Daily Outbreak Prevention in Long-term Care: Moving Forward from COVID-19

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Disclosure

Rebecca is employed by Diversey—A Solenis Company. The company pays her expenses to attend this meeting & create educational content (salary). Diversey has had no input into this presentation from a commercial interest.

Acknowledgements

Special thanks to my dear friend & fellow Infection Preventionist Karen Jones, MPH, RN, CIC, FAPIC for sharing her long-term care research & several slides in this presentation.

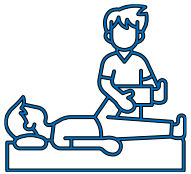
Objectives

- Describe the potential risks of transmission for long term care residents
- Outline best practices for hand hygiene and cleaning & disinfection
- Identify the high-touch surfaces in the facility
- Discuss tools and resources to help prevent outbreaks in long term care

Long-Term Care = Post Acute Care (PAC) Settings

Long-Term Acute Care Hospital

LTACHs provide care to patients who need hospital-level care for extended periods.



Inpatient Rehab Facility

Inpatient rehabilitation facilities (IRFs) provide intensive rehab services to patients after illness, injury or surgery.

Skilled Nursing Facility

Skilled nursing facilities (SNFs) provide nursing care & rehab services.

Home Health

Services - skilled nursing, activities of daily living – provided in the home.

Why Acute Care IPs Need to Partner with LTC IPs

Nursing Home Facility A

Hospital 1

Outpatient clinic

Home Health

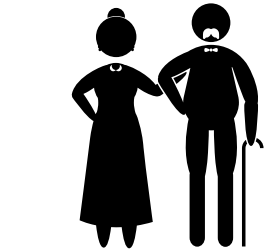
Hospital 2

Nursing Home Facility B

Credit: Joyce Wang, PhD

Infection Risk Factors in LTC

Resident level	• Effects of older age (immune system, mucous membrane & skin changes) • Atypical symptoms of infection • Residents may not verbalize s/s changes (APIC 2019)
Environmental level	• Many **shared spaces** • **Highly interactive**, high-touch surfaces (e.g., PT/OT)
Therapy-related	• Antibiotic overuse & rise in MDROs



Montoya, *Clin Geriatr Med*. 2016

Potential Outbreak Risks in LTC

Multidrug-resistant organisms (MDROs) & other environmentally significant pathogens

Gastrointestinal Illnesses (norovirus, *C.difficile,* HAV, etc).

Bloodborne Pathogens (HBV, HCV, HIV)

Respiratory Illnesses (COVID-19, influenza, RSV, pneumococcus, etc.)

Waterborne-associated (Legionella, *Pseudomonas*, etc.)

https://www.cdc.gov/longtermcare/staff/report-publications.html#anchor_1591648451025

APIC's 2019 *Infection Prevention Guide to Long-Term Care*, 2nd Edition

True or false? More than *half* of ALL reported norovirus outbreaks in the US occur in LTC.

- True! Foodborne illnesses can be linked to:
  - Incorrect food storage & improper cooking temps
  - Food items contaminated prior to arrival, like eggs, shellfish, meat, poultry
  - Infected facility staff preparing & handling foods
  - Poor compliance with hand & environmental hygiene

What Is an Outbreak?

- The definition of a LTC outbreak may depend on the **disease** (e.g., COVID-19 vs norovirus) and/or federal/local/state definitions
  - CMS QSO-20-39-NH instructs LTC to initiated outbreak investigation when a single new case of C19 occurs among residents or staff
- Per CDC, an outbreak is “an increase, often sudden, in the number of cases of a disease above what is normally expected in that population in that area.” (APIC 2019)
- Always consult your local/state health department if an outbreak is suspected!
  - Public health epidemiology & ICAR representatives should be seen as consultative partners, not as outsiders who will “get you in trouble”

Find your state IP resources! HAI/AR Programs: Recipient Health Departments & Funding

https://www.cdc.gov/hai/HAI-AR-Programs/recipients-funding.html#anchor_1677593691295

Hand Hygiene & LTC

Traditional Hand Hygiene: Healthcare Providers

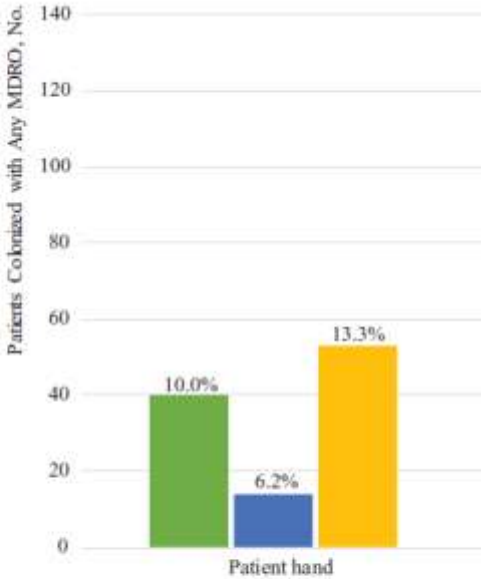
- HCP to comply with WHO 5 moments
  - Typically, via covert/“secret” shoppers (btw, the IP is *not* a secret!), automated monitoring systems
- Education & direct feedback to staff
- Success requires all-hands-on-deck approach (from the frontline to the admin office)

What's on residents' hands?

- Cao et al (2016) swabbed palms, fingers & around nails at admission, then monthly up to 180 days or until discharged
- Isolated MRSA, VRE & resistant gram negs
- **24.1% had at least one MDRO on hands admission**; 34.2% during follow up visit.

MDRO Contamination of Hospitalized Patients

- MDRO contamination of hands occurring if acute care hospitals, too.
- Same researchers swabbed 399 hospital patients at admission, and at follow up intervals, looking for MRSA, VRE or resistant gram-negative bacilli (RGNB) (Mody et al 2019)
- 10% positive at admission, 6.2% acquired a new MDRO at follow up
- Focusing *only* on HCP hand hygiene ignores significant risk factors



Baseline (n = 399)	40/399 (10.0%)
New acquisition* (n = 225 with at least one follow-up visit)	14/225 (6.2%)
Anytime during hospital stay (n = 399)	53/399 (13.3%)

Resident Hand Hygiene

- Often missed in traditional compliance measures
- Not (yet) required by regulatory/accreditation agencies

Key Questions!

- Does the resident **know** that the product is there and what it is and when to use it?
- Can the resident **perform** their own hand hygiene?
- Do existing shift assessments **identify** those requiring assistance?
- Are products **available** when needed most (before eating, after self care, etc)?

https://apic.org/patient-hand-hygiene-toolkit/

The LTC Environment

MDRO Colonization in NHs: AN “Iceberg Effect”

- McKinnell et al (2020) performed point prevalence sampling of residents & the environment in 28 NHs in Southern California.
- In >50% of NHs, **>50% of residents were colonized with MDROs** (MRSA, VRE, ESBL and/or CRE)
- 74% of resident rooms w/ MDRO contamination!
- 93% of common areas contaminated!
- One of several key studies leading to recommendations for Enhanced Barrier Precautions in LTC

Enhanced Barrier Precautions (EBP) – 2019

- **EBP may be confusing to acute care-based IPs who are accustomed to limited patient movement, adherence to standard precautions & shorter lengths of stay**
- Targeted to prevent MDRO transmission
- Gowns & gloves for high-contact resident care activities
- Resident inclusion:
  - Has an indwelling medical device
  - Has a wound
  - Infection or colonization of MDRO
- Recommended, but not yet required by CMS

FAQs of Enhanced Barrier Precautions in Nursing Homes, CDC, last updated July 27, 2022

LTC present unique challenges to environmental hygiene

- Less turnover of resident population
- Leveraging “home-like” with increasing concerns of MDRO transmission
- What in this resident room photo **cannot** be effectively disinfected?

