WISCONSIN DEPARTMENT of HEALTH SERVICES

Wisconsin HAI Long-Term Care Education Series

April 28, 2022

Today's Agenda

- Newly Reportable Multidrug-Resistant Organisms in Wisconsin
  - Ashlie Dowdell, Director, HAI Prevention Program
  - Greta Michaelson, Regional Infection Preventionist, HAI Prevention Program

Newly Reportable Multidrug-Resistant Organisms (MDROs) in Wisconsin: Information for Long-Term Care Facilities

Ashlie Dowdell, Director
Greta Michaelson, Regional Infection Preventionist

Wisconsin Healthcare-Associated Infections (HAI) Prevention Program
Long-Term Care (LTC) Education Series
April 28, 2022

Topics for Today

- Brief overview of newly reportable organisms
- Wisconsin MDRO data snapshot
- Impact of this change on facilities
- Outbreak response activities
- New resources for facilities
- Questions and discussion

CDC's 2019 "Antibiotic Resistance Threats in the United States" Report

- Report identified 18 drug-resistant pathogens that pose an "urgent," "serious" or "concerning" threat to public health.
- To date, only one of the urgent threats (CP-CRE) has been reportable in Wisconsin.
- As of July 1, 2022, three additional MDROs will be reportable in Wisconsin.

https://www.cdc.gov/drugresistance/pdf/threats-report/2019-ar-threats-report-508.pdf

CDC's "Targeted MDROs"

- Pan-resistant organisms
- Carbapenemase-producing *Enterobacterales* spp.
- Carbapenemase-producing *Pseudomonas aeruginosa*
- Carbapenemase-producing *Acinetobacter baumannii*
- *Candida auris*

As of July 1, 2022, will be Category II reportable conditions in Wisconsin

Affected Entities

- Hospitals
  - Acute care
  - Critical access
  - Specialty
  - Long-term acute care
- Nursing homes

WISCONSIN DEPARTMENT of HEALTH SERVICES

Bureau of Communicable Diseases

Three New Reportable Multidrug-Resistant Organism Disease Conditions in Wisconsin

The Bureau of Communicable Diseases (BCD) is announcing that infection or colonization with two carbapenemase-producing, multidrug-resistant organisms (MDROs) and one multidrug-resistant fungal organism will soon be reportable communicable disease conditions in Wisconsin. As of July 1, 2022, confirmed and probable cases of the following will be considered Category II reportable communicable diseases:

- Carbapenemase-producing carbapenem-resistant *Acinetobacter baumannii* (CP-CRAB)
- Carbapenemase-producing carbapenem-resistant *Pseudomonas aeruginosa* (CP-CRPA)
- *Candida auris*

To date, surveillance for these three organisms has been based on voluntary submission of isolates by clinical laboratories to the Wisconsin State Laboratory Hygiene (WSLH). **The addition of these organisms as reportable diseases will enable systematic, statewide surveillance, which is an essential part of controlling their spread.**

WSLH will continue to perform free confirmatory testing for these organisms and to automatically send confirmed results to the Wisconsin Electronic Disease Surveillance System (WEDSS) to support public health response and surveillance.

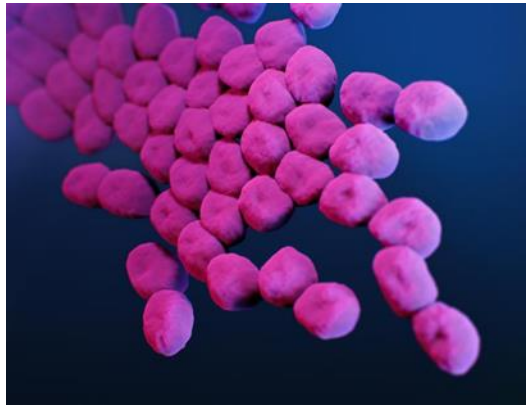
https://content.govdelivery.com/accounts/WIDHS/bulletins/314794a

Carbapenemase-Producing Organisms

- Carbapenemases make an organism highly resistant to antibiotics, including to carbapenem antibiotics.
- Carbapenem antibiotics are often used as drugs of last resort for resistant infections.
- Carbapenemase genes (for example KPC, NDM-1, VIM, IMP, OXA-48) can transfer between bacteria, which can spread resistance within a patient's normal flora or between patients.

Carbapenemase-Producing Carbapenem-Resistant *Acinetobacter baumannii* (CP-CRAB)

- *Acinetobacter baumannii* is an opportunistic pathogen.
- It survives for a long time on surfaces, can colonize the skin, and causes severe infections.
- CP-CRAB can be highly resistant.
  - Most isolates are carbapenemase-producing.
  - Pan-resistant isolates have been detected in Wisconsin.
  - Treatment of CP-CRAB infections is complex.



Carbapenemase-Producing Carbapenem-Resistant *Pseudomonas aeruginosa* (CP-CRPA)

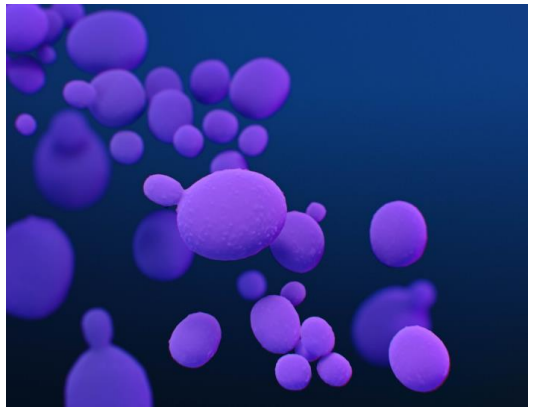
- *Pseudomonas aeruginosa* is found in water and soil.
- The species is naturally drug resistant and can cause severe wound, burn, and respiratory infections.
- CP-CRPA is relatively rare, but can cause very serious and hard-to-treat infections.

Carbapenemase-Producing Carbapenem-Resistant Enterobacterales (CP-CRE)

- The Enterobacterales order of bacteria is commonly found in the human digestive system as part of normal flora.
  - Examples include *E. coli, Klebsiella,* and *Enterobacter.*
- CP-CRE can cause serious infections if introduced to a sterile site.
- CP-CRE has been reportable in Wisconsin since 2018.
- As of May 1, 2022, reporting CRE in NHSN is no longer required, as data is available in WEDSS.

