

Prevention of *Candida auris* and Other Novel Multidrug-resistant Organisms in Healthcare Facilities

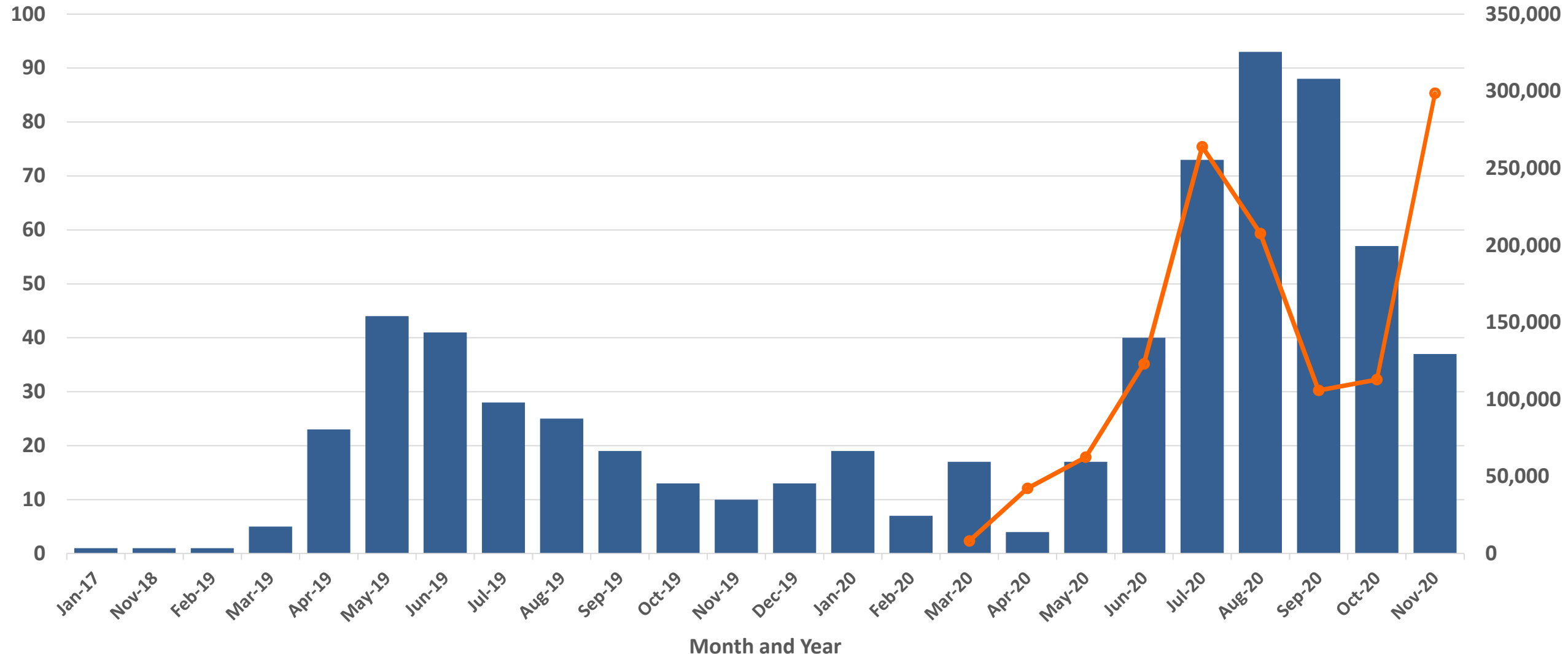
December 10, 2020

Presented via webinar in collaboration with the
Los Angeles County Department of Public Health and
Centers for Disease Control and Prevention

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Healthcare-Associated Infections (HAI) Program
Center for Health Care Quality
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C. auris, COVID-19 Cases in CA through November 30, 2020

■ Number of Candida auris Cases ● Number of COVID-19 Cases



Key Messages

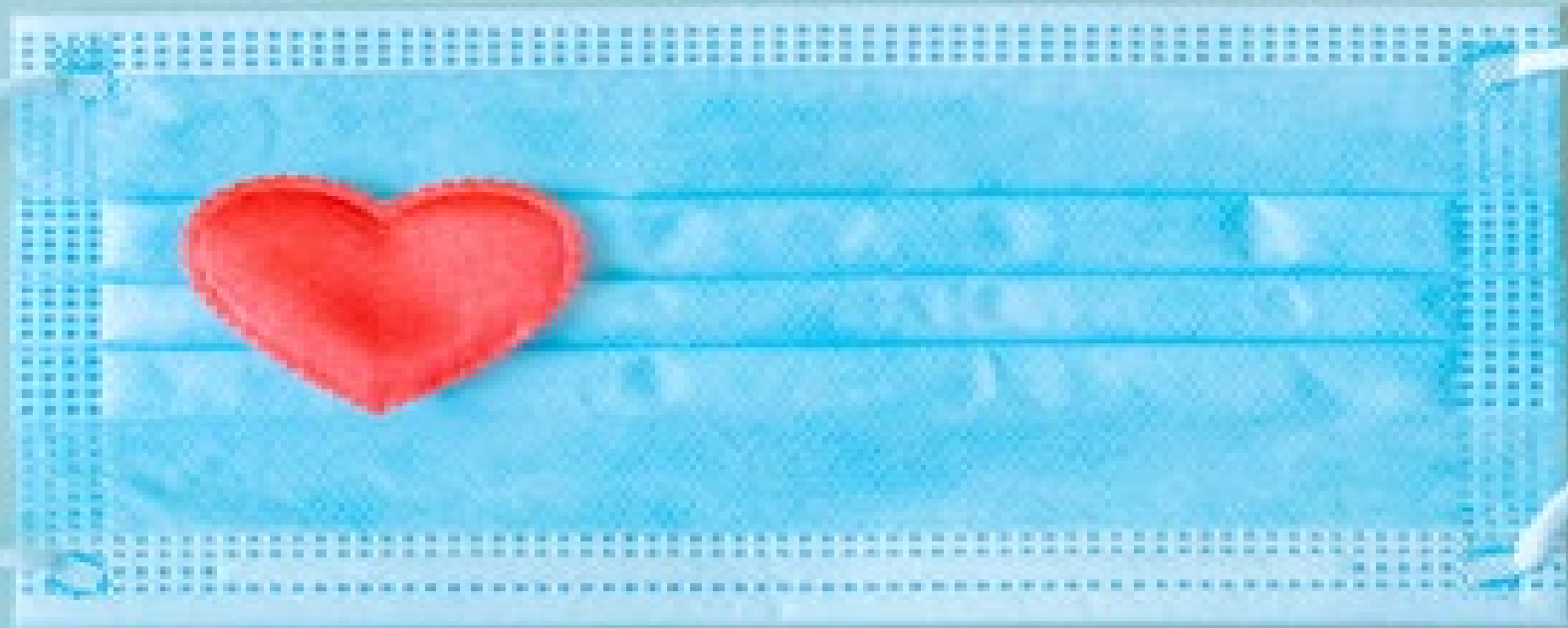
- COVID-19-related disruptions and challenges have affected everyone – we understand!
 - Healthcare personnel (HCP) safety concerns, shortages, infection control lapses
- *Candida auris* and other novel multidrug-resistant organisms (MDRO) are **still** public health threats, with recent resurgence of cases and outbreaks
- Strategies to prevent *C. auris* and other MDRO transmission are not new
- Strengthening basic infection prevention and control practices reduces transmission of **both** MDRO and SARS-CoV-2, **and** protects patient and HCP health and safety
- Public health resources are available to support MDRO testing and containment



***Candida auris* and other novel multidrug-resistant organism prevention in long-term care facilities**

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THANK
YOU

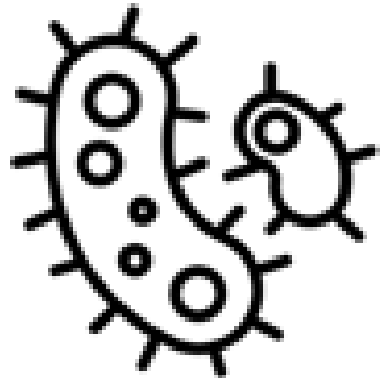


Objectives

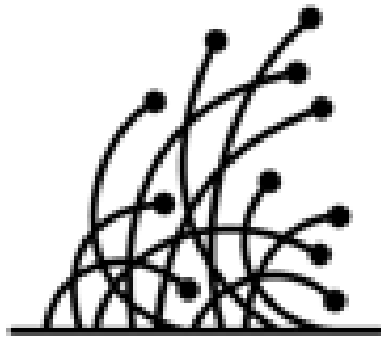
1. Describe novel multidrug-resistant organisms (MDROs).
2. Describe *Candida auris* in long-term care settings.
3. Describe recent public health investigation related to *Candida auris*, other novel MDROs and COVID-19 in Los Angeles County (LAC).
4. Describe prevention strategies for *Candida auris* and novel MDROs in long-term care facilities (LTCF).

What are Novel Multidrug-Resistant Organisms (MDROs)?

Resistant to all or most antibiotics tested, making them hard to treat



Bacteria



Fungi

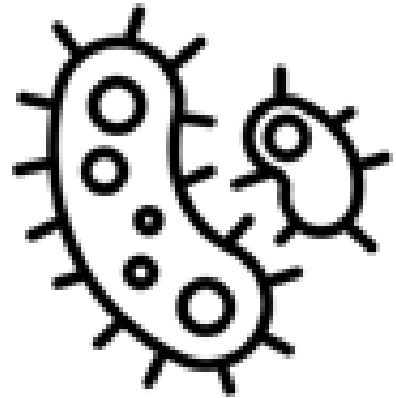
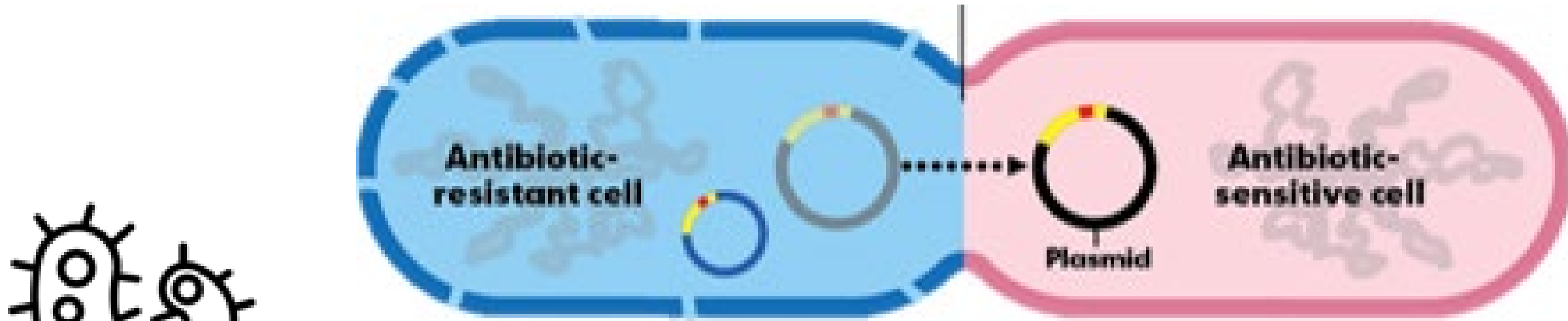
+

Are **uncommon** in a geographic area or the US (e.g., *Candida auris*)

OR

Have **special genes** that allow them to spread their resistance to other germs (e.g., Carbapenem-resistant bacteria)

Novel multidrug-resistant bacteria pose a special threat.



