Wisconsin HAI Long-Term Care Education Series

August 24, 2023

WISCONSIN DEPARTMENT *of* HEALTH SERVICES

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Infection Prevention and Control: Elements, Program, and Implementation Strategies

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Today's Agenda

- Basic IPC principles
- Antimicrobial stewardship
- Vaccination considerations

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Today's session is part one of a two-part series on IPC basics.

What is Infection Prevention and Control (IPC)?

Communicable disease can be:

- Caused by viruses, bacteria, or parasites.
- Spread between people or through contaminated objects.
- An active infection or colonization.

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- Communicable, infectious or transmissible all mean the same thing.
- These diseases can be caused by viruses, bacteria, parasites, fungi or other type of infectious agent.
- These are transmitted between people or contaminated objects and can be spread from:
  - Health care personnel (HCP) to patient/resident
  - Resident to resident
  - HCP to HCP
- Active infections occur when the germs enter the body, often through medical devices like ventilators, intravenous catheters, urinary catheters, or wounds caused by injury or surgery and cause medical concerns or issues.
- Colonization means that the germs are on or in a person's body, but those germs are not causing an infection at this time. Being colonized can increase the risk of developing an active infection in the future.

Transmission

Contact

Droplets

Air

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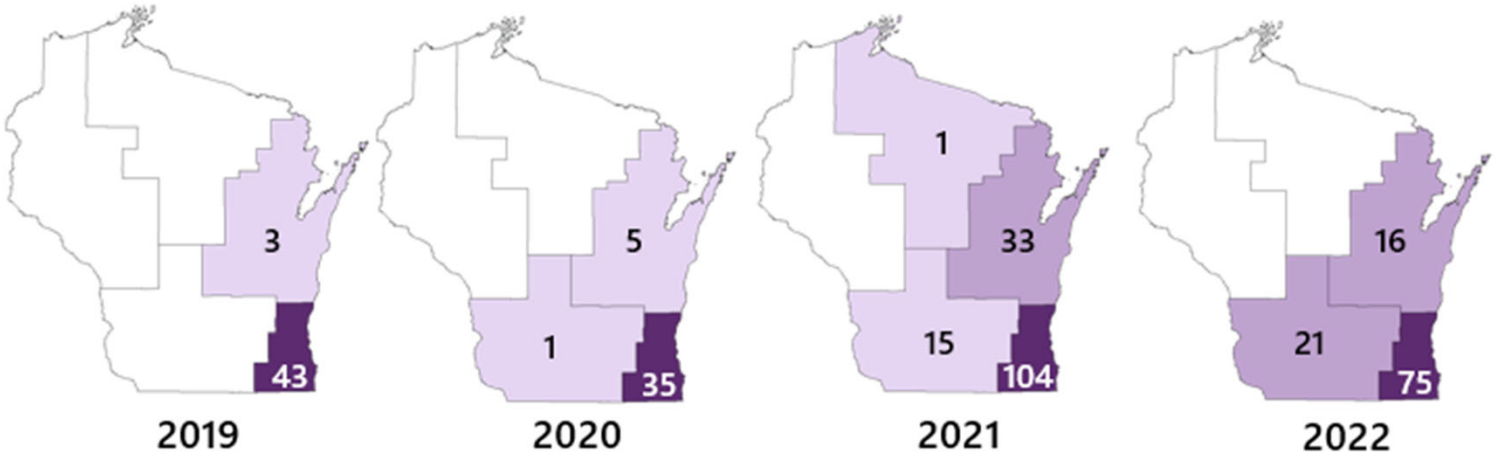
- Infectious agents can be transmitted through:
  - Contact – direct with another person or indirectly through contaminated objects.
  - Droplets.
  - Air.
- Some infectious agents can be spread in more than one way.

Why is IPC Important?

A Rise and Spread in MDROs



Reported CP-CRAB cases in Wisconsin
Data source: Wisconsin State Lab of Hygiene

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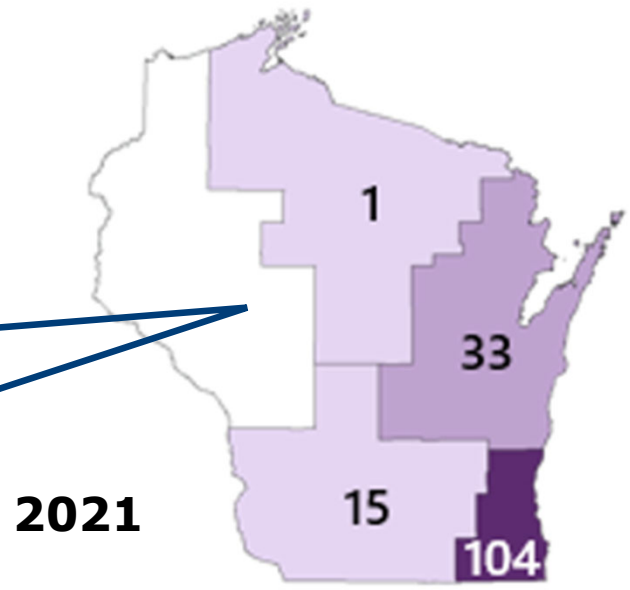
CP-CRAB Cases in Wisconsin

Of the individuals for which case history information was available, **90%** were either a **current or former LTCF resident**.



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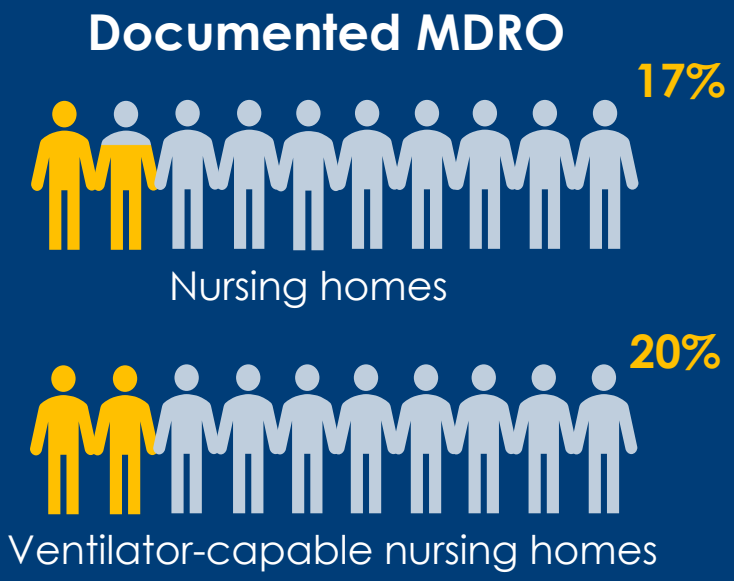
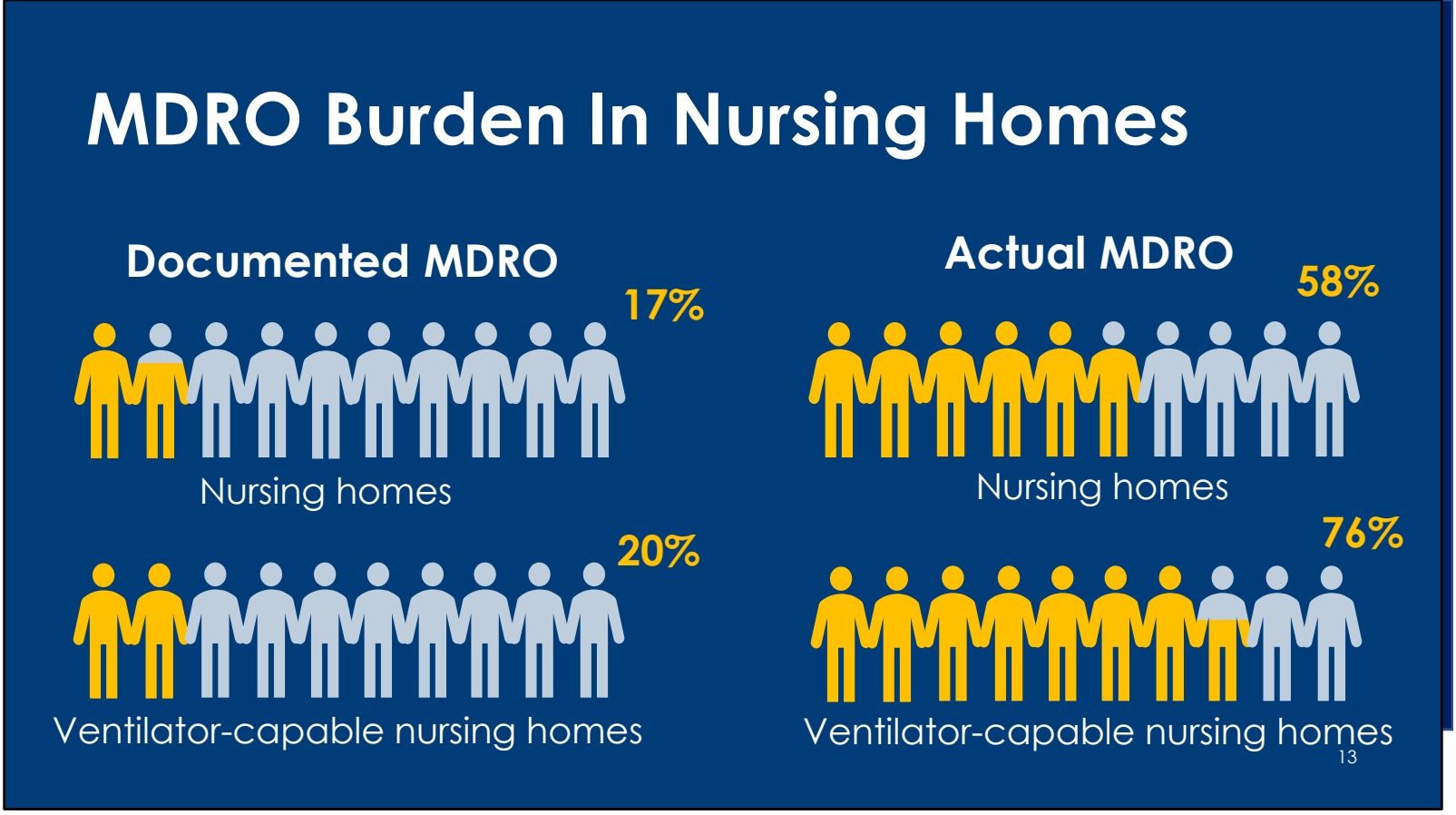
- Of the 134 CP-CRAB cases in which case history information was available, Wisconsin in 2021, 121 of these, or **90%, were either a current or former long-term care facility (LTCF) resident**. This is telling us, and it is very evident, that there are many gaps in IPC and these gaps cause transmission.