Candida auris

- This fungal pathogen is almost always resistant to antifungal medications, making infections difficult to treat.
- Special cleaning agents are needed to kill *C. auris* on surfaces (Environmental Protection Agency List P).
- CDC estimates that *C. auris* infections have a high mortality rate (30 to 60%).
- Wisconsin identified its first case of *C. auris* in January 2022.



Colonization vs. Infection with MDROs

Colonization

- An individual has the organism in or on their body, but it is not making them ill.
- Individuals who are colonized can still spread the organism to surfaces and others.
- Individuals may remain colonized indefinitely.

Infection

- An individual has the organism and it is causing symptoms or making them ill.
- The risk of infection is highest for those with in-dwelling devices, wounds, frequent healthcare visits or long stays, and other co-morbidities.

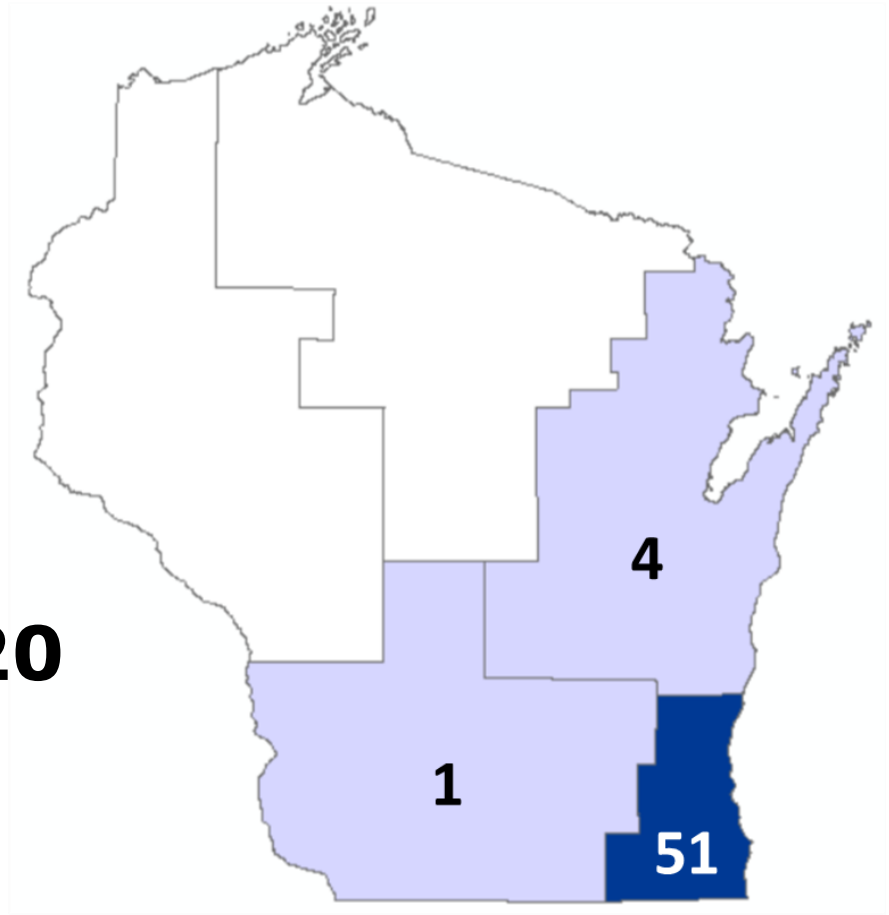
Wisconsin MDRO Data Snapshot

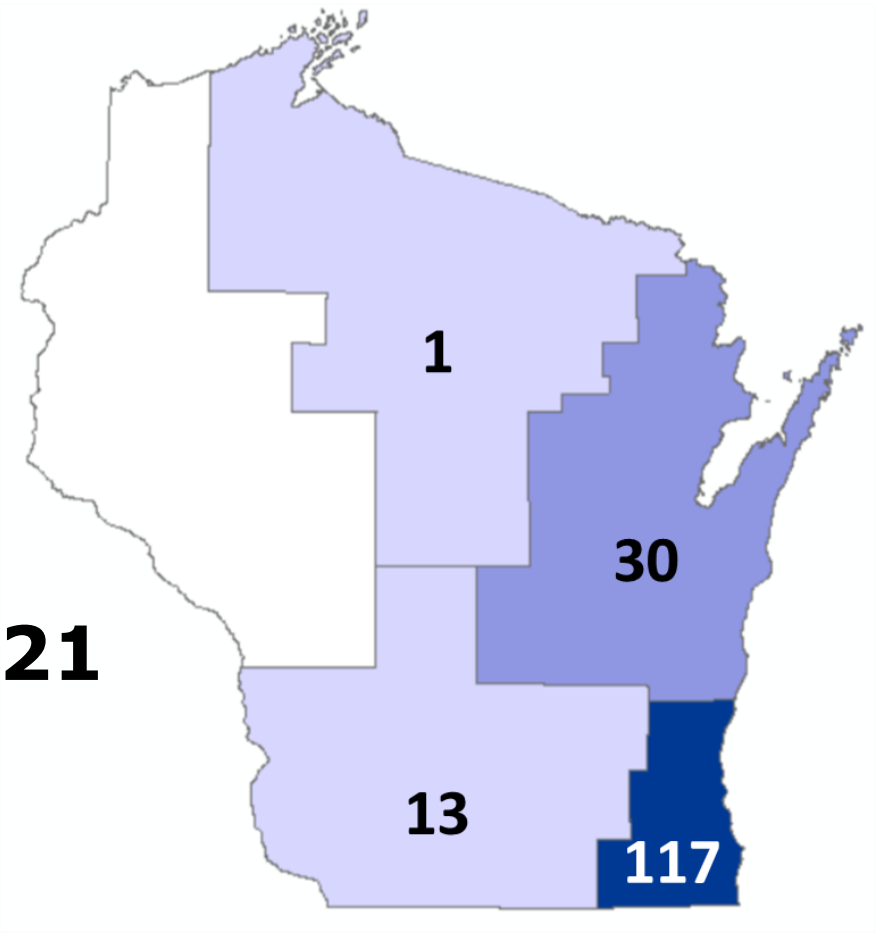
Reported Cases* of CP-CRE, CP-CRPA, and *Candida auris* in Wisconsin, 2020 and 2021

	2020	2021
CP-CRE	30	46
CP-CRPA	2	3
Candida auris	0	1

*Cases include both clinical and colonization screening isolates. Also, the numbers in the table and maps are not de-duplicated across years.