Resistant to
carbapenems*

+

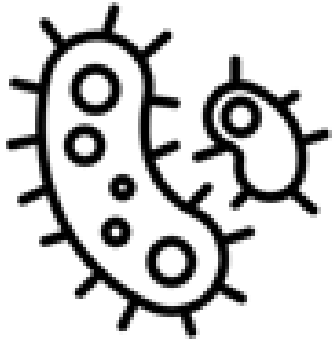
Carbapenemases are enzymes that make certain antibiotics, like carbapenems, penicillins, and cephalosporins ineffective.

The **code for carbapenemases can be shared between strains of bacteria**, accelerating their spread.

*Carbapenems are the broadest-spectrum antibiotics used in difficult to treat bacterial infections

The language used to describe novel MDROs can be confusing, but you just need to know the basics.

You may hear:

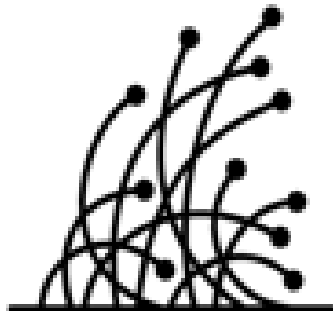


CPO = carbapenemase-producing organism

KPC, VIM, NDM, IMP, OXA-48 = carbapenemase enzymes

CRE, CRAB, CRPA = multidrug-resistant bacteria

Candida auris = novel multidrug-resistant yeast



[CDC 2019 AR Threats Report](https://www.cdc.gov/drugresistance/biggest-threats.html)

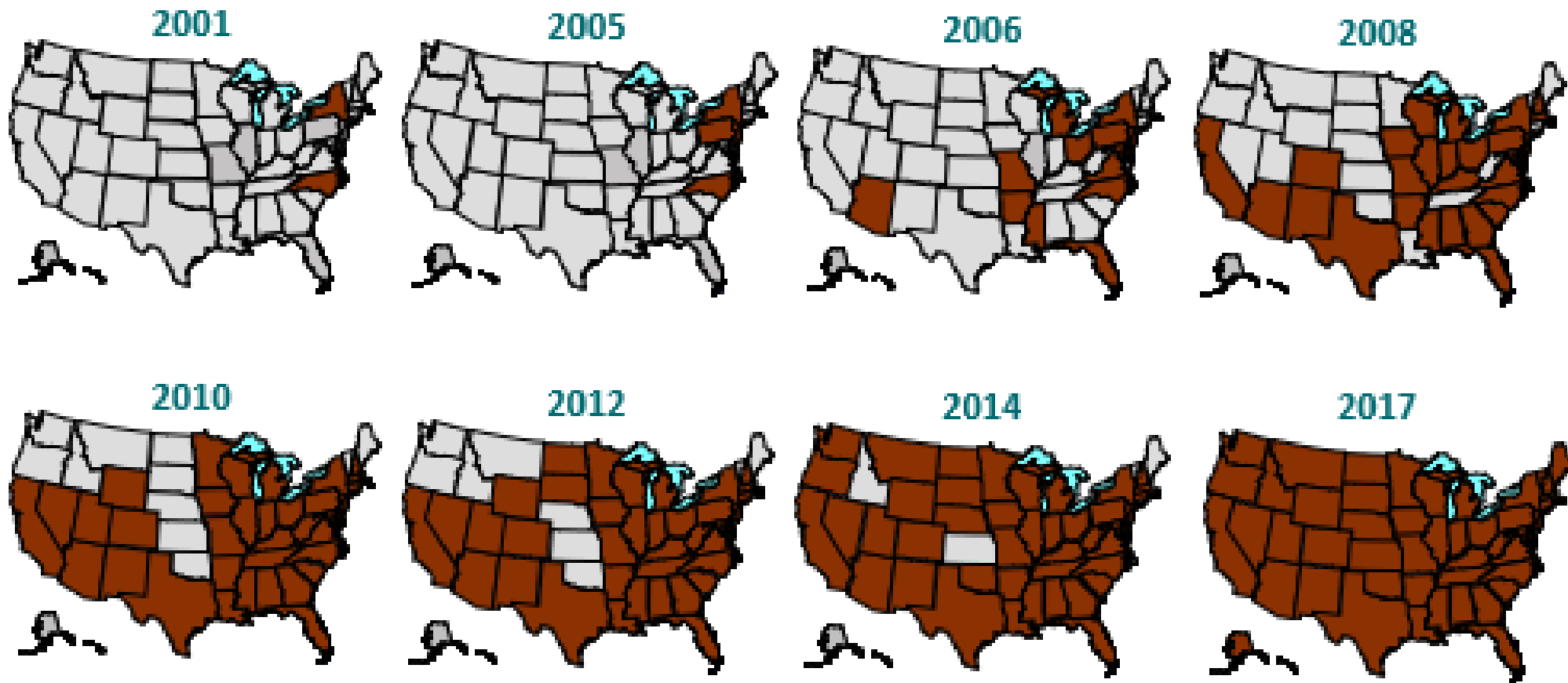
(www.cdc.gov/drugresistance/biggest-threats.html)

[CDC CRE Technical Information](https://www.cdc.gov/hai/organisms/cre/technical-info.html)

(<https://www.cdc.gov/hai/organisms/cre/technical-info.html>)

Carbapenem resistance has **spread rapidly** throughout the U.S.

KPC-CRE found in the US spread from 2 states in 2001 to 50 states, DC, and PR by 2017



■ States with *Klebsiella pneumoniae* carbapenemase (KPC)-producing Carbapenem-resistant Enterobacterales (CRE) confirmed by CDC

[Tracking CRE in the United States](https://www.cdc.gov/hai/organisms/cre/trackingcre.html)

(www.cdc.gov/hai/organisms/cre/trackingcre.html)

Novel MDROs require more aggressive intervention than endemic* MDROs.

We don't want novel MDROs to become as common as endemic MDROs (e.g., MRSA and VRE)

Endemic and novel MDROs can be prevented using the same infection prevention and control (IPC) principles!

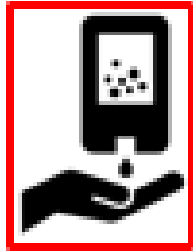
*Endemic = the constant presence of an agent or health condition within a given geographic area or population

MRSA = Methicillin-resistant *Staphylococcus aureus*; VRE = Vancomycin-resistant Enterococci

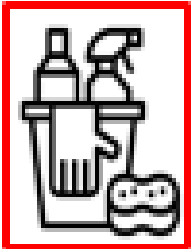


Transmission and spread of novel MDROs

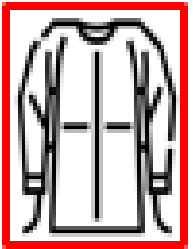
Novel MDROs can be prevented by core infection prevention practices.



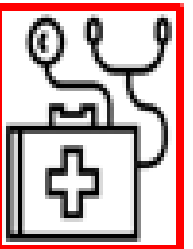
Hand hygiene



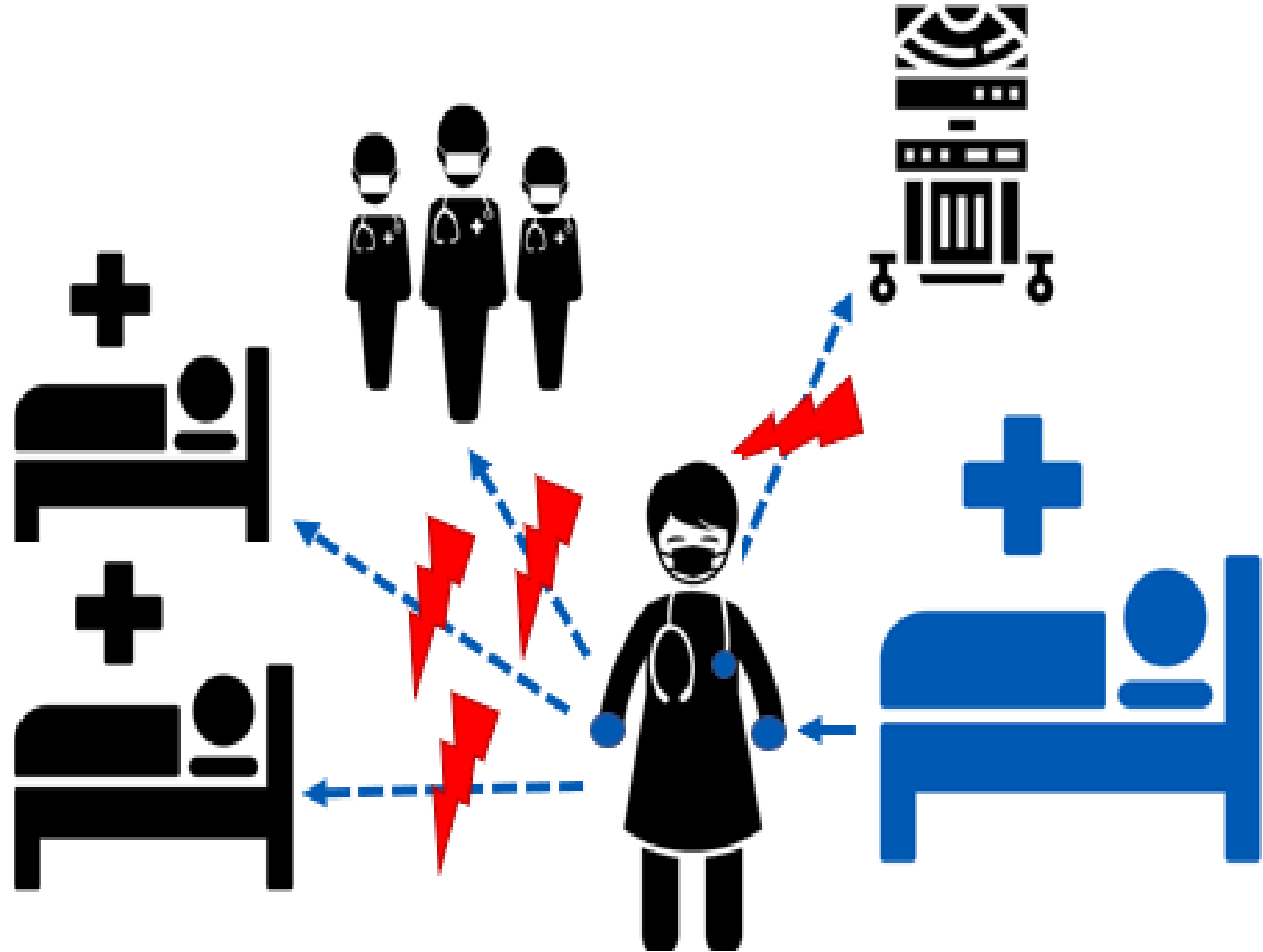
Cleaning and disinfection



Transmission-based precautions



Dedicated medical equipment



Novel MDROs can **spread silently** if residents/patients are colonized.