Key areas to clean & disinfect

GENERAL ACCESS PREMISES
- Facility entrance/ lobby
- Staff offices

RESIDENT UNITS
- Nurses station
- Resident rooms
- Nutrition rooms

HIGH RISK AREAS
- Public washrooms
- Soiled utility room
- Isolation rooms

LAUNDRY
- Laundry processing

KITCHEN AREAS
- Kitchen
- Staff break room
- Dining areas

ACTIVITY AREAS*
- Common area
- IT room
- Fitness/Activity area/PT
- Beauty Shop

*Consider limited use and adopt additional precautions to prevent exposure

Are nursing home common areas reservoirs for MDROs?

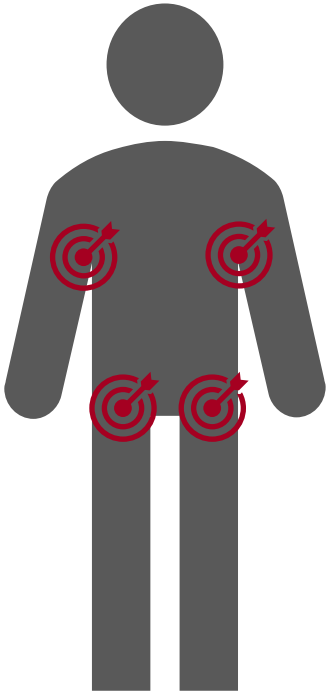
Study: Prevalence & transmission in shared spaces

	MRSA+ (%)	VRE+ (%)	RGNB+ (%)	Any MDRO+ (%)
ALL Patient-Used Common Area Specimens (N=796)	**43 (5.4%)**	**61 (7.7%)**	**52 (6.5%)**	**143 (18.0%)**
Shower Room (n=156)	7 (4.5%)	20 (12.8%)	19 (12.2%)	40 (25.6%)
Rehabilitation Gym (n=178)	14 (7.9%)	20 (11.2%)	10 (5.6%)	38 (21.4%)
Hallway Handrails (n=179)	14 (7.8%)	10 (5.6%)	13 (7.3%)	37 (20.7%)
Living Room (n=117)	2 (1.7%)	5 (4.3%)	6 (5.1%)	13 (11.1%)
Dining Room (n=166)	6 (3.6%)	6 (3.6%)	4 (2.4%)	15 (9.0%)

Gontjes, *JAGS*, 2020

Positive Correlation between *Candida auris* Skin Colonization Burden and Environmental Contamination in Ventilator-Capable Skilled Nursing Facility (vSNF) in Chicago, Illinois
(Sexton et al 2021)

- 70-bed facility in Chicago Illinois
  - First CA case was identified by point prevalence in March 2017
  - **In 18 months (Sept 2018), CA colonization climbed to 71%!**
- Study sampled bilateral axillary/inguinal swabs on all residents

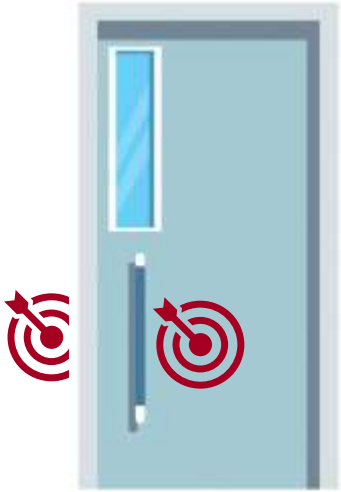


Study Findings vSNF Chicago:
Candida auris Positive Environmental Cultures

Bedrails

Left **81%**

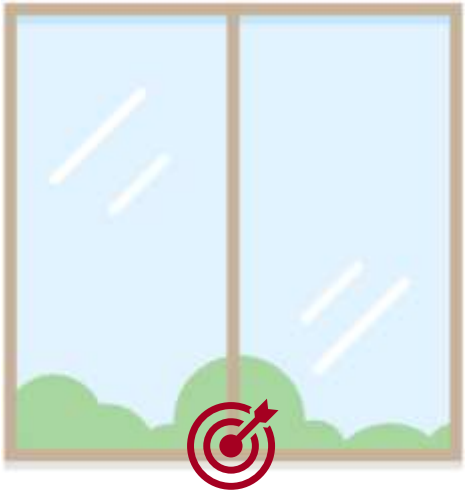
Right **78%**



Door handles

Inner **58%**

Outer **25%**



Windowsills **75%**

Sexton 2021

Resident & Environmental Culture Heatmap!

