

# Best Practices for Skilled Nursing Facilities (SNFs) in Accepting Residents with Multidrug-resistant organisms (MDROs)

Webinar  
February 15, 2024

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



## Objectives

- Understand the importance of accepting patients with MDROs
- Learn from SNF peers who regularly accept patients with MDROs
- Learn how you can safely care for patients with MDROs



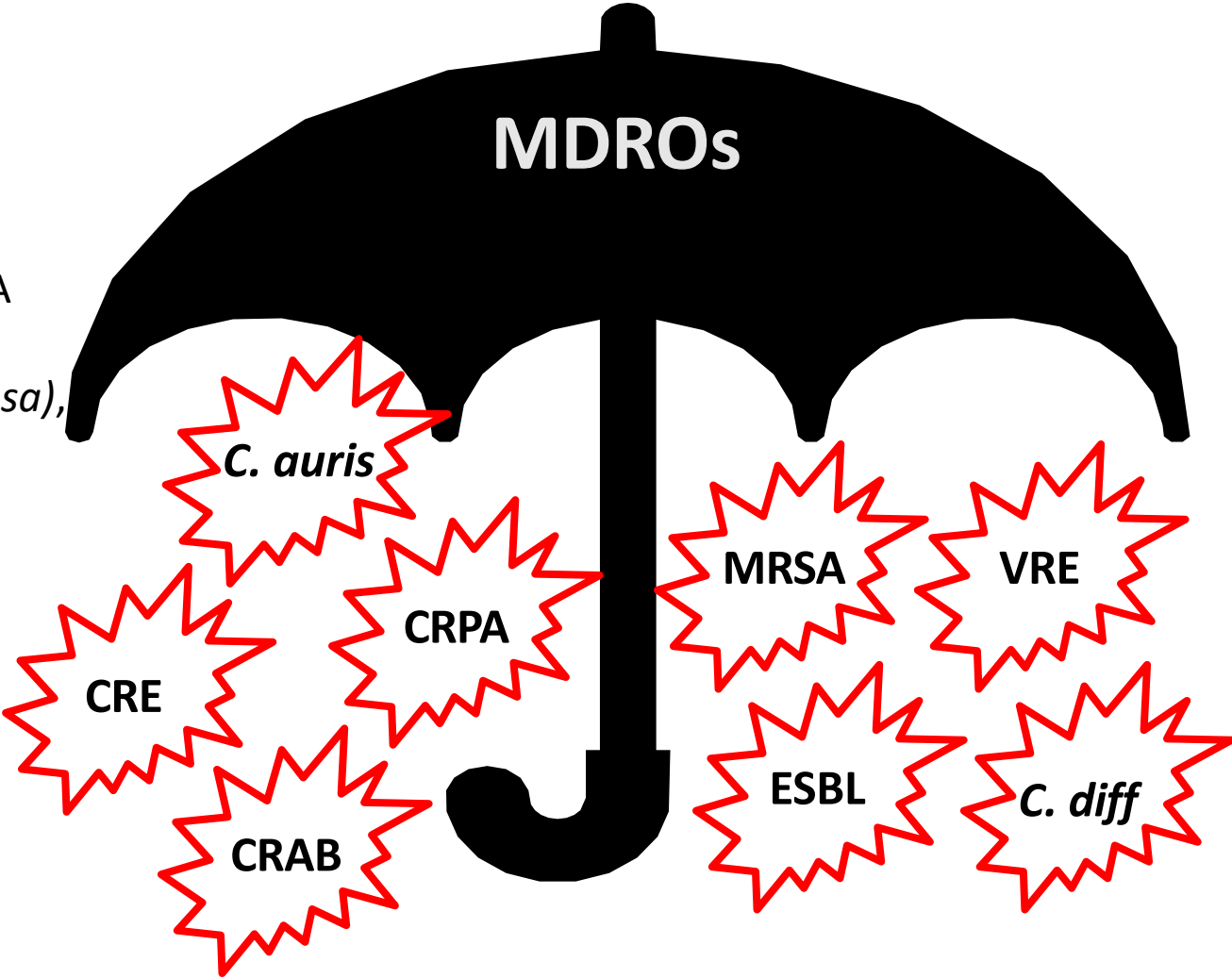
## SNFs play an important role in the smooth operation of the healthcare system

- SNFs provide a vital role in caring for patients that no longer require hospitalization
- 1 in 4 Medicare patients admitted to the hospital for acute medical illness need skilled nursing care after discharge
- Smooth discharges from hospitals to SNFs are essential to ensure capacity across the continuum of care

Krumholz HM, Nuti SV, Downing NS, Normand SL, Wang Y. Mortality, Hospitalizations, and Expenditures for the Medicare Population Aged 65 Years or Older, 1999–2013. *JAMA*. 2015 Jul 28;314(4):355–65.

# Multidrug-resistant Organisms

- *Candida auris*
- CPO – Carbapenemase-producing CRE (carbapenem-resistant Enterobacterales), CRPA (carbapenem-resistant *Pseudomonas aeruginosa*), CRAB (carbapenem-resistant *Acinetobacter baumannii*)

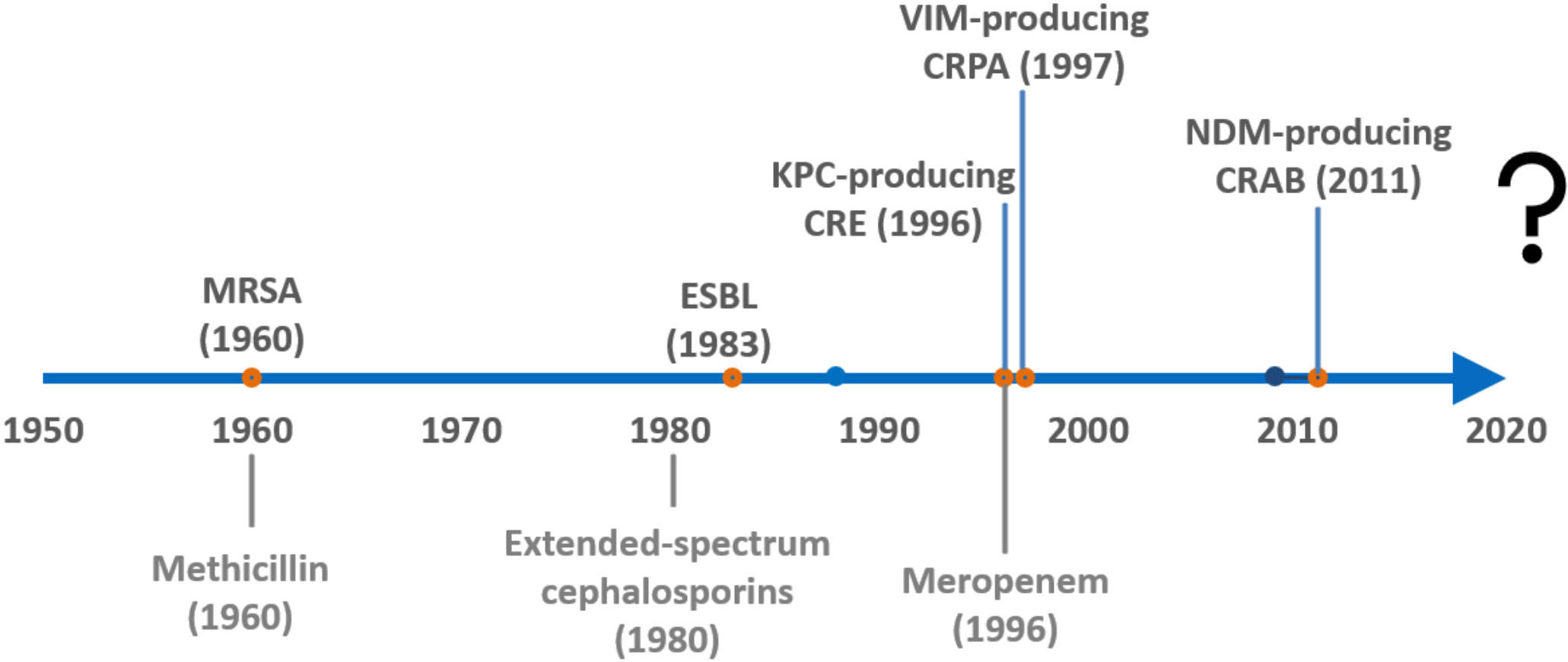


- Methicillin-resistant *Staphylococcus aureus* (MRSA)
- Vancomycin-resistant Enterococci (VRE)
- Extended-spectrum  $\beta$ -lactamase-producing organisms (ESBL)
- *Clostridioides difficile* (*C. diff*)