CP-CRAB Cases in Wisconsin, 2020-2021

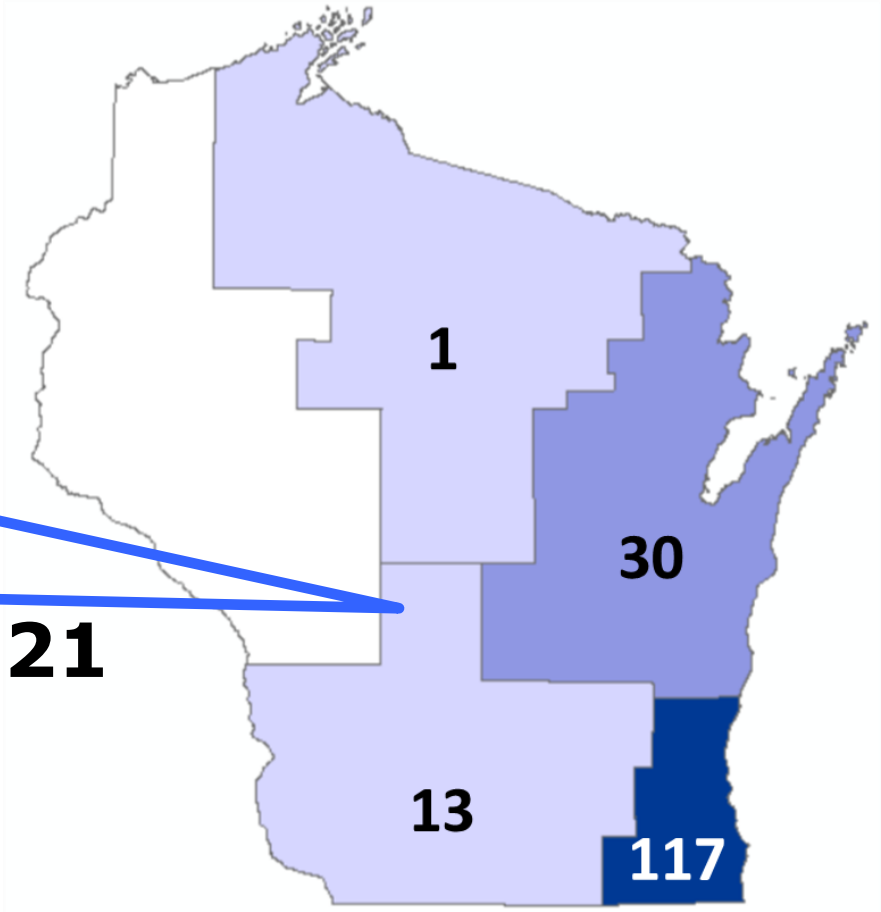




Data source: WSLH

CP-CRAB Cases in Wisconsin, 2021

Of the 134 individuals for which case history information was available, 121 or **90%** were either a **current or former resident of a long-term care facility**.



Data source: WSLH

Impacts of the New Reportables on Long-Term Care Facilities

Summary of Impacts on LTCF

- Not likely to increase reporting burden for LTCFs
  - Confirmatory testing of isolates for carbapenemase production or *C. auris* identification by Wisconsin State Laboratory of Hygiene (WSLH)
  - WSLH reports cases in WEDSS
- May increase the number of cases identified
  - Current surveillance is based on voluntary submission of isolates to WSLH
- Will likely increase outbreak response activities by LTCFs

Key LTCF Response Activities when Targeted MDRO is Identified

- Participation in case investigation and risk assessment
- Screening of other residents for the organism
- Implementation of appropriate precautions
- Increased environmental cleaning and attention to hand hygiene
- Staff, resident, and visitor education
- Communication with other facilities on resident transfers

The HAI Prevention Program and/or LTHD will be available to advise and support the facility!

Follow Up When a Case is Identified

- Obtain resident's history
  - How long have they been a resident?
  - Did they have roommates?
  - Were they on precautions?
- Determine risk of transmission to other residents

Point Prevalence Screening (PPS)

- PPS is screening other residents to assess transmission of a targeted MDRO.
- PPS may involve screening residents on the same unit or wing as a resident identified with the targeted MDRO, or all residents.
- Screening is voluntary and residents can decline screening.
- Supplies and testing are provided by WSLH at no charge.
- The HAI Prevention Program will advise and assist.

PPS Procedure Overview

- The type of swab will depend on the organism, but often involves a bilateral axilla/groin swab.
- Swabs should be collected on a Monday or Tuesday.
- Test results can take 1-5 days depending on the type of test ordered.
- Results are faxed to the facility and the HAI Program.

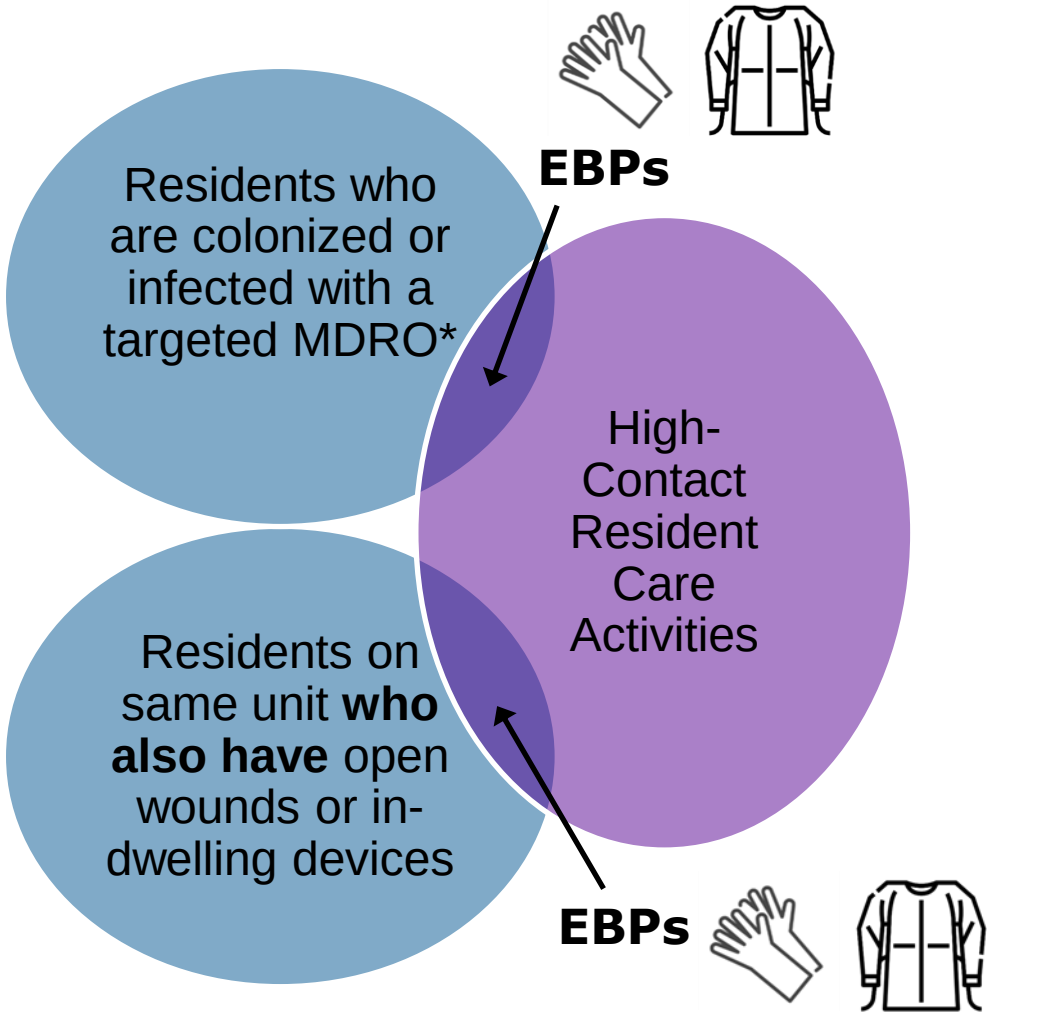
Detailed information on PPS is included in the **DHS Nursing Home MDRO Response Guide**.

