after cleaning	yes

Methods to Monitor Cleaning (continued)

Comparison of Methods

Method	Visual	Fluorescence	ATP
5. How are results presented?	pass/fail	pass/fail	numeric value
6. Is software needed for the monitoring process?	no	can be used, but not required	yes
7. How well can it be used for a training tool?	results immediate with visual cues	results immediate with visual cues	results delayed, no visual cues usually available from surface
8. How affordable is the method?	no monetary investment	materials inexpensive; if formal program including staff education purchased, expenses will be higher	cost of machine and swabs is substantial

Monitor Adherence

- Monitoring staff while room cleaning gives feedback to the staff member as soon as breaches are discovered
- Adherence reports improves adherence to standards and helps staff focus on gaps
- CDPH HAI Program developed a tool to monitor adherence of cleaning practices (2016)

CDPH Adherence Monitoring Tools (PDF)
(www.cdph.ca.gov/Programs/CHCQ/HAI/CDPH%20Document%20Library/AdherenceMonitoringEVSApproved101516.pdf)

Adherence Monitoring Tool-Environmental

Environmental Cleaning Practices	EVS Staff 1		EVS Staff 2		Adherence by Task	
					# Yes	# Obs
Detergent/disinfectant solution is mixed according to manufacturer's instructions.	Yes	No	Yes	No	2	2
Solution remains in wet contact with surfaces according to manufacturer's instructions.	Yes	No	Yes	No	1	2
A new clean, saturated cloth is used in each room. The cloth is also changed when visibly soiled and after cleaning the bathroom.	Yes	No	Yes	No	1	2
Environmental Services staff use appropriate personal protective equipment (*e.g. Gowns and gloves are used for patients/residents on contact precautions upon entry to the contact precautions room.*)	Yes	No	Yes	No	1	2
Objects and environmental surfaces in patient care areas that are touched frequently* are cleaned and then disinfected when visibly contaminated or at least daily with an EPA-registered disinfectant.	Yes	No	Yes	No	0	2
# Yes 5 # Observed 10 #Yes/#Observed = % Adherence 50 %						

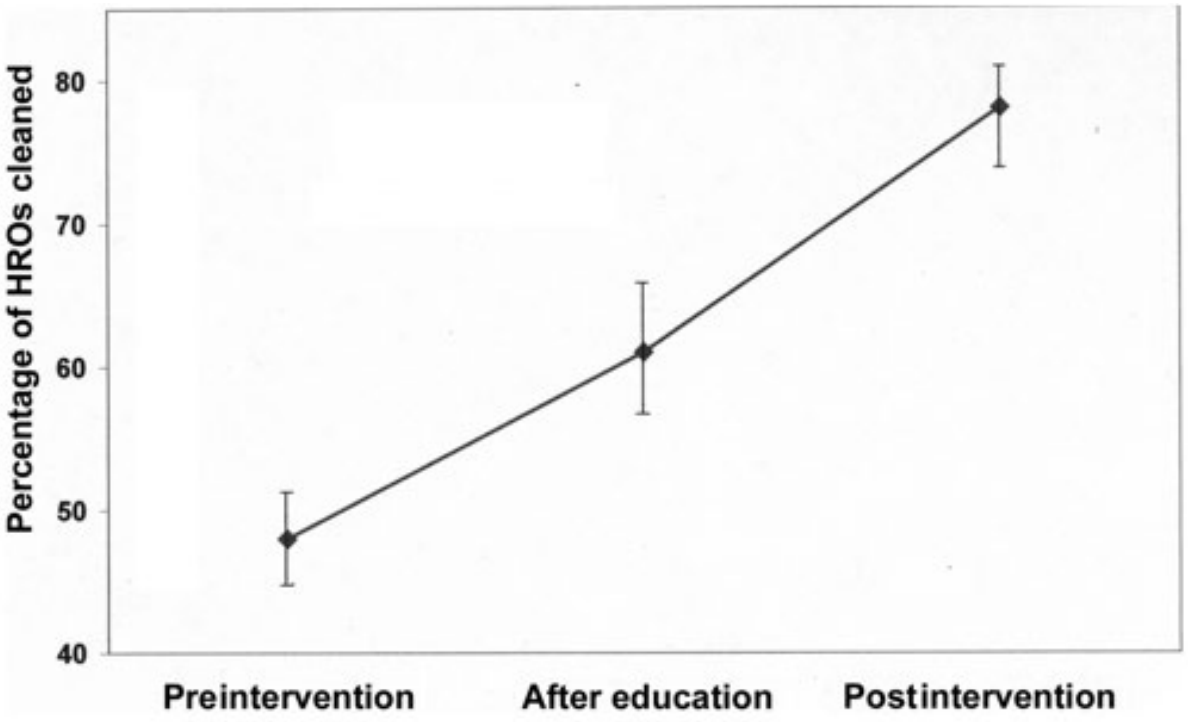
CDPH Adherence Monitoring Tools (PDF)
(www.cdph.ca.gov/Programs/CHCQ/HAI/CDPH%20Document%20Library/AdherenceMonitoringEVSApproved101516.pdf)