# MDROs are not going away, and new MDROs will continue to appear

MDRO  
first  
identified

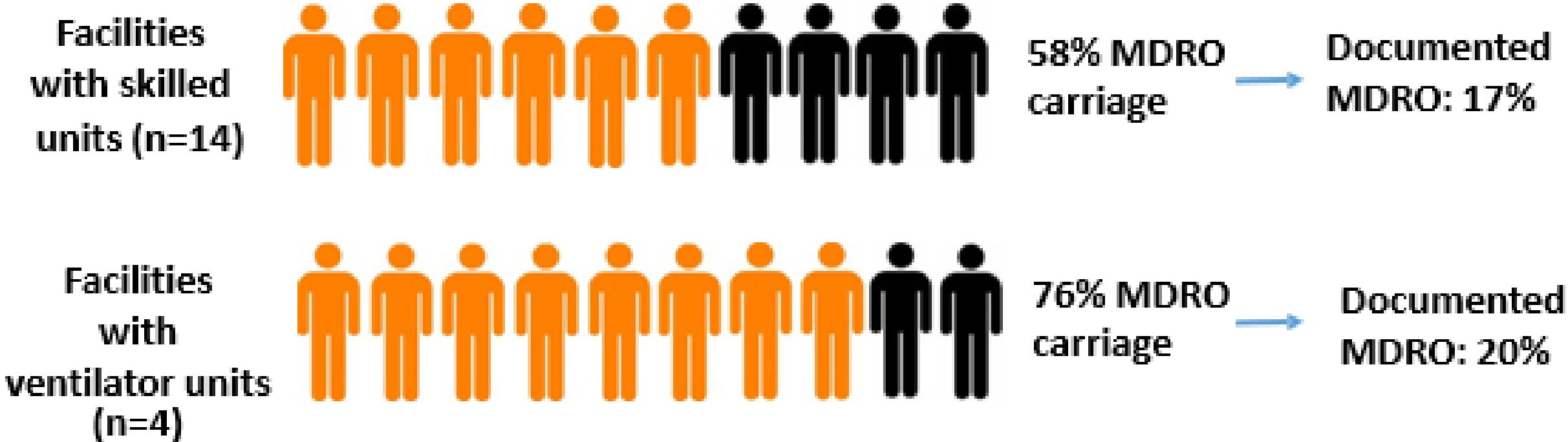
Antibiotic  
first  
released



[Suay-Garcia and Perez-Garcia, 2019](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC6784177/) ([www.ncbi.nlm.nih.gov/pmc/articles/PMC6784177/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC6784177/)) [CDC 2019 AR Threats Report](https://www.cdc.gov/drugresistance/pdf/threats-report/2019-ar-threats-report-508.pdf) (PDF) ([www.cdc.gov/drugresistance/pdf/threats-report/2019-ar-threats-report-508.pdf](https://www.cdc.gov/drugresistance/pdf/threats-report/2019-ar-threats-report-508.pdf)) MRSA = Methicillin-resistant *Staphylococcus aureus*; ESBL = extended-spectrum beta lactamases; KPC = *Klebsiella pneumoniae* carbapenemase; VIM = Verona Integron Metallo-β-Lactamase; NDM=New Delhi metallo-β-lactamase



# Most SNF residents are colonized with MDROs

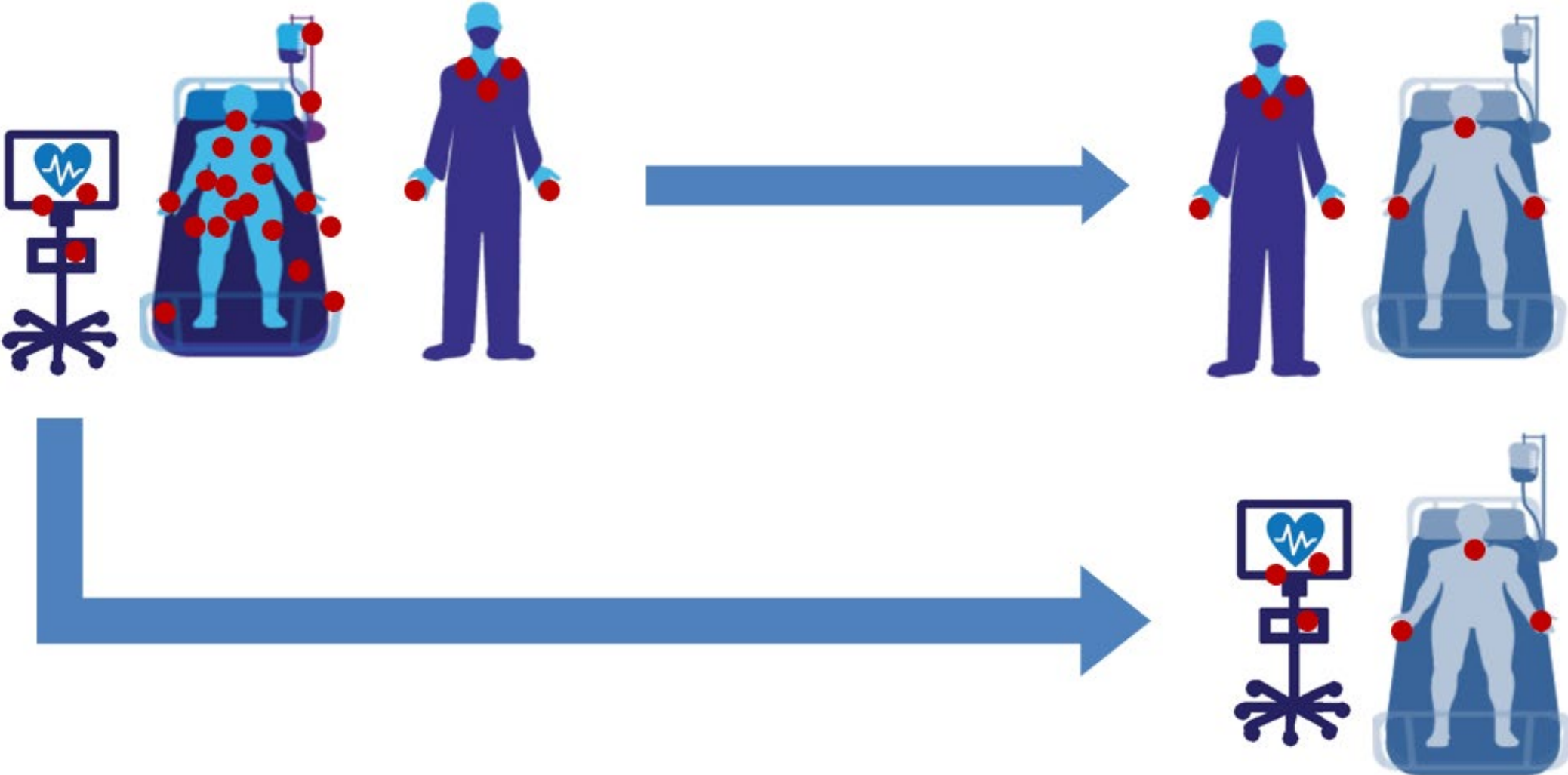


Even when roommates are negative, other residents in facility may be positive

McKinnell JA et al. Clin Infect Dis. 2019; 69(9):1566-1573  
Gussin G et al. Open Forum Infect Dis 2023; 27;10(Suppl 2):ofad500.145