PPS Follow-up

- Residents who test positive for a targeted MDRO:
  - May need to be cohorted or moved to a single room, if possible.
  - May need to be placed on enhanced barrier precautions (EBPs).
  - Are assumed to be colonized indefinitely and will not need to be tested again.
- Screenings are repeated until there are two consecutive rounds of screening with no positive results.
- Follow up colonization screening may be repeated 1-2 months later to detect any further transmission.

EBPs

- Developed by CDC to control targeted MDROs in nursing homes
- Offer a “mid-point” between standard and contact precautions
- Involve gown and glove use by staff during high-contact resident care activities
- Are intended to be implemented for the duration of a resident’s stay in the facility



*For whom contact precautions do not apply

Which Residents Should be Placed on EBPs?

- Residents who are infected or colonized with a targeted MDRO, **when contact precautions do not apply**
- Residents who reside on the same unit or wing as a resident who is known to be infected or colonized with a targeted MDRO **and who also have** wounds and/or indwelling medical devices, such as a central line, urinary catheter, feeding tube, or tracheostomy

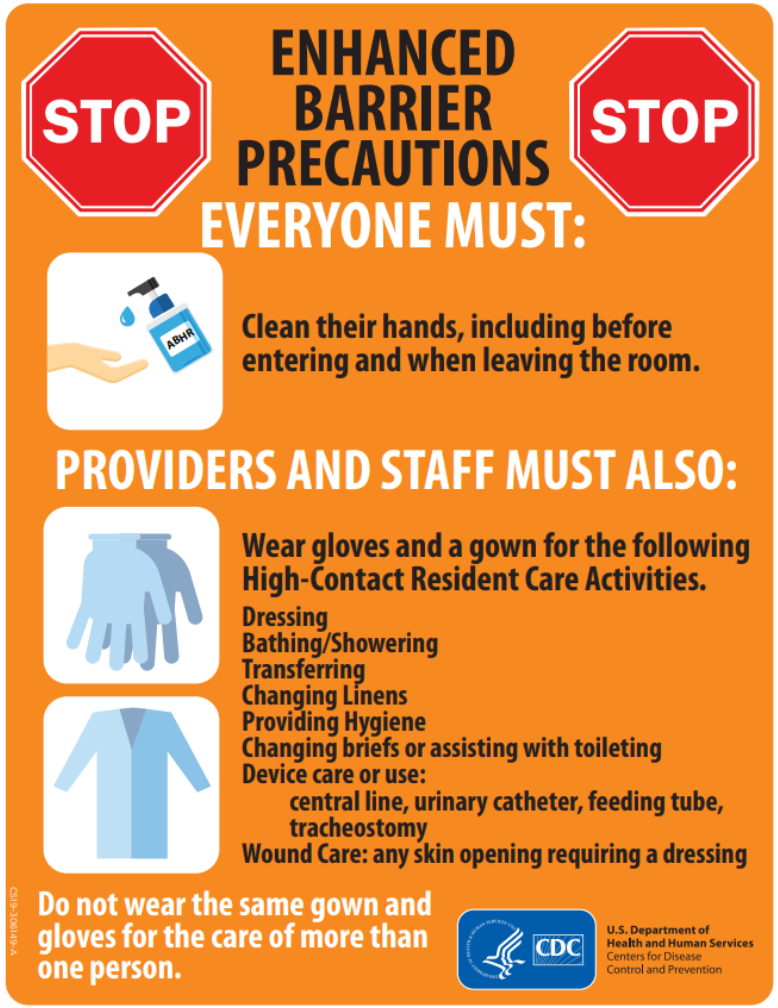
High-Contact Resident Care Activities Requiring Gown and Glove Use for EBPs

- Dressing
- Bathing or showering
- Transferring
- Providing hygiene
- Changing linens
- Changing briefs or assisting with toileting
- Caring for devices such as a central line, urinary catheter, feeding tube, or tracheostomy/ventilator
- Providing wound care, including any skin opening that requires a dressing

EBPs: Final Points

- Specifically designed for nursing homes
- Intended to be implemented for the duration of a resident's stay in facility (with some exceptions)
- Can be implemented more broadly than originally outlined by CDC
  - When other epidemiologically-important MDROs are present
  - For additional resident care activities beyond the CDC list
- Critical that staff understand when and with whom EBPs should be implemented, and that appropriate supplies are readily available