Colonization means that a person is carrying a germ but does not have symptoms of an infection.

Colonized patients can **spread the germs to others**.

Colonized patients can **develop infections**.



Screening for novel MDROs helps identify colonized patients and prevent transmission.

Facility-wide point prevalence surveys as part of investigations



Screening newly admitted or readmitted patients

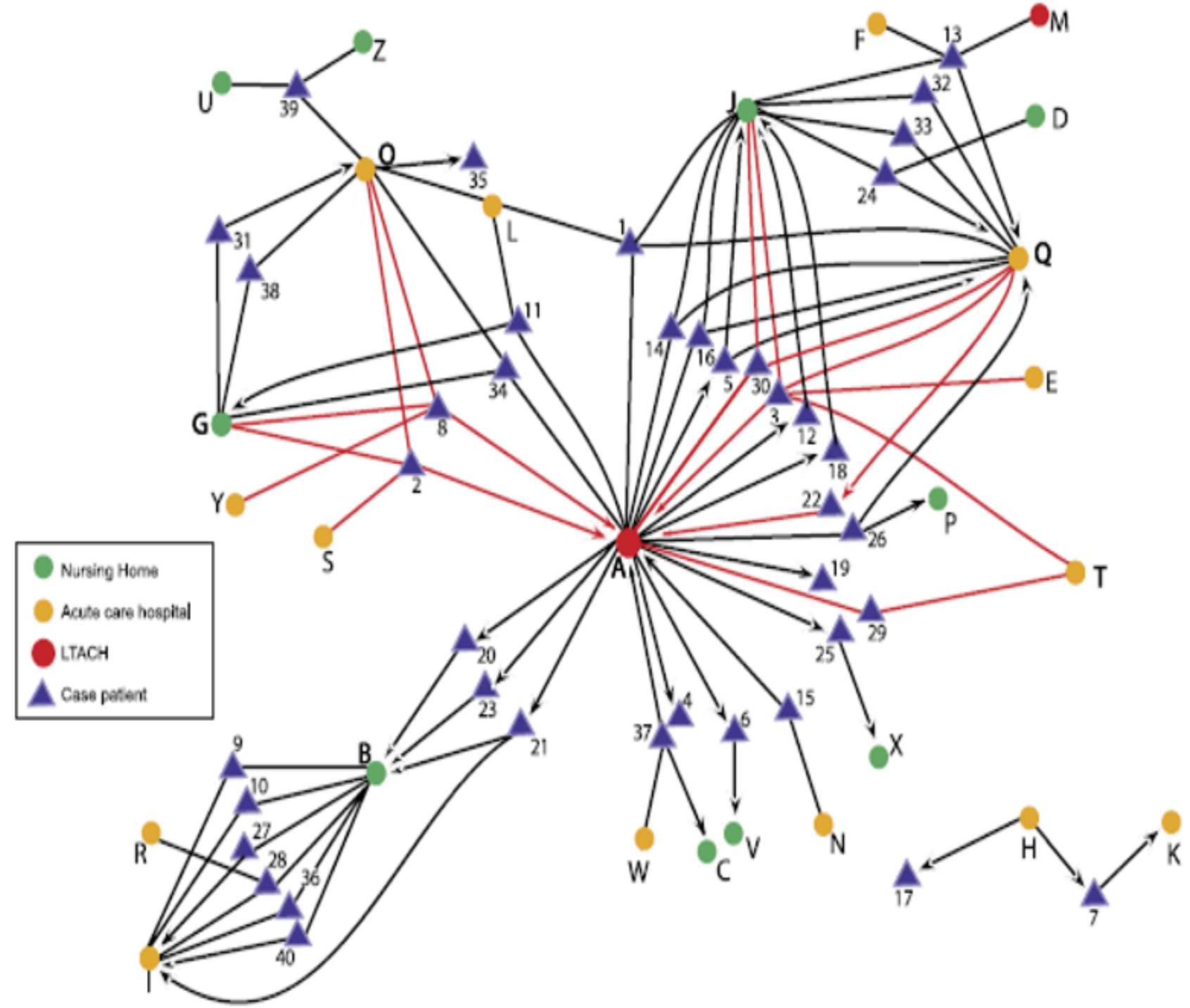
Gaps in interfacility communication contribute to novel MDRO spread.

Spread of an MDRO Among Many Healthcare Facilities in a Region

Spread is often amplified in high acuity post-acute care facilities

- Long lengths of stay
- High acuity patients
- Less infection control infrastructure than short stay acute care hospitals

LTACH = long-term acute care hospital
Won et al. Clin Infect Dis 2011; 53:532-540



Coordinated communication between facilities and health departments is essential to prevent spread.

[Making Health Care Safer Infographics](http://www.cdc.gov/vitalsigns/stop-spread/infographic.html)

(www.cdc.gov/vitalsigns/stop-spread/infographic.html)

Facilities work together to protect patients.

Common Approach (Not enough)

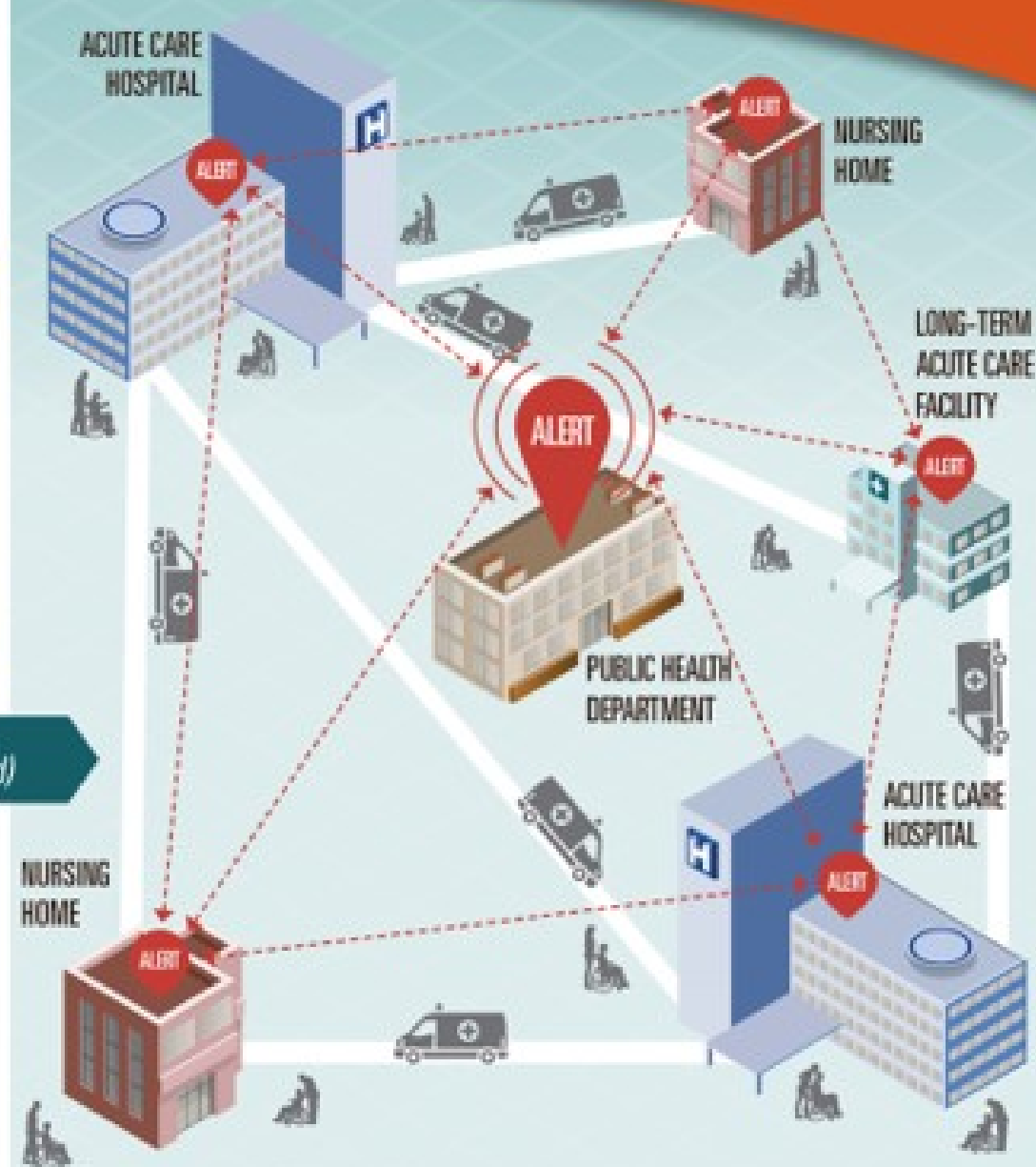
- Patients can be transferred back and forth from facilities for treatment without all the communication and necessary infection control actions in place.

Independent Efforts (Still not enough)

- Some facilities work independently to enhance infection control but are not often alerted to antibiotic-resistant or *C. difficile* germs coming from other facilities or outbreaks in the area.
- Lack of shared information from other facilities means that necessary infection control actions are not always taken and germs are spread to other patients.

Coordinated Approach (Needed)

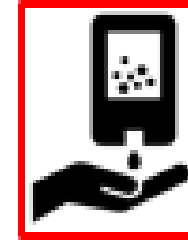
- Public health departments track and **alert** health care facilities to antibiotic-resistant or *C. difficile* germs coming from other facilities and outbreaks in the area.
- Facilities and public health authorities share information and implement shared infection control actions to stop spread of germs from facility to facility.



Containment of novel MDROs is cyclical and requires early and aggressive response.



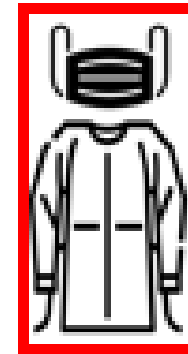
Health care facilities, health departments, and CDC are ON ALERT for antibiotic resistance.