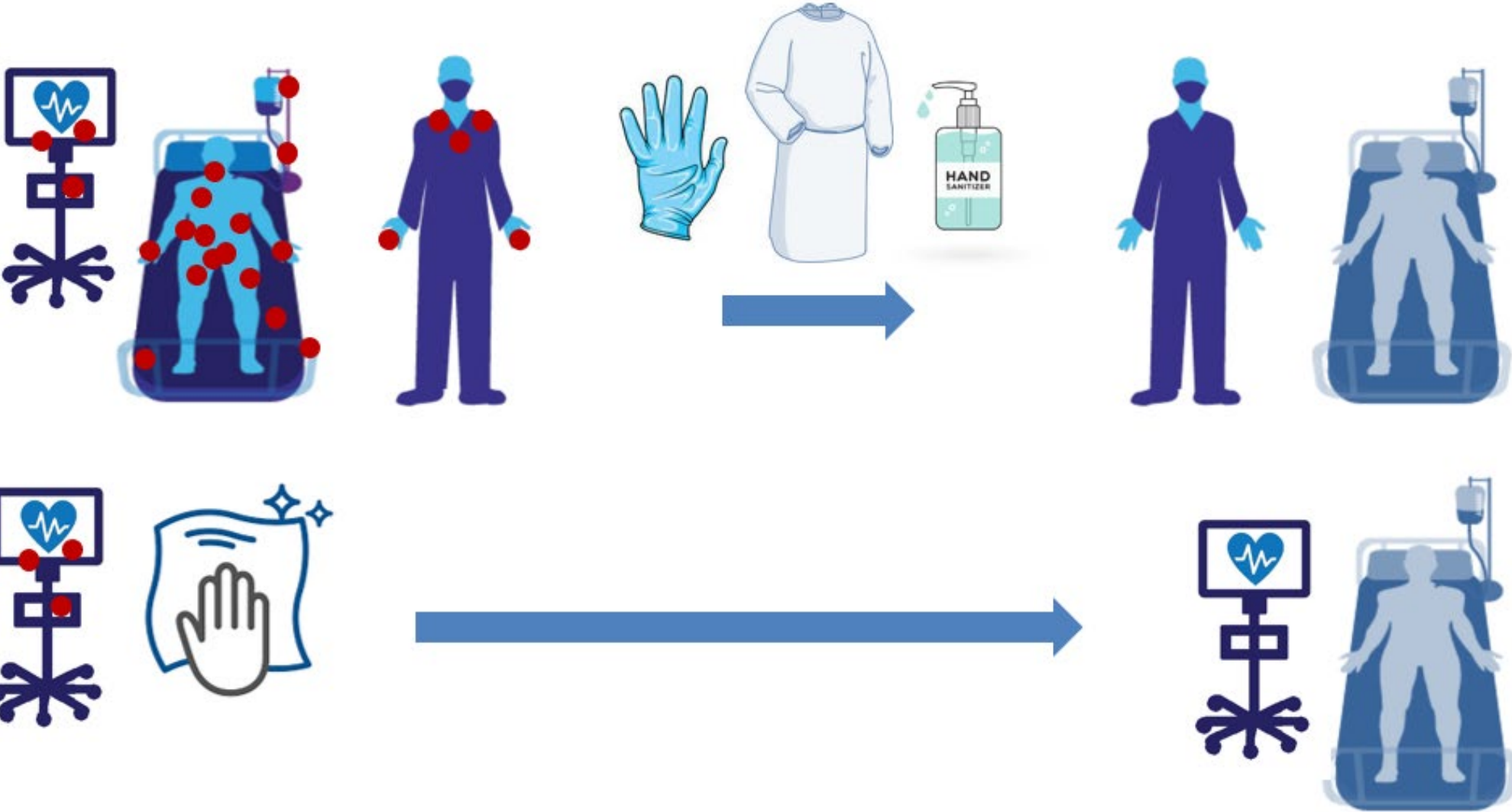
# Interrupting MDRO Transmission within Healthcare Facilities



Slide courtesy of Danielle Rankin, CDC



# Interrupting MDRO Transmission within Healthcare Facilities





## SNFs in compliance can care for residents with MDROs

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“All SNFs in compliance with state statute and federal regulations must be able to provide care for residents with MDROs.”

# Similar tools can be used to manage all MDROs

<p>Hand hygiene (hand sanitizer (generally preferred) or soap and water)</p>			<p>Personal protective equipment (PPE): gloves, gowns</p>
<p>Environmental cleaning and disinfection</p>			<p>Adherence monitoring of infection prevention and control (IPC) practices</p>

## Enhanced Standard Precautions (ESP) are a Shift from Bacteria or Fungal-Centered Care...



...to Resident-Centered Care

## Use of ESP streamlines care of residents with MDROs

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- Focus is on resident's risk factors, not their MDRO colonization status
  - Solution for high rate of unknown MDRO colonization
  - Suitable for known and unknown colonization status
  - Reduces risk of MDRO spread
  - Better option for residents and families
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## Best Practice: Enhanced Standard Precautions

- ESP applies to SNFs *and* vSNFs
  - Gown and glove use for high-contact activities
  - Initial risk assessment
- Simplified criteria for ESP (for residents at highest risk of MDRO colonization)
  - Presence of indwelling device
  - Unhealed wounds or pressure ulcer
- Facility-level intervention
  - In some cases, may be unit-level
- Training and more details available on our website



# Best practice: Use the interfacility transfer form

- Use the interfacility transfer form to communicate MDRO status when a resident or patient transfers between facilities
- Actively seek MDRO status of residents on admission

## HEALTHCARE FACILITY TRANSFER FORM

Affix patient labels here.

Use this form for all transfers to an admitting healthcare facility.

Patient Name (Last, First): _____		
Date of Birth: _____	MRN: _____	Transfer Date: _____
Receiving Facility Name (if known): _____		
Contact Name (optional): _____	Contact Phone (optional): _____	
Sending Facility Name: _____		
Contact Name: _____	Contact Phone: _____	

### PRECAUTIONS

Patient currently on precautions?  Yes  No      If yes, check all that apply:  
 Airborne    Contact    Droplet    Enhanced Standard\*

\*Long-term care facilities may implement [Enhanced Standard Precautions](http://www.cdph.ca.gov/Programs/CHCQ/HAI/Pages/ESP.aspx) (www.cdph.ca.gov/Programs/CHCQ/HAI/Pages/ESP.aspx) for patients with multidrug-resistant organisms (MDROs) or risk factors for transmission, i.e., gown and glove use for high-contact care activities; such patients may be on Contact Precautions in acute care settings.