MDRO Burden In Nursing Homes



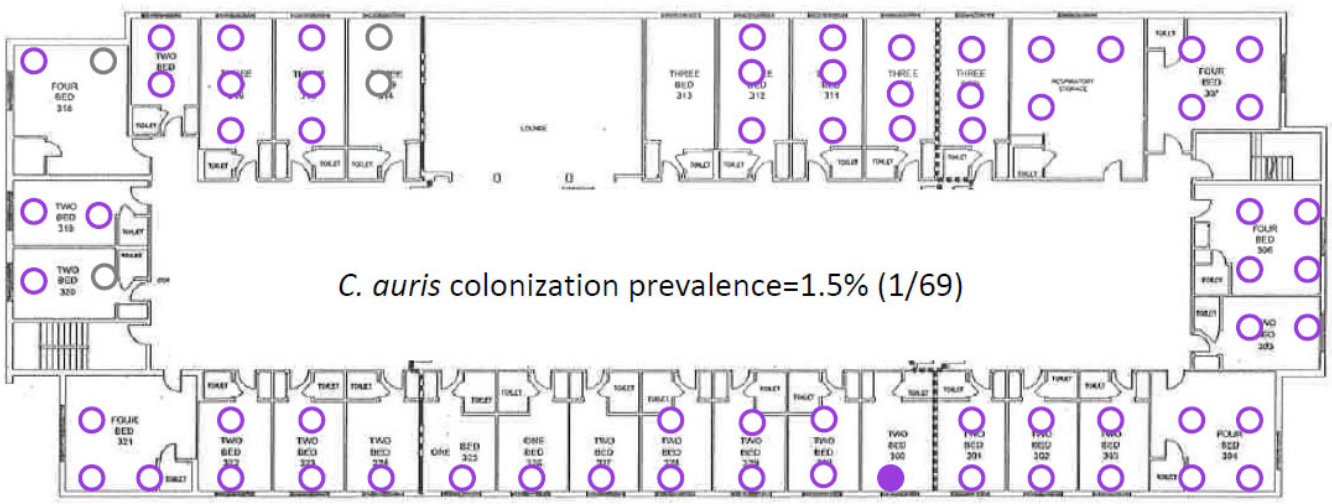
- This slide shows data from a large study that was conducted in nursing homes, including a subset of nursing homes called ventilator-capable nursing homes that provide care to ventilator-dependent residents.
- The first column shows the percentages of residents who had documentation in their medical record of a presence of a multidrug-resistant organism (MDRO) colonization or infection - so about 2 out of every 10 residents across all these nursing homes were already known to have an MDRO.



- The second column shows the percentages of residents who actually had an MDRO after testing was complete. As you can see, in the nursing homes that did not provide ventilator care, almost 6 out of 10 of the residents were found to have an MDRO and in the ventilator-capable nursing homes, the number went up to almost 8 out of every 10 residents.
- What this data, and other data like it, shows is that there are **many** nursing home residents who are colonized with MDROs and we are **not aware** of most of them, and the numbers are even higher in nursing homes that take care of the most complex residents, such as residents on ventilators.

Source:
https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.cdc.gov%2Fhai%2Fpdfs%2Fcontainment%2FEBP-Presentation-July2022.pptx&wdOrigin=BROWSELINK

vSNF B 3rd Floor
March 2017 *C. auris* PPS Results



- *C. auris* positive
- Screened negative for *C. auris*
- Not tested for C. auris (refused or not in room)

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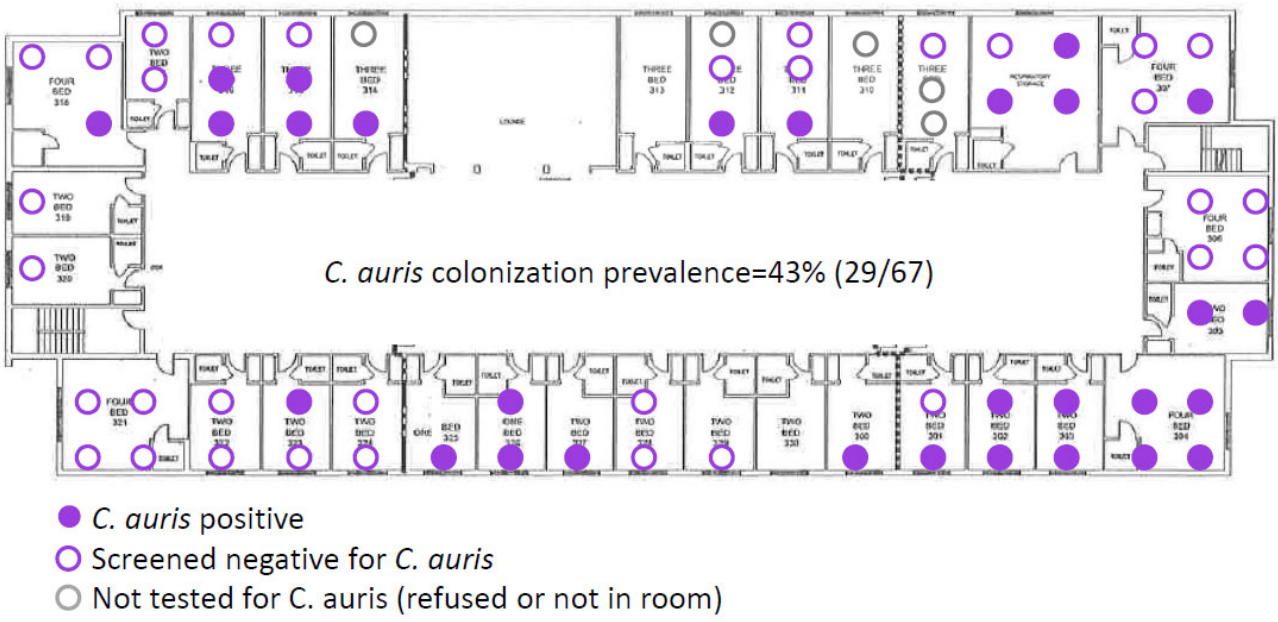
- This was in a ventilator unit of a skilled nursing facility in another state. In March 2017 they detected one *Candida auris* case in a resident, which is depicted by the filled purple circle. They screened nearly everybody on the unit, and everyone else that they screened was negative, represented by the non-filled purple circles.

vSNF B 3rd Floor
January 2018 *C. auris* PPS Results



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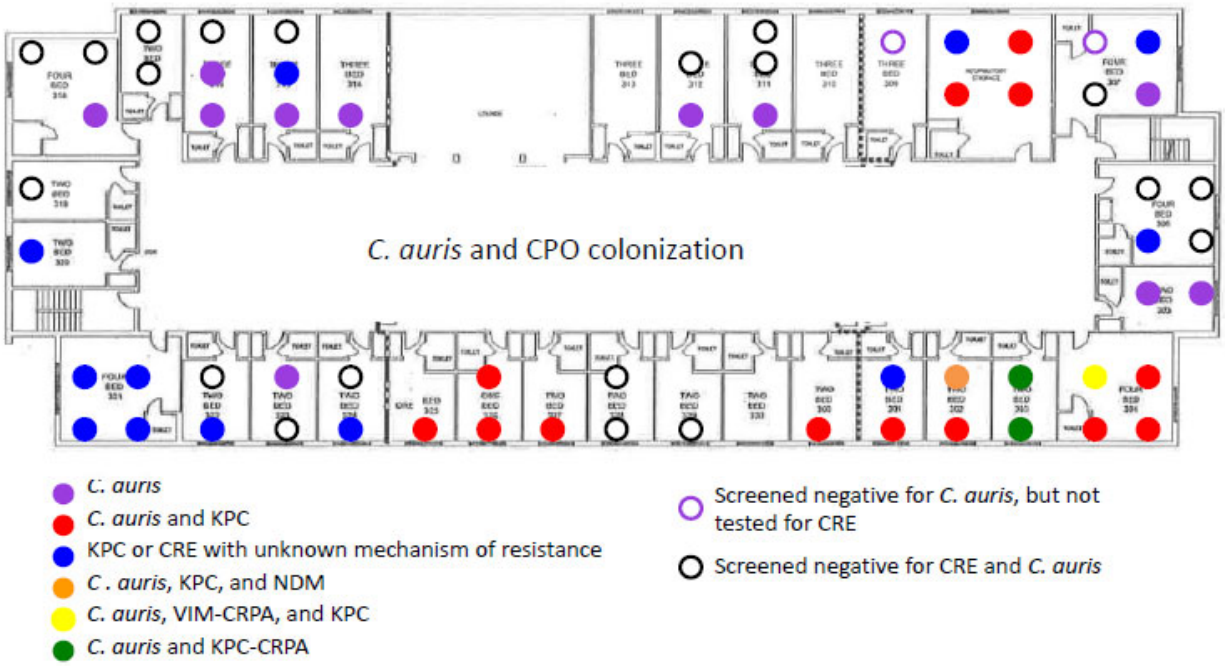
- Ten months later, in January 2018, they did a second screen of the residents. 29 of 67 residents, 43%, were now positive for *Candida auris.* These residents are all colonized, not infected, so they're not immediately sick. But given that they're on a ventilator unit, you can assume that they have some other serious health conditions, and they're at high risk for an infection from this organism.
- There are IPC measures that can be implemented, that CDC recommends, to help prevent this situation:
  - Using personal protective equipment (PPE)
  - Environmental cleaning.
  - Cohort residents (putting someone colonized in with *Candida auris* with another resident who also tested positive *for Candida auris* can be effective, but also very tricky. Residents can be colonized with more than one MDRO.

vSNF B 3rd Floor
January 2018 CPO and *C. auris* PPS Results



- *C. auris*
- *C. auris* and KPC
- KPC or CRE with unknown mechanism of resistance
- *C . auris*, KPC, and NDM
- *C. auris*, VIM-CRPA, and KPC
- *C. auris* and KPC-CRPA
- Screened negative for *C. auris*, but not tested for CRE
- Screened negative for CRE and *C. auris*