Hand Hygiene



Cleaning & Disinfection



Transmission-based precautions



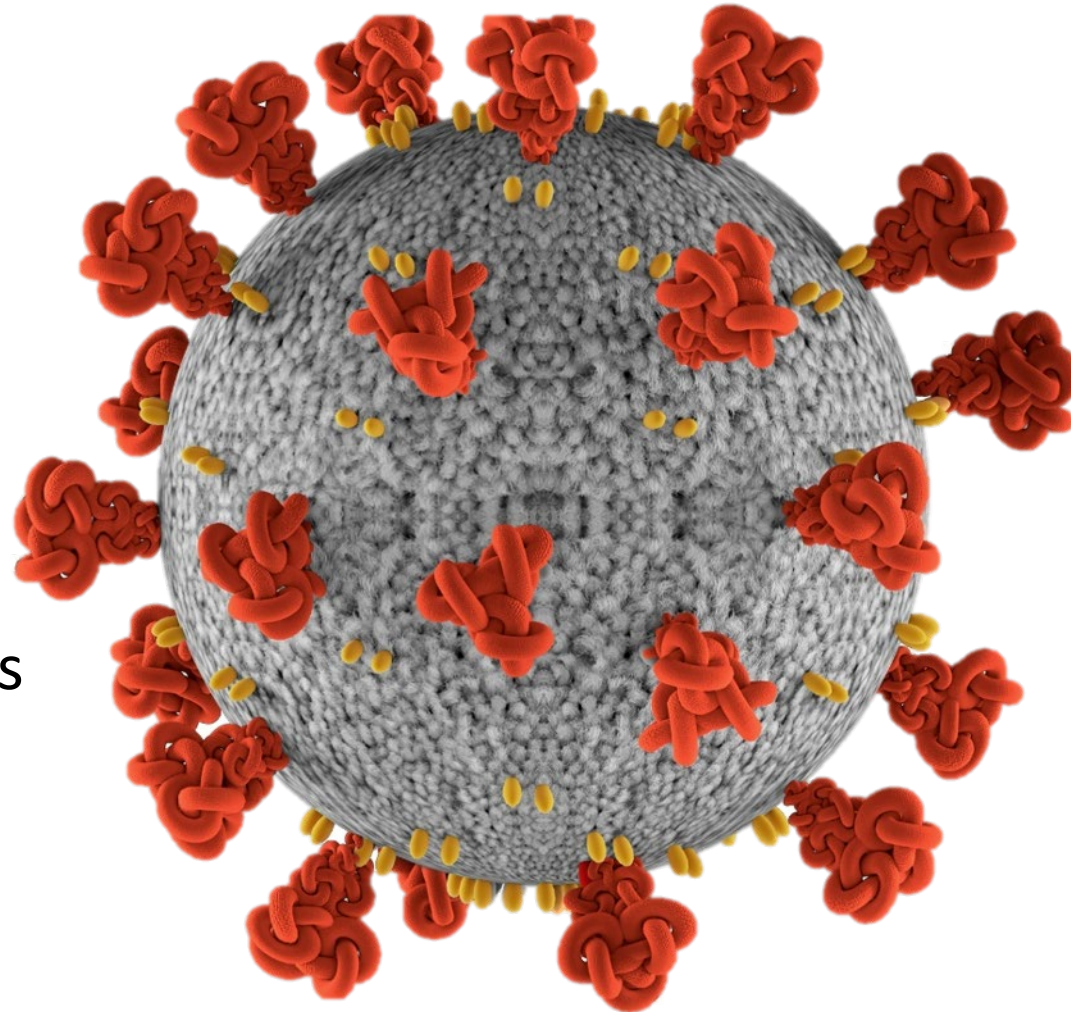
COVID-19 presents new prevention challenges for novel MDROs.

Staffing shortages

PPE shortages

ABHS shortages

Disinfectant shortages



Increased patient/resident volume and transfers

Increased infection prevention program burden

HCP safety

PPE = personal protective equipment; ABHS = alcohol-based hand sanitizer; HCP = healthcare personnel

Candida auris

Candida auris is an emerging multidrug-resistant yeast (a type of fungus) that **can cause severe infections.**

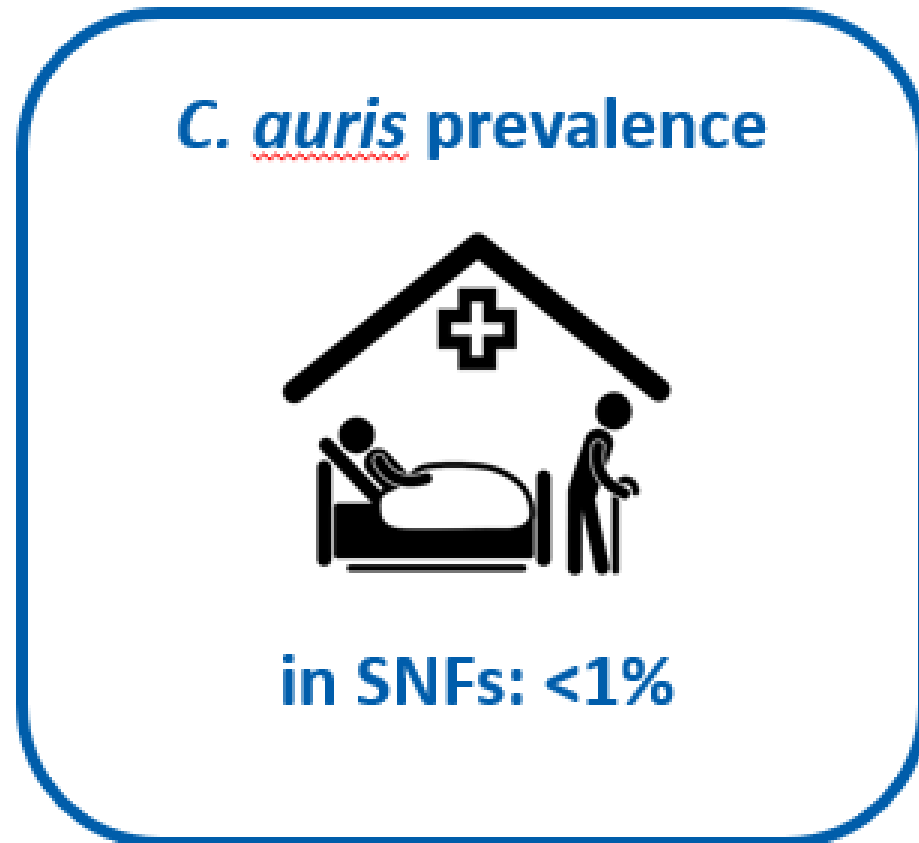
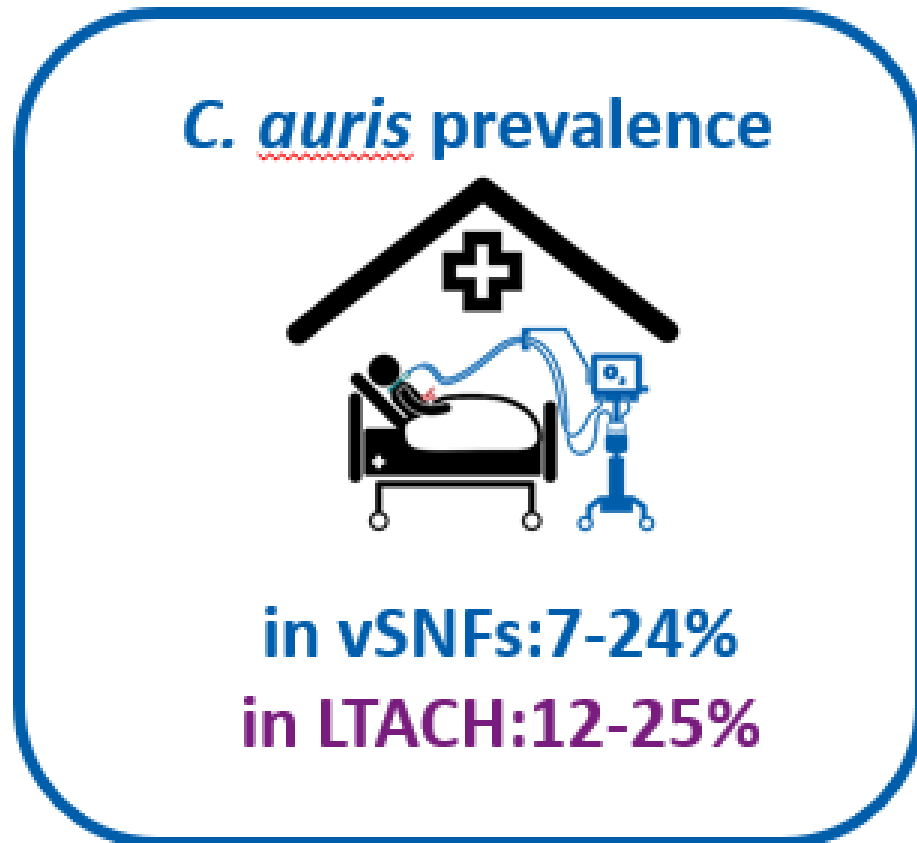


Candida auris affects the sickest of the sick.

- Multiple healthcare stays
- Tracheostomies
- Ventilator-dependent
- Colonized with other MDROs
- Recently received antibiotics and antifungals



vSNFs and LTACHs are **disproportionately affected** when compared with traditional skilled nursing facilities (SNFs).



Data from investigation in Illinois and New York, unpublished

vSNF = skilled nursing facilities with ventilator units; LTACH = long-term acute care hospitals

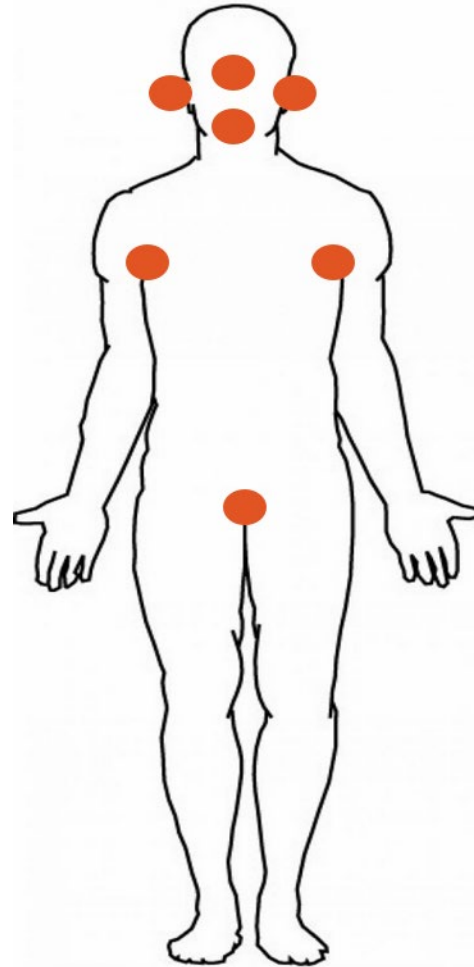
Patients with *Candida auris* are often colonized indefinitely.

Persist for many months

Currently, no decolonization strategies

Primarily on skin

- Nares
- Armpit
- Groin



Of patients colonized with *Candida auris* 5-10% develop bloodstream infections.