### ORGANISMS (Include copy of lab results with organism ID and antimicrobial susceptibilities.)

Patient is **NOT** known to be colonized or infected with any multidrug-resistant or other organisms requiring precautions (*skip section*)

Patient has MDRO or other lab results requiring precautions (record organism(s), specimen source, collection date)

Exposed to MDRO/other (record organism(s) and last date(s) of exposure if known)

Organism	Carbapenemase (if applicable)**	Source	Date
<input type="checkbox"/> <i>Candida auris</i> ( <b>C. auris</b> )			
<input type="checkbox"/> <i>Clostridioides difficile</i> ( <b>C. diff</b> )			
<input type="checkbox"/> <i>Acinetobacter</i> , multidrug-resistant (e.g., <b>CRAB**</b> )			
<input type="checkbox"/> Carbapenem-resistant Enterobacterales ( <b>CRE**</b> )			
<input type="checkbox"/> <i>Pseudomonas aeruginosa</i> , multidrug-resistant (e.g., <b>CRPA**</b> )			
<input type="checkbox"/> Extended-spectrum beta-lactamase (ESBL)-producer			
<input type="checkbox"/> Methicillin-resistant <i>Staphylococcus aureus</i> ( <b>MRSA</b> )			
<input type="checkbox"/> Vancomycin-resistant <i>Enterococcus</i> ( <b>VRE</b> )			
<input type="checkbox"/> No organism identified (e.g., molecular screening test**)			
<input type="checkbox"/> Other, specify: (e.g., SARS-CoV-2 (COVID-19), lice, scabies, disseminated shingles ( <i>Herpes zoster</i> ), norovirus, influenza, tuberculosis)			

\*\*Note specific carbapenemase(s) (e.g., NDM, KPC, OXA-23) if known

## Best Practice: MDRO Screening and Surveillance

- Public health recommends that ventilator/subacute units (vSNFs) conduct admission screening and regular point prevalence surveys (PPS) because of their high-risk population
- All SNFs should make sure that their lab tests carbapenem-resistant organisms (CROs) to see if they produce a carbapenemase (CPOs)
  - Public health can help with this testing

## Best Practice: Cohort residents with known MDROs when possible

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- When MDRO status is known, cohorting residents appropriately can help limit spread.
    - Cohorting is for residents who are known to be infected or colonized with the same MDRO
    - Contact your local health department for guidance when developing cohorting strategies and any questions
    - Maintain a running log of residents known to be infected or colonized with MDROs
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## Best Practice: Environmental Cleaning and Disinfection

- Not all disinfectants can kill *C. auris*
  - List P agents have claims against *C. auris* and should be used with a *C. auris*-colonized resident and unit-wide in subacute/ventilator units.
    - If List P is not available, List K agents or bleach may be used
  - Consult with public health with questions
- When cleaning and disinfecting a resident's room, EVS staff should follow precautions for the patient in that room
- EVS practices should include policies for terminal cleaning and frequent cleaning and disinfection of high-touch surfaces

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# University Post Acute Rehab

## Alvin Narayan

# University Post Acute Rehab

- We are a 56-bed facility.
- 50% skilled mix with a high turnover for patients
- Primary focus is Ortho-Rehab.
- Multiple physicians who are highly involved in facility quality measures.

# New Admission Characteristics

- Most patients live in the Sacramento-Roseville area
- 35-38 admits per month
- UCD and Sutter

# Process for new admissions

- We do not screen for MDROs, our primary partner at the acute screens
- Facility uses ESP with known MDROs.
- Prior to admission, residents are screened at the hospital, depending on status, isolation sign and carts are put in prior to DC.
- Residents who are on isolation are admitted only to an empty room; cohorting is only done if the microorganism is the same for both patients

# IPC practices

- Highlights of our IPC practices
  - We have strong housekeepers whom we routinely train via adherence monitoring using Glo-germ.
  - Understanding how to use appropriate cleaners with realistic kill times.
  - Hand hygiene audits to be done daily, pull staff and educate daily.
  - Constant education on ATB stewardship and what are MDROs.

## Communication with other facilities

- Give specific report to all parties – Transport (EMT, non-emergency transports), LTC (skilled nursing-R&B, B&C, assisted living), educate them on the MDRO.
- Use an inter-facility transfer form from public health.
- Send multiple copies of H&P so the receiving parties all have the required information about the receiving patient.
- Upon admission or return, we like to receive report, have H&P reviewed prior to admit.

# Advice for other SNFs on accepting residents with MDROs

- Ask HAI and public health for help, they are amazing and so willing to help and educate.
- Keep up on your education on MDROs, attend webinars and collaborative sessions.
- Be prepared, have enough PPE, carts and signage. Educate your staff frequently.
- Enhanced Standard Precautions will mitigate a lot of your risk for transmission, understand and implement when possible.
- Ask our friends at HAI for an infection control survey. They are there to help, this is the best and most honest way to assess your building for risk and preparedness



# Why it's important that SNFs accept residents with MDROs

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- Offload the Hospitals-trained SNF partners can help mitigate the spread of MDROs and assist our hospital partners in taking care of the patient.
  - Limiting transmission of MDROs is possible-CDC studies show that proper infection control can limit spread of MDROs over a period of time.
  - Patients with MDROs need a place to go-with the right training it's the right thing to do.
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# Newgen Administrative Services

Ivan Barajas, Dir. of Infection Prevention

# Newgen Administrative Services

- Newgen manages nursing homes throughout California, Nevada, and Washington.
- We work to provide a supportive culture.

# Admissions

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- We partner with local and regional hospital groups.
  - Mostly acute care hospitals and LTACS.
  - Institutions for Mental Disease (IMD) facilities partner with local public health jurisdictions for behavioral admissions.
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# Process for new admissions

- Admissions and marketing staff receive training to review and screen new admissions for infectious diseases. Clinical staff at the facility level will also review for proper placement.
  - Green, Yellow, Red conditions list.
- If further questions arise, it is elevated to the regional nursing level for guidance.
- For residents that have invasive devices or open wounds, they are placed on ESP.
- Shift huddles are held each shift to ensure staff is aware of the types of precautions that must be taken.

# Room Placement/ Cohorting

## Transmission-Based Precautions Flow Sheet

### Single Room

- Single room with a private bathroom.

### Like Organism

- Cohort based on the organism.
- MRSA with MRSA
- EBSL with EBSL

### Resistant Mechanism

- Cohort based on the mechanism of resistance.
- Carbapenem resistant organism with another carbapenem resistant organism.
- CRAB with a CPRA.
- VIM CRKP with a CRAB.

### Healthy Roommate

- If you exhaust all other cohorting methods, cohort them with the healthiest possible roommate.
- No invasive medical devices or open wounds.
- A roommate that has a history the matching MDRO.

# IPC practices

- Highlights of our IPC practices
  - EVS
  - Daily rounds
  - HH auditing and process surveillance program
  - MDRO education for staff
  - On hire and annual infection control competencies.

# Communication with other facilities

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- When sending out a resident, we utilize a transfer communication sheet that contains all pertinent information including MDRO status.
  - Transportation is also called regarding MDRO status.
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# Advice for other SNFs on accepting residents with MDROs

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- Do not be afraid.
  - Focus on education and increase staff understanding of MDROs and the importance of compliance with transmission-based precautions/ESP.
  - Ensure staff is educated on how to implement transmission-based precautions.
  - Work with your admissions team and educate them on how to identify “red Flags”.
  - Have open communication.
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# Why it's important that SNFs accept residents with MDROs

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- Decrease the burden on the acute care hospitals.
  - Increase census
  - We need to care for residents regardless of their conditions.
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**Kindred | ScionHealth**

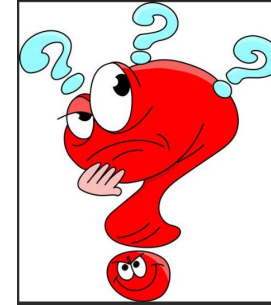
**Jana Cooper-Bloxham, Infection Preventionist**