Adherence monitoring and reporting in EVS

- Adherence is calculated by # of compliant/# of observations x 100 = % compliance
- High touch surface cleaning
  - Observation of cleaning of each of those sites
- Reports of adherence is tabulated, reported to EVS department supervisor/director, presented to committees that oversee
  - Quality, patient safety, regulatory
  - Infection control committee
  - Internal EVS department

Does Monitoring Improve Cleaning?

- In 36 hospitals, mean percentage of high-risk objects cleaned was
  - 48% **prior** to intervention
  - 78% **after** intervention

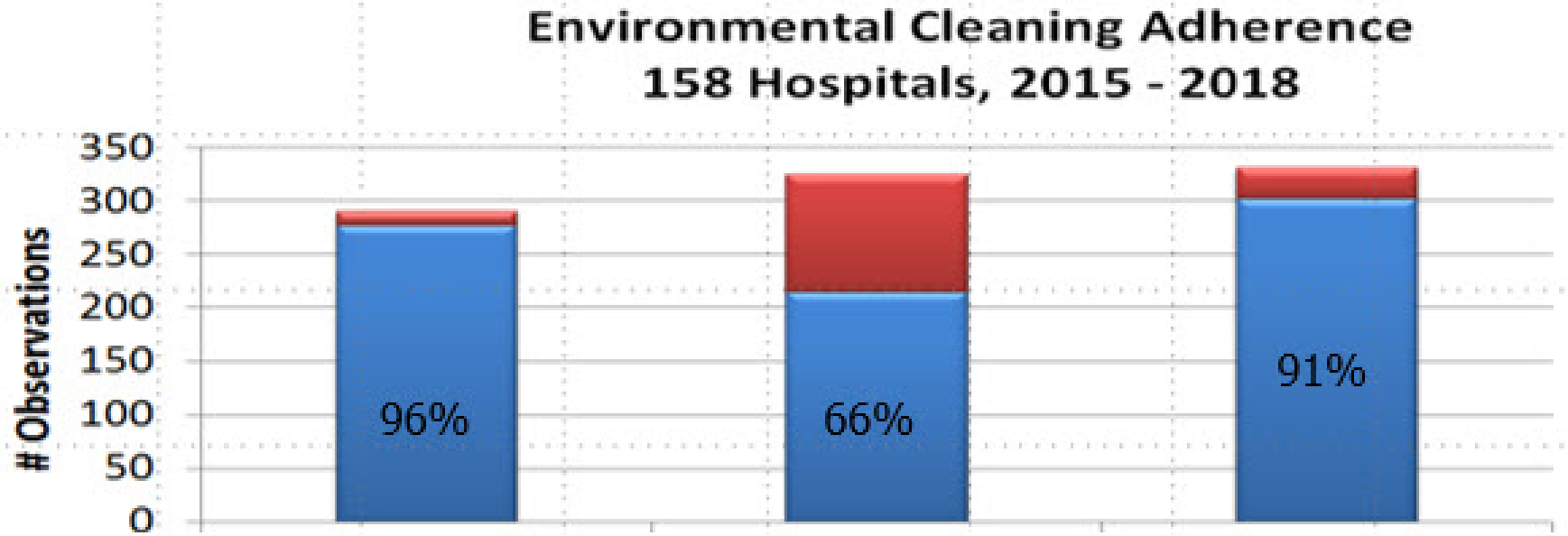


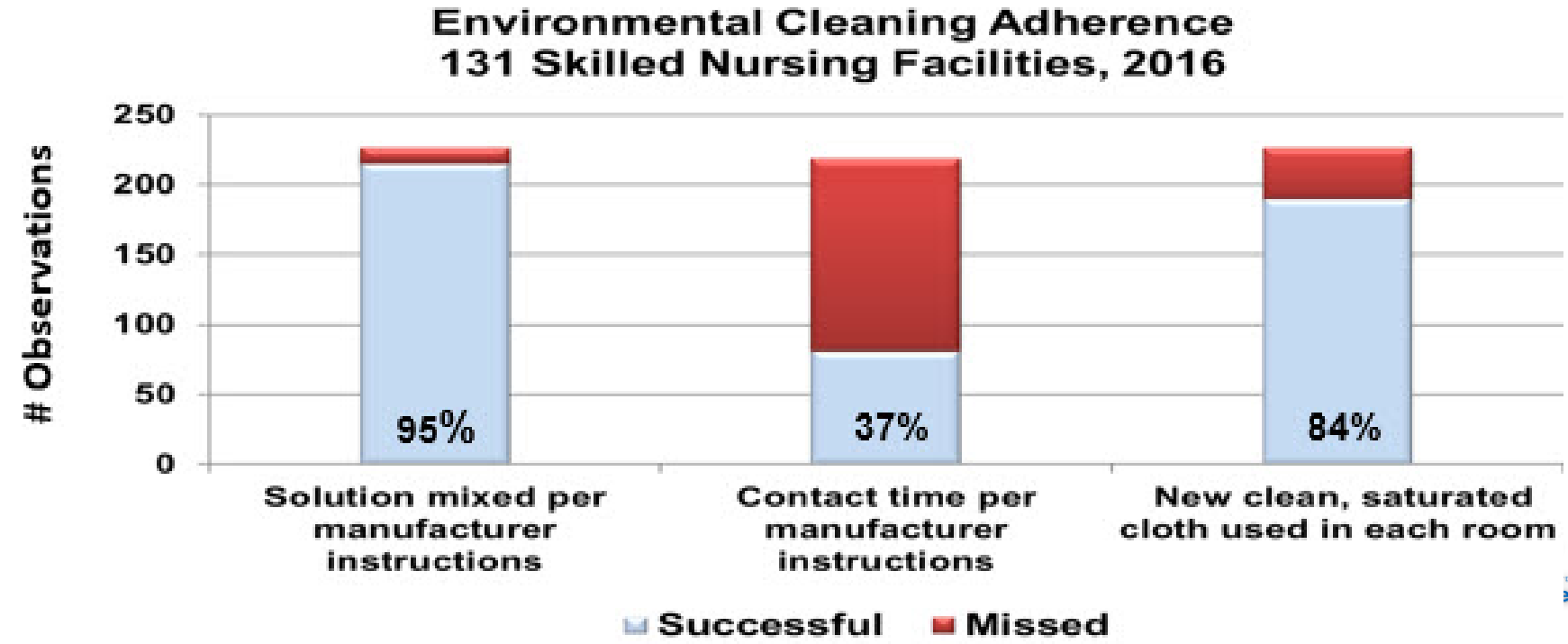
Carling, P. (2016) Optimizing Health Care Environmental Hygiene