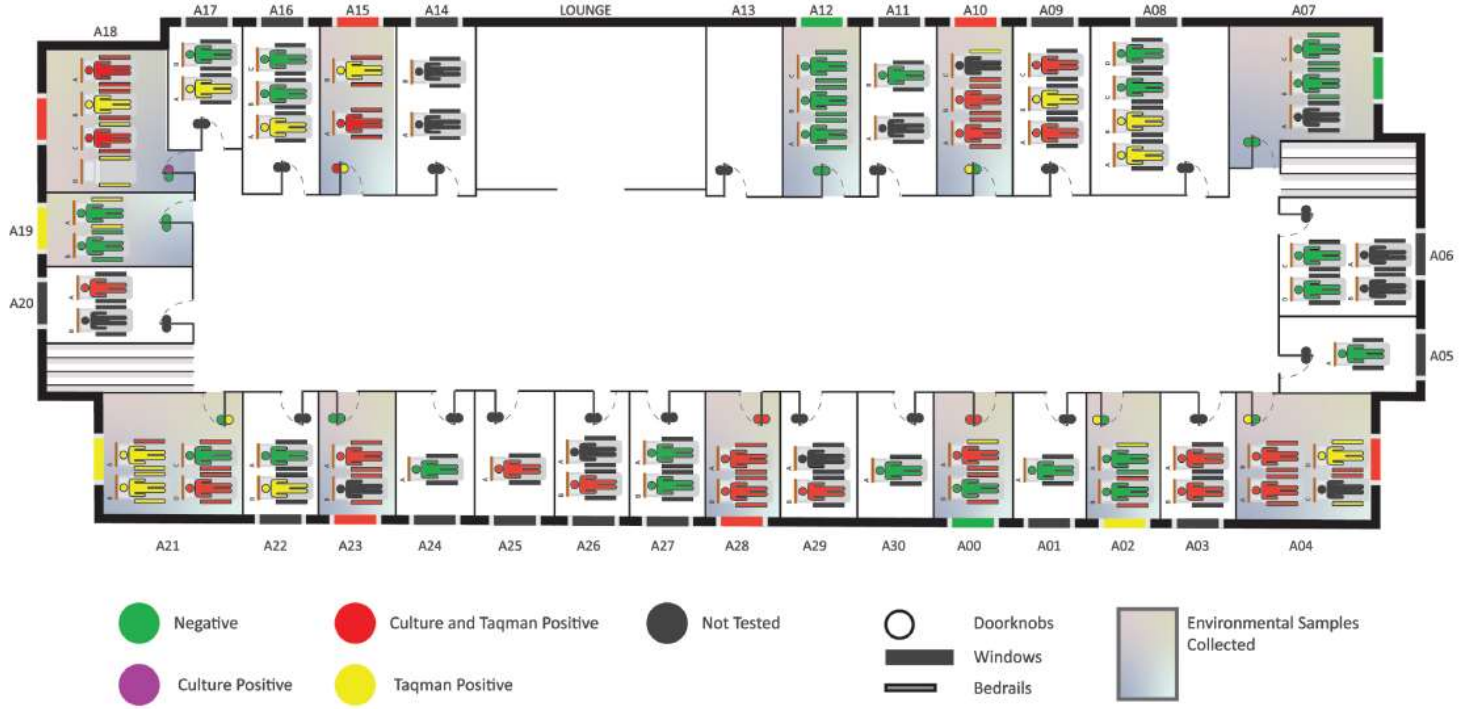


Figure 1. Facility map with culture-based and qPCR results for residents and associated environmental surfaces. The specific organization of beds within a room may differ from the image.

Sexton 2021

Study Findings vSNF Chicago

Colonized residents can have **high CA burden on their skin**, which was positively related with **contamination** of their surrounding healthcare **environment**.

3 patients who screened negative had bedrails that tested positive:

- 1 patient was previously positive for CA
- The other 2 patients were in rooms which were previously occupied by a CA positive patient 1-2 months before the study

These findings underscore the importance of:

- Hand hygiene
- Transmission-based precautions
- **Environmental disinfection** with EPA List P disinfectants

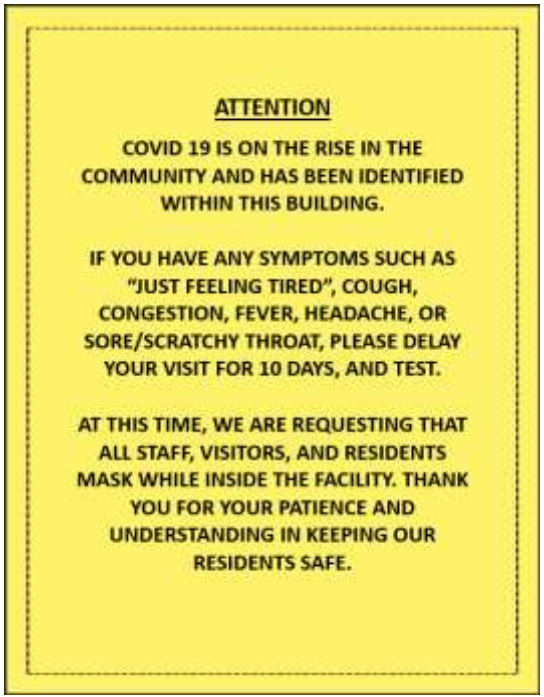
Sexton 2021

Strategies to Mitigate Outbreak Risks

Passive Health Screening – Visitors & Family

Per CMS Nursing Homes Visitation – COVID-19 (REVISED) QSO-20-39-NH:

- Facilities should provide guidance (e.g., posted signs at entrances) about recommended actions for visitors with positive C19 test, symptoms of C19, or recent exposure
- Defer visitation non-urgent visits if symptomatic or after exposure
- **Tailor signage to facility-specific needs**



As shared on AHCH/NCAL Community by Anna Curcio, Carmel Hills Care Center

Know the

INFECTIOUS SYMPTOMS

Please delay your visit if you are experiencing any of the following symptoms:

- Fever
- Cough
- Sore throat
- Shortness of breath
- Chills
- Body aches
- Headache
- Vomiting
- Diarrhea
- Congestion
- Runny Nose
- Loss of Taste/Smell

Also, please reschedule if you:

- Have been in close contact with someone who has tested positive for a respiratory illness like COVID-19 in the past 10 days
- Have tested positive for COVID-19, RSV or Flu in the past 10 days.

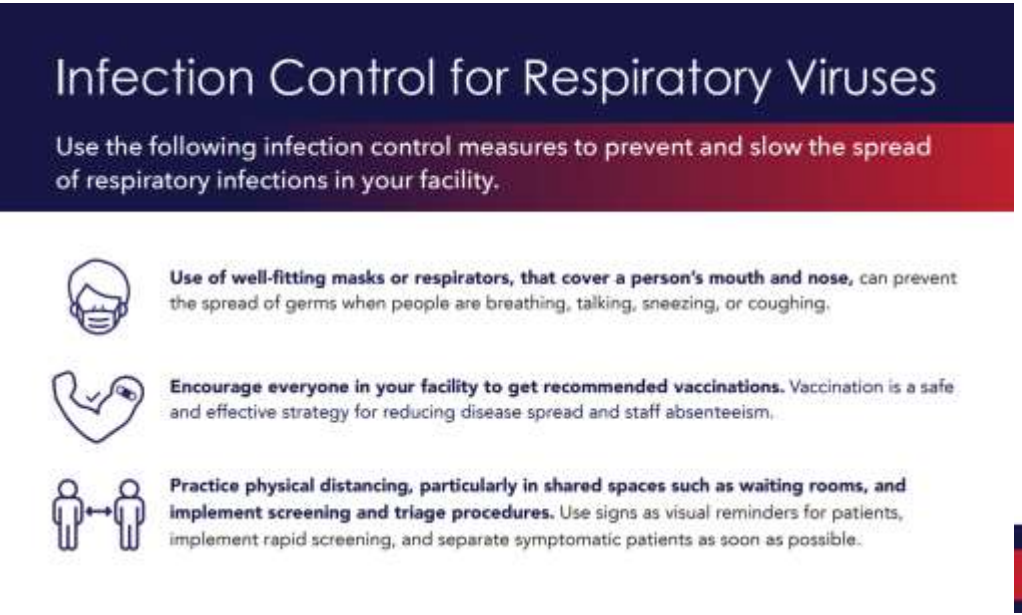
MASKS ARE NOT REQUIRED AT THIS FACILITY, BUT FOR YOUR PROTECTION AND THE PROTECTION OF THOSE AROUND YOU, YOU ARE WELCOME TO WEAR A MASK. THESE ARE PROVIDED AT THE FRONT DESK.

Need sign templates?

- Go to www.canva.com to customize your own signage based for free!
- Search the AHCA/NCAL Online Member Community Library!
- APIC IP Talk community is also helpful for signs, forms & templates.

https://www.canva.com/templates/EAD3hYSSNsM-blue-and-green-symptoms-coronavirus-poster/

Passive Health Screening – Visitors & Family



https://www.cdc.gov/infectioncontrol/pdf/projectfirstline/IPC-Respiratory-Viruses-508.pdf

Occupational Health & Staff Illnesses

- Sick policies should **encourage self-monitoring** & reporting of infectious illnesses without punitive repercussions
- Educate staff to report s/s of infection, including fever, diarrhea, cough, sore throat & skin lesions to IP/OH/manager
- Remember that staff see each other outside of work!
- Review staffing contingency plans!
- Include outbreaks in emergency preparedness exercises!