**Lorene Campbell, Director of Infection Control**

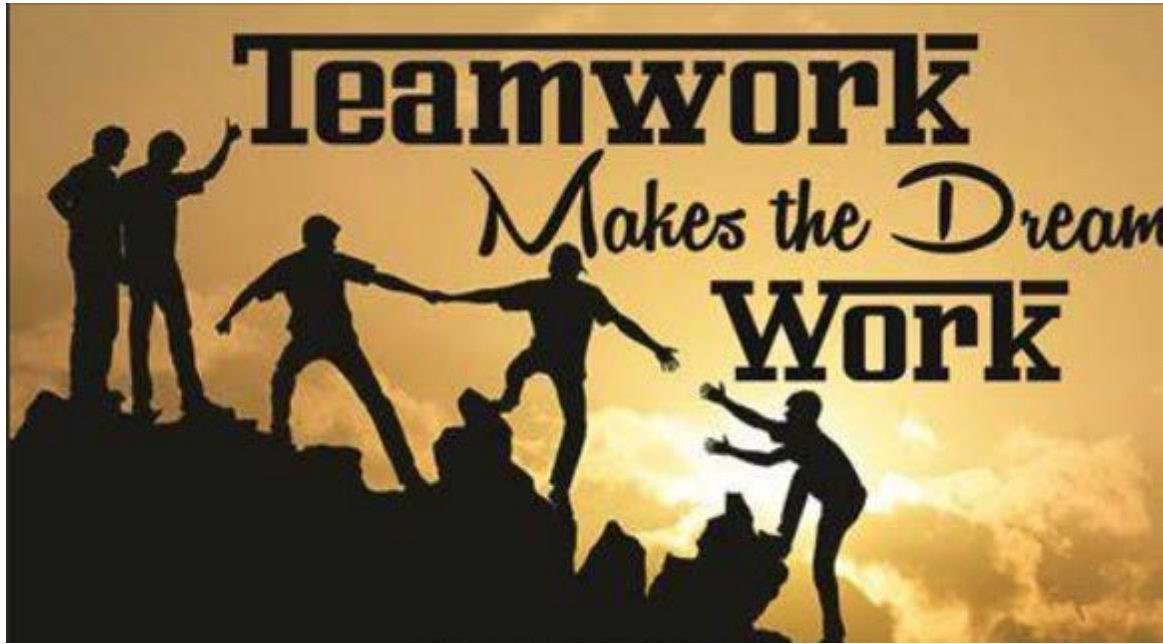
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## Why Not Accept Residents with *C. auris* ?

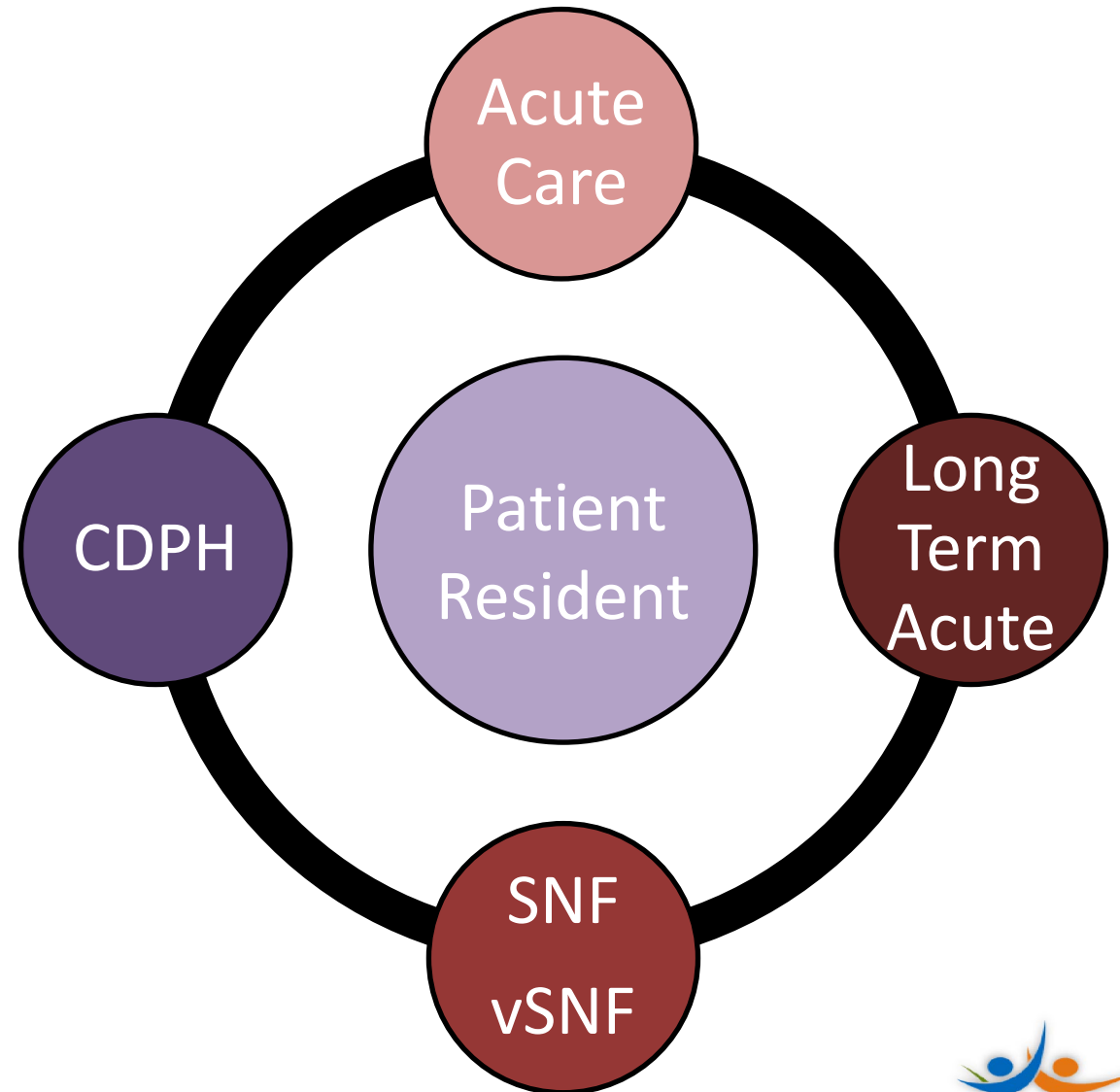


1. Patient recovery is our goal
2. Patient-readiness for the next level of care and how delays affect their recovery
3. MDROs (which includes *C. auris*) have low risk of transmission in SNF for patients and staff
4. Preventing spread tools: Admission testing, Transfer summary, and Peer - Peer consultation
5. Enhanced Standard Precautions vs. Contact Precautions, Hand Hygiene, and EVS cleaning
6. SNF differences from acute care.



**Working Together for the  
Best  
Patient /Residents  
Outcomes**

**HEALTHCARE-ASSOCIATED INFECTIONS PROGRAM**



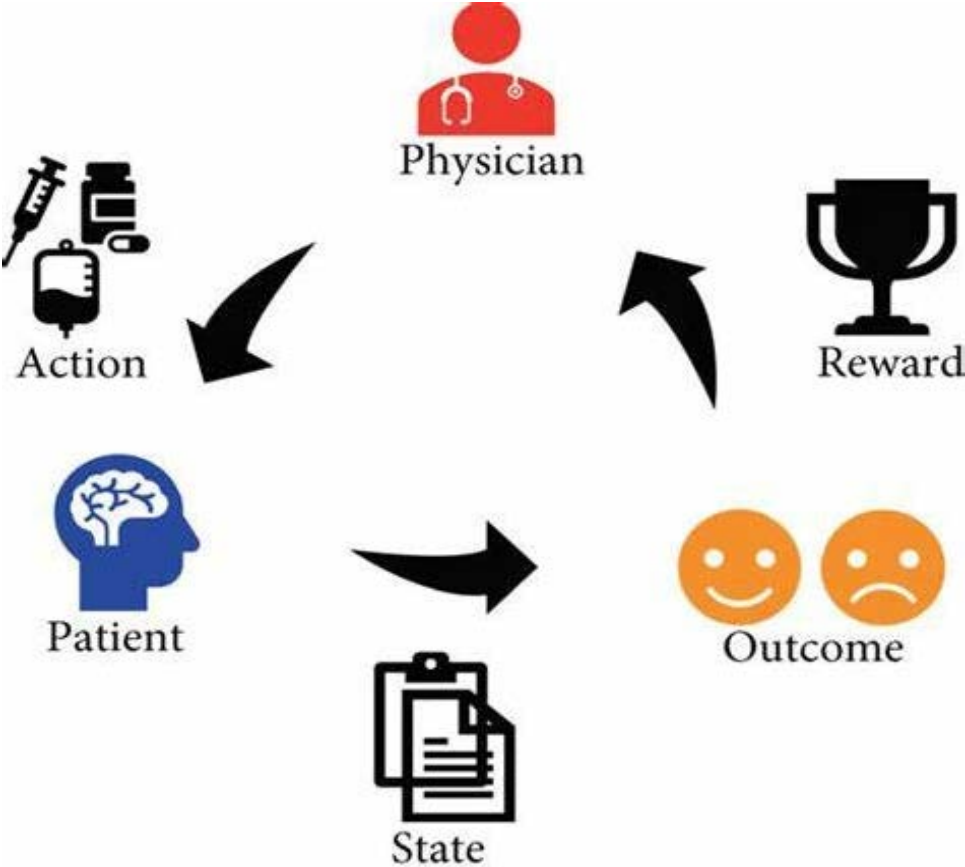
# Each facility has a role to play

### Long-Term Care Hospital (LTCH)

Patients who need to stay in the hospital for a more extended period, LTCHs are certified as acute care hospitals typically patients are transferred from ICUs or critical care units. Medical care for patients with multiple complex chronic problems who need a little more time to heal.