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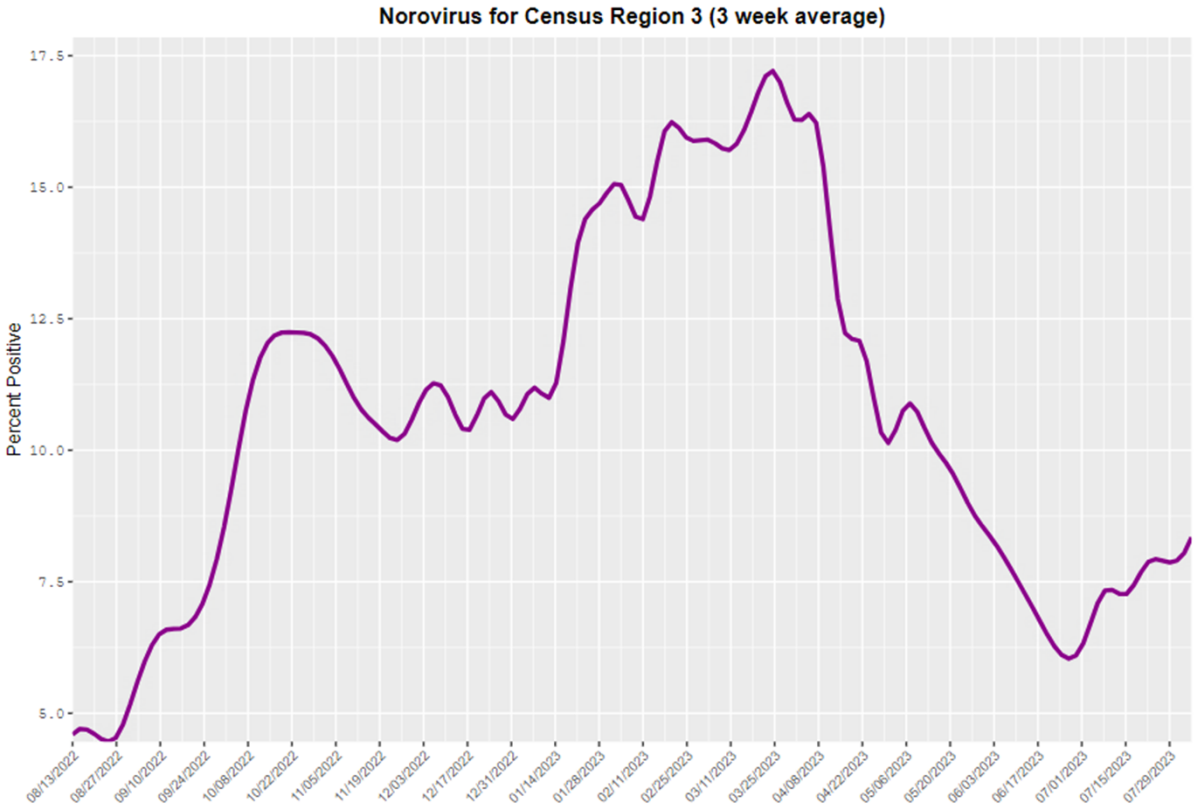
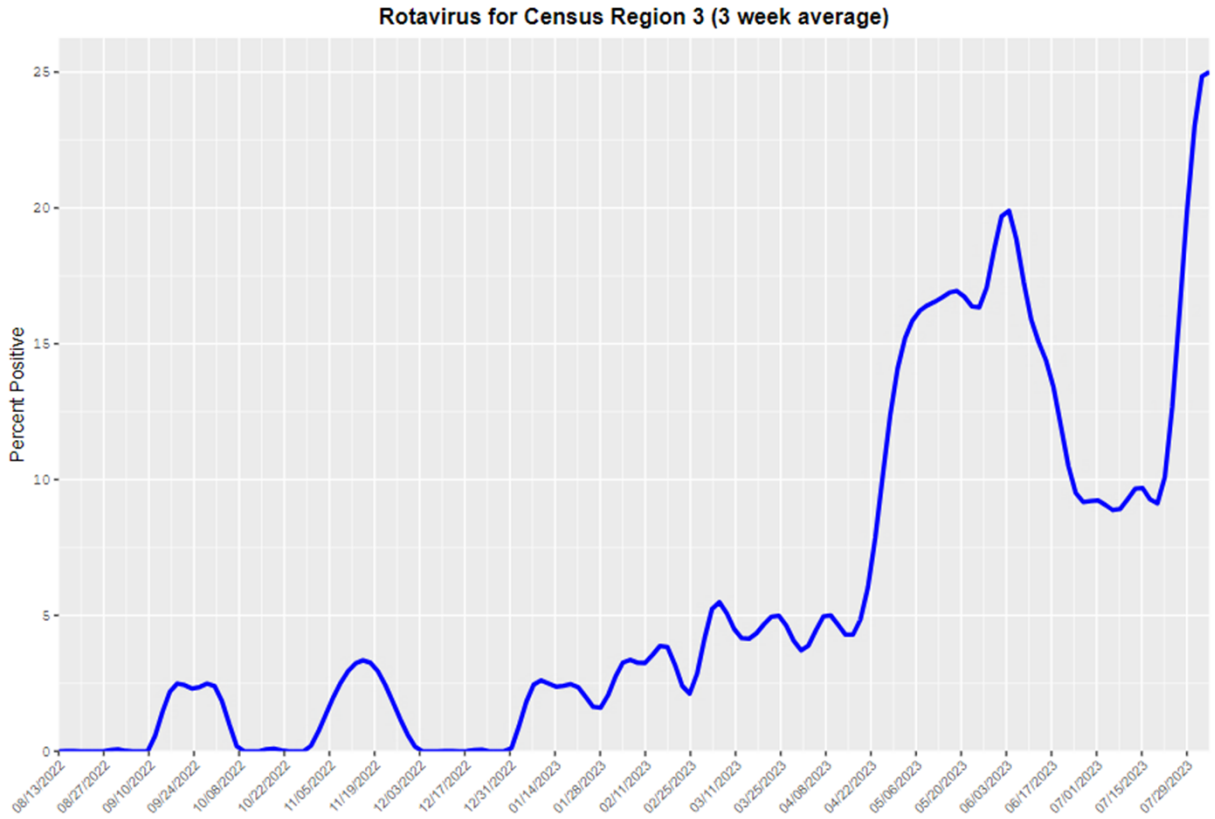
- This same facility did another screen at the same time, January 2018, for carbapenemase-producing bacteria.
  - The black circles are negative for both *Candida auris* and carbapenem-resistant Enterobacterales (CRE).
  - The purple circles are still patients positive for *Candida auris.*
  - The red circles are patient with *Candida auris* and a bacteria with a KPC carbapenemase.
  - Blue circles have an unknown carbapenemase.
  - The orange circle had *Candida auris*, KPC, and an NDM carbapenemase producing organism.
  - The yellow circle had Candida, KPC, and a carbapenemase-producing Pseudomonas, that is two out of five of the CDC's Targeted Organisms!
- You can imagine how cohorting residents becomes a nearly impossible puzzle as these MDROs spread.



National Respiratory and Enteric Virus Surveillance System, CDC [17]

- This graph shows Norovirus infections detected by PCR lab tests in our region of the US.
- Norovirus is typically seen as being seasonal, increased at certain times of the year, and can spread quickly and easily.
- IPC practices and work restrictions are very important in keeping GI infections from spreading.

Source: https://www.cdc.gov/surveillance/nrevss/index.html

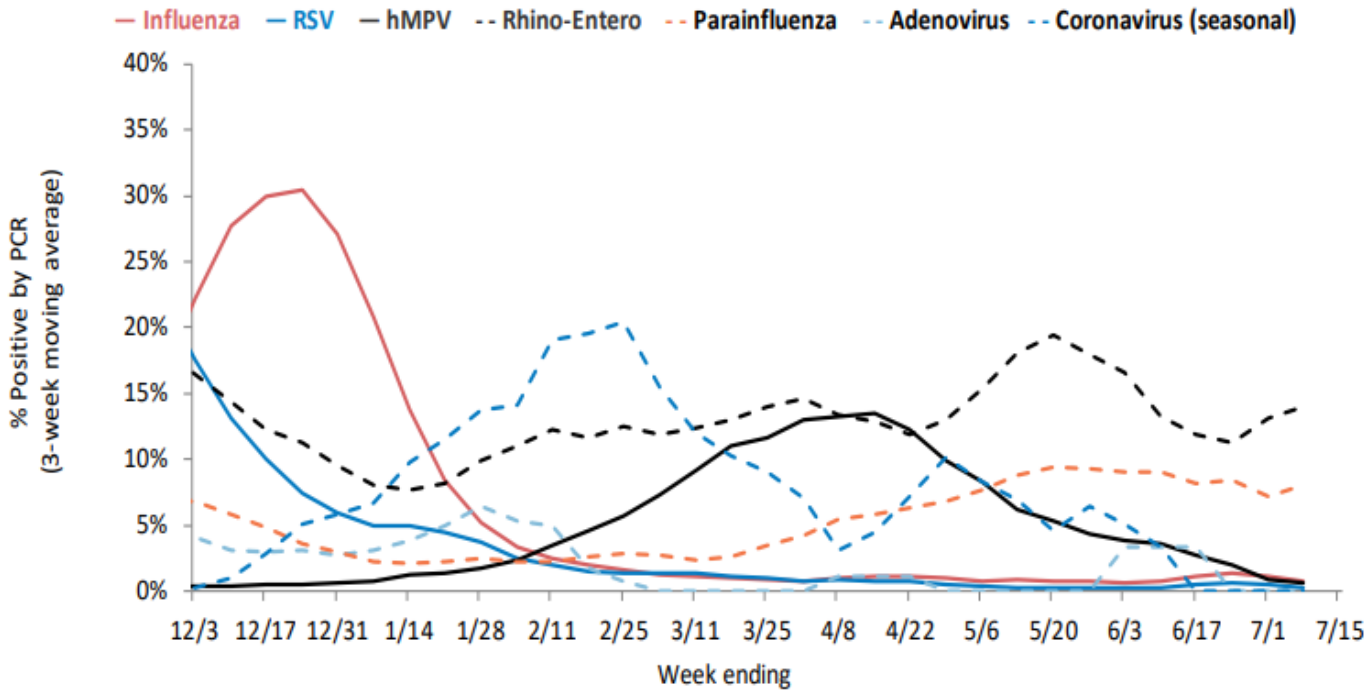


National Respiratory and Enteric Virus Surveillance System, CDC [18]

- This graph shows the rotavirus infections identified in our region of the US using antigen testing.
- Again, this can be seasonal but can be found throughout the year.
- If IPC practices are not initiated, spread of rotavirus can increase.