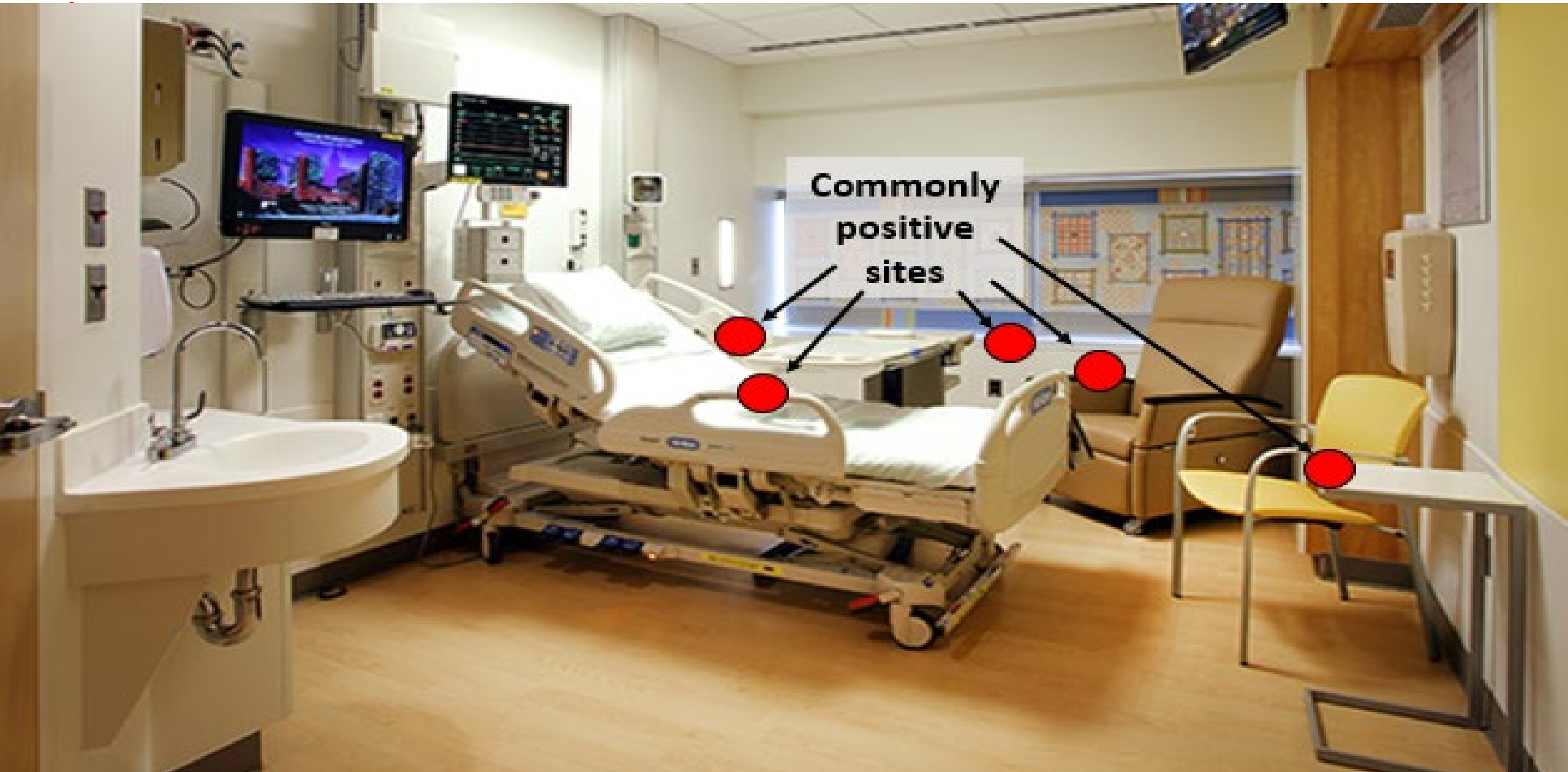
Mortality is **>45%** within the first 30 days

Misconception: Healthcare personnel (HCP) can become easily colonized when caring for patients with *Candida auris*.

HCP are at minimal risk of colonization.

An investigation in a facility with a *Candida auris* outbreak found that out of ~700 HPC caring for patients with *Candida auris*, none were colonized.

Candida auris persists in the environment for a long time.

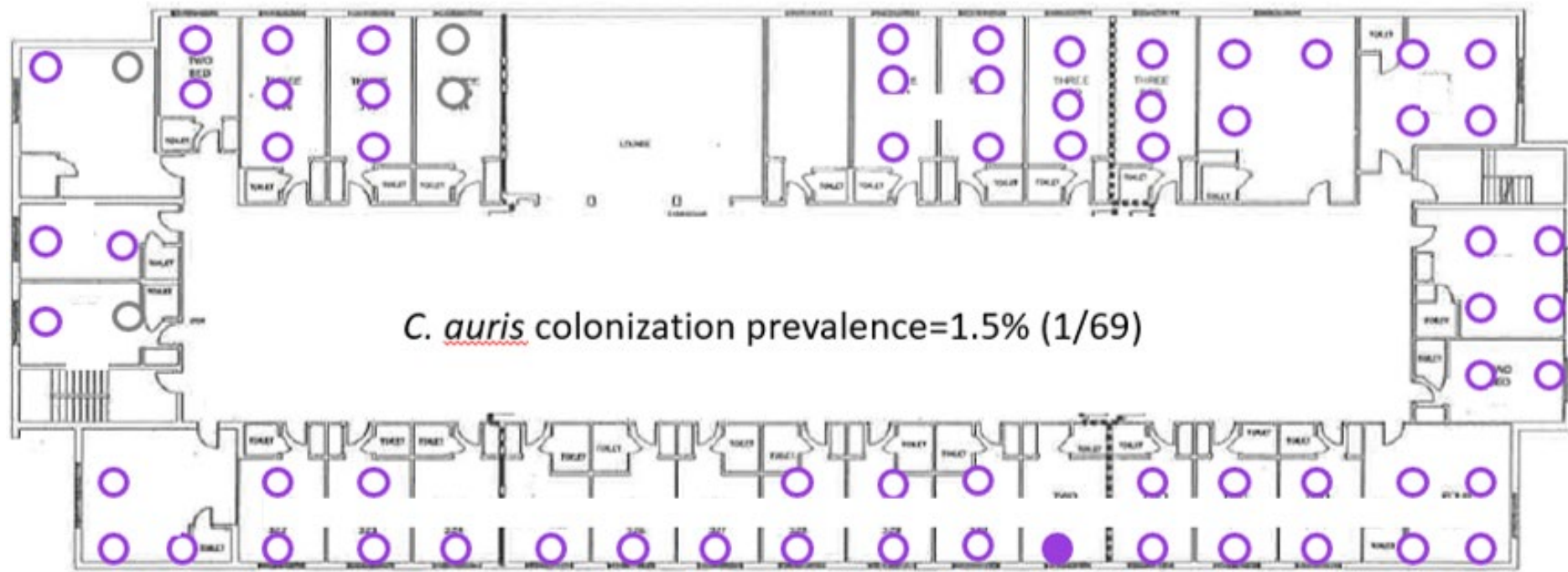


Candida auris can also contaminate medical equipment.



From a single introduction, *Candida auris* can spread rapidly.

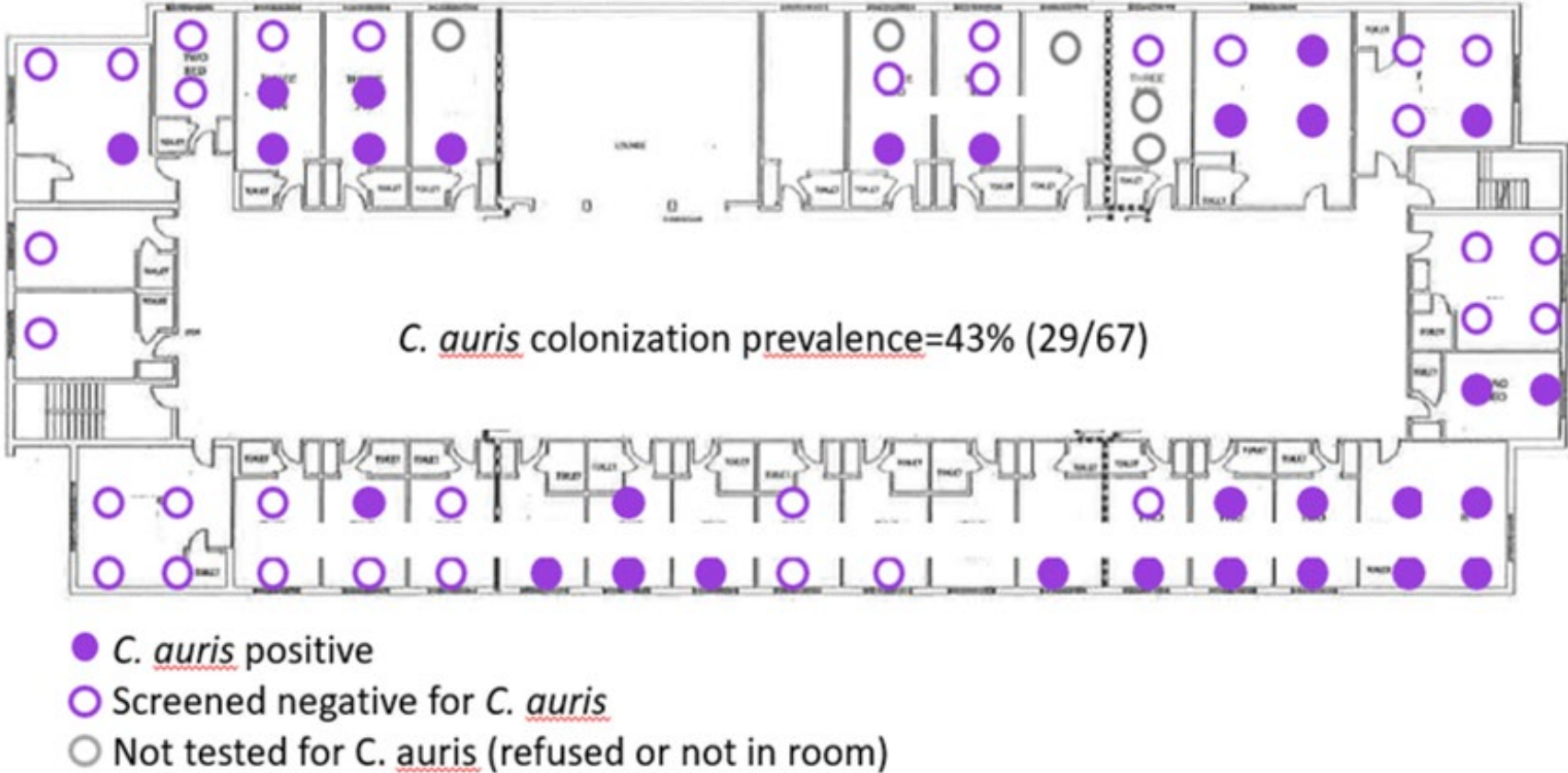
vSNF A Ventilator/Trach Floor
March 2017 *C. auris* PPS Results



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

From a single introduction, *Candida auris* can spread rapidly, cont.