Transmission-Based Precautions Signs

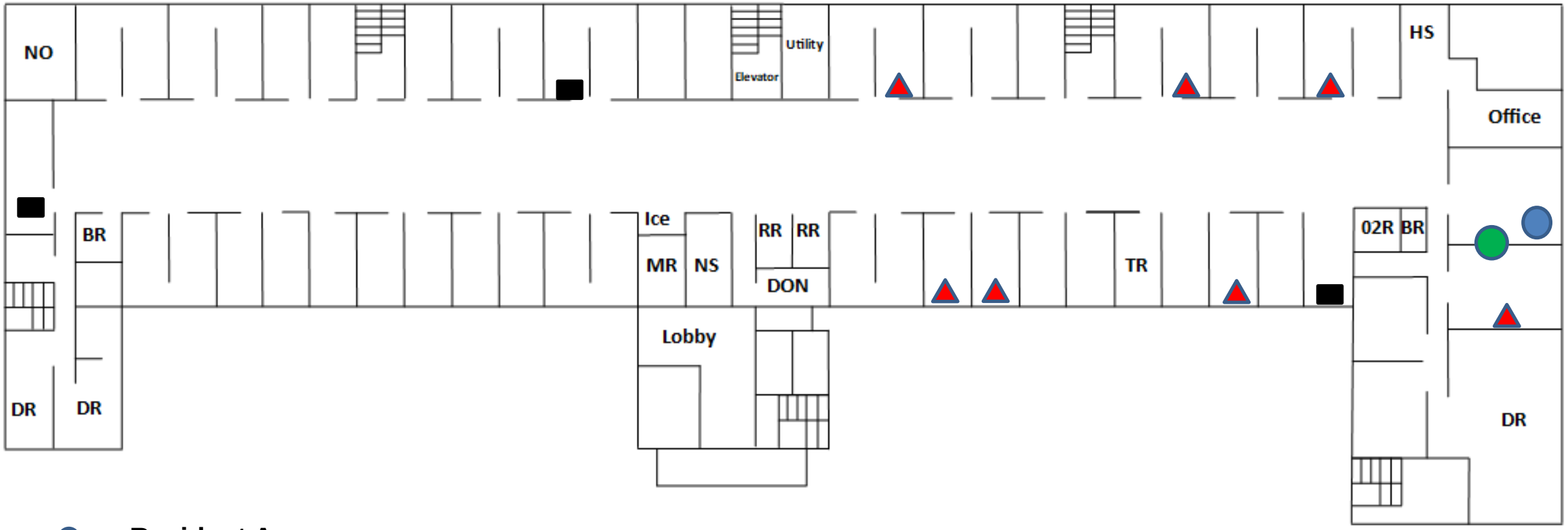


https://www.cdc.gov/hai/containment/faqs.html

Resident Cohorting

- Involves placing residents infected with the same pathogen (and who are suitable roommates) in the same room
- Purpose is to reduce risk of targeted MDRO spread to other residents and staff
- Many factors to be considered, including:
  - Space issues
  - Resident co-morbidities, co-infections, and clinical care needs
  - Staffing patterns
- HAI Prevention Program or LTHD available to advise on potential cohorting plans and options

Cohorting Considerations



- Resident A
- Resident B (roommate)
- Residents with lines/drains/wounds
- Vacant Room

Internal and External Communication

- How will ongoing staff communication about the outbreak be handled?
- How will ongoing communication with residents and families be handled?
- How will communication between your facility and transferring facilities or ancillary services be achieved?

Staff Education

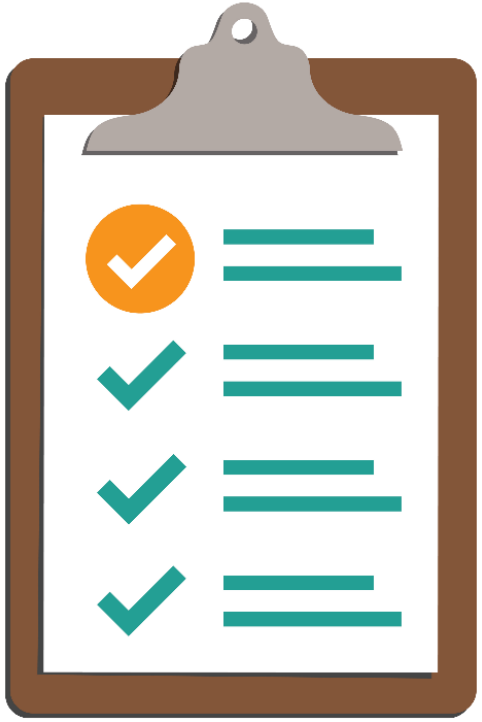
Include direct care staff and ancillary service staff on all shifts in education on:

- Targeted MDROs present in the facility
- Precautions: standard, enhanced barrier, and contact
- Hand hygiene, both staff and resident
- Cleaning: shared equipment, communal spaces (for example the tub room), and resident rooms

Sustaining Education

How will you gauge whether education has been understood and is being followed?

- Observations/audits with appropriate follow-up
- Quality Assurance and Performance Improvement (QAPI) Committee involvement
- Colonization screening



Resident Transfers and External Communication

- Importance of clear and timely communication when a resident who is colonized or infected with a targeted MDRO is transferred **cannot be overstated**.
- Communication failures have been identified as a key contributor to the spread of MDROs between facilities in Wisconsin and in other states.
- Communication is essential for ancillary services as well as facility transfers.

Resident Transfers and External Communication

Key information to be communicated:

- Resident name and date of birth
- Transferring facility name
- Reporter name and contact information
- Resident MDRO history and current status
  - Organism name
  - Specimen type and collection date
  - Infection versus colonization with the MDRO
  - If infected, status of treatment for MDRO

New Admissions or Readmissions

- Ensure you know all incoming residents' MDRO status.
- Promptly place residents in the appropriate level of precautions.
- Assess residents' individual risk factors for MDROs, such as the presence of devices, medical history, and recent locations of care.
- Consider cohorting residents with MDROs, if single rooms available.
- Consult with HAI program or public health if you have questions.

Hand Hygiene

- Critically important when targeted MDROs are present in a facility
- Staff and resident education **important, but not sufficient** alone
- Also consider
  - Availability of alcohol-based hand sanitizer (ABHS), garbage cans, sinks
  - Facility policies
  - Facility culture around ABHS vs. soap and water
- Regular monitoring or audits of actual behavior

https://www.cdc.gov/handhygiene/pdfs/Provider-Poster-Clean-Hands-Count-508.pdf

Hand Hygiene Observations

DEPATMENT OF HEALTH SERVICES
Division of Public Health
F-02475 (06/2021)

STATE OF WISCONSIN

HAND HYGIENE OBSERVATIONS

Date: _____ **Auditor:** _____

Unit: _____

Please circle one phrase from each column that best describes the opportunity you are observing.