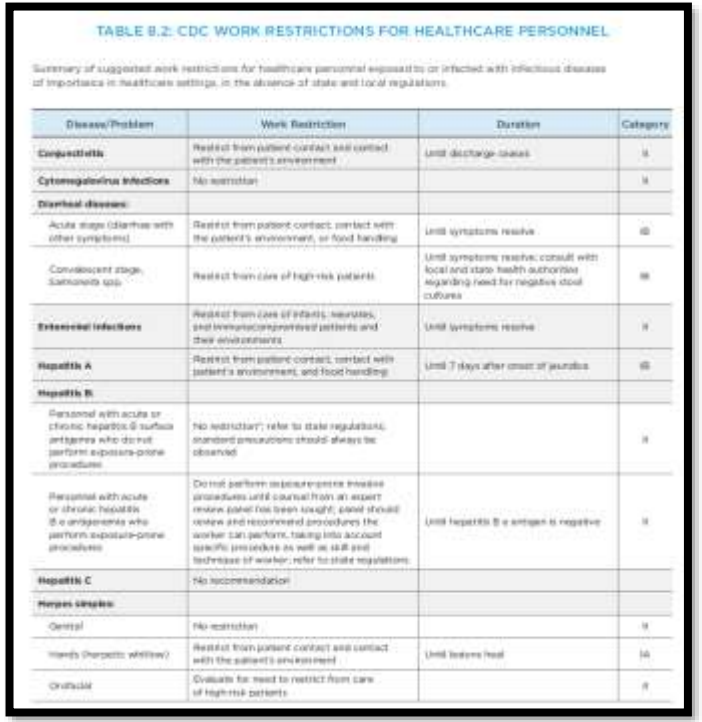


TABLE 8.2: CDC WORK RESTRICTIONS FOR HEALTHCARE PERSONNEL

Summary of suggested work restrictions for healthcare personnel exposed to or infected with infectious diseases of importance in healthcare settings, in the absence of state and local regulations

Disease/Problem	Work Restriction	Duration	Category
Conjunctivitis	Restrict from patient contact and contact with the patient's environment	Until discharge ceases	II
Cytomegalovirus infections	No restriction		II
Diarrheal diseases:			
Acute stage (diarrhea with other symptoms)	Restrict from patient contact, contact with the patient's environment, or food handling	Until symptoms resolve	III
Convalescent stage, *Salmonella* spp.	Restrict from care of high-risk patients	Until symptoms resolve; consult with local and state health authorities regarding need for negative stool cultures	III
Enteroviral infections	Restrict from care of infants, neonates, and immunocompromised patients and their environments	Until symptoms resolve	II
Hepatitis A	Restrict from patient contact, contact with patient's environment, and food handling	Until 7 days after onset of jaundice	III
Hepatitis B:			
Personnel with acute or chronic hepatitis B surface antigenemia who do not perform exposure-prone procedures	No restriction*; refer to state regulations; standard precautions should always be observed		II
Personnel with acute or chronic hepatitis B e antigenemia who perform exposure-prone procedures	Do not perform exposure-prone invasive procedures until counsel from an expert review panel has been sought; panel should review and recommend procedures the worker can perform, taking into account specific procedure as well as skill and technique of worker; refer to state regulations	Until hepatitis B e antigen is negative	II
Hepatitis C	No recommendation		
Herpes simplex:			
Genital	No restriction		II
Hands (herpetic whitlow)	Restrict from patient contact and contact with the patient's environment	Until lesions heal	III
Orofacial	Evaluate for need to restrict from care of high-risk patients		II

TABLE 8.2: CDC WORK RESTRICTIONS FOR HEALTHCARE PERSONNEL, *APIC IP Guide to LTC*, 2nd Edition, 2019

Active Health Screening of Residents

- The **nursing assessment** is the cornerstone of resident care and critical to infection prevention efforts, including outbreak management (APIC 2019)
- Recognize there are more CNAs than RNs in LTC
- **Fever is absent** in more than half of LTC facility residents with a serious infection, making evaluation challenging when infection is suspected (APIC 2019)
- Educate staff on criteria to exclude/delay potentially infectious residents from group activities!

FIGURE 6.1: BRI SCALE

Infection Risk Scale

PLEASE COMPLETE THIS ASSESSMENT

- On Admission
- With MDS Schedule (where applicable)
- For any significant change in resident condition

RESIDENT INFORMATION

First name: _____

Last name: _____

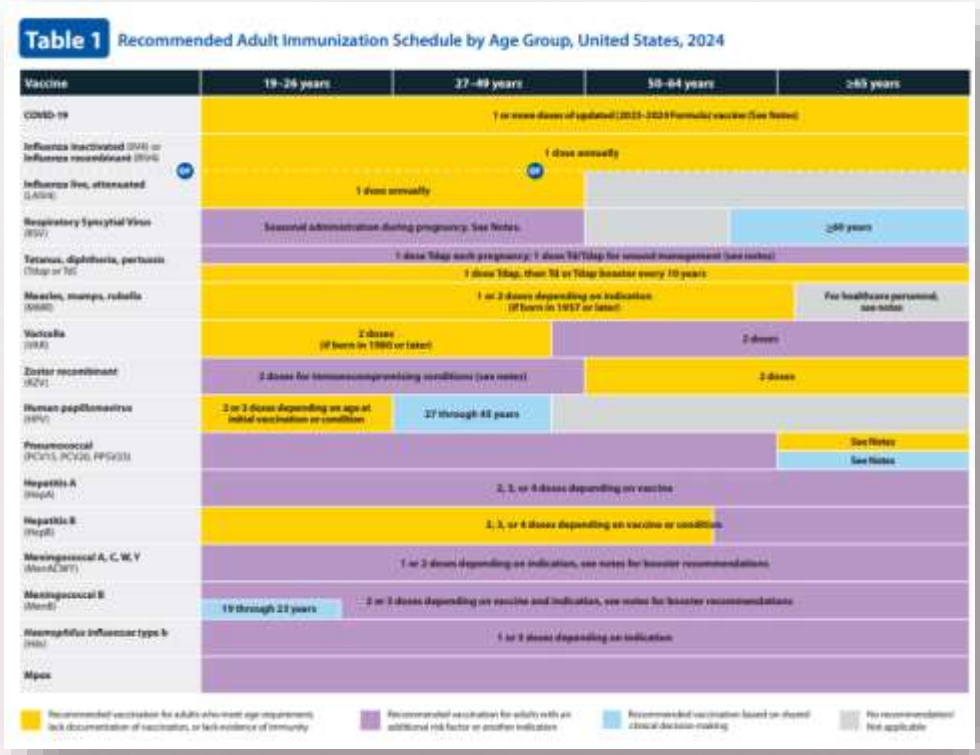
Birthdate/YO: _____

	Date	Date	Date	Date
	/ /	/ /	/ /	/ /
	ENTER SCORE: 0 = NO 1 = YES			
Current Active Infection, Ventilator, Dialysis, Immune System Compromise (HIV, Splenectomy, Chemotherapy, Chronic steroid use) (Automatic High Risk (6))				
History of infection/antibiotic use during the last 6 months				
History of hospitalization during the last 6 months				
History of colonization/past infection with MDRO (MRSA, VRE, C-diff)				
MRSA nasal colonization				
Dependent for Personal Care				
Significant, Unplanned Wt. Loss (5%)				
PEG tube/J tube, surgical implant past 12 months				
Swallowing issues/Aspiration Risk				
Diagnosis of Diabetes				
Diagnosis of Urinary Retention				
Diagnosis of Neuropathy				
Diagnosis of Peripheral Vascular Disease				
Open Wounds				
Oxygen/Nebulizer Use				
Vascular Access (PICC, Port, Peripheral IV)				
Urinary Catheter				
Foley Inserter (MRSA Colonization)				
Refuses immunization				
TOTAL (MAXIMUM 32)				
Low risk (1) = 0-4 Moderate risk (M) = 5-9 High risk (H) = 10-32 — *Care suggestions on page 2*				
ADDRESSED ON CARE PLAN AND WITH CARE TEAM				
INITIALS				