Source: https://www.cdc.gov/surveillance/nrevss/index.html

WISCONSIN LABORATORY SURVEILLANCE FOR RESPIRATORY VIRUSES



Weekly Respiratory Report, DHS

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Source: https://www.dhs.wisconsin.gov/publications/p02346-2023-07-08.pdf

IPC Basics

IPC Basic Principles


Hand hygiene


Separation of clean and dirty


Cleaning and disinfection


Environmental infection control


Precautions

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IPC Basic Principles

- Hand hygiene
- Separation of clean and dirty
- Cleaning and disinfection
- Environmental infection control
- Precautions

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Hand Hygiene Methods

Soap and water

Alcohol-based hand rub (ABHR)

State Operations Manual: Appendix PP

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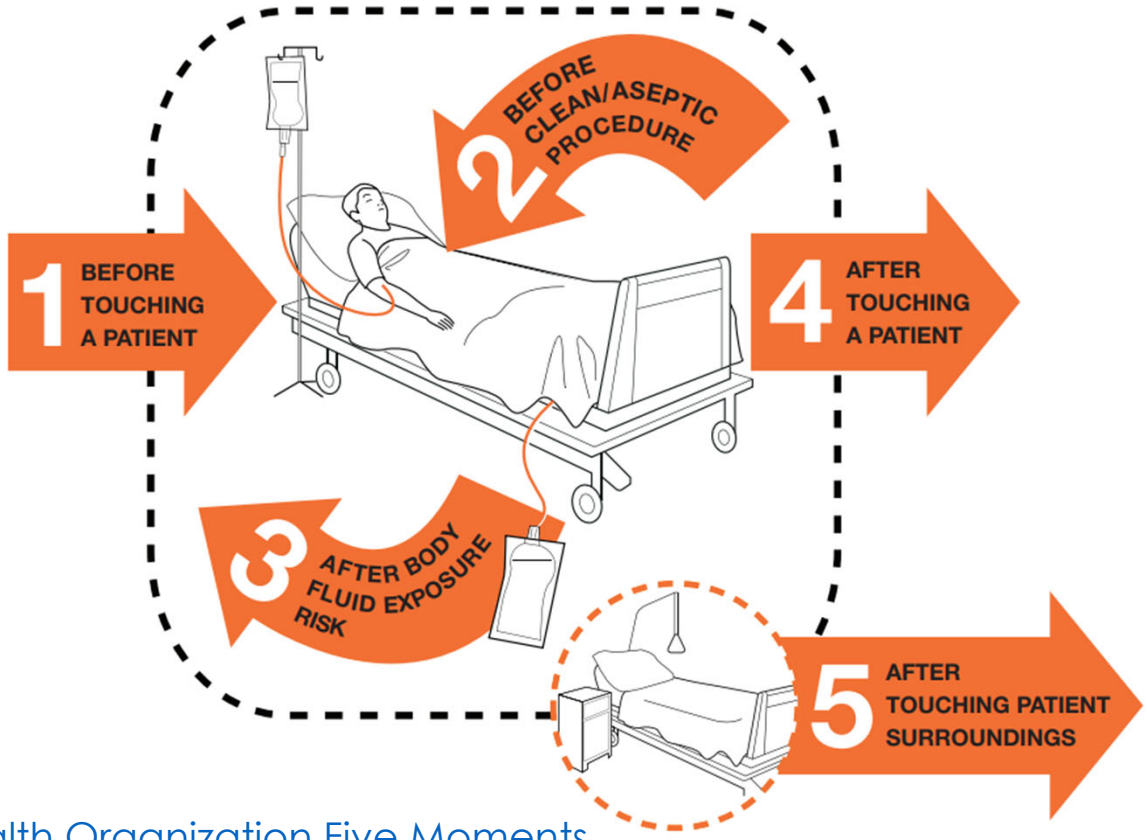
- There are 2 ways to clean your hands
  - Using soap and water
  - Using alcohol-based hand rub.
- These should be in readily accessible, and in appropriate locations. Appropriate locations include but are not limited to resident care areas, and food and medication preparation areas.
- Staff must perform hand hygiene (even if gloves are used). Glove use should never be a substitute for hand hygiene. Gloves can actually serve as a source of transmission.

Resource: https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/downloads/som107ap_pp_guidelines_ltcf.pdf



World Health Organization Five Moments

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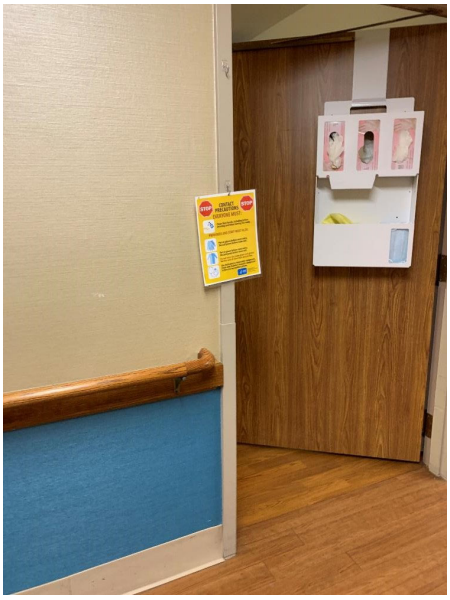
- Hand hygiene should be performed before:
  - Patient contact
  - Donning PPE
  - Performing an aseptic task
- After:
  - Patient contact
  - Doffing PPE
  - Contact with blood and other bodily fluids

Source: https://www.who.int/gpsc/5may/Your_5_Moments_For_Hand_Hygiene_Poster.pdf

Observations



IPC Basic Principles

Hand hygiene


Separation of clean and dirty

Cleaning and disinfection

Environmental infection control

Precautions

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Separate clean and dirty items.

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- A basic concept for IPC comes down to keeping clean and dirty separate.
  - Do not put clean items next to dirty items or on dirty surfaces.
  - Do not store clean items in dirty utility rooms.
  - Work from clean to dirty when performing tasks.
- Keep supplies away from sinks and potential water contamination. A splashguard or making sure items are 3 feet away from the sinks will help prevent transmission of contamination and keep things dry.

Observations

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IPC Basic Principles

- Hand hygiene
- Separation of clean and dirty
- **Cleaning and disinfection**
- Environmental infection control
- Precautions

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Environmental contamination plays a role in infection transmission.

CDC Environmental Cleaning in Resource-Limited Settings

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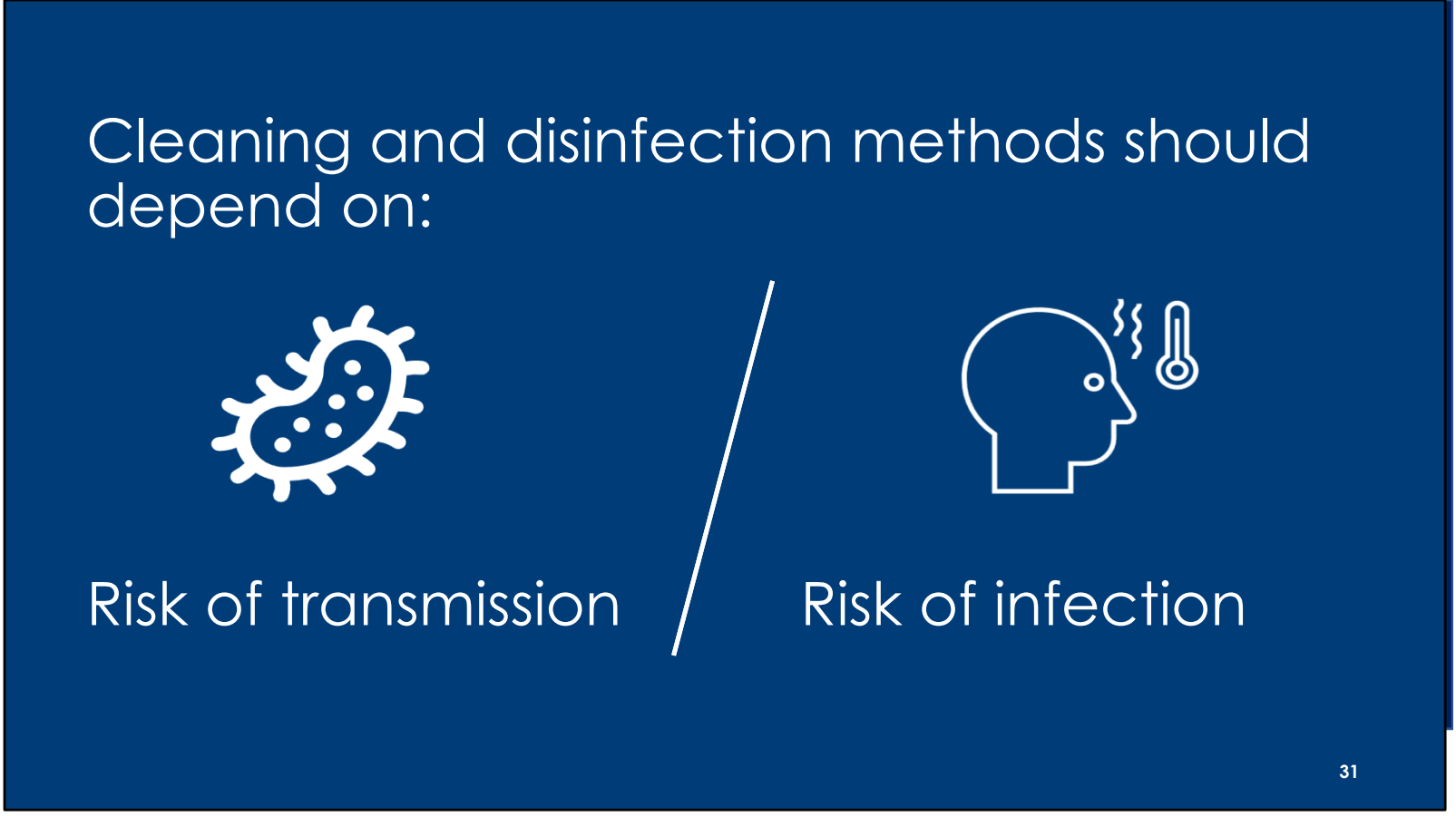
Source: https://www.cdc.gov/hai/prevent/resource-limited/introduction.html



- Cleaning and disinfection methods should be based on:
  - The risk of the patient or resident coming in contact with equipment or medical devices.
  - The risk of infection.
- Cleaning and disinfection is a multi-step process. Cleaning is the physical removal of contamination, where disinfection is the process of killing the pathogen.
  - You must remove debris first. The physical removal of debris and microorganisms by wiping or scrubbing is just as important as the antimicrobial effect of the cleaning agent used.
  - When disinfecting, contact time is extremely important. If a person doesn't allow the disinfectant to sit for the defined wet contact time, the efficacy of the product is decreased.
- Sterilization is a process that destroys or eliminates all forms of microbial life in equipment. This is utilized when sterile equipment is needed for tasks.