Hand Hygiene Audits

1	Title	Indication	Action	Coached/Comments
	MD/APNP/PA	Before resident		
	Nurse	Before asept	Alcohol rub	
	CNA	After resident	Soap and water	
	EVS	After surroundings	None performed	
	Other Staff	After body fluid		

Hand Hygiene Audits

5	Title	Indication	Action	Coached/Comments
	MD/APNP/PA	Before resident		
	Nurse	Before asept	Alcohol rub	
	CNA	After resident	Soap and water	
	EVS	After surroundings	None performed	
	Other Staff	After body fluid		

https://www.dhs.wisconsin.gov/forms/f02475.pdf

Hand Hygiene and PPE Observations

DEPARTMENT OF HEALTH SERVICES
Division of Public Health
F-02726 (10/2020)

STATE OF WISCONSIN

HAND HYGIENE (HH) AND PERSONAL PROTECTIVE EQUIPMENT (PPE) OBSERVATIONS

Staff type*	Type of opportunity	HH performed?	What PPE is indicated? (check all that apply)	PPE used by staff during observation	Comments
☐ MED ☐ EVS ☐ NUR ☐ OTH ☐ CNA ☐ FAM ☐ Therapy ☐ UNK ☐ DIET	☐ Room entry ☐ Room exit ☐ Before resident contact ☐ After resident contact ☐ Before glove use ☐ After glove use ☐ Other: _____	☐ Alcohol-rub ☐ Hand wash ☐ No HH done ☐	☐ Gown ☐ Gloves ☐ Eye protection ☐ Mask ☐ None	☐ Gown ☐ Gloves ☐ Eye protection ☐ Mask ☐ None	
☐ MED ☐ EVS ☐ NUR ☐ OTH ☐ CNA ☐ FAM ☐ Therapy ☐ UNK ☐ DIET	☐ Room entry ☐ Room exit ☐ Before resident contact ☐ After resident contact ☐ Before glove use ☐ After glove use ☐ Other: _____	☐ Alcohol-rub ☐ Hand wash ☐ No HH done ☐	☐ Gown ☐ Gloves ☐ Eye protection ☐ Mask ☐ None	☐ Gown ☐ Gloves ☐ Eye protection ☐ Mask ☐ None	

https://www.dhs.wisconsin.gov/forms/f02726.pdf

Environmental Cleaning

Some targeted MDROs can persist in the environment, making thorough environmental cleaning and disinfection key to controlling their spread.

- Increase the frequency of cleaning when a targeted MDRO is present, focusing on high-touch surfaces.
- Consider designating specific environmental services staff to the affected resident care unit.
- Clean from least soiled to most soiled and from physically high to physically low areas.

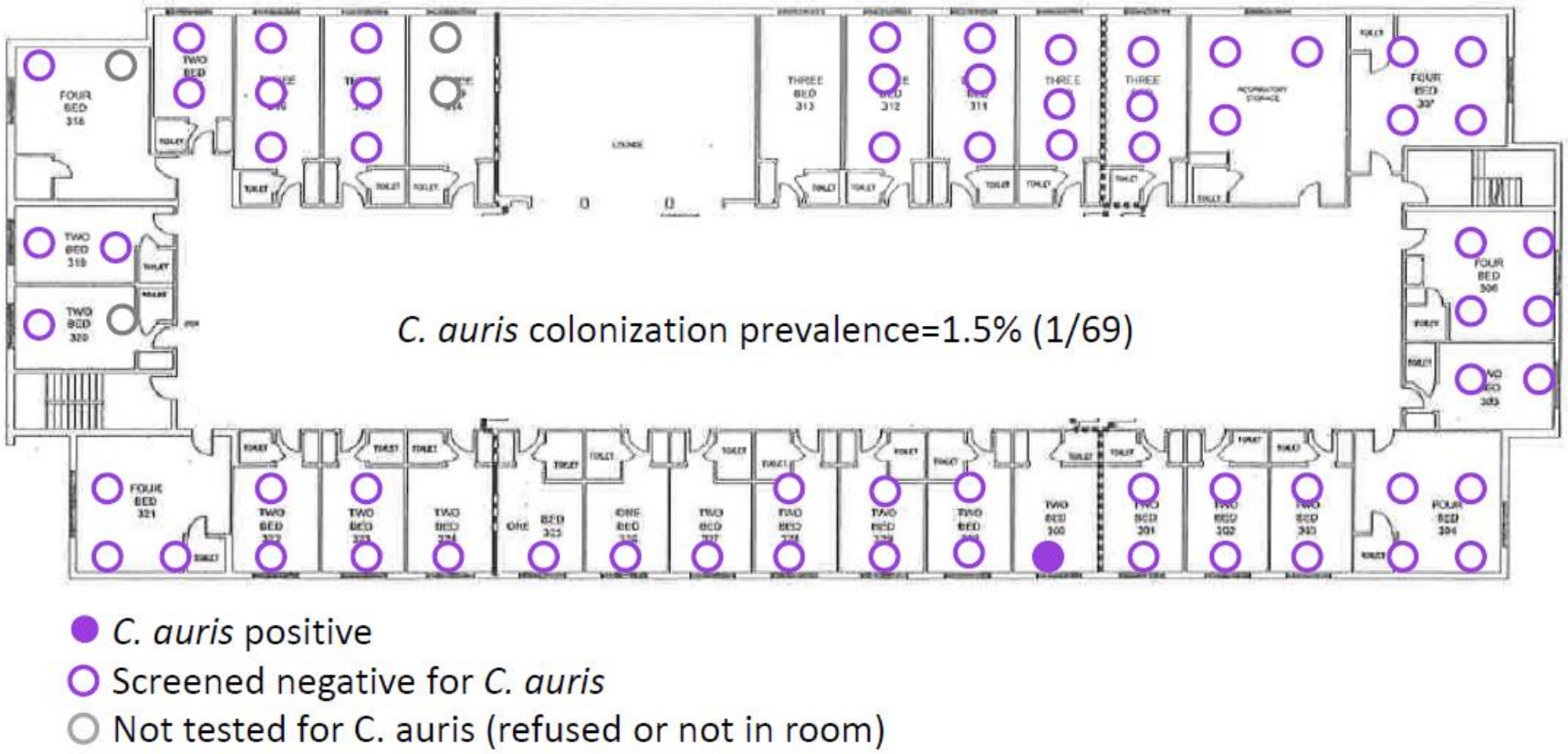
Environmental Cleaning (continued)

- Use Environmental Protection Agency-registered disinfectants to clean floors and surfaces.
- Adhere to the contact time of each disinfectant and other label instructions to ensure complete disinfection occurs.
- Change any privacy curtains on a routine basis, if they become soiled, and after a resident on isolation is discharged or transferred.