BRI Scale for Assessing Infection Risk in LTC, *APIC IP Guide to LTC*, 2nd Edition, 2019

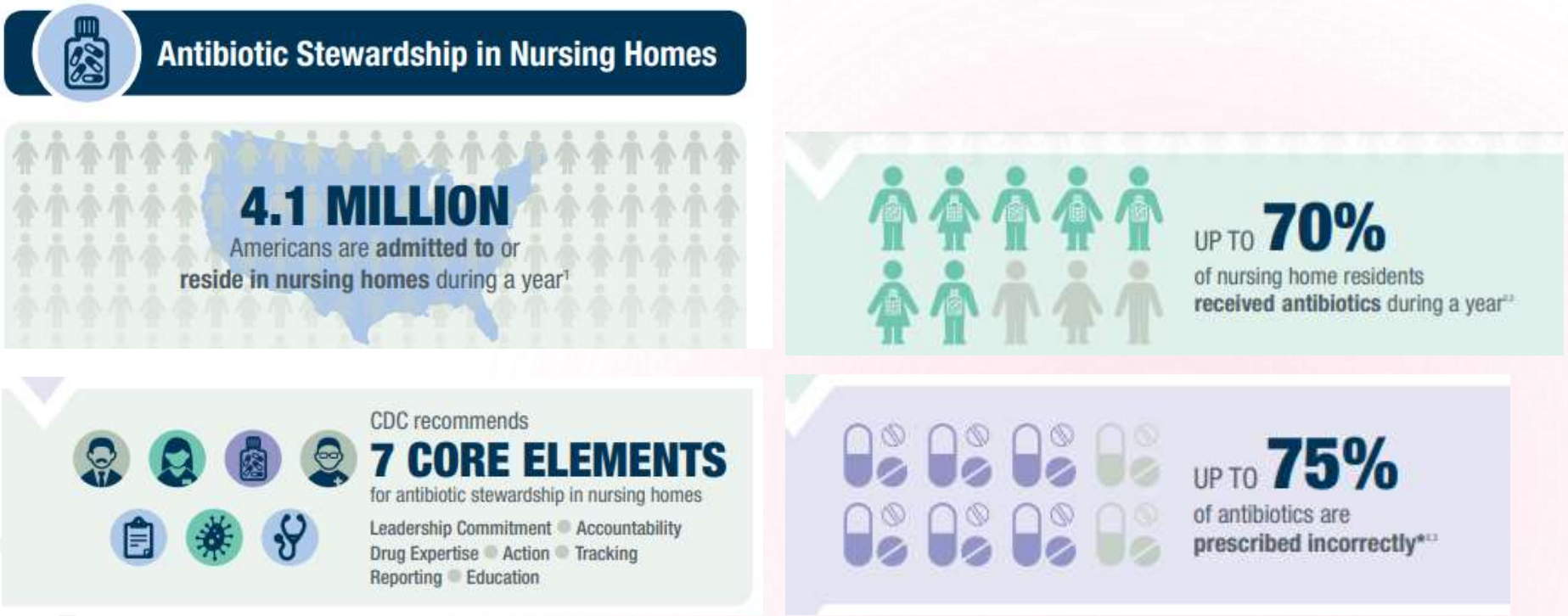
Outbreak Prevention: Vaccination

- Promote vaccination among vulnerable populations like LTC residents AND the HCP who care for them!
- CMS requires skilled nursing facilities to screen and offer influenza, pneumococcal & C19 vaccination for all new resident admissions (APIC 2019)
- Ensure state-based historic, electronic vaccination records interfaces with electronic health records (EHRs) whenever possible
- Check for proper vaccine storage when rounding (very specific requirements)



https://www.cdc.gov/vaccines/schedules/downloads/adult/adult-combined-schedule.pdf

MDRO Reduction: Antimicrobial Stewardship



https://www.cdc.gov/antibiotic-use/core-elements/pdfs/Infographic-Antibiotic-Stewardship-Nursing-Homes-508.pdf

MDRO Reduction: Antimicrobial Stewardship

- **IPC cannot achieve overarching MDRO outbreak prevention goals without addressing antimicrobial stewardship**
- If *C. diff* is an issue, IPs must assess & address appropriate testing (dx stewardship) during HO-CDI root cause analyses (RCA).
- Per CDC (2021), clinicians should:
  - Consider noninfectious causes of diarrhea
  - DC laxatives, wait 48 hours before CD testing
  - Do not test for cure (tests remain + for ≥ 6 weeks)

https://www.ahrq.gov/nhguide/index.html

C. Diff Testing Tip HCP pocket cards, developed by presenter

Improving Environmental Hygiene: A Practical Guide to Implementation

Common EVS Disinfection Challenges

UNACHIEVABLE CONTACT TIMES

If using a 10-minute product, observe cleaning & watch for reapplication to keep surfaces wet. (It's *not* happening!)

QUAT BINDING RISKS

Cotton & some microfibers are incompatible with QACs
Boyce 2016

SPRAYING & IMMEDIATELY WIPING DRY

In-progress cleaning & disinfection multi-center study

CONTAMINATED CLEANING CLOTHS & DOUBLE DIPPING

Look where & how rags & mops are stored, not only in EVS but also on the carts & in closets!
Sifuentes 2013

Common EVS Disinfection Challenges

IMPROPER DILUTION

Dispensers require maintenance (Boyce 2016). EVS techs may also manually mix chemicals if dispensers are malfunctioning.

EMERGING PATHOGEN CLAIMS

Quaternary ammonium compounds (QACs) are the most used EVS disinfectants (Han 2021), but do not have *Candida auris* efficacy.