NON-CRITICAL[1] ITEMS CLEANING AND DISINFECTION PRODUCT LIST

Item Cleaned	Product /EPA Reg. No.	EPA List N for *SARS-CoV-2*	Contact/Wet Time[2]	Responsibility of: (e.g., Nursing, Housekeeping)	Comments
Example: *Glucometer*	*Orange Top; Sani-cloth Bleach-Germicidal wipe (EPA# 9480-8)*	*Yes*	*4 minutes*	*Nursing*	*Each resident should have own glucometer.*

Non-Critical Items Cleaning and Disinfection Product List, DHS

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- This is an example of a cleaning chart. It offers a visual reminder information on the item, who should be cleaning it, how often it needs to be cleaned/disinfected and with what.
- These could be placed throughout the facility in various locations to ensure proper cleaning and disinfection are occurring.

Source: https://www.dhs.wisconsin.gov/forms/f02705.pdf

Product Name	PDI Super Sani-Cloth	PDI Sani-Cloth AF3	CaviWipes	Virex TB	Virex II 256	Protex (spray or wipes)	Clorox Healthcare Hydrogen Peroxide Wipes	Oxivir TB Wipes	Everwipe
All these products effective against Coronavirus. Not effective against *C. diff*									
Contact Time	2 minutes	3 minutes	3 minutes	5 minutes	10 minutes	10 minutes	2 minutes	1 minute (5 minutes for TB)	10 minutes

Product Name	PDI Sani-Cloth Bleach	OxyCide	Dispatch
All these products effective against Coronavirus, *C. diff*, and HepA			
Contact Time	4 minutes	5 minutes	5 minutes

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- This chart shows different disinfectants, what they can be used for, and the corresponding wet contact time needed for proper disinfection.

IPC Basic Principles

- Hand hygiene
- Separation of clean and dirty
- Cleaning and disinfection
- **Environmental infection control**
- Precautions

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Air handling plays an important role in disease prevention.

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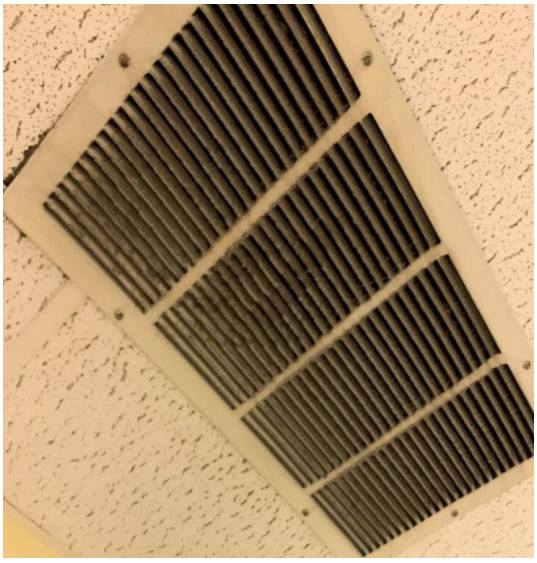
- Air handling: Air handling involves monitoring the temperature, humidity, air pressure, and number of air exchanges per hour in a particular space.
- Health care facilities with poor ventilation including filter insufficiencies and poor maintenance can contribute to the spread of infectious disease.
- When IPs have a basic understanding of air handling systems and the associated risks, they can collaborate with facility maintenance staff and engineers on improvement efforts.

Resource: https://www.ashe.org/project-firstline/ventilation-quick-guide

Observations



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Water systems can promote growth of pathogenic organisms if not properly maintained.

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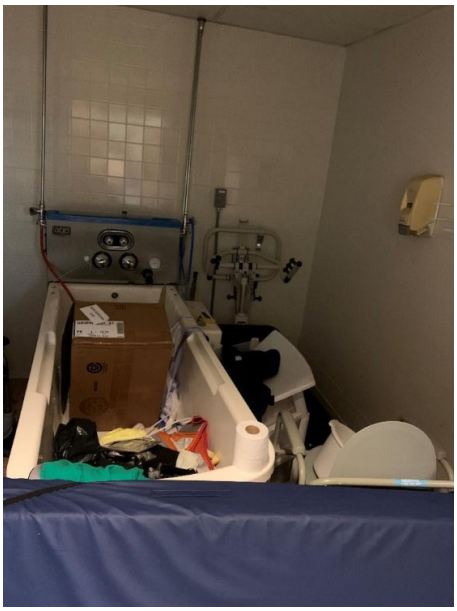
- Health care facilities can have large complex water systems that promote growth of pathogenic organisms if not properly maintained. For this reason, the Centers for Medicare & Medicaid Services (CMS) and CDC consider it essential that hospitals and nursing homes have a water management program that is effective in limiting Legionella and other opportunistic pathogens of premise plumbing from growing and spreading in their facility.
- A healthcare water management program identifies both hazardous conditions and corrective actions that can minimize the growth and spread of waterborne pathogens.
- Flushing of systems is a good way to help keep water moving throughout the building. If removing any fixtures, we need to ensure that enough of the piping is removed to eliminate dead legs or areas that water can accumulate and remain stagnant. These dead legs really pose a risk for the building.

Source: https://www.cdc.gov/hai/prevent/environment/water.html

Observations



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Soiled laundry can be a source of contamination.

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- OSHA requires employers to launder workers personal protective garments or uniforms if contaminated with blood or other potentially infectious materials.
- Laundry processes should be monitored to ensure they are meeting requirements – temperature, cleaning/maintenance of machines, general cleanliness of the area.
- Ensure that clean linens are being stored in a manner that minimizes contamination.
    - Keep linens covered or stored in dedicated linen areas.
    - Keep linens off the floor and if stored on shelves, you want to have a solid bottom shelf that is 6-8 inches off the floor to allow for cleaning beneath these racks.

Observations

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Dispose of medical waste regularly to avoid accumulation.

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- Regulated medical waste (i.e., infectious waste) must be segregated and handled using PPE according to OSHA guidelines to avoid exposure to others.
  - There may be other federal, state and local regulations that consider other items medical waste.
- There should be a designated person responsible for the disposal plan of medical waste. This person should be responsible for establishing, administering, monitoring, and reviewing the plan.
- Staff need to be trained on handling regulated waste, this includes:
  - Proper PPE use when handing waste.
  - Proper sharps disposal strategies.
  - How to securely close bags before disposal.
- Puncture-resistant containers need to be placed at the point of use for sharps.

Construction in health care settings can pose an infection risk to patients and residents.

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- Construction in health care includes, renovation, demolition, excavation or maintenance activities that involve cutting, drilling, grinding, disruption of ventilation or plumbing systems, or otherwise may impact patients, residents, staff, or visitors.
- There are many considerations and infection risks present with construction activities such as mold spores and waterborne pathogens.
- Construction infection control risk assessments (ICRA) is a process to assess the impact of construction and renovation work in healthcare facilities on infection control program and practices, and to ensure the construction is designed to meet the needs of the anticipated patient population.
    - The ICRA should take place before any construction begins.

IPC Basic Principles

- Hand hygiene
- Separation of clean and dirty
- Cleaning and disinfection
- Environmental infection control
- **Precautions**

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Standard Precautions

Applies to	Personal Protective Equipment (PPE) used for these situations	Required PPE	Room restriction
All patients and residents	Any potential exposure to: • Blood • Body fluids • Mucous membranes • Non-intact skin • Potentially contaminated environmental surfaces or equipment	Depending on anticipated exposure: gloves, gown, or face protection Change PPE before caring for another resident	None

Standard Precautions, CDC

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- Standard Precautions are used for all patient care.
- They're based on a risk assessment and make use of common-sense practices and PPE use that protect health care providers from infection and prevent the spread of infection from patient to patient.
- Standard precautions include hand hygiene, PPE use, respiratory hygiene or cough etiquette (cover your cough), cleaning and disinfection, laundry handling, and safe injection practices.

Contact Precautions

Applies to	PPE used for these situations	Required PPE	Room restriction
All patients or residents infected or colonized with a novel MDRO: • Presence of acute diarrhea, draining wounds, or other sites of secretions or excretions that are unable to be covered or contained • On units or in facilities where ongoing transmission is documented or suspected	Any room entry	Gloves and gown Don before room entry, doff before room exit, change before caring for another patient or resident Face protection may be needed if performing activity with risk of splash or spray	Yes, except for medically necessary care

Transmission-Based Precautions, CDC

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- Transmission-based precautions (TBP) are the second tier of basic infection control.
- TBPs should be used in addition to standard precautions for patients who may be infected or colonized with infectious agents.

- Contact precautions should be used when an infectious agents that can be spread by indirect contact from the environment or direct contact with those with the infection or colonization.
- This applies to all patients or residents infected or colonized with a novel MDRO.

Source: https://www.cdc.gov/infectioncontrol/basics/transmission-based-precautions.html

Contact Precautions

Applies to	PPE used for these situations	Required PPE	Room restriction
Infections (e.g., *C. difficile*, norovirus, scabies) and other conditions where contact precautions is recommended per CDC Guideline for Isolation Precautions	Any room entry	Gloves and gown Don before room entry, doff before room exit, change before caring for another patient or resident Face protection may be needed if performing activity with risk of splash or spray	Yes, except for medically necessary care

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This is another example of when contact precautions would be utilized.