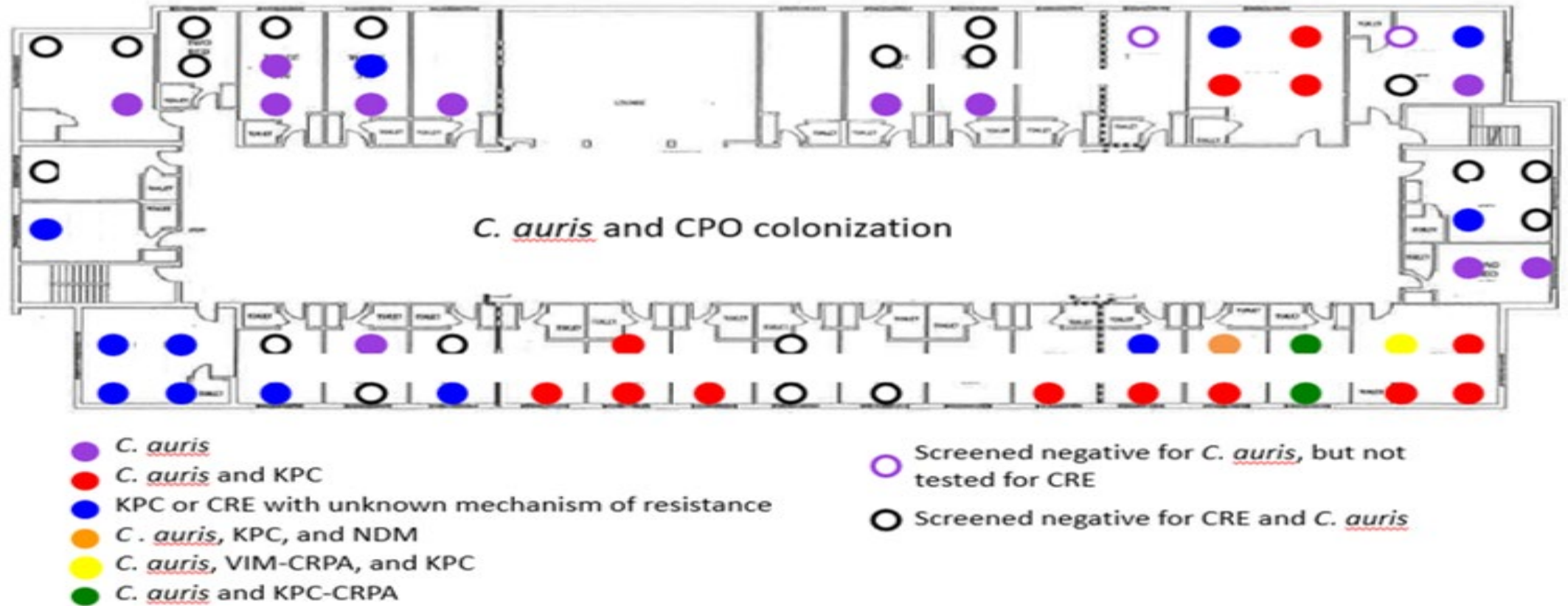
**vSNF A Ventilator/Trach Floor
January 2018 *C. auris* PPS Results**



vSNF = skilled nursing facility with ventilator units; PPS = point-prevalence survey Slide courtesy of Chicago Department of Public Health.

Novel MDROs travel together.

vSNF A Ventilator/Trach Floor January 2018 CPO and *C. auris* PPS Results



vSNF = skilled nursing facility with ventilator units; PPS = point-prevalence survey; CPO = carbapenemase-producing organism
Slide courtesy of Chicago Department of Public Health.

Investigation *Candida auris* and COVID-19 in Los Angeles County (LAC): Investigation

Responding to increased detection of *Candida auris* in long-term care facilities.



LAC and CDC's coordinated public health response had **three objectives**.

- 1. Assess infection prevention and control (IPC) program, infrastructure, and practices** in LTACH and vSNF facilities with recent or ongoing novel MDRO outbreaks or at risk of future outbreaks **to identify factors contributing to MDRO transmission.**
- 2. Identify IPC changes in response to the COVID-19 pandemic** that could contribute to re-emergence of novel MDROs, including how facilities were implementing surge capacity strategies.
- 3. Use findings to inform additional education and recommendations.**

Assessment of IPC practices included questionnaire and direct observations.

Policies and procedures:

- IPC program staffing
- MDRO detection, management, and prevention
- Facility staffing
- Hand hygiene
- Cleaning and disinfection
- PPE supply and usage

PPE = personal protective equipment



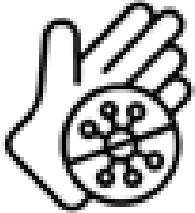
Direct Observation

- Facility layout
- PPE use
- Hand hygiene
- Environmental cleaning

We visited 12 facilities: 4 LTACHs and 8 vSNF,
5 facilities had *Candida auris* and 2 had CPO.

- Staffing, hand hygiene, cleaning and disinfectant, and PPE shortages were common.
- **No significant differences in practices were found between facilities with *Candida auris* or CPO and those without.**

We identified **several strengths** in our IPC assessment.



All facilities had infection prevention programs.



ABHS was generally available but not as much as would be ideal.



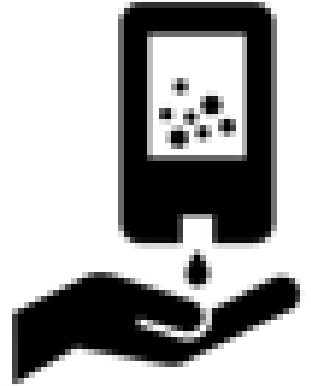
Most facilities stocked disinfectants effective against *Candida auris*.

ABHS = alcohol-based hand sanitizer

We identified common IPC gaps that may contribute to *C. auris* spread.

- Preference of soap and water over ABHS
- Missed HH opportunities when entering and exiting resident rooms
- ABHS not available outside and immediately inside resident rooms

- Inadequate measurement and mixing when self-preparing bleach
- Missed high touch surface cleaning and disinfection
- Infrequent cleaning of mobile medical equipment

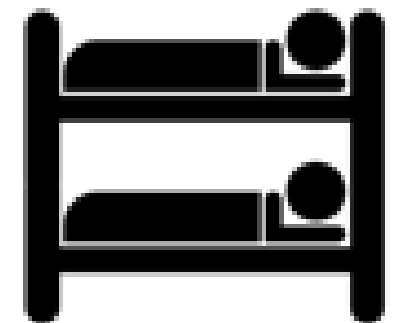


ABHS = alcohol-based hand sanitizer; HH = hand hygiene

We identified **common IPC gaps** that may contribute to *C. auris* spread, cont.

- Double gowning and double gloving
- Using gowns with back untied
- Re-use of disposable gowns
- Not changing PPE between patients in the same room
- Confusing or contradictory transmission-based precautions signage

- Cohorting patients by organism, site of infection, and infection type (i.e., colonization or active) resulting in frequent/unnecessary patient movement



PPE = personal protective equipment

Preventing MDRO Spread Within Your Facility

Hand hygiene

Misconception: Hand hygiene with soap and water is superior at killing organisms on hands than ABHS.

ABHS is better than handwashing at killing bacteria.

ABHS is less damaging to the skin than soap and water.

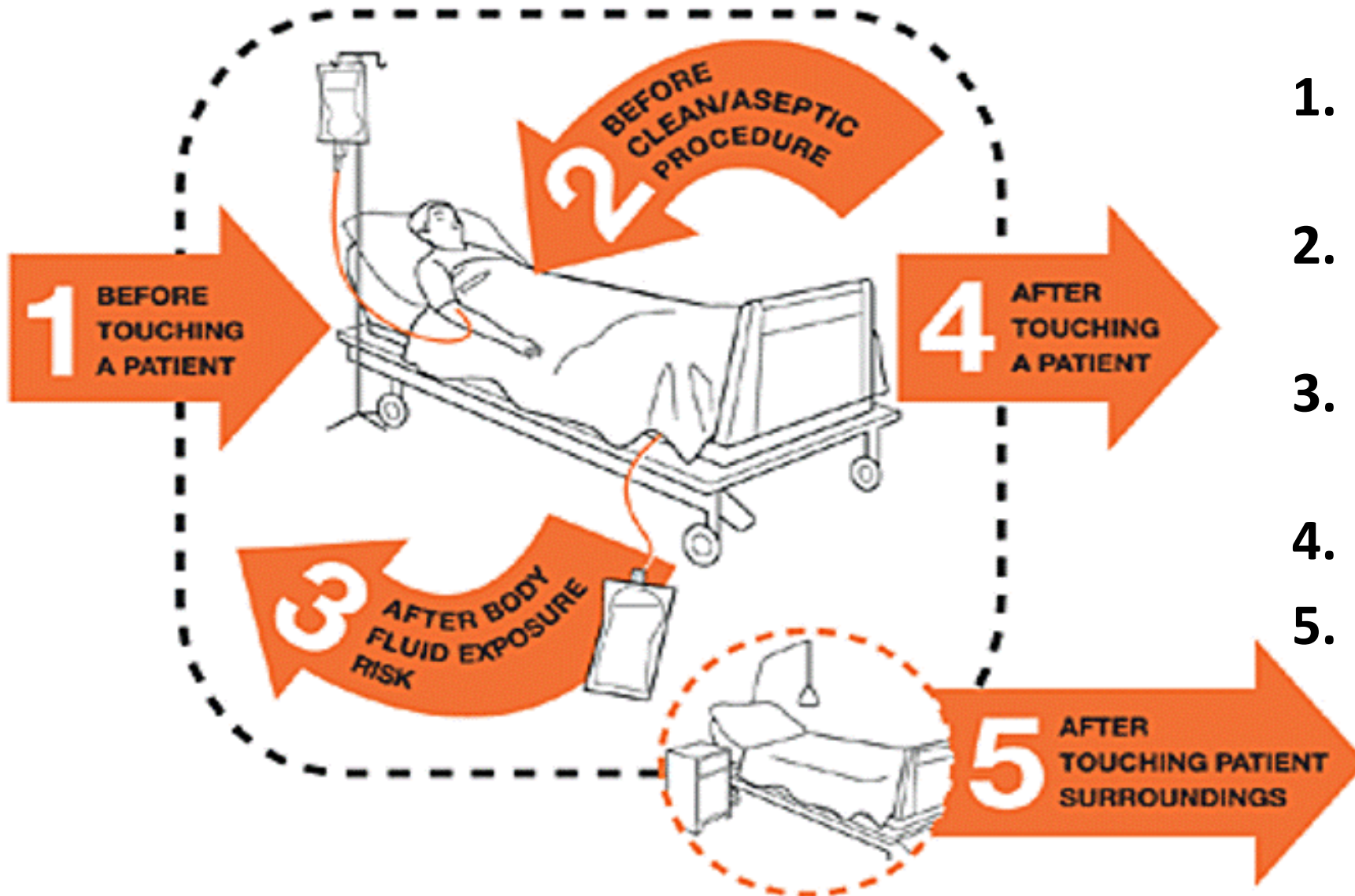
ABHS is preferred method of hand hygiene for most clinical situations.

ABHS = alcohol-based hand sanitizer

[CDC Hand Hygiene](https://www.cdc.gov/coronavirus/2019-ncov/hcp/hand-hygiene.html)

(www.cdc.gov/coronavirus/2019-ncov/hcp/hand-hygiene.html)

Remember the 5 key moments for hand hygiene.