### General Acute Care Facility

Care for patients with any illness, disease, injury, or surgery that requires the individual to be admitted to a hospital for short-term treatment.



### Skilled Nursing Facility

Short-term rehabilitation following an accident or illness, helps individuals regain bodily functions and enhance independence with ADLs after an illness or injury.

# The goal is to transition patients to different levels of care when they are ready

## 3-6 Months Post-Traumatic Brain Injury Fastest Recovery Occurs

During the first six months- the brain is in a heightened state of plasticity, or healing. This explains why the greatest gains in TBI recovery will usually occur within the first 3-6 months of therapy.

This means therapy will have a huge, visible impact during this time frame. It is extremely important to work closely with your rehab team during this period to maximize progress.

## Physical Therapy

Physical therapy isn't really a milestone, since it doesn't occur at a single point on the recovery timetable, and is never really over. Most spinal cord injury survivors commence physical therapy as quickly as they are able. The more energy you have to put into physical therapy, and the more closely you follow your therapist's instructions, the more likely you are to recover. Physical therapy does more than just offer you exercise. It slowly rewires your nervous system, potentially empowering your brain to work around the site of the injury.

## Spinal Cord Injury

The primary goal of hospitalization is to stabilize , not to provide long-term treatment.

[Stroke Recovery Timeline | Johns Hopkins Medicine](http://www.hopkinsmedicine.org/health/conditions-and-diseases/stroke/stroke-recovery-timeline#:~:text=Stroke%20Recovery%20Timeline%201%20Day%201%3A%20Initial%20Treatment,...%204%20The%206-Month%20Mark%20and%20Beyond%20) (www.hopkinsmedicine.org/health/conditions-and-diseases/stroke/stroke-recovery-timeline#:~:text=Stroke%20Recovery%20Timeline%201%20Day%201%3A%20Initial%20Treatment,...%204%20The%206-Month%20Mark%20and%20Beyond%20)

[TBI Recovery Timeline: How Long Does It Take to Recover?](http://www.flintrehab.com/tbi-recovery-timeline/) (www.flintrehab.com/tbi-recovery-timeline/)

[Spinal cord injury: Recovery, stages, and support](http://www.medicalnewstoday.com/articles/spinal-cord-injury-recovery) (www.medicalnewstoday.com/articles/spinal-cord-injury-recovery)

## The 6-Month Mark -Stroke

After six months, improvements are possible, but will be much slower. Most stroke patients reach a relatively steady state at this point. For some, this means a full recovery. Others will have ongoing impairments, also called chronic stroke disease. Whether a full recovery is possible depends on a variety of factors, including severity of the stroke, how fast the initial treatment was provided, and the type and intensity of rehabilitation.



# CDC and CDPH guide and assist with safe patient practices

## FAQs for SNFs for Admitting and Caring for *C. auris* Patients

What can we do to prepare for *C. auris* in our facility? All healthcare facilities should prepare for the possibility of *C. auris* entering their doors, or already silently spreading. A healthcare facility or treatment center is refusing to accept my confirmed or suspect *C. auris* patient. What can I do? Please note that *C. auris*, or any MDRO infection/colonization status, alone is never a reason to refuse (re)admission or treatment of a person. If a facility can provide appropriate care and available bed/treatment space, they should not deny admitting/seeing a patient. Note- facilities can be reported to the CDPH Health Facilities Inspection Division for refusing patients based on MDRO status. How do we cohort *C. auris* patients with other patients? In SNFs, Enhanced Standard Precautions should be followed. Suspect *C. auris* patients should be placed separately from *C. auris* positive patients as much as possible. For assistance in determining a co-horting strategy to make room for a new suspect or confirmed *C. auris* patient, the DOH is available for guidance. How often should patients be re-screened for *C. auris*? There is no indication for repeat screening for *C. auris* since there is no criteria for clearance currently. Once a patient has tested positive for *C. auris*, the appropriate level of precautions should be continued for the current and all subsequent admissions.

Do *C. auris* cases need special considerations for laundry? No, you can generally follow the same IC practices as you would for *C. diff*. Any items that need to be laundered for *C. auris* patients do not need to be sorted separately either.

Does a positive *C. auris* test impact visitation? No; the patient may still have visitors. Skilled nursing facilities staff should have families follow the principles of Enhanced Standard Precautions to determine if/when visitors should don PPE. Does a positive *C. auris* test impact therapies or social activities? No; the patient may still visit common areas. The patient should perform hand hygiene and change into a clean gown if they leave their room. Any open wounds or other sites of bodily excretion should be covered and contained. Surfaces touched by the patient in common areas should be cleaned and disinfected. When possible, *C. auris* positive patients should be scheduled for the last time slot in the day to allow ample time for proper disinfection before the next patient. Will admitting patients with *C. auris* result in outbreaks in SNFs? Outbreaks of *C. auris* have not been seen in the regular SNF population outside of subacute units ( vSNF). Invasive illness due to *C.auris* in SNF residents is very rare .The risk of *C.auris* infection to otherwise healthy people, including healthcare personnel, is very low as well and not at risk for *C.auris* infections. How do we prevent the spread of *C. auris*?

good hand hygiene, implement enhanced precautions, and effective environmental cleaning. Use appropriate EPA listed disinfectant products. Work with local health department to ensure best practice.

	<i>C. auris</i>	<i>Acinetobacter</i>	Other MDRO (e.g., CRE)	<i>C. diff</i>	COVID-19
Good hand hygiene – ABHS preferred	X	X	X	Soap & water	X
Contact precautions, single room if possible	X	X	X	X	+ respirator, eye protection
Thorough environmental cleaning and disinfection	Use <a href="#">C. auris/ List K agent</a>	X	X	Use <a href="#">List K agent</a>	Use <a href="#">List N agent</a> ( <i>C. auris</i> /List K agent OK)
Routine adherence monitoring	X	X	X	X	X
Cohorting of patients and HCP	X	X	X	X	X
Lab surveillance	X	X	X	X	X
Screening of high-risk contacts	X	X	X		X

ABHS=alcohol-based hand sanitizer; *C. diff*=*Clostridiodes difficile*; CRE=Carbapenem-resistant Enterobacterales



## *C. auris* Typically Affects the Sickest of the Sick

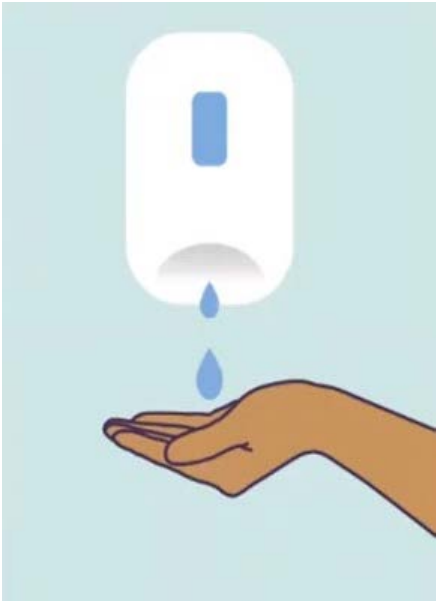
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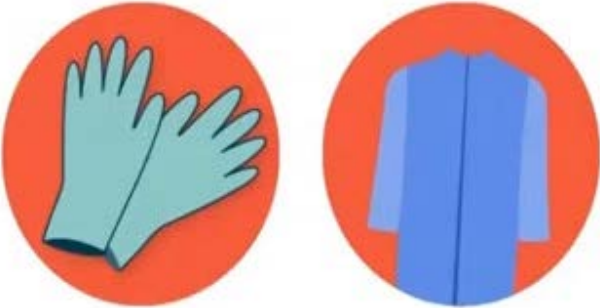
- Tracheostomies
  - Ventilator-dependent
  - Colonized with other multidrug-resistant organisms
  - Recently received antibiotics and antifungals
  - Not a threat to general public or healthy individuals
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# How do we Prevent the Spread of *C. auris*?