Droplet Precautions

Applies to	PPE used for these situations	Required PPE	Room restriction
All patients or residents known or suspected to be infected with pathogens transmitted by respiratory droplets that are generated by coughing, sneezing, or talking	Put mask on the resident	Face protection, e.g., mask Don mask upon entry into the resident's room or resident's space	Yes, except for medically necessary care

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- Droplets are considered larger respiratory droplets that do not travel more than 6 feet before dropping to the ground. These do not remain suspended in the air or travel far.
- For resident or patients known or even suspected of being infected with these pathogens, droplet precautions should be initiated.

Airborne Precautions

Applies to	PPE used for these situations	Required PPE	Room restriction
All patients or residents known or suspected to be infected with pathogens transmitted by the airborne route (e.g., tuberculosis, measles, chickenpox, disseminated herpes zoster).	Put mask on the resident	Respiratory protection: fit-tested NIOSH-approved N95 or higher-level respirator for healthcare personnel Restrict susceptible HCP from entering room Respirator donned before entry to room	Yes, except for medically necessary care

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- The airborne transmission route involves small droplets that can travel a great distance and remain suspended for greater periods of time. In the case of measles, these droplets can remain suspended in the air for up to 2 hours depending on the air exchanges of the room.
- In cases where resident are known or suspected to be infected with pathogens transmitted by the airborne route, they should be placed on airborne precautions.
- For any facilities that may care for residents or patients with pathogens transmitted by the airborne route, a respiratory protection plan must be in place.

Enhanced Barrier Precautions

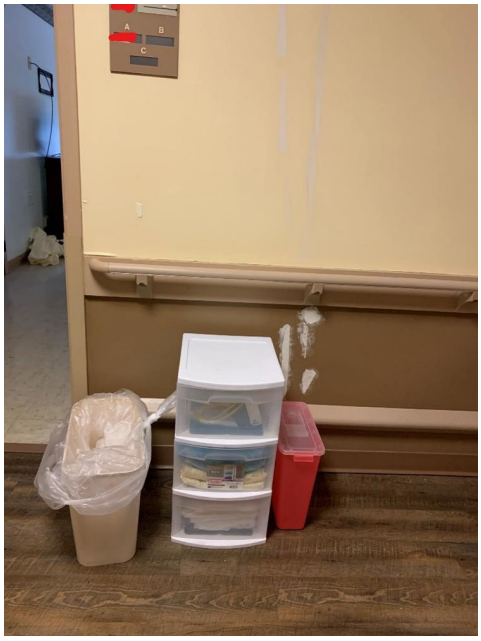
Applies to	PPE used for these situations	Required PPE	Room restriction
All residents with either: • Infection or colonization with an MDRO when contact precautions do not apply • Wounds and/or indwelling medical devices *regardless of MDRO colonization status* who reside on a unit or wing where a resident infected or colonized with an MDRO resides	During high-contact resident care activities: • Dressing • Bathing or showering • Transferring • Providing hygiene • Changing linens • Changing briefs or assisting with toileting • Device care or use (central line, urinary catheter, feeding tube, tracheostomy/ventilator, etc.) • Wound care (any skin opening requiring a dressing)	Gloves and gown prior to the high-contact care activity Change PPE before caring for another resident Face protection may also be needed if performing activity with risk of splash or spray	None

CDC Implementation of Personal Protective Equipment (PPE) Use in Nursing Homes to Prevent Spread of Multidrug-resistant Organisms (MDROs) 49

- Enhanced barrier precautions (EBP) are intended specifically for nursing homes.
- EBPs are recommended for all residents with either:
  - Infection or colonization with an MDRO when contact precautions do not apply.
  - Wounds and/or indwelling medical devices *regardless of MDRO colonization status* who reside on a unit or wing where a resident infected or colonized with an MDRO resides.
- Residents colonized with an MDRO are intended to remain on EBPs for the duration of their stay in a facility.
- The use of gloves and gown during high-contact resident care activities has the potential to disrupt transmission in a less restrictive way than prolonged placement in contact precautions for asymptomatic carriers.
  - When on EBPs, the residents are not restricted to their rooms and do not require placement in a private room.

Source: https://www.cdc.gov/hai/containment/PPE-Nursing-Homes.html

Observations



CDC Signage

- Contact precautions
- Droplet precautions
- Airborne precautions
- Enhanced barrier precautions

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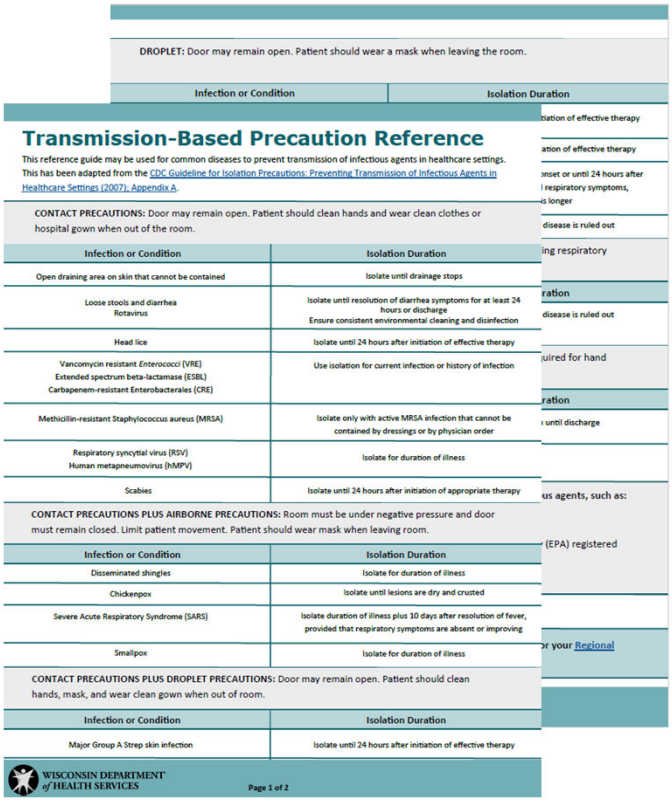
- Signs that say "see nurse if" or use color codes may lead to lots of error.
- Posting isolation signs is not a HIPAA violation as they don't list what the person has or why they are in precautions.
- These signs need to be posted in plain sight to instruct HCP entering the room to use the proper precautions.
- Signs available from the CDC:
  - https://www.cdc.gov/infectioncontrol/pdf/contact-precautions-sign-p.pdf
  - https://www.cdc.gov/infectioncontrol/pdf/droplet-precautions-sign-P.pdf
  - https://www.cdc.gov/infectioncontrol/pdf/airborne-precautions-sign-P.pdf
  - https://www.cdc.gov/hai/pdfs/containment/enhanced-barrier-precautions-sign-P.pdf

[Transmission-Based Precaution Reference Guide, DHS]



DROPLET: Door may remain open. Patient should wear a mask when leaving the room.

Infection or Condition	Isolation Duration

Transmission-Based Precaution Reference

This reference guide may be used for common diseases to prevent transmission of infectious agents in healthcare settings. This has been adapted from the CDC Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings (2007); Appendix A.

CONTACT PRECAUTIONS: Door may remain open. Patient should clean hands and wear clean clothes or hospital gown when out of the room.

Infection or Condition	Isolation Duration
Open draining area on skin that cannot be contained	Isolate until drainage stops
Loose stools and diarrhea Rotavirus	Isolate until resolution of diarrhea symptoms for at least 24 hours or discharge Ensure consistent environmental cleaning and disinfection
Head lice	Isolate until 24 hours after initiation of effective therapy
Vancomycin resistant *Enterococci* (VRE) Extended spectrum beta-lactamase (ESBL) Carbapenem-resistant Enterobacterales (CRE)	Use isolation for current infection or history of infection
Methicillin-resistant Staphylococcus aureus (MRSA)	Isolate only with active MRSA infection that cannot be contained by dressings or by physician order
Respiratory syncytial virus (RSV) Human metapneumovirus (hMPV)	Isolate for duration of illness
Scabies	Isolate until 24 hours after initiation of appropriate therapy

CONTACT PRECAUTIONS PLUS AIRBORNE PRECAUTIONS: Room must be under negative pressure and door must remain closed. Limit patient movement. Patient should wear mask when leaving room.

Infection or Condition	Isolation Duration
Disseminated shingles	Isolate for duration of illness
Chickenpox	Isolate until lesions are dry and crusted
Severe Acute Respiratory Syndrome (SARS)	Isolate duration of illness plus 10 days after resolution of fever, provided that respiratory symptoms are absent or improving
Smallpox	Isolate for duration of illness

CONTACT PRECAUTIONS PLUS DROPLET PRECAUTIONS: Door may remain open. Patient should clean hands, mask, and wear clean gown when out of room.