What's All the Fuss?

Case Example

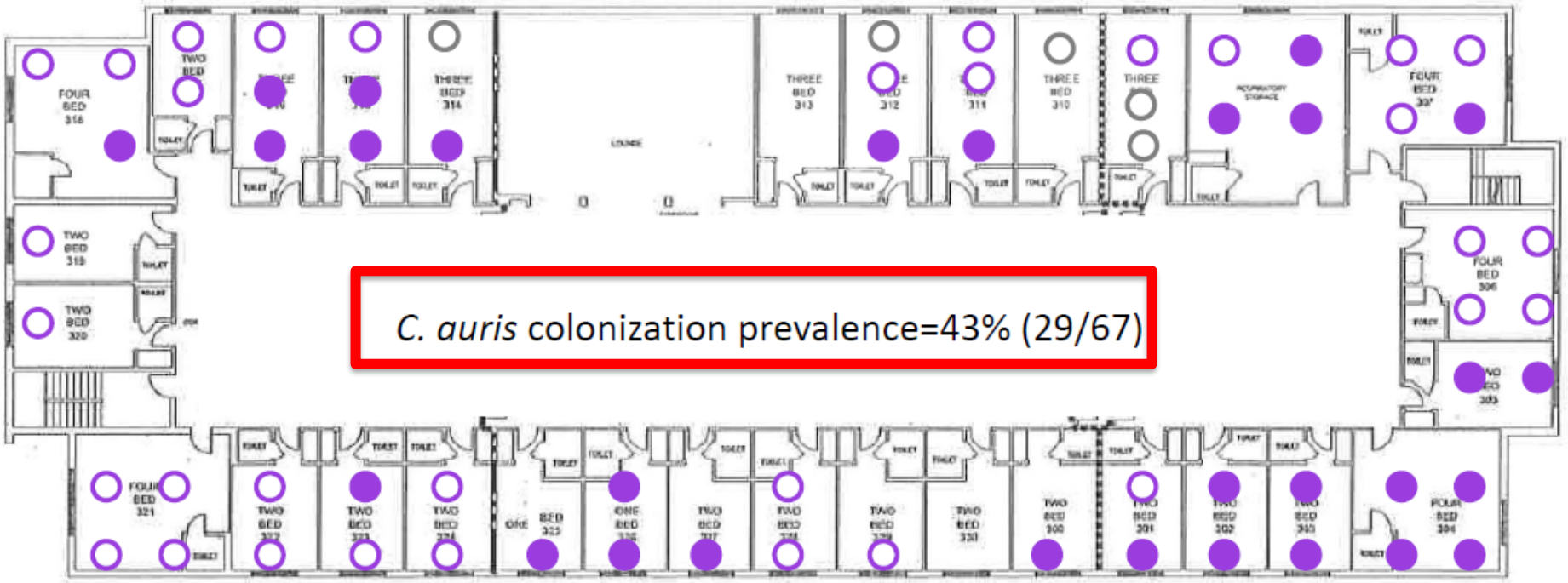
vSNF B 3rd Floor
March 2017 *C. auris* PPS Results



Source: Chicago Department of Health

Case Example

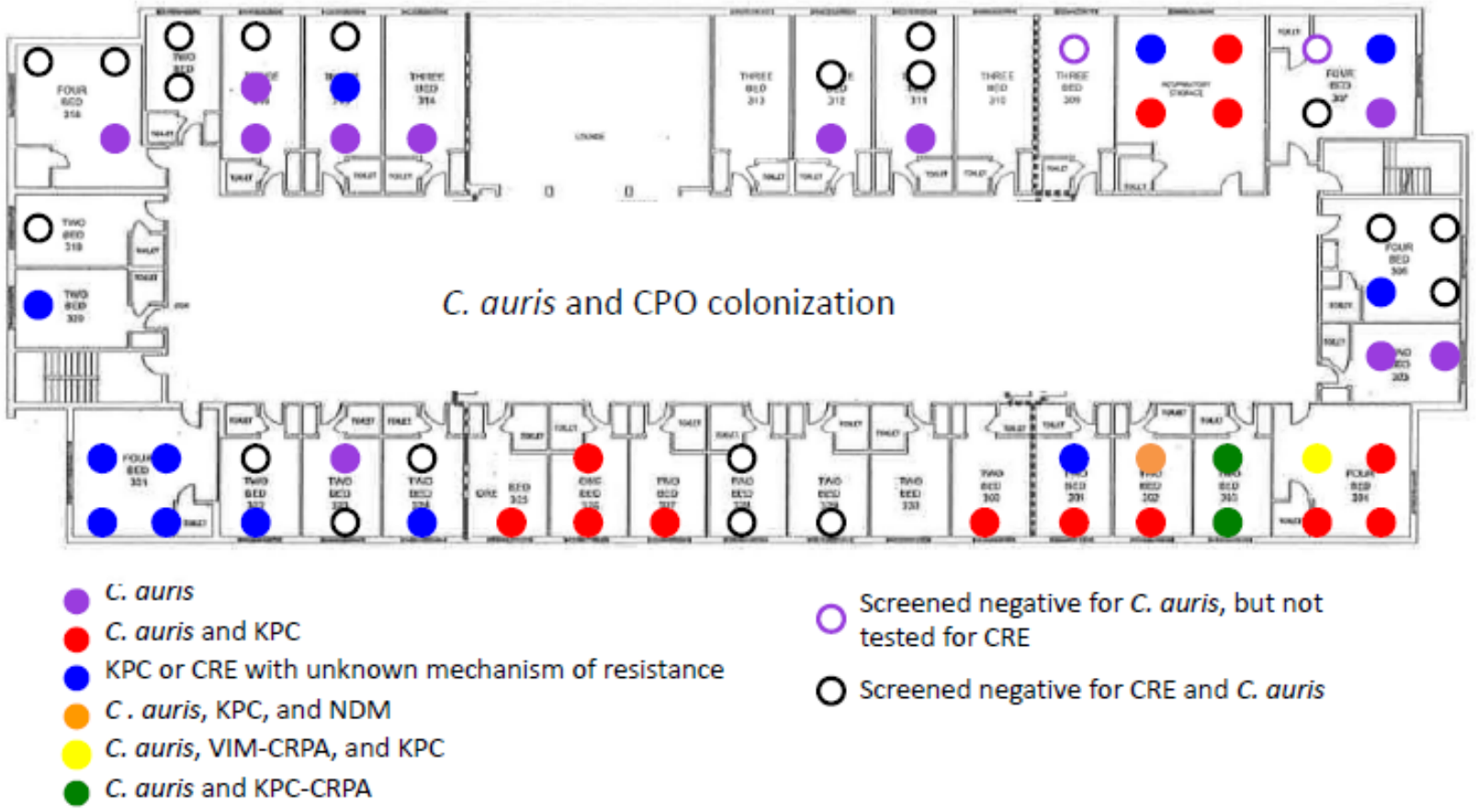
vSNF B 3rd Floor
January 2018 *C. auris* PPS Results