1. **Before** touching a patient
2. **Before** clean/aseptic procedures
3. **After** body fluid exposure/risk
4. **After** touching a patient
5. **After** touching patient surroundings

Misconception: HCP should perform handwashing with soap and water after ~3 resident contacts to reduce transmission of organisms.

Indications for handwashing with soap and water:

- When hands are visibly soiled
- After caring for a person with known or suspected infectious diarrhea
- After know or suspected exposure to spores (for example in *Clostridioides difficile* outbreaks)

After glove doffing and moving from dirty to clean when caring for a patient are two frequently missed opportunities for hand hygiene.



Gloves are not a substitute for hand hygiene

Make it easy to perform hand hygiene for staff and others.

- Provide immediate access to ABHS at every point of care
 - Inside and outside of resident rooms (ideally at each bed space)
 - Common areas
 - Staff workstations
 - Therapy rooms
- Have a plan for restocking supplies
 - Avoid “topping off” ABHS or soap dispensers to avoid environmental contamination



Develop a training, auditing, and feedback system.

- Create a culture of safety
- Competency-based training
 - Caught red-handed
 - Fluorescent gel hand washing exercise
- Develop an auditing and feedback program
 - “Secret shopper”
 - Record data
 - Provide feedback



[CDC Hand Hygiene: Education, Monitoring and Feedback slides](#)
(PDF)

(www.cdc.gov/infectioncontrol/pdf/strive/HH102-508.pdf)

Cleaning and disinfection



Cleaning and disinfection are **separate** and **complementary** processes.

Cleaning is the **removal of foreign material** (e.g., soil, and organic material) from objects.

Disinfection is the **thermal or chemical destruction** of pathogenic and other types **of organisms**.

Thorough **cleaning is required before disinfection (unless a product is specifically labeled as a combined cleaner and disinfectant)** because inorganic and organic materials interfere with the effectiveness of disinfectants.

Contact/Wet Time is the amount of time that a disinfectant must remain on a surface to be effective.

Consider **labeling products** with contact times to ensure all staff use disinfectants appropriately



Focus cleaning **high-touch areas** frequently



DOOR HANDLE



LIGHT SWITCH



BEDPAN CLEANERS



TOILET HANDHOLDS

Make sure shared medical equipment is cleaned and disinfected **after each patient.**



Misconception: All hospital-grade disinfectants effective against SARS-CoV-2 are also effective against *Candida auris*.

- Most quaternary ammonium chloride (“Quats”) compounds are not effective against *Candida auris*.
- All disinfectants approved for *Candida auris* are effective against SARS-CoV-2 and other novel MDROs.

There are **several options** when choosing a product effective against *Candida auris*.

- **First choice:** Products with EPA-registered claims against *Candida auris*
- **Second choice:** Products tested by CDC effective against *Candida auris*
- **Third choice:** Products in EPA's List K effective against *Clostridioides difficile* spores

[Antimicrobial Products Registered with EPA for Claims Against *C. auris*](http://www.epa.gov/pesticide-registration/selected-epa-registered-disinfectants#candida-auris) (www.epa.gov/pesticide-registration/selected-epa-registered-disinfectants#candida-auris)

[C. auris Infection Prevention and Control](http://www.cdc.gov/fungal/candida-auris/c-auris-infection-control.html) (www.cdc.gov/fungal/candida-auris/c-auris-infection-control.html)

[Section 18 Public Health Exemption](http://www.cdc.gov/fungal/candida-auris/cpdf/section-18-public-health-exemption-508.pdf) (PDF) (www.cdc.gov/fungal/candida-auris/cpdf/section-18-public-health-exemption-508.pdf)

[List K: EPA's Registered Antimicrobial Products Effective against *Clostridium difficile* Spores](http://www.epa.gov/pesticide-registration/list-k-epas-registered-antimicrobial-products-effective-against-clostridium) (www.epa.gov/pesticide-registration/list-k-epas-registered-antimicrobial-products-effective-against-clostridium)

When using self-prepared bleach pay attention to **type, dilution, and storage.**

Always **follow manufacturers' instructions** for proper use of disinfecting (or detergent) products including proper protective equipment needed.

Use germicidal bleach intended for healthcare settings and **not generic household bleach.**

Surfaces need to be cleaned **before** applying bleach or else it will be inactivated.



[OSHA NIOSH Info Sheet: Protecting Workers Who Use Cleaning Chemicals \(PDF\)](https://www.osha.gov/Publications/OSHA3512.pdf)
(www.osha.gov/Publications/OSHA3512.pdf)

When using self-prepared bleach pay attention to **type, dilution, and storage**, cont.

5.25-6.15% sodium hypochlorite solution

- 1 part bleach, 9 parts water dilution (1:10) required to kill *Clostridioides difficile* and *Candida auris*
- **Accurately measured and well mixed**
- Make your bleach solution **daily** if possible and stored in an opaque container, as **bleach is light-sensitive**



[Section Navigation Rationale and Considerations for Chlorine Use in Infection Control for Non- U.S. General Healthcare Settings](https://www.cdc.gov/vhf/ebola/clinicians/non-us-healthcare-settings/chlorine-use.html)

(www.cdc.gov/vhf/ebola/clinicians/non-us-healthcare-settings/chlorine-use.html)

Effective strategies to improve cleaning and disinfection include:

1. **Assign** clear disinfection responsibilities
2. Develop an **audit and feedback** program
3. Make disinfectants **available to all staff**
4. **Train staff** on proper cleaning, disinfection, and product use.



[Appendices to the Conceptual Program Model for Environmental Evaluation](#)

(www.cdc.gov/hai/toolkits/appendices-evaluating-environmental-cleaning.html)

Strongly consider using disinfectants effective against *Candida auris* **even if there have been no cases identified in your facility!**



Transmission-based precautions



Gowns and gloves are recommended to care for residents colonized/infected with *C. auris* and other novel MDROs.



Complicated signage can lead to improper PPE use.

Isolation

In addition to standard precautions

Use the color code system to determine what type of isolation is needed

Blue = sputum
Yellow = urine
Red = blood
Green = skin
Brown = stool



Wear all PPE: gown, gloves, and mask

Difficult to read due to small font and color contrast

Unnecessary level of detail – color coding for site of colonization/infection

Does not mention need for dedicated medical equipment

PPE use signage should be **consistent**.



Avoid placing too many signs together which may have conflicting information.

Signs should clearly communicate the level of precautions, PPE needed, and any other special considerations and be immediately outside patient's room.

STOP **CONTACT PRECAUTIONS** **STOP**

EVERYONE MUST:

-  Clean their hands, including before entering and when leaving the room.

PROVIDERS AND STAFF MUST ALSO:

-  Put on gloves before room entry. Discard gloves before room exit.
-  Put on gown before room entry. Discard gown before room exit.
Do not wear the same gown and gloves for the care of more than one person.
-  Use dedicated or disposable equipment. Clean and disinfect reusable equipment before use on another person.

 U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

ALTO **MEDIDAS DE PRECAUCIÓN POR CONTACTO** **ALTO**

Todos deben:


-  Limpiarse las manos, incluso antes de entrar y al salir de la habitación.

Los proveedores de atención médica y el personal deben, además:

-  Ponerse guantes antes de entrar a la habitación. Desechar los guantes antes de salir de la habitación.
-  Ponerse una bata antes de entrar a la habitación. Desechar la bata antes de salir de la habitación.
No usar la misma bata ni los mismos guantes para atender a más de una persona.
-  Usar equipo de uso exclusivo o desechable. Limpiar y desinfectar el equipo reutilizable antes de usarlo para otra persona.

 U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

Proper donning and doffing will minimize the risk for disease transmission.



The image shows a YouTube video player interface. The main video thumbnail has a dark teal background. On the left side of the thumbnail is an illustration of a person wearing full PPE: a yellow protective suit, purple gloves, blue shoes, a blue face shield, and a blue surgical mask. In the center of the thumbnail, the text reads "How to Safely Take Off Personal Protective Equipment (PPE)" in white. Below the text is a black play button icon. In the bottom right corner of the thumbnail is the CDC logo, which includes the text "U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES" and "CDC". In the top right corner of the thumbnail is a white "Share" icon with an arrow. The video player has a light blue sidebar on the left with a back arrow and a "t" character, and a light blue sidebar on the right with a forward arrow and a "De (P" character. Below the video player, there is a white caption box with the text "Demonstration of Doffing (Taking Off) Personal Protective Equipment (PPE)".

How to Safely Take Off Personal Protective Equipment (PPE)

Demonstration of Doffing (Taking Off) Personal Protective Equipment (PPE)

www.cdc.gov/coronavirus/2019-ncov/hcp/using-ppe.html

Misconception: If a resident/patient who was previously known to be colonized with *Candida auris* tests negative for colonization contact precautions can be removed.

- Colonization with *C. auris* can last for prolonged periods of time and is not always detected.
- Routine rescreening of individuals is not recommended.
- Decisions to discontinue Contact Precautions should be made in consultation with health department.

Patient placement and cohorting considerations



Private rooms are preferred and prioritize patients with uncontained secretions or excretions.



If cohorting, **prioritize pathogens and keep it simple:**

1. COVID-19

2. *Candida auris* and/or other MDRO status

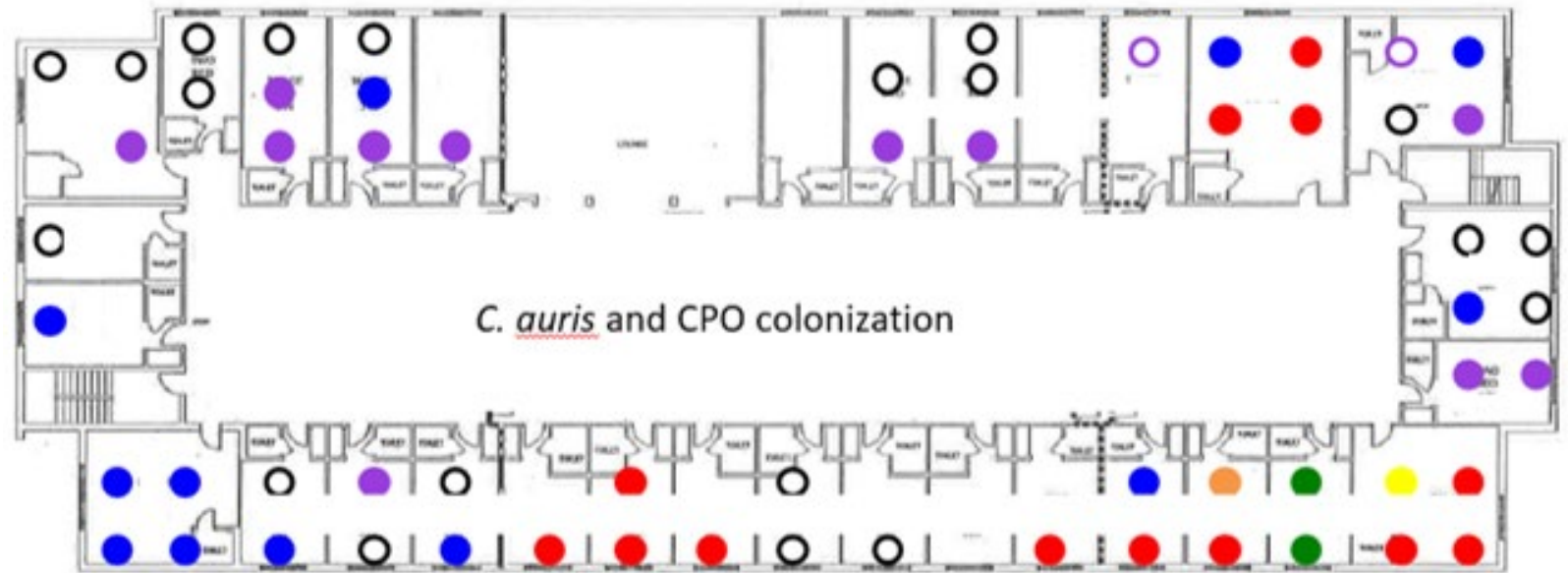
- Remember that *C auris* **persists in the environment**, rooms require **thorough environmental cleaning** after any patient movement
- Beds at least 3 feet apart
- Each resident and surrounding environment should be treated as separate areas

Colonization vs active infection and the anatomic site of positive specimen should not be considered when making cohorting decisions.