Infection or Condition	Isolation Duration
Major Group A Strep skin infection	Isolate until 24 hours after initiation of effective therapy

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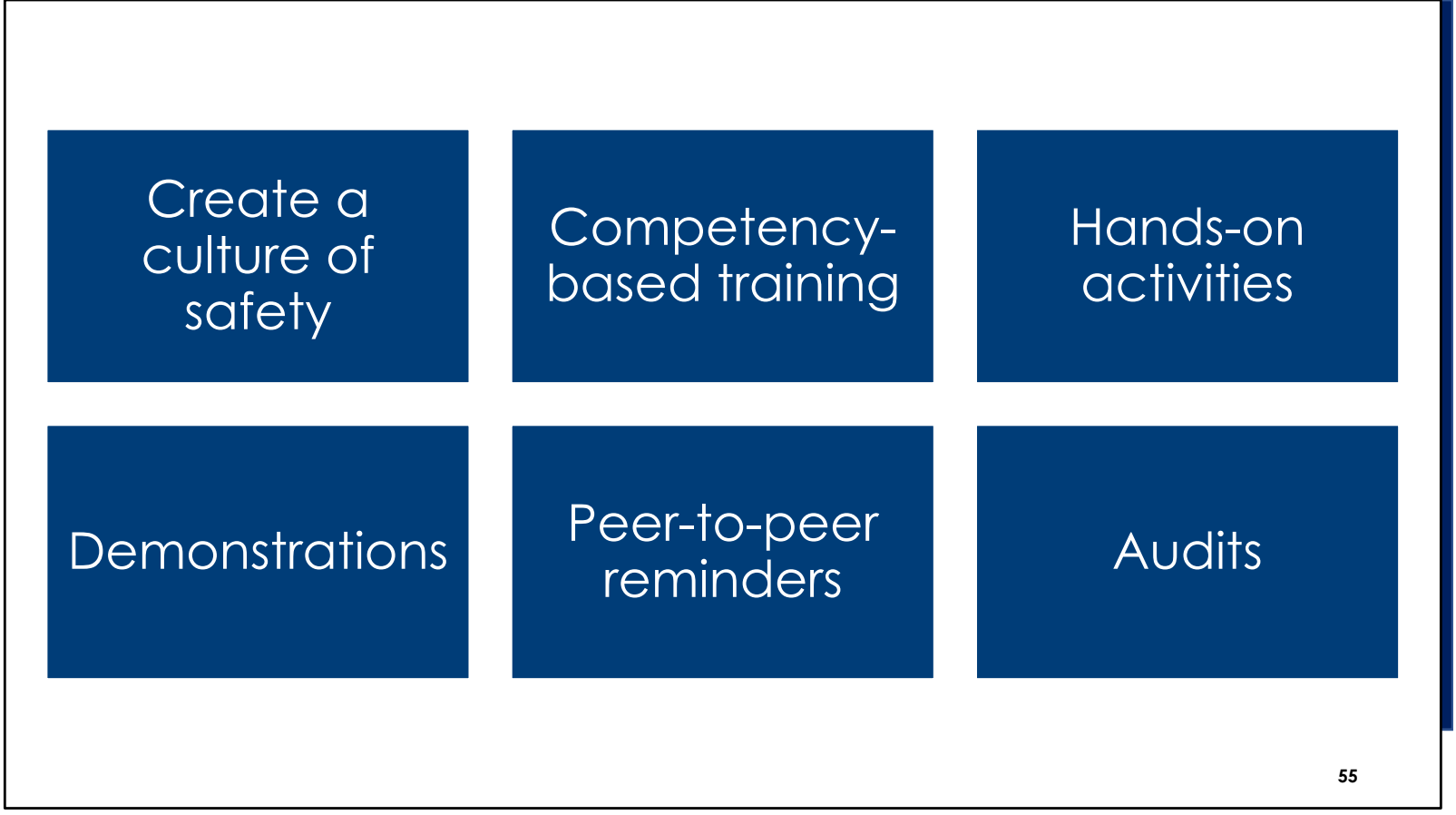
- This guide provides information for what precautions should be used in common infections in facilities.

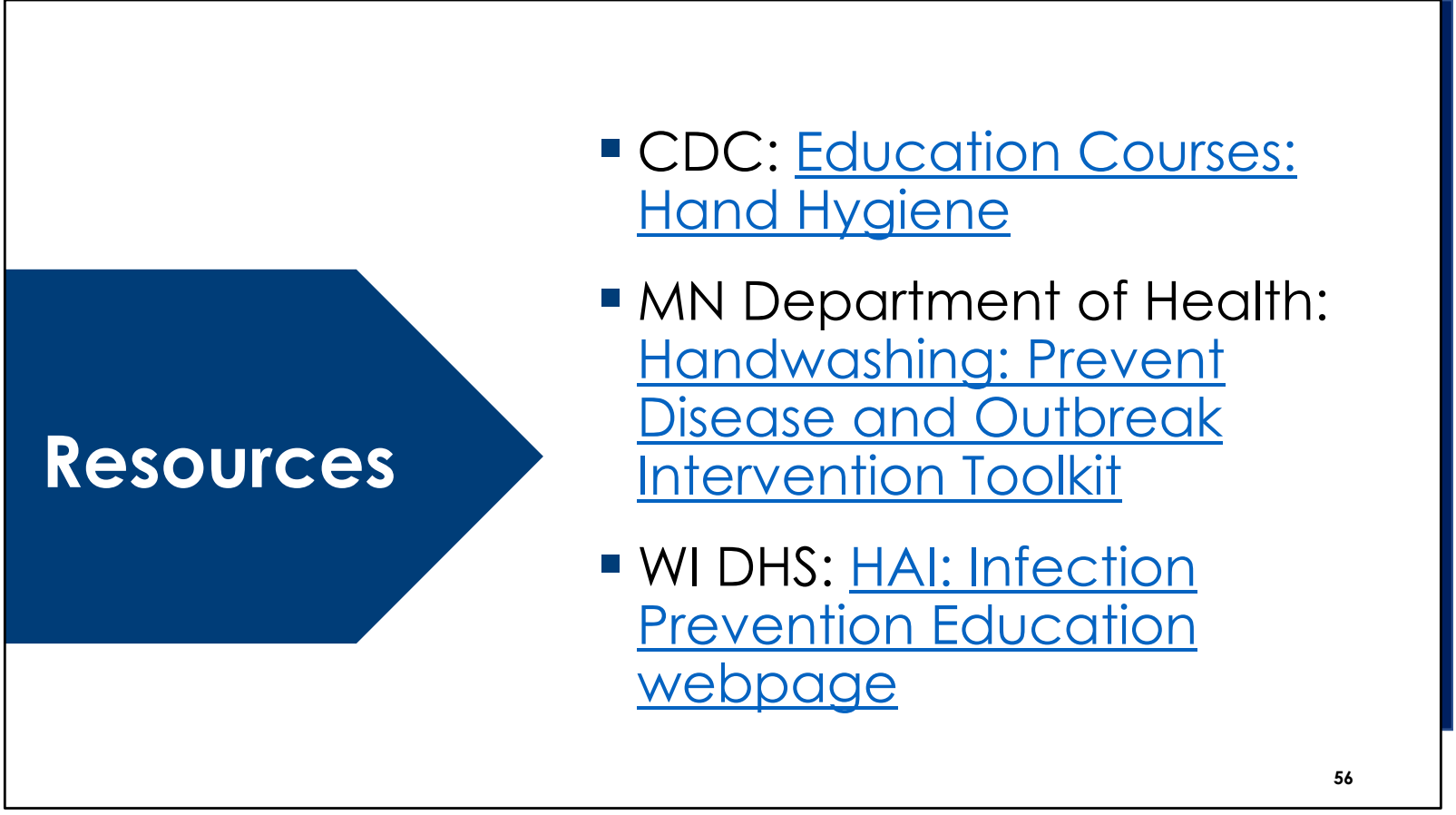
Resource: https://dhs.wisconsin.gov/publications/p03366.pdf

Education

What can you do to reinforce this information among staff?



- Create and encourage a culture of safety for the facility.
- There are many ways to educate staff:
  - Traditional methods such as competency-based training, hands on activities and demonstrations help to introduce and reinforce IPC practices. These can include practicing correct cleaning and disinfection techniques or return demonstrations with PPE donning and doffing.
  - Develop an audit and feedback program. Audits can help educate staff with just in time training, onboarding, and overall scores that can be displayed. You want to make sure you train all observers consistently and summarize data clearly and concisely to share with staff.
  - Other activities that have been popping up are escape room activities and identifying the errors in a room. These are great ways to help keep the education interactive.
- Encourage peer to peer reminders.



- CDC: Education Courses: Hand Hygiene: https://www.cdc.gov/handhygiene/providers/training/index.html
- MN Department of Health: Handwashing: Prevent Disease and Outbreak Intervention Toolkit https://www.health.state.mn.us/people/handhygiene/curricula/curriculumadult.pdf
- WI DHS: HAI: Infection Prevention Education webpage https://www.dhs.wisconsin.gov/hai/ip-education.htm

Antimicrobial Stewardship

Antimicrobial stewardship programs help guide the benefits and risks of antibiotic treatments.

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- Per the CDC, antibiotics are among the most commonly prescribed medications in nursing homes.
  - Up to 70% of nursing home residents receive one or more courses of systemic antibiotics per year, and 40-75% of those are unnecessary and/or inappropriate.
- We know that increased antibiotic usage (whether necessary or not) can lead to further challenges down the road in long term care, including C. diff infections and residents becoming colonized and/or infected with MDROs.