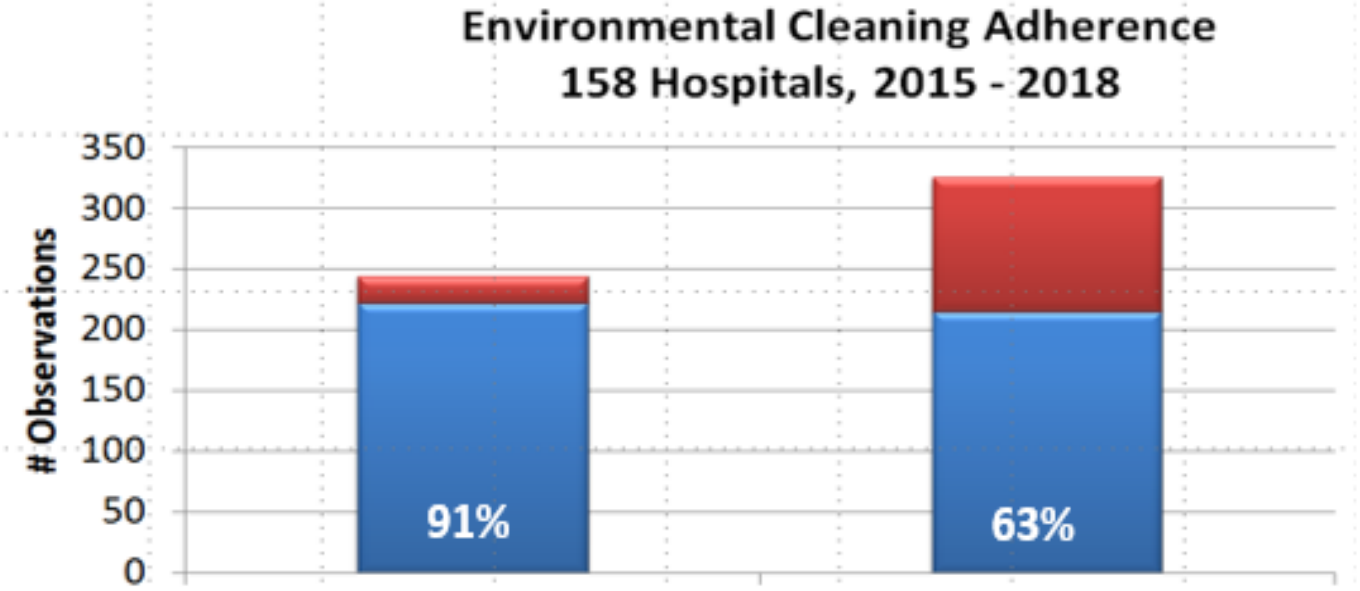
American Society for Microbiology (2014)