Remember that novel MDROs **travel** together and patients may have multiple organisms.

vSNF A Ventilator/Trach Floor
January 2018 CPO and *C. auris* PPS Results

PPE should be removed, and hand hygiene performed **before providing care to another resident, even in the same room** to avoid cross-contamination



- *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*

Slide courtesy of Chicago Department of Public Health.

COVID-19 strategies for optimizing PPE supplies



Surge capacity strategies are a framework to approach a decreased supply of PPE during the COVID-19 response.

Published by CDC in February after the first few cases were reported in the United States and CDC started becoming aware of impending PPE shortages.

CDC developed the burn rate calculator to help facilities optimize the use of PPE during the COVID-19 response.

[CDC PPE Burn Rate Calculator](https://www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/burn-calculator.html)

(www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/burn-calculator.html)

Item	Box 1	Box 2
Gown	1.00	1.00
Gloves	1.50 (small), 6.00 (medium), 6.50 (large), 1.00 (extra large)	15.00
Respirators	3M 1860, North 7130, 3M 8210	0.50
Surgical Masks	1.00	1.00
Face Shields	1.00	1.00
Other	1, 2, 3, 4, 5	

Type of PPE	Box/Brand
Gown	Box 1
Gloves	small, medium, large, extra large
Respirators	3M 1860, North 7130, 3M 8210
Surgical Masks	
Face Shields	
Other	1, 2, 3, 4, 5

Surge capacity strategies should be implemented sequentially.



Surge capacity refers to the ability to manage a sudden increase in patient volume that would severely challenge or exceed the present capacity of a facility.

[Optimizing the Supply of PPE in Healthcare Facilities](https://www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/strategies-optimize-ppe-shortages.html)

(www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/strategies-optimize-ppe-shortages.html)

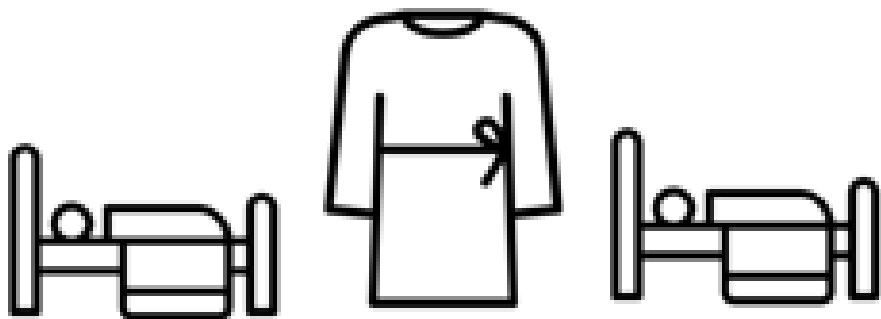
Strategies for Optimizing the Supply of Gowns

Conventional	Contingency	Crisis
Use isolation gown alternatives that offer equivalent or higher protection.	Consider the use of coveralls.	Extended use of isolation gowns.
Polyester or polyester-cotton fabrics can be safely laundered after each use and reused	Use of gowns beyond the manufacturer-designated shelf life for training.	Prioritize gowns: <ul style="list-style-type: none"> • Splashed and sprays anticipated, including aerosol generating procedures • High-contact activities: <ul style="list-style-type: none"> • Dressing, bathing/showering, providing hygiene, assisting with toileting • Transferring, changing linens • Device care, wound care
	Use gowns or coveralls conforming to international standards.	Consider using gown alternatives: <ul style="list-style-type: none"> • Disposable laboratory coats • Reusable (washable) patient gowns • Reusable (washable) laboratory coats • Disposable aprons

Extended use and Re-use of Gowns are different strategies.

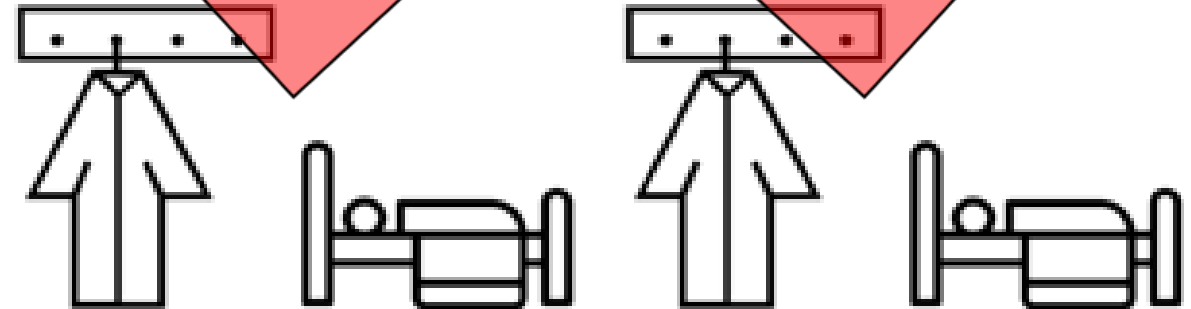
Extended use

- Wearing **the same gown to see multiple patients without removing.**
- Patients housed in the **same location** and known to be **infected with COVID-19.**
- No additional known co-infectious diagnoses **transmitted by contact** (e.g., *Candida auris*)



Reuse

- Wearing **the same gown for multiple patient encounters** but removing after each encounter.
- Disposable gowns **should not be re-used.**
- Higher risk of HCW **self-contamination.**
- **Not recommended**



Communication between facilities is essential to prevent spread.

Communicate MDRO status at:

- Admission
- Discharge
- Transfer within facility

Communicate with your local public health department about MDROs and possible outbreaks

Facilities work together to protect patients.

Common Approach *(Not enough)*

- Patients can be transferred back and forth from facilities for treatment without all the communication and necessary infection control actions in place.

Independent Efforts *(Still not enough)*

- Some facilities work independently to enhance infection control but are not often alerted to antibiotic-resistant or *C. difficile* germs coming from other facilities or outbreaks in the area.
- Lack of shared information from other facilities means that necessary infection control actions are not always taken and germs are spread to other patients.

Coordinated Approach *(Needed)*

- Public health departments track and **alert** health care facilities to antibiotic-resistant or *C. difficile* germs coming from other facilities and outbreaks in the area.
- Facilities and public health authorities share information and implement shared infection control actions to stop spread of germs from facility to facility.



Summary

Take home messages:

- We understand COVID-19-related disruptions, safety concerns, and other **challenges have affected everyone**
- *C. auris* and other MDRO are **still** public health threats, with **recent resurgence of cases and outbreaks**
- Strategies to prevent *C. auris* and other MDRO transmission **are not new**
- Strengthening basic infection prevention and control practices reduces transmission of **both** MDRO and SARS-CoV-2, **and** protects patient and HCP health and safety
- **Public health resources are available** to support MDRO testing and containment

Most important things to remember when you get off this call:

Check your disinfectants! *C. auris* persists in the environment for a long time and requires **thorough cleaning and disinfection** with specific disinfectants – don't forget to **clean shared medical equipment**

Assess ABHS availability in your facility and take steps to increase access where needed – use pocket sanitizers if needed

Review surge capacity strategies – make plans for how to implement these strategies **in advance** anticipating any shortages – remember to implement sequentially

Acknowledgements

- LAC Department of Public Health
- California Department of Public Health
- All facilities and their staff who shared their experience

Icons obtained from the Noun Project

Images obtained from Getty images

Questions



Resources

- [2019 Antibiotic resistance threats report](http://www.cdc.gov/drugresistance/biggest-threats.html) (www.cdc.gov/drugresistance/biggest-threats.html)
- *Candida auris*
 - [Candida auris](http://www.cdc.gov/fungal/candida-auris/index.html) (www.cdc.gov/fungal/candida-auris/index.html)
 - [C. auris Infection Prevention and Control](http://www.cdc.gov/fungal/candida-auris/c-auris-infection-control.html) (www.cdc.gov/fungal/candida-auris/c-auris-infection-control.html)
 - [Environmental Control of Candida auris with Antimicrobial Pesticides](http://www.epa.gov/pesticides/environmental-control-candida-auris-antimicrobial-pesticides) (www.epa.gov/pesticides/environmental-control-candida-auris-antimicrobial-pesticides)
- [CRE Toolkit](https://www.cdc.gov/hai/organisms/cre/cre-toolkit/index.html) (https://www.cdc.gov/hai/organisms/cre/cre-toolkit/index.html)
- [Interim Containment Guidance for Novel or Targeted MDROs](http://www.cdc.gov/hai/outbreaks/mdro/index.html) (www.cdc.gov/hai/outbreaks/mdro/index.html)
- [Hand Hygiene](http://www.cdc.gov/infectioncontrol/guidelines/hand-hygiene/index.html) (www.cdc.gov/infectioncontrol/guidelines/hand-hygiene/index.html)
- [Environmental Cleaning and Disinfection](http://www.cdc.gov/infectioncontrol/guidelines/environmental/index.html) (www.cdc.gov/infectioncontrol/guidelines/environmental/index.html)
- [Risk Assessment with Appropriate use of PPE](http://www.cdc.gov/hai/prevent/ppe.html) (www.cdc.gov/hai/prevent/ppe.html)
- [Guideline for Isolation Precautions](http://www.cdc.gov/infectioncontrol/guidelines/isolation/index.html) (www.cdc.gov/infectioncontrol/guidelines/isolation/index.html)
- [Reprocessing of Reusable Medical Equipment](http://www.cdc.gov/hicpac/recommendations/flexible-endoscope-reprocessing.html) (www.cdc.gov/hicpac/recommendations/flexible-endoscope-reprocessing.html)

***C. auris* Coordinated Response in Los Angeles County**

- **Los Angeles County Department of Public Health**
- **California Department of Public Health**
- **Centers for Disease Control and Prevention (CDC)**
 - Division of Healthcare Quality Promotion
 - Mycotic Diseases Branch
- **National Institute for Occupational Safety and Health (NIOSH)**