Hand Hygiene



Personal Protective Equipment (PPE) & Precautions



Effective environmental Cleaning & Disinfection (EPA List P)

# The Primary Infection Control Measures for Prevention of *C. auris* Transmission in Healthcare Settings

1. Adherence to [hand hygiene](http://www.cdc.gov/fungal/candida-auris/c-auris-infection-control.html#hygiene). (www.cdc.gov/fungal/candida-auris/c-auris-infection-control.html#hygiene)
2. Appropriate use of [Transmission-Based Precautions](http://www.cdc.gov/fungal/candida-auris/c-auris-infection-control.html#transmission) based on setting. (www.cdc.gov/fungal/candida-auris/c-auris-infection-control.html#transmission)
3. [Cleaning and disinfecting](http://www.cdc.gov/fungal/candida-auris/c-auris-infection-control.html#disinfection) (www.cdc.gov/fungal/candida-auris/c-auris-infection-control.html#disinfection) the patient care environment (daily and terminal cleaning) and reusable equipment with recommended products, including focus on shared mobile equipment (e.g., glucometers, blood pressure cuffs).
4. Communication about patient's *C. auris* status when patient is [transferred](http://www.cdc.gov/fungal/candida-auris/c-auris-infection-control.html#transfer). (www.cdc.gov/fungal/candida-auris/c-auris-infection-control.html#transfer)
5. [Screening contacts of newly identified case patients](http://www.cdc.gov/fungal/candida-auris/c-auris-screening.html) (www.cdc.gov/fungal/candida-auris/c-auris-screening.html) to identify *C. auris* colonization.  
*Retesting patients infected or colonized with C. auris is not recommended and should not be used to change infection control measures because it does not ensure that the patient no longer has C. auris on their skin or other body sites and will not spread it to others.*
6. [Laboratory surveillance](http://www.cdc.gov/fungal/candida-auris/c-auris-surveillance.html) (www.cdc.gov/fungal/candida-auris/c-auris-surveillance.html) of clinical specimens to detect additional cases.

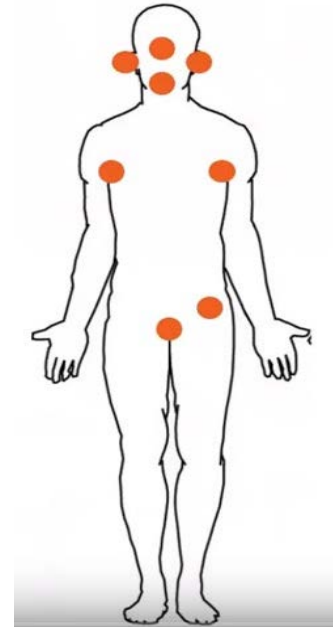
The term “patient” refers to both patients of healthcare facilities and residents of nursing homes.

[CDC \*C. auris\* Website](http://www.cdc.gov/fungal/candida-auris/c-auris-infection-control.html) (www.cdc.gov/fungal/candida-auris/c-auris-infection-control.html)

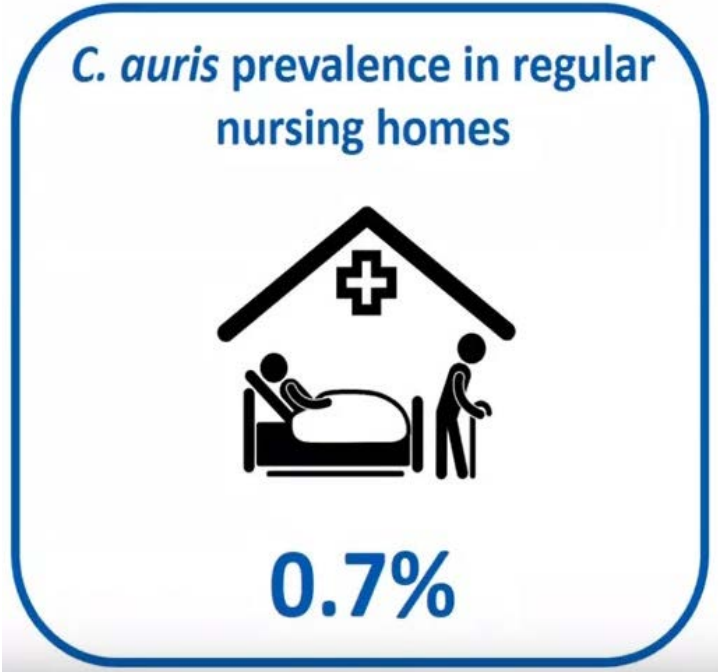
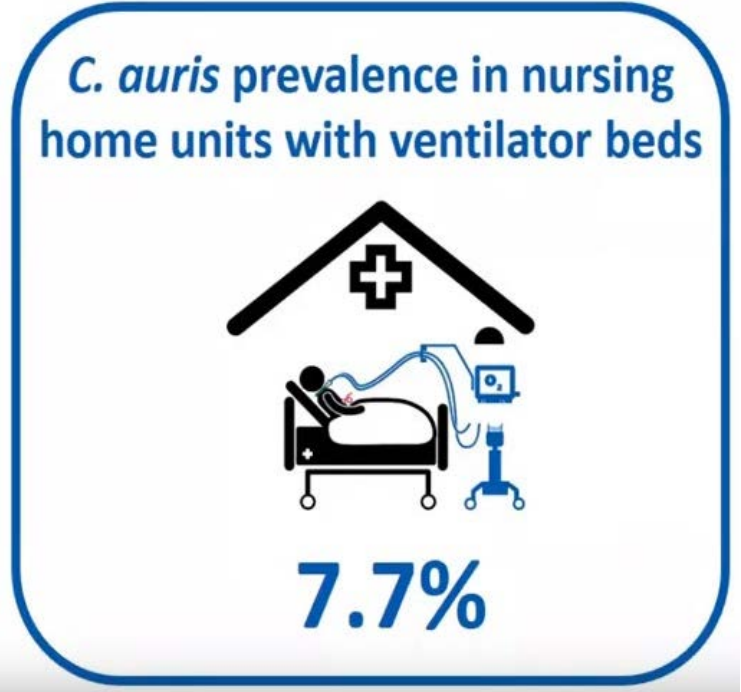


# Risk factors

- Patients/residents who have received healthcare in post-acute facilities (i.e., SNFs, nursing homes), especially those with ventilator units
- Patients/residents with a recent history of receiving healthcare outside the United States in a country with known *C. auris* transmission
- Healthy people have not been found to be at risk for *C. auris* infection or colonization