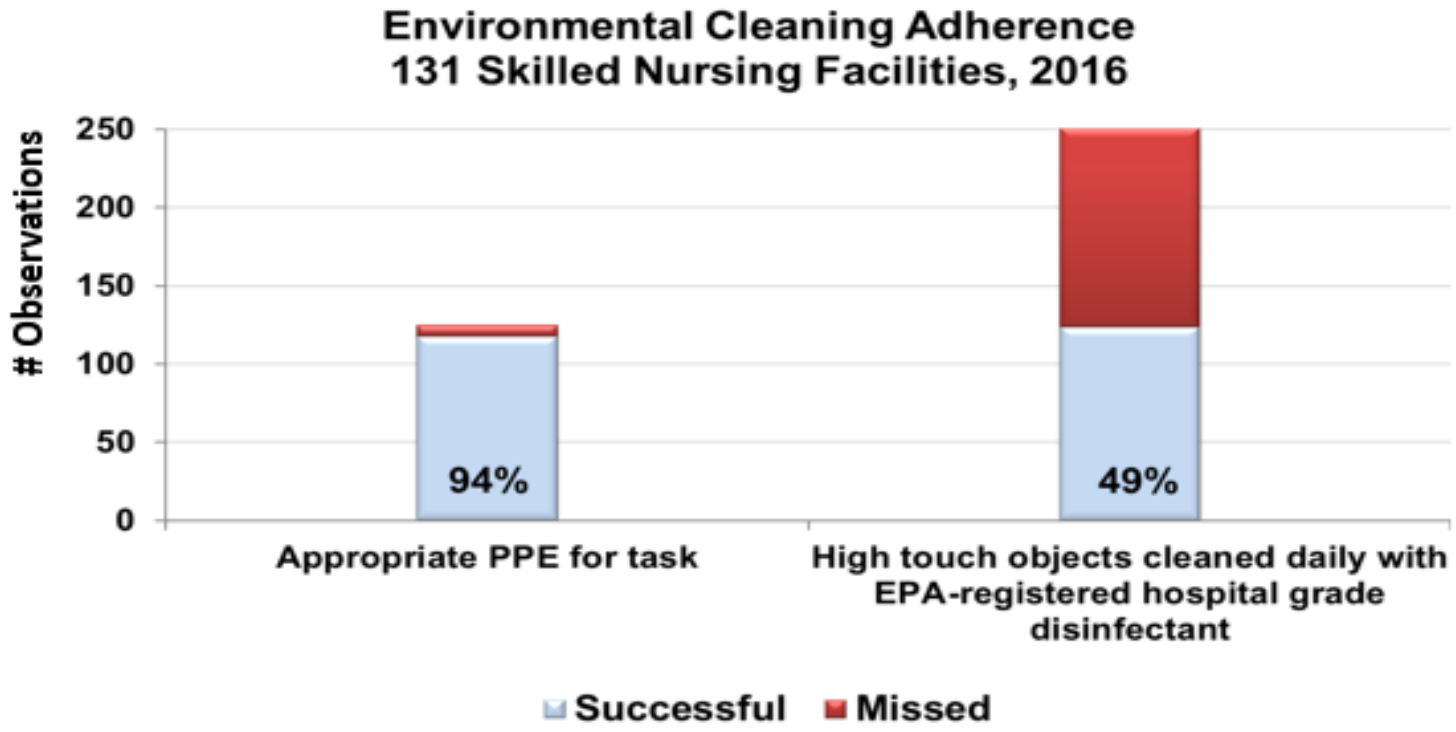
(dx.doi.org/10.1016/j.idc.2016.04.010)

California Department of PublicHealth


Environmental Cleaning Adherence
158 Hospitals, 2015 - 2018
Observations
350
300
250
200
150
100
50
0
96%
66%
91%


Environmental Cleaning Adherence
131 Skilled Nursing Facilities, 2016
Observations
250
200
150
100
50
0
95%
37%
84%
Solution mixed per manufacturer instructions
Contact time per manufacturer instructions
New clean, saturated cloth used in each room
Successful
Missed


Environmental Cleaning Adherence
158 Hospitals, 2015 - 2018
Observations
350
300
250
200
150
100
50
0
91%
63%


Environmental Cleaning Adherence
131 Skilled Nursing Facilities, 2016
Observations
250
200
150
100
50
0
94%
49%
Appropriate PPE for task
High touch objects cleaned daily with EPA-registered hospital grade disinfectant
Successful
Missed

Environmental Assessment

- The IP performs other multidisciplinary infection prevention assessments involving:
  - Disinfectant product usage
  - Placement and proper use of sharps containers
  - Proper medical (biohazardous) waste disposal
  - Hand hygiene access
  - Medical equipment storage areas
  - Facilities report issues, maintenance schedule
  - Water system maintenance, cooling towers
  - All construction projects: ICRA permits, OSHPD documents

EFFECTIVE CLEANING AND DISINFECTION PROGRAMS – POLICY

Cleaning Policy Considerations

- Include in policy the surfaces and equipment that can reasonably be expected to be contaminated by bacteria (high touch surfaces)
  - Bedrail
  - Call light
  - Light switches
  - Doorknobs
  - TV remote
  - IV pump
  - Toilet, commode chair
  - IV poles
  - Computer keyboard
  - Telephone
  - Over bed table
  - Respiratory and other bedside equipment
  - Chairs
- Define responsibility and frequency for cleaning and disinfecting patient care equipment and surfaces