INEFFECTIVE CLEANING TOOLS

Cotton string mops are bulky, more work intensive & contribute to cross contamination
EPA 2002

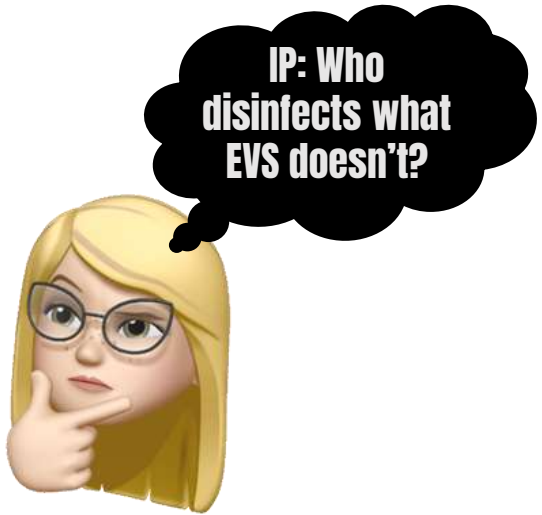
CONSISTENT ROOM CLEANING

Only 49% of high-touch surfaces cleaned in LTC; shared rooms had lower compliance, more difficult to clean
McKinley et al 2023

EVS EXPECTATIONS SURVEY RESULTS

	Leader	Tech
Toilet bowl	✚	✚
Toilet bedpan cleaner	✖	✚
Toilet seat	✚	✚
Sink/faucet	✚	✚
Toilet flush handle	✚	✚
Toilet handrails	✚	✚
Bathroom sink/faucet	✚	✚
Overbed table	✚	✚
Door knobs	✚	✚
Light switches	✚	✚

	Leader	Tech
Telephone	✚	✖
Bedside table	✚	✖
Cabinets*	✚	✖



	Leader	Tech
Computer	✖	✖
Bed rails	✖	✖
Bed controls	✖	✖
Call button	✖	✖
Chair	✖	✖
IV pump & pole	✖	✖
Commode	✖	✖
Barcode scanner*	✖	✖
Thermometer*	✖	✖

*Not currently on CDC list.
Site surveys analyzed individually.
Results reflect 4 completed surveys.

1. First, **collaborate with EVS** & determine the agreed upon **disinfectant and cleaner portfolio**, factoring in **faster/achievable contact times**, **broader pathogen coverage**, **safety**, **ease of use** & how a disinfectant manufacturer can help achieve the facility's goals**.**

2. Next, **clarify daily room cleaning roles & responsibilities and implement a (re)training and communication program to improve cleaning compliance of high touch surfaces,** including any **new product** implementation**.**

3. Lastly, **validate the efficacy** of your program using visual audits, ATP, fluorescent marking or a combination of all three. Consider adjunct disinfection, like UV-C, to offset any variability in manual cleaning & disinfection.

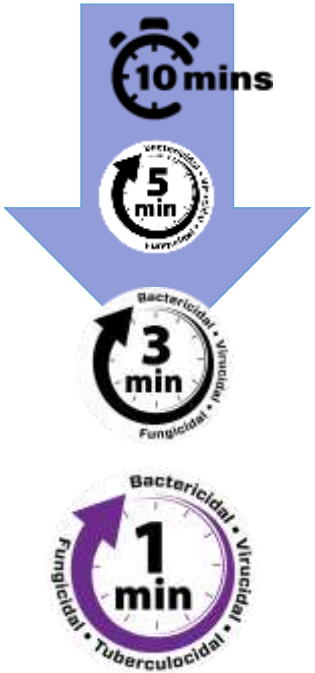
Evaluate Current Disinfectant Portfolio

	CONSIDERATION	QUESTIONS TO ASK
	**Kill Claims**	Does the product kill relevant pathogens that cause HAIs, cause outbreaks & viral threats?
	**Kill Times & Wet Contact Time**	How quickly does the product kill prevalent healthcare pathogens? Have you tested contact times internally? Does the product dry too quickly?
	**Safety**	Does the product have an acceptable toxicity & flammability rating? What PPE is required? Have you ever worked directly with the product?
	**Ease of Use**	Odor acceptable, pleasant for the user shelf-life, in convenient forms (wipes, spray) water soluble, works in organic matter, one-step (cleans/disinfects)
	**Other Factors**	Supplier offers comprehensive training/education, 24-7 customer support, overall cost acceptable (product capabilities, cost per compliant use, help standardize disinfectant in facility/system)

Rutala WA, Weber DJ. Selection of the Ideal Disinfectant. Infect Cont Hosp Epidemiol 2014;35(7): 855-865

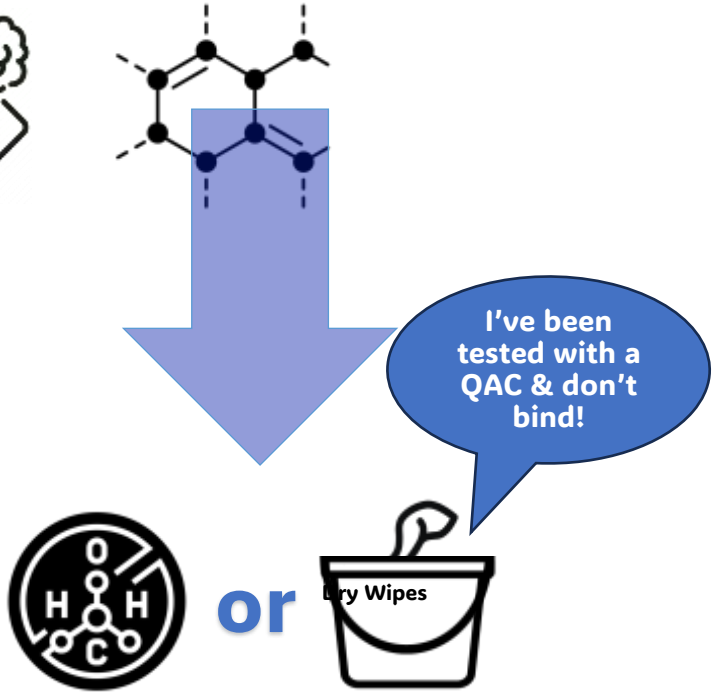
Reduce Variability, Maximize Simplicity

Contact Times



Easier Tools

Compatibility



RTU WIPES OR DILUTABLE DISINFECTANTS?

WIPES

Can be cost effective & sustainable,

No mixing.

Grab & go!