Source: Chicago Department of Health

Case Example

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



Source: Chicago Department of Health

Final Thoughts

- Responding to the presence of a targeted MDRO in your facility can be a daunting task.
- Response activities will likely continue for an extended period of time.
- Wisconsin HAI Prevention Program staff will be available to advise and assist.
- A new *Nursing Home MDRO Response Guide*, outlining the steps and topics discussed today, has been developed specifically for Wisconsin nursing homes and will be released soon.

New HAI Program Resources for Facilities

- Wisconsin DHS New MDRO Reportables Webpage: www.dhs.wisconsin.gov/hai/reportable-mdro.htm
- Nursing Home MDRO Response Guide
- MDRO Response fact sheets
  - Fact sheets for staff
  - Fact sheets for residents and families
  - Some fact sheets available in English and Spanish
- Recordings of educational sessions on MDROs

Key CDC Resources

- Containment Strategy Guidelines: Interim Guidance for a Public Health Response to Contain Novel or Targeted Multidrug-resistant Organisms (MDROs) https://www.cdc.gov/hai/containment/guidelines.html
- Implementation of Personal Protective Equipment (PPE) in Nursing Homes to Prevent Spread of Novel or Targeted Multidrug-resistant Organisms (MDROs) https://www.cdc.gov/hai/containment/PPE-Nursing-Homes.html
- CDC frequently asked questions (FAQs) about enhanced barrier precautions in nursing homes: https://www.cdc.gov/hai/containment/faqs.html
- CDC webinar, “Preventing the Spread of Novel or Targeted Multidrug-Resistant Organisms (MDROs) in Nursing Homes through Enhanced Barrier Precautions (2019)”: https://emergency.cdc.gov/coca/calls/2019/callinfo_102419.asp

Questions?

HAI Prevention Program

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608-267-7711

HAI Prevention Program Staff Contacts:

https://www.dhs.wisconsin.gov/hai/contacts.htm

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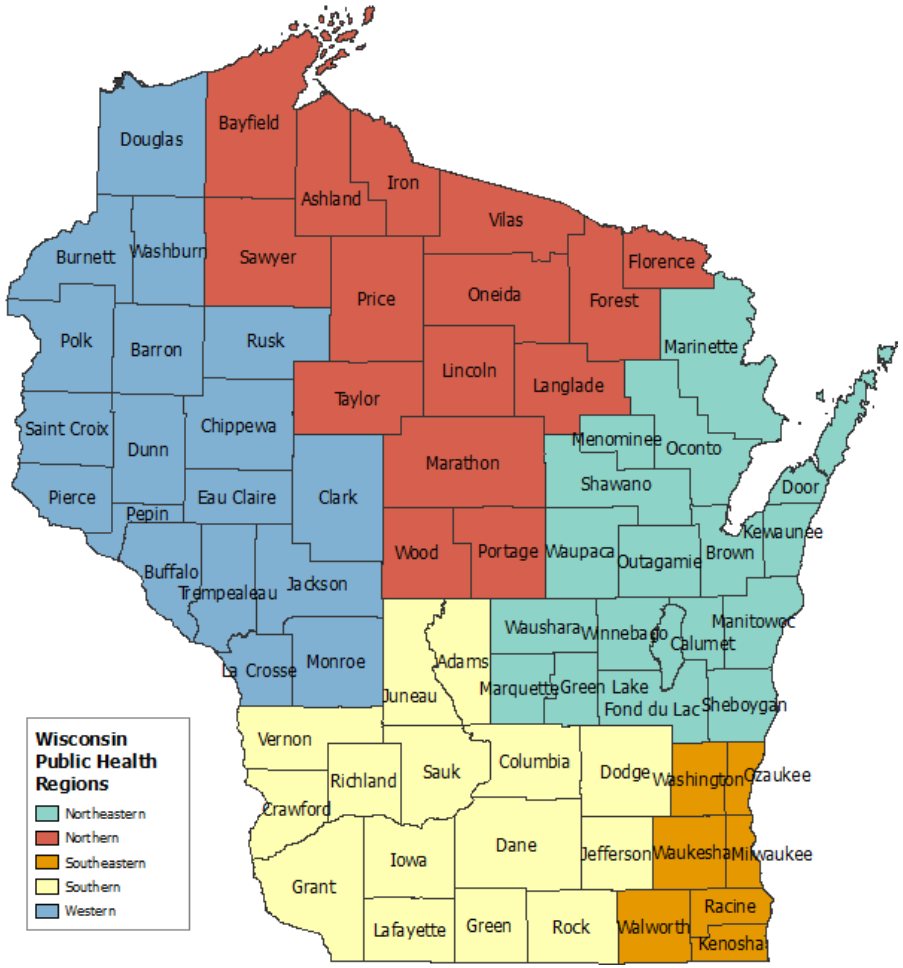

www.dhs.wisconsin.gov/hai/contacts.htm

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

WISCONSIN DEPARTMENT of HEALTH SERVICES

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Find a COVID-19 vaccine
Stop the spread of COVID-19

Diseases & Conditions > Healthcare-Associated Infections: Resources for Health Professionals > HAI Infection Prevention Education

- HAI: Home
- For Health Professionals
- Basic Information
- Antimicrobial Stewardship
- Infection Prevention Education
- Laboratories
- Personal Protective Equipment
- Precautions
- Reportable Exposures
- Surgical Site Infection Prevention

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

The IP Starter Kit provides Infection Preventionists a brief background and resources for some of the many infection

Upcoming LTC Education Session

Thursday, May 26, 2022

Environment of Care Rounding