Cleaning Responsibility

- **All personnel are responsible** for cleaning the environment
  - Nursing and other services – CNAs, LVNs, RNs, dietary aides
  - Environmental services
  - Physical therapy, occupational therapy, speech therapy
  - Respiratory therapists
  - Radiology technicians, facilities/maintenance
  - **All personnel must be oriented** to proper cleaning methods
  - Safety is a must! Accidental slips, needlesticks, and exposure to chemicals are a few of many safety concerns

OSHA: Housekeeping
(www.osha.gov/SLTC/etools/hospital/housekeeping/housekeeping.html)

Cleaning Responsibility (continued)

- Put individual responsibilities into **policy**; assign responsibilities with **checklist**
- **Responsibility checklist from CDPH** (www.cdph.ca.gov/Programs/CHCQ/HAI/CDPH%20Document%20Library/AdherenceMonitoringEVS_ResponsibilityAssessment.pdf)

Healthcare-Associated Infections Program

Environmental Cleaning and Disinfection – Responsibility Assessment

Who is responsible for cleaning:	Respondent #1 Title:	Respondent #2 Title:	Respondent #3 Title:
ABHR dispenser			
Bathroom			
Bedrail			
Blood pressure machine			
Call button			
Charting area			
Floor			
Floor, with large spill			

How Much Time Does it Take to Clean?

- **Create an individualized benchmark time** for the facility based on time needed to complete a checklist of items to be cleaned and disinfected
  - Input from front line staff is essential
  - Consider room size, amount of equipment, furniture and clutter that need to be cleaned or cleaned around
- **Disseminate information to all nursing units**
  - General understanding of how important room cleaning is, and how taking shortcuts may harm patients

Environmental cleaning and disinfection of patient areas
(www.ijidonline.com/article/S1201-9712(17)30270-9/fulltext)
Doll, M., Stevens, M., & Bearman, 2017. IJID,67(2018)

HEALTHCARE-ASSOCIATED INFECTIONS (HAI) PROGRAM

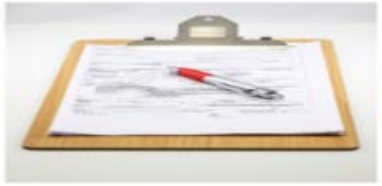
Environmental Cleaning

Welcome to the California Department of Public Health (CDPH) Healthcare-Associated Infections (HAI) Program environmental cleaning in healthcare facilities web page. The purpose of this page is to answer questions and provide information on maintaining a clean and sanitary environment in healthcare facilities for patients, visitors and staff. Reducing bioburden in the environment decreases potential for transmission of harmful organisms. Information is presented as frequently asked questions (FAQ) with references and links to additional information. The initial content on this page will emphasize the importance of environmental cleaning for stopping the spread of *C. difficile* diarrheal infections (CDI).

Additional content will be added in the coming months. For questions, suggestions, or more information, please email HAIProgram@cdph.ca.gov.

Role of Environmental Surfaces in Disease Transmission

Effective Cleaning Strategies



Monitoring Cleaning

CDPH Adherence Monitoring Tools (PDF)
(www.cdph.ca.gov/Programs/CHCQ/HAI/CDPH%20Document%20Library/AdherenceMonitoringEVSApproved101516.pdf)

CDC Cleaning Programs
(cdc.gov/hai/prevent/resource-limited/cleaning-programs.html)

EMERGING CLEANING TECHNOLOGIES

Whole-Room Disinfection Technologies

- "Touchless" or non-manual techniques
- Types include
  - Hydrogen peroxide fogging (dry mist or vapor)
  - Ultraviolet light (continuous emitting or pulsed xenon-UV)
- Not enough studies to support their use
- VERY expensive
- Require thorough manual cleaning before use – may add to room turnover time

Canadian Agency for Drugs and Technologies in Health. Room Disinfection in Healthcare Facilities (PDF) (www.cadth.ca/sites/default/files/pdf/htis/nov2014/RC0545%20Room%20Disinfection%20Final.pdf)