Core Elements


Leadership commitment


Tracking


Accountability


Reporting


Drug expertise

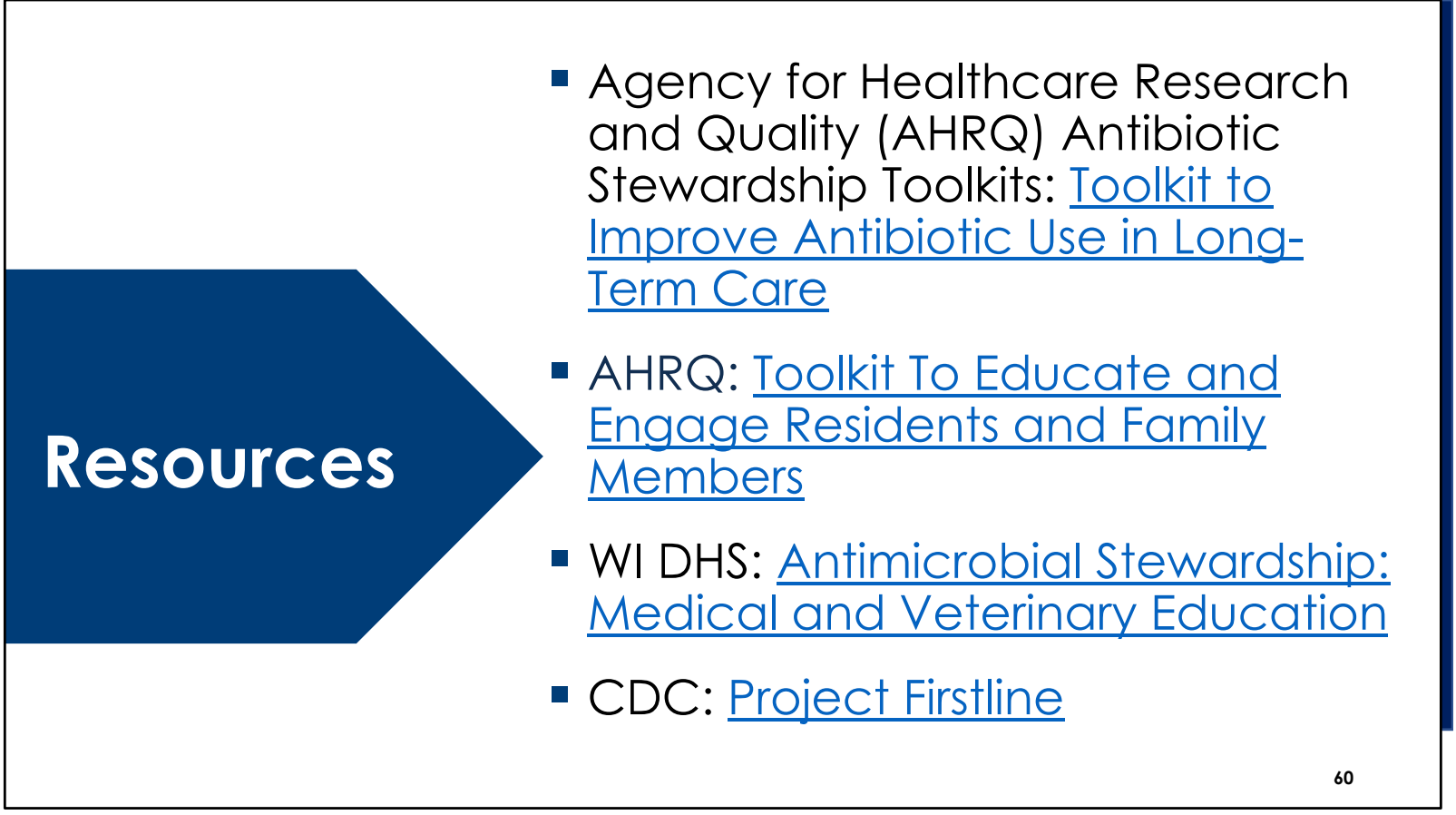

Education


Action

CDC Core Elements of Antibiotic Stewardship for Nursing Homes 59

- Per the CDC, there are seven core elements of a successful antimicrobial stewardship program:
  - Leadership commitment – leadership should assist in creating a safety culture promoting antimicrobial stewardship.
  - Accountability – ensure there are individuals responsible for antimicrobial stewardship activities including the medical director, nursing leadership, infection preventionist, consultant pharmacist and laboratory.
  - Drug expertise – someone that has specialized training in infectious disease and/or antimicrobial stewardship.
  - Action – implement protocols and policies to improve antimicrobial use, such as utilizing best practices for microbiology testing, performing antibiotic "time outs", and identifying opportunities to decrease antibiotic usage in inappropriate situations.
  - Tracking and reporting – Metrics include how and why antibiotics are prescribed, how often and how many antibiotics are prescribed, and adverse outcomes and costs from antibiotics.
  - Education – Education on the antimicrobial stewardship program should be provided to clinicians, nurses, residents, and families.

Source: https://www.cdc.gov/antibiotic-use/core-elements/nursing-homes.html



- Agency for Healthcare Research and Quality (AHRQ) Antibiotic Stewardship Toolkits: Toolkit to Improve Antibiotic Use in Long-Term Care: https://www.ahrq.gov/antibiotic-use/long-term-care/index.html
- AHRQ: Toolkit To Educate and Engage Residents and Family Members: https://www.ahrq.gov/nhguide/toolkits/educate-and-engage/index.html
- WI DHS: Antimicrobial Stewardship: Medical and Veterinary Education: https://www.dhs.wisconsin.gov/antimicrobial-stewardship/provider-education.htm
- CDC: Project Firstline: https://www.cdc.gov/infectioncontrol/projectfirstline/index.html

Vaccination Considerations

Vaccines provide protection against severe disease.

CDC Adult Vaccination Resources

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Influenza example

This is why vaccinations are highly recommended:

- Anyone can get influenza.
- People who are at high risk of developing serious complications, like pneumonia, include:
  - People who have certain medical conditions such as asthma, diabetes, and heart disease.
  - Pregnant women.
  - Children younger than 5 years of age.
  - Older adults age 65 years and older.
- Vaccines cause antibodies to develop in the body about two weeks after vaccination. These antibodies provide protection against infection with the viruses that are in the vaccine.
- The seasonal flu vaccine protects against the influenza viruses that research indicates will be most common during the upcoming season.

Source: https://www.cdc.gov/vaccines/hcp/adults/for-patients/index.html

CDC Vaccination Recommendations

- Recommended Vaccines for Adults
- Recommended Adult Immunization Schedule
- Immunization of Health Care Personnel

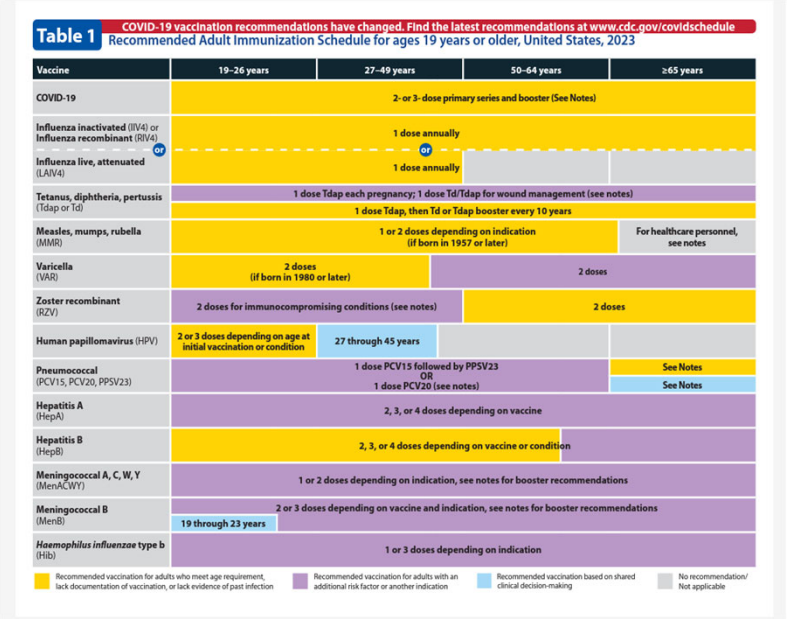

Table 1 COVID-19 vaccination recommendations have changed. Find the latest recommendations at www.cdc.gov/covidschedule

Recommended Adult Immunization Schedule for ages 19 years or older, United States, 2023

Vaccine	19–26 years	27–49 years	50–64 years	≥65 years
COVID-19	2- or 3- dose primary series and booster (See Notes)			
Influenza inactivated (IIV4) or Influenza recombinant (RIV4)	1 dose annually			
or				
Influenza live, attenuated (LAIV4)	1 dose annually			
Tetanus, diphtheria, pertussis (Tdap or Td)	1 dose Tdap each pregnancy; 1 dose Td/Tdap for wound management (see notes)			
	1 dose Tdap, then Td or Tdap booster every 10 years			
Measles, mumps, rubella (MMR)	1 or 2 doses depending on indication (if born in 1957 or later)			For healthcare personnel, see notes
Varicella (VAR)	2 doses (if born in 1980 or later)		2 doses	
Zoster recombinant (RZV)	2 doses for immunocompromising conditions (see notes)		2 doses	
Human papillomavirus (HPV)	2 or 3 doses depending on age at initial vaccination or condition	27 through 45 years		
Pneumococcal (PCV15, PCV20, PPSV23)	1 dose PCV15 followed by PPSV23 OR 1 dose PCV20 (see notes)			See Notes
				See Notes
Hepatitis A (HepA)	2, 3, or 4 doses depending on vaccine			
Hepatitis B (HepB)	2, 3, or 4 doses depending on vaccine or condition			
Meningococcal A, C, W, Y (MenACWY)	1 or 2 doses depending on indication, see notes for booster recommendations			
Meningococcal B (MenB)	2 or 3 doses depending on vaccine and indication, see notes for booster recommendations			
	19 through 23 years			
Haemophilus influenzae type b (Hib)	1 or 3 doses depending on indication			

Recommended vaccination for adults who meet age requirement, lack documentation of vaccination, or lack evidence of past infection; Recommended vaccination for adults with an additional risk factor or another indication; Recommended vaccination based on shared clinical decision-making; No recommendation/ Not applicable

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- Adults may require additional vaccinations on a routine basis or need booster doses throughout their life.
- There may be different recommendations for high-risk adults such as those that are immunocompromised.

Sources:

- Recommended Vaccines for Adults: https://www.cdc.gov/vaccines/adults/rec-vac/index.html#other
- Recommended Adult Immunization Schedule: https://www.cdc.gov/vaccines/schedules/downloads/adult/adult-combined-schedule.pdf
- Immunization of Health Care Personnel: https://www.cdc.gov/mmwr/pdf/rr/rr6007.pdf

Questions?

Thank you!

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608-267-7711

For additional contact information visit
www.dhs.wisconsin.gov/hai/contacts.htm

HAI Infection Prevention Education webpage

HAI Infection Prevention Education

The resources below are intended to connect health care facility infection preventionists (IP) with education materials to support their role in preventing, detecting, and responding to healthcare-associated infections.

IPs play an essential role in facility infection prevention policy development, surveillance, and risk assessment.

IPs serve as a resource to other staff and programs within their facilities.

In addition to the state in-person trainings and online references below, there are a number of links to trusted education resources, including the CDC (Centers for Disease Prevention and Control), the Centers for Medicare and Medicaid Services (CMS), and the Association for Professionals in Infection Control and Epidemiology (APIC).

The IP Starter Kit provides Infection Preventionists a brief background and resources for some of the many infection prevention-related responsibilities within health care facilities.

Resources for infection preventionists

Long-Term Care Education series

The long-term care (LTC) education series provides education presentations on topics that include infection prevention, HAIs, antibiotic stewardship, disease surveillance, and outbreak response for staff at skilled nursing facilities, assisted living facilities, local health departments, and other LTC stakeholders. Each session features a new, timely topic presented by the Department of Health Services (DHS) program staff, HAI Infection Preventionists, partner organizations, or other external subject matter experts.

View the full library of education sessions. **Note:** All 2021 and 2022 education sessions can be found by visiting the full library

Have a topic request?

Send topic ideas or requests that you have for the long-term care education series or the IP lunch and learn series to DHSWIHAIPreventionProgram@dhs.wi.gov.

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https://www.dhs.wisconsin.gov/hai/ip-education.htm

Upcoming LTC Education Session

Date: September 24, 2023

Topic: Infection Prevention and Control Basics: Part Two

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