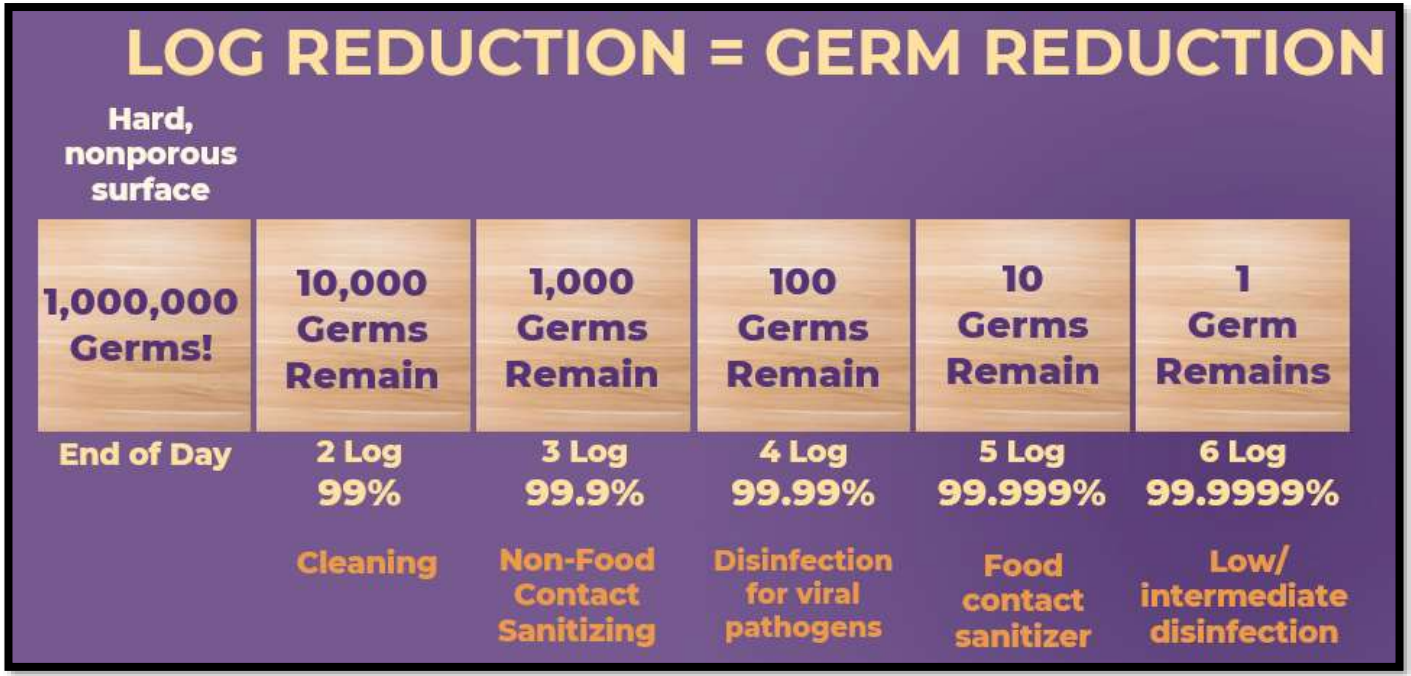
DILUTABLE

Ensure equipment is working

Label ALL containers!

No topping off or double dips!

2 (Re)training Cleaning & Disinfection: Begin with the Basics!



Educate BOTH clinical AND EVS teams on the differences between cleaning, sanitizing & disinfection!

WE MUST REMOVE VISIBLE DIRT BEFORE SANITIZING OR DISINFECTING!

WIPE 1	WIPE 2	WIPE 3	WIPE 4
First pass shows significant dirt removal	Less soil released at second wipe	Barely any soil on third wipe	Surface disinfected, 1-minute wet time

Soft Surface Sanitizing

- Recent study (Gibson 2022) in 6 NHs, 40% of residents' privacy curtains were contaminated with an MDRO
- "Soft surface" claims are limited, by the EPA, to "sanitizer."
  - The sanitization for non-food contact surfaces is generally accepted as 99.9% (**a 3-log reduction**).
  - The sanitizer claim is based on laboratory testing of **only two bacteria**, *not* viruses or fungi.
- EPA recently published soft surface disinfectant (6-log reduction) testing methods, so we can expect to see more products with these claims soon.

Robotic companion “pets” can be effectively cleaned & reprocessed

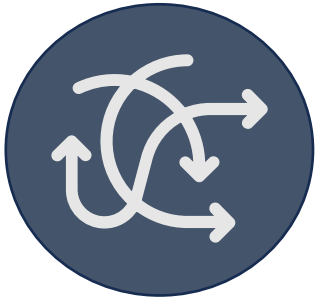
- Often used on memory care units, decrease anxiety & depression
- Include fur, soft & hard plastic components
- Cleaned with disinfectant wipes; sprayed w/ sanitizer & brushed; all parts “vigorously wiped” per instructions for use (IFUs)
- Results: process effectively removes high number of bacterial pathogens

Bradwell, *PLoS ONE*, 2020.

Common Clinical Disinfectant Challenges

POINT-OF-CARE DEVICE DISINFECTION

Finding visible blood & body fluids on shared portable medical equipment (PME) is a risk not only for pathogen transmission, but also BBF outbreaks.



UNCLEAR ROLES & RESPONSIBILITIES

Who is responsible for cleaning & disinfectant what, when & with which products? EVS is **not responsible** for everything!

POINT-OF-CARE DISINFECTANT AVAILABILITY

Are disinfectant wipes available to reprocess shared portable medical equipment? Staff will *not* go searching!

COMPATIBILITY VS. IFUs

IFUs can be challenging for IP teams to navigate. Does a wipe damage the equipment, or has it simply not been tested?

Whose job is it, anyway? EVS, clinical user or central processing?

Bedside commode

IV Pump controls

Bedrails

Glucometer

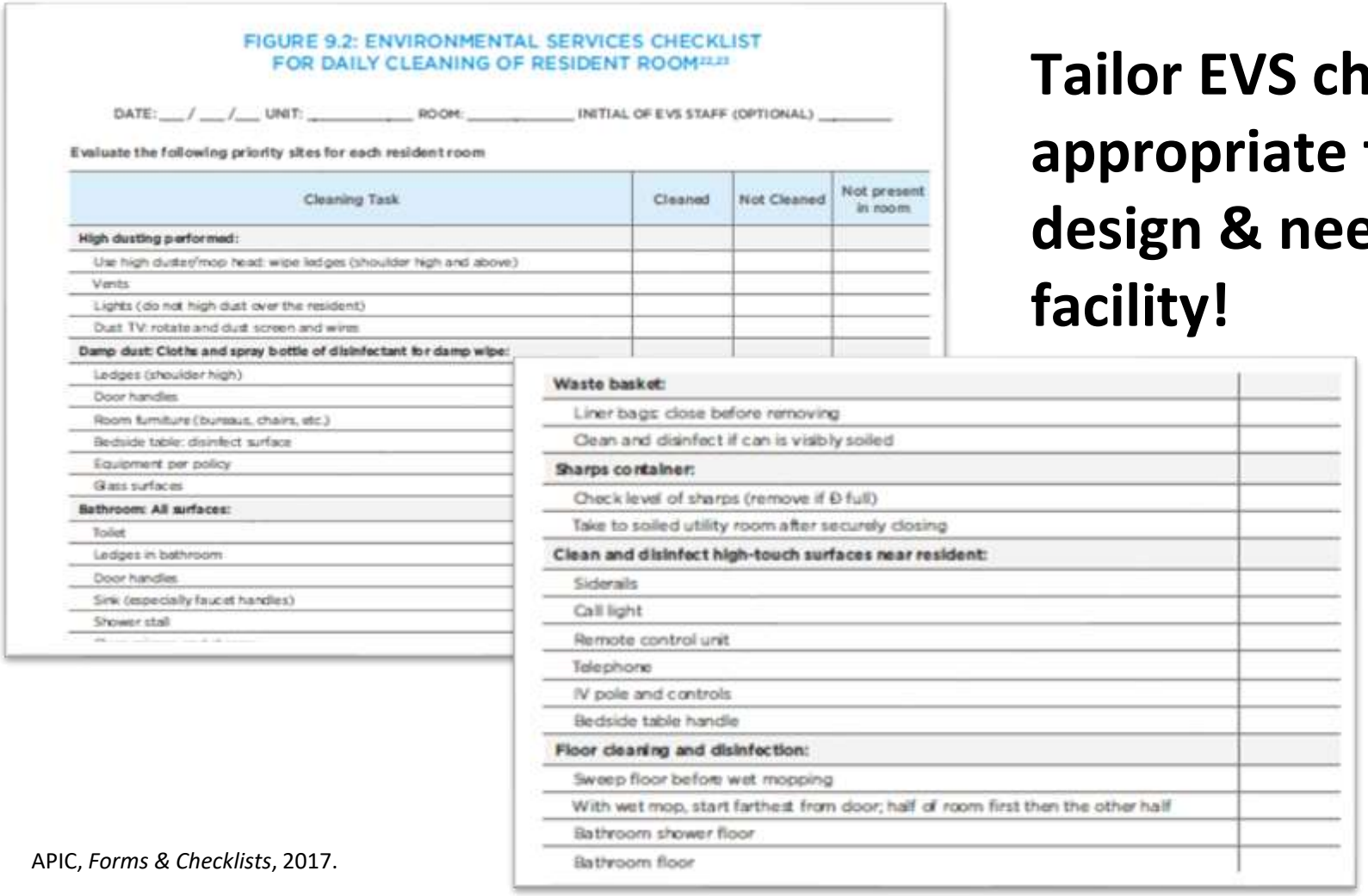


FIGURE 9.2: ENVIRONMENTAL SERVICES CHECKLIST FOR DAILY CLEANING OF RESIDENT ROOM[22,23]