REPROCESSING REUSABLE MEDICAL DEVICES

Cleaning Medical Instruments and Devices

- Disinfection or sterilization cannot be achieved without cleaning first
  - Organic material dilutes or inactivates disinfectants
  - Bioburden must be reduced for processes to be effective
- Clean all medical equipment, instruments and devices by
  - Removing visible soil at point of use
  - Disconnecting or separating instrument parts
  - Checking the IFU for specific instruments to avoid damage
  - Avoiding organic material drying on equipment, by rinsing or soaking in an enzymatic solution per IFU
  - Guidance on reuse of single use items, link below

CDC Oral Health
(www.cdc.gov/oralhealth/infectioncontrol/faqs/single-use-devices.html)

FDA Reprocessing and Reuse of Single Use Devices
(www.fda.gov/medical-devices/products-and-medical-procedures/reprocessing-reusable-medical-devices)

Medical Device Reprocessing Terminology

- Health care devices and equipment are designated (Spaulding's Classification System)
  - Non-critical: touches intact skin
  - Semi-critical: touches mucous membranes - except dental
  - Critical: enters sterile tissue or vascular system
- Categories determine level of reprocessing required

CDC: Spaulding's classification system
(www.cdc.gov/infectioncontrol/guidelines/disinfection/rational-approach.html)

Spaulding's Classification System and Levels of Disinfection

Reprocessing Classification	Levels of Disinfection
• Non-Critical • Semi-critical • Critical	• Low-level • Intermediate-level • High-level • Sterilization

Non-Critical Medical Devices

- In contact only with intact skin
- Requires intermediate- or low-level disinfection
- Include
  - Blood pressure cuffs
  - Stethoscopes
  - Durable medical equipment

Low-Level Disinfection

For non-critical devices and equipment (intact skin)

- EPA-approved products for low-level disinfection include:
  - Quaternary ammonium compounds (QUATS)
  - Phenolic compounds
  - Iodophors
- Ensure achievement of dilution and contact or “wet” time requirements

CDC Guideline for Disinfection and Sterilization, February 15, 2017

Intermediate-Level Disinfection

- For semi-critical devices and equipment (non-intact skin and mucous membranes, except dental)
- Thermometers and hydrotherapy tanks
- EPA-approved products for intermediate-level disinfection include
  - Alcohols
  - Aldehydes
  - Chlorine compounds
  - Iodophors
  - Hydrogen Peroxide
  - Phenolics
- Ensure achievement of dilution and contact or “wet” time requirements

CDC Guideline for Disinfection and Sterilization in Healthcare Facilities (Feb 2017)

(www.cdc.gov/infectioncontrol/guidelines/disinfection/updates.html)

Semi-Critical Medical Devices

- In contact with non-intact skin or mucous membranes (except dental)
- Requires **high level disinfection** or sterilization
- Include
  - Bronch**oscopes**
  - GI endo**scopes**
  - Vaginal ultrasonic probes
  - Respiratory therapy equipment
  - Anesthesia equipment

High-Level Disinfection

- For semi-critical devices and equipment
- EPA-approved products for high-level disinfection include
  - Gluteraldehyde
  - Ortho-phthaldehyde (OPA)
  - Peracetic acid
  - Peracetic acid/hydrogen peroxide
  - Hydrogen peroxide
- Test disinfectant product prior to each use
  - Change product as indicated by test, per manufacturer IFU
  - Maintain test log
- Ensure competency of staff

CDC Guideline for Disinfection and Sterilization in Healthcare Facilities (Feb 2017)
(www.cdc.gov/infectioncontrol/guidelines/disinfection/updates.html)
Glutaraldehyde (NIOSH)
(www.cdc.gov/niosh/topics/glutaraldehyde/default.html)

Critical Medical Devices

- Enter sterile tissue or the vascular system
  - Requires sterilization
  - Includes some dental or podiatry instruments
- Includes:
  - Surgical instruments and accessories
  - Biopsy forceps
  - Cardiac and urinary catheters
  - Implants