# Type of Post-Acute Care Facility

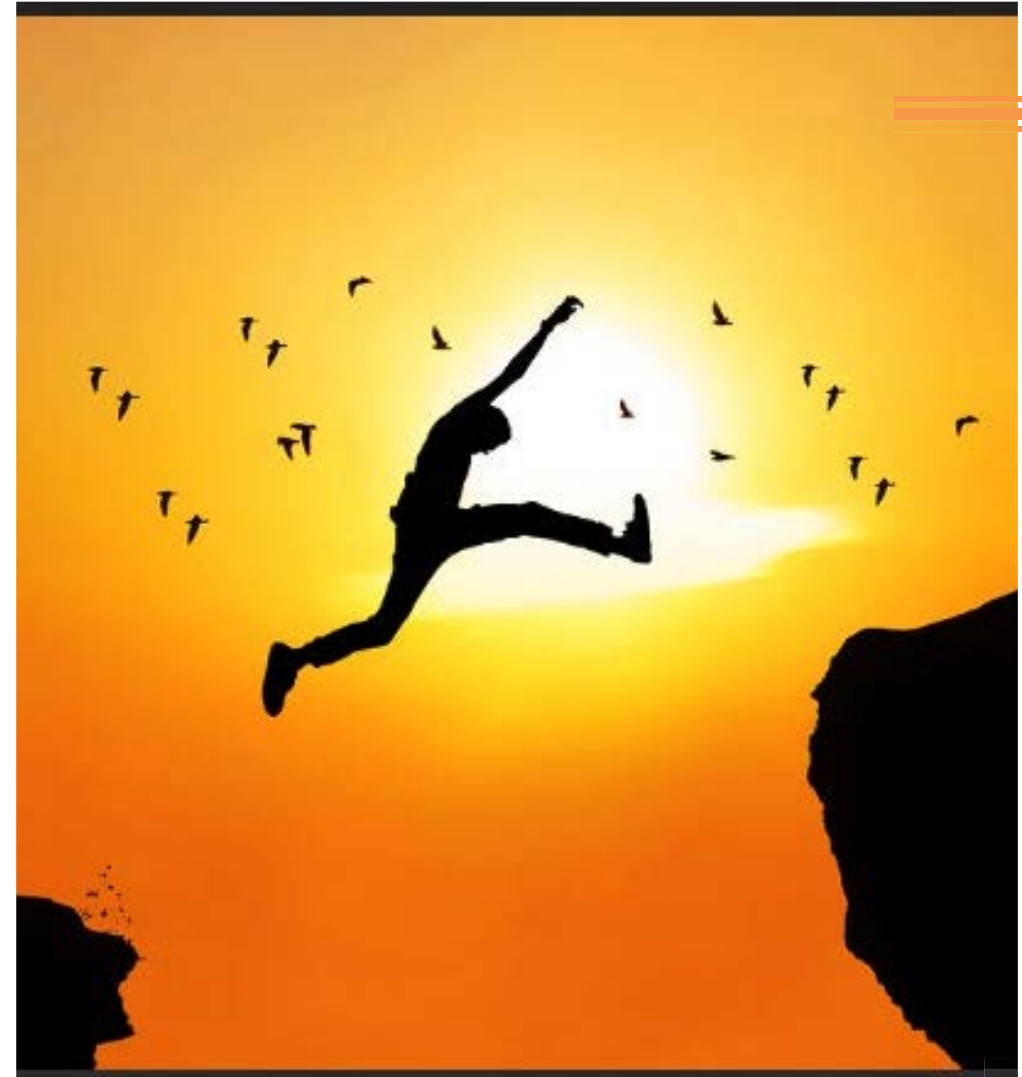


Adams EH, Quinn M, Ostrowsky B, et al. The Value Added from Candida auris Point Prevalence and Environmental Studies in New York State. 2018. Available at:

[Abstract: The Value Added from \*Candida auris\* Point Prevalence and Environmental Studies in New York State \(IDWeek 2018\)](https://idsa.confex.com/idsa/2018/webprogram/Paper72423.html) (idsa.confex.com/idsa/2018/webprogram/Paper72423.html)

# Overcoming Challenges to Discharges

- Collaboration
- Education
- Communication





## Supporting Infection Prevention Practices at All Levels

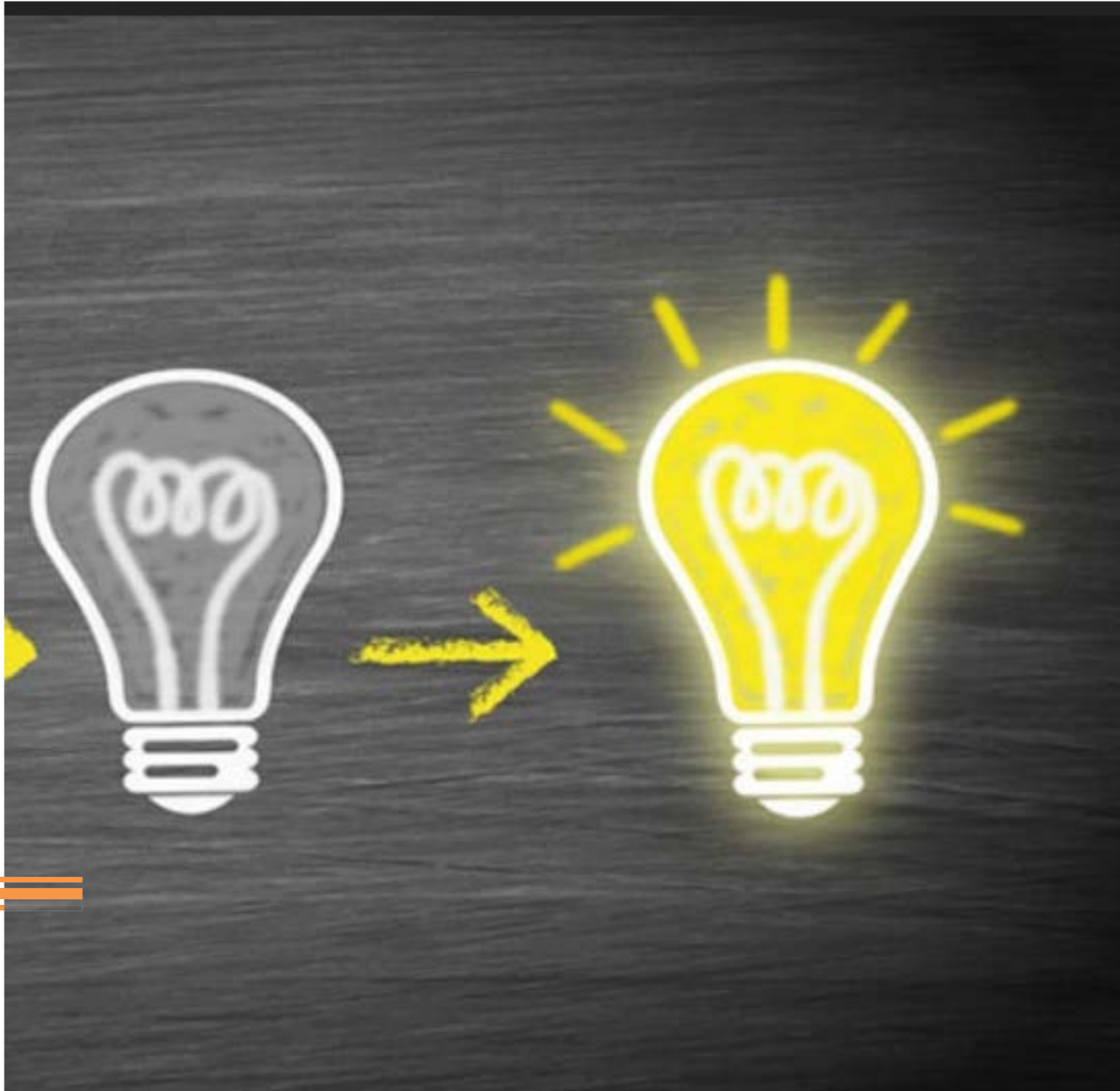
- Early Intervention
- Intra-facility Facility Support
- Infection Control Practices
- Standardized Guidance
- Admission Screening

## Lessons Learned

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- Early Prevention
- Admission Screening
- Communication
- Collaboration





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**Questions?**

**Contact us at [HAIPprogram@cdph.ca.gov](mailto:HAIPprogram@cdph.ca.gov)**