DATE: ___/___/___ UNIT: _____ ROOM: _____ INITIAL OF EVS STAFF (OPTIONAL) _____

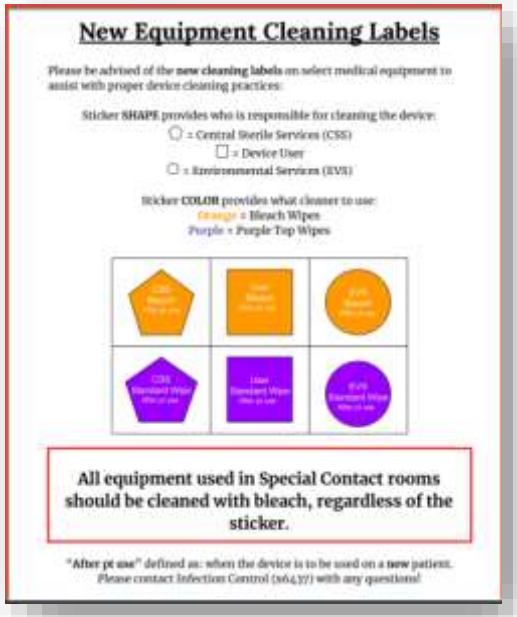
Evaluate the following priority sites for each resident room

Cleaning Task	Cleaned	Not Cleaned	Not present in room
High dusting performed:			
Use high duster/mop head: wipe ledges (shoulder high and above)			
Vents			
Lights (do not high dust over the resident)			
Dust TV: rotate and dust screen and wires			
Damp dust: Cloths and spray bottle of disinfectant for damp wipe:			
Ledges (shoulder high)			
Door handles			
Room furniture (bureaus, chairs, etc.)			
Bedside table: disinfect surface			
Equipment per policy			
Glass surfaces			
Bathroom: All surfaces:			
Toilet			
Ledges in bathroom			
Door handles			
Sink (especially faucet handles)			
Shower stall			
Waste basket:			
Liner bags: close before removing			
Clean and disinfect if can is visibly soiled			
Sharps container:			
Check level of sharps (remove if ⅔ full)			
Take to soiled utility room after securely closing			
Clean and disinfect high-touch surfaces near resident:			
Siderails			
Call light			
Remote control unit			
Telephone			
IV pole and controls			
Bedside table handle			
Floor cleaning and disinfection:			
Sweep floor before wet mopping			
With wet mop, start farthest from door; half of room first then the other half			
Bathroom shower floor			
Bathroom floor			

Tailor EVS checklist appropriate to design & needs of facility!

APIC, *Forms & Checklists*, 2017.

But do NOT forget clinical portable medical equipment!



New Equipment Cleaning Labels

Please be advised of the **new cleaning labels** on select medical equipment to assist with proper device cleaning practices:

Sticker **SHAPE** provides who is responsible for cleaning the device:

- ⬠ = Central Sterile Services (CSS)
- ☐ = Device User
- ⬭ = Environmental Services (EVS)

Sticker **COLOR** provides what cleaner to use:

Orange = Bleach Wipes

Purple = Purple Top Wipes

All equipment used in Special Contact rooms should be cleaned with bleach, regardless of the sticker.

"**After pt use**" defined as: when the device is to be used on a **new** patient. Please contact Infection Control (x6437) with any questions!

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Selected Equipment for Labeling

Equipment or Item	Group Responsible	Manufacturer Recommended
IV pump	CSS	Bleach
SCD Pump	EVS	Bleach
Vital Sign Machines	User	Bleach
Wall Mounted Vital Sign Machines	EVS	Bleach
EKG Machine	User	Bleach
PCA	CSS	Bleach
Feeding Pump	EVS	Bleach
Defibrillator on Code Cart	CSS	Quaternary Ammonium
Wall Mounted Patient Monitor/Leads/Pulse Ox/Cuff	EVS	Quaternary Ammonium
Bladder Scanner	User	Quaternary Ammonium
Telemetry Pack	User	Quaternary Ammonium

Dabkowski M. 2022. **Improving Cleaning Compliance of Noncritical Equipment with Labels and Auditing**. APIC 2022 oral abstract. Accessed securely online as conference attendee at https://c53ac34983397363b9e2-fa85729df59db74d0fed9dc21ffea231.ssl.cf1.rackcdn.com//1884872-1491675-004.pdf.

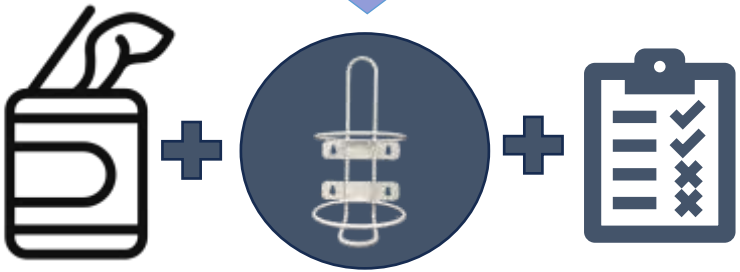
Increase Accessibility to Clinical Disinfectants

Review Safety Rating

EPA Category II

EPA Category IV

Increase Accessibility & Compliance



Include PME in Validation

Validating the LTC Environmental Hygiene Program*

	Pros	Cons
	Easy to perform, cost effective, engages staff	Difficult to standardize, may be seen as punitive w/o team engagement, Hawthorne effect, IP resources
	Encourages resident participation, including family & visitors, quantitative measurement	Subjectivity, **emphasizes visible cleanliness only, not true disinfection**, no benchmarking
	May be useful during an outbreak or research project, quantitative	Not recommended by CDC as routine measure, **high cost**, long turn around times, results may not correspond to the outbreak
	Easy to use & train others, immediate feedback, can be helpful when evaluating new/novel cleaning methods	Detection of organic matter (bioburden) is **not reliable predictor** of infection risk, **high cost of equipment & supplies**, storage of swabs
	Very inexpensive, easy to perform, immediate results	Does not identify pathogens, only detects cleaned/not cleaned, may be seen as punitive w/o team engagement

Modified from Infection Prevention Guide to LTC 2nd ed, APIC, 2017.

In summary

- LTC settings house vulnerable populations where hand hygiene & environmental disinfection are uniquely challenging
- Multiple studies have demonstrated high levels of MDRO contamination not only on residents' hands, but also their rooms & common areas.
- Select cleaning, sanitizing/disinfectant products based on facility needs & risk assessment.
- Effective LTC outbreak prevention requires adherence to ***all*** IPC fundamentals!

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