Sterilization

Rarely will a SNF be sterilizing instruments, however

- Responsibility is to make sure anyone bringing instruments in from a dental, wound care, or podiatry clinic:
  - Instruments are wrapped until used
  - A wrapped instrument is used for EVERY patient
    - Podiatry instruments used on multiple patients can lead to spread of organisms, including MDROs
  - Instruments returning are in a transport carrier that prevents leaking of any substances out that could contaminate the environment

Storage of Sterile Items

- Protect sterility of stored instruments until ready to use
  - Store to protect packages from dust, moisture, falling on floor
  - Handle to protect package integrity
    - Refrain from stacking, crushing packages or rubber-banding them together
    - Wrap sharp points with tip protectors before wrapping and sterilizing
- Rotate sterile items: first in, first out (FIFO)
- Label the item on tape to prevent tearing of the package while writing on it. If the tape is broken it has to be returned for reprocessing
- For more information on sterilization see CDC Guideline for Disinfection and Sterilization in Healthcare Facilities (Feb 2017) (www.cdc.gov/infectioncontrol/guidelines/disinfection/updates.html)

Adherence Monitoring Tools- Device Reprocessing

HEALTHCARE-ASSOCIATED INFECTIONS (HAI) PROGRAM

Monitoring Adherence to Health Care Practices that Prevent Infection

Device Reprocessing

Many areas of the healthcare facility may be performing device reprocessing. These adherence monitoring tools may be used in any area where device reprocessing, or high-level disinfection or sterilization of reusable devices are performed. Select the monitoring tool that best applies to the reprocessing area being observed.

- Device Reprocessing Adherence Monitoring Tool (PDF)
- High-Level Disinfection of Reusable Devices Adherence Monitoring Tool (PDF)
- Sterilization of Reusable Devices Adherence Monitoring Tool (PDF)
- CDC Guideline for Disinfection and Sterilization in Healthcare Facilities (PDF)
- FDA regulations on reprocessing of single-use devices

CDPH Adherence Monitoring Tools

(www.cdph.ca.gov/Programs/CHCQ/HAI/Pages/MonitoringAdherenceToHCPracticesThatPreventInfection.aspx)

California Department of PublicHealth

Summary

- A properly cleaned care environment is essential to prevent or contain HAIs
- A surface must be physically cleaned before it can be disinfected
- Environmental services staff must be competent to ensure infection prevention and patient safety
- Adherence to policies and procedures for cleaning, disinfection, instrument handling, is part of a robust Infection Prevention Program
- CDPH Adherence Monitoring Tools

(www.cdph.ca.gov/Programs/CHCQ/HAI/Pages/MonitoringAdherenceToHCPracticesThatPreventInfection.aspx)

Resources

- Environmental Protection Agency Guide to Registered Disinfectants
  (Pesticide Registration)
  (www.epa.gov/pesticide-registration/selected-epa-registered-disinfectants)
- CDC Guideline for Disinfection and Sterilization in Health Care Facilities
  (Disinfectants Cleaning, Sterilization)
  (www.cdc.gov/infectioncontrol/pdf/guidelines/disinfection-guidelines.pdf)
- CDC Guidelines for Environmental Infection Control in Healthcare Facilities
  (Water, Air, Medical Waste, Pet Therapy, Construction)
  (www.cdc.gov/infectioncontrol/pdf/guidelines/environmental-guidelines.pdf)
- CDC Tool kit: Developing a Water Management Program to Reduce Legionella Growth and Spread in Buildings
  (www.cdc.gov/legionella/downloads/toolkit.pdf)
- California Medical Waste Management Act
  (cchealth.org/eh/solid-waste/pdf/medical_waste_management_act.pdf)

Questions?

For more information, please contact

HAIProgram@cdph.ca.gov

Include “SNF IP Basics Class” in the subject line

Post Test

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To Return to

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If the Post Test link does not pop up, you will be sent a link via e-mail

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