AHCA/NCAL Clinical Scenarios

Candida auris

Mr. Collins, aged 64, was admitted to Clearbrook Care Center's short stay unit following a lengthy hospitalization. His History & Physical indicate that he spent 3 weeks in the Intensive Care Unit (ICU) following a myocardial infarction (also known as a heart attack) with heart failure. Procedures included cardiac bypass surgery with the use of invasive devices to help his heart recover from the injury. Unfortunately, during the hospitalization, he developed a bone infection of the sternum that required a long course of IV antibiotics given through a peripherally inserted central catheter (PICC). When Mr. Collins took a turn for the worse, a urine culture was done, but showed only *Candida* species, not a urinary tract infection. Lab work upon discharge was within normal limits and cardiac rehab was also indicated. Other pertinent diagnosis includes gastroesophageal reflux disease (GERD), hypertension, hyperlipidemia, the recent myocardial infarction and type 2 diabetes mellitus.

On the day of admission to the short stay unit, he began having symptoms of extreme fatigue, but blamed it on the recent heart attack. MI. Vital signs on admission: Blood Pressure (BP) 136/76; apical pulse (AP) – 78; respirations (RR) – 16; oral temperature (T) – 98.7 and oxygen saturation at 96% on room air. Both physical therapy and occupational therapy screened him on the day of admission with a plan to begin therapy the next morning.

Mr. Collins was admitted to a room with a roommate. Since it was a short stay unit, the room was spacious, with an actual wall dividing the room in half. They shared a bathroom that included a sink, toilet, and shower with shower chair. His roommate was recovering from hip surgery and due to post-op issues with retention due to obstruction, an in-dwelling urinary catheter. He was in his second week of rehab, and hoping to discharge home soon, as his incision was healing nicely, and his mobility was improving. Both Mr. Collins and his roommate were on EBP, due to the presence of invasive devices.

On day 4 of Mr. Collins' stay the Infection Preventionist (IP) for the facility received a phone call from the discharged hospital. They wanted to inform the care center that prior to Mr. Collins' discharge, the urine culture had been positive for *Candida* species, which has now been identified as *Candida auris*. They recommended that the facility get in touch with the state epidemiologist, as well as the State Health Department for further direction.

Scenario Review

Discharges from the hospital, even when well-planned, can happen quickly and the discharge paperwork may not reveal the entire story of the person's hospital stay. A culture with a result not identified to the species level is an example. However, there are steps that nursing home staff can take to get the most information possible before admission.

The first step would be to include the Infection Preventionist (IP) in any pre-admission discussion when there is a known positive culture result. Mr. Collins was being admitted on IV antibiotic therapy, therefore, there was a known infection. The facility IP would know which "safe" rooms are to place someone with an infection, considering indwelling devices, history of MDROs and open wounds. This involves the IP and the admission coordinator working closely together so the IP is aware that they can call the IP at the hospital prior to admission or determination of admission. The IP could ask the hospital if there were plans to further identify the *Candida* species. They would have found out about the lab indicating *Candida* species, not yet identified. Neither of these items would have been a reason not to admit. Options for resident placement, like admitting to a room without a roommate or cohorting with another resident with the same organism could be considered.

Candida auris is a fungus that causes serious infections. Why is this a concern?

1. **It causes serious infections,** including bloodstream infections that can lead to death among hospital and nursing home residents with serious medical problems.
2. **It is often resistant to antifungal medications.** There are only three types of antifungal medications to use, and some strains have proven resistant to all three.
3. **It is extremely hardy** in the healthcare environment and spreads easily by touch.
4. **It's becoming more common.** Although it was just discovered in 2009, it has spread quickly and caused infections in more than a dozen countries and many states.
5. **It's difficult to identify.** *C. auris* requires specific laboratory technology. Many labs simply cannot identify it.
6. **It can spread in hospitals and nursing homes.** This spread can occur after contact with an affected resident or contaminated surfaces or equipment.

People who get invasive *Candida auris* infections are often already sick from other medical conditions, so it can be difficult to know if they have a *C. auris* infection. Mr. Collins was in ICU for three weeks and developed a terrible bone infection which did not necessarily indicate invasive *C. auris*. The most common symptoms of invasive *C. auris* infection are fever and chills, and he did not present with either of these symptoms. Unfortunately, the standard amount of time for the lab results is 1–2 weeks. And it is only through the lab testing that *C. auris* can be confirmed.

Take action to limit the spread when *C. auris* is identified in your facility

What are the next steps for the IP to take now that there is a known case of *C. auris* in the facility? An outbreak is the occurrence of more disease cases than expected in a given area or among a specific group of people over a particular period. Because *C. auris* should not be found in long-term care, one positive case would be considered an outbreak. The steps you would need to follow would be:

1. Place affected residents on either Contact or Enhanced Barrier Precautions based on the situation and local or state jurisdictional recommendations.

2. Check the CDC website for the most up-to-date guidance on identifying and managing *C. auris: Candida auris* | *Candida auris (C. auris)* | CDC.

3. Coordinate with environmental services to monitor and audit environmental cleaning and disinfection of resident care areas with a disinfectant with EPA claim against *C. auris* (List P). It is always extremely important to follow the label instructions for use, including application of the product and for the correct contact time.

4. Screening patients can help inform how widespread *C. auris* may be in your population and guide infection prevention actions. If screening is undertaken, it should be done only for residents that have not previously tested positive. The following opportunities for screening might provide actionable results:
    a. Immediately after admission to determine if specific infection control precautions are needed.
    b. During the stay to assess effectiveness of infection control actions to limit the spread to previously unaffected residents or if an epidemiologic link (e.g., shared room) to a newly positive resident that is found.
    c. At discharge or transfer screening residents that have never been tested or were previously negative may identify residents needing infection control precautions at a receiving facility which can help prevent transmission within and between facilities.
    d. When requested by local or state public health personnel when they are investigating spread of *C. auris* in a region or locality.
    e. Screening testing should not be used as the sole consideration for admission to a facility.

5. When transferring a resident with *C. auris* (including healthcare visits outside the facility such as physician's office, dialysis, radiation treatment), clearly communicate the resident's *C. auris* status to receiving healthcare providers.

6. Appropriate use of Enhanced Barrier Precautions, or if indicated, Contact Precautions.
    a. Residents often remain colonized with *C. auris* for many months, perhaps indefinitely, even after an acute infection has been treated and resolved. Therefore, if a resident has previously tested or screened positive for *C. auris* the CDC recommends continuing Enhanced Barrier Precautions, for the entire duration of their nursing home stay.

7. Resident placement: A resident on Enhanced Barrier Precautions does not require a private room. However, there should be consideration for roommates who may be at a higher risk of acquiring *C. auris* (such as those more acutely ill, having an indwelling medical device or wound). A facility can choose to cohort residents with *C. auris* in the same room.
    a. Shared rooms:
        i. Maintain separation of at least 3 feet between beds.
        ii. Use privacy curtains to limit direct contact.
        iii. Remember to treat each bed space as a separate room. For example: Clean and disinfect any shared or reusable equipment and change mopheads, cleaning cloths, and other cleaning equipment between bed areas.
        iv. Clean and disinfect environmental surfaces on a more frequent schedule.
        v. Remind healthcare workers that gowns and gloves must be changed after the care of each resident. Hands must be cleaned immediately after gloves are removed.
8. Thoroughly clean and disinfect for residents found to be infected or colonized with *C. auris* in the same way done for residents not known to be infected or colonized. Pay close attention to shared mobile medical devices, like vital sign machines and pulse oximeters, ensuring cleaning between each patient use.

Clean hands when indicated

Alcohol-based hand sanitizer (ABHS) is the preferred method of hand cleaning for *C. auris* when hands are not visibly soiled. As always, wearing gloves is not a substitute for cleaning hands.


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Environmental disinfection

C. auris can persist on surfaces in healthcare environments. *C. auris* has been cultured from multiple locations in resident rooms, including both high-touch surfaces, such as bedside tables and bedrails, and surfaces farther away from the resident such as the windowsill. It has also been identified on mobile or reusable equipment that is shared between residents such as glucometers, temperature probes, blood pressure cuffs, nursing carts and crash carts.

Because of this, thorough, daily, routine cleaning and terminal cleaning and disinfection of resident rooms and areas where they receive care, such as therapy gyms, must be done using an appropriate disinfectant. All healthcare personnel must be educated on this process.

The CDC recommends using Environmental Protection Agency (EPA)-registered hospital-grade disinfectant effective against *C. auris* found listed in EPA List P.

Resident transfer

When transferring a resident with *C. auris* colonization or infection to another healthcare facility or to another unit within a facility, notify the receiving facility or unit of the resident's *C. auris* status, including transmission-based precaution currently in use.

How to facilitate adherence to infection control measures

To avoid further transmission, this is perhaps the most important link. Consider the following steps to assure compliance:

- Educate all healthcare personnel about *C. auris* and the need for appropriate precautions. This education should include environmental services, activities, and culinary services.
- Ensure that adequate supplies – such as alcohol-based hand sanitizers, gowns and gloves, and cleaning and disinfection agent(s) are readily available to implement and maintain appropriate infection control measures.
- Monitor for adherence to appropriate infection control practices through auditing with real-time feedback on hand hygiene, donning and doffing of gowns and gloves, and environmental cleaning and disinfection.
- Ensure signage about needed precautions is visible at the entry to the resident's room.

Questions

1. True or false – *Candida auris* has been around for many years, therefore, treatment modalities are easy to find.

a. True

b. False

C. auris is still rare in the United States and not easily detected. Not all laboratories are able to complete the testing required for *C. auris*, therefore it can go undetected or misdiagnosed. The CDC and public health partners are working hard to better understand *C. auris* and answer three vital questions to help protect people from this serious infection.

C. auris Research: Needs and CDC Resources

- What is the best way to rapidly diagnose *C. auris* infection or colonization?
- Is it possible to decolonize someone with *C. auris* colonization?
- What new tools and protocols against *C. auris* might be developed to help prevent spread?

2. Collecting a specimen to test for *C. auris* involves swabbing the axilla and the groin areas. The swab is then sent to the lab. Results can be expected in 1–2 weeks. What should the facility put in place during the time they are waiting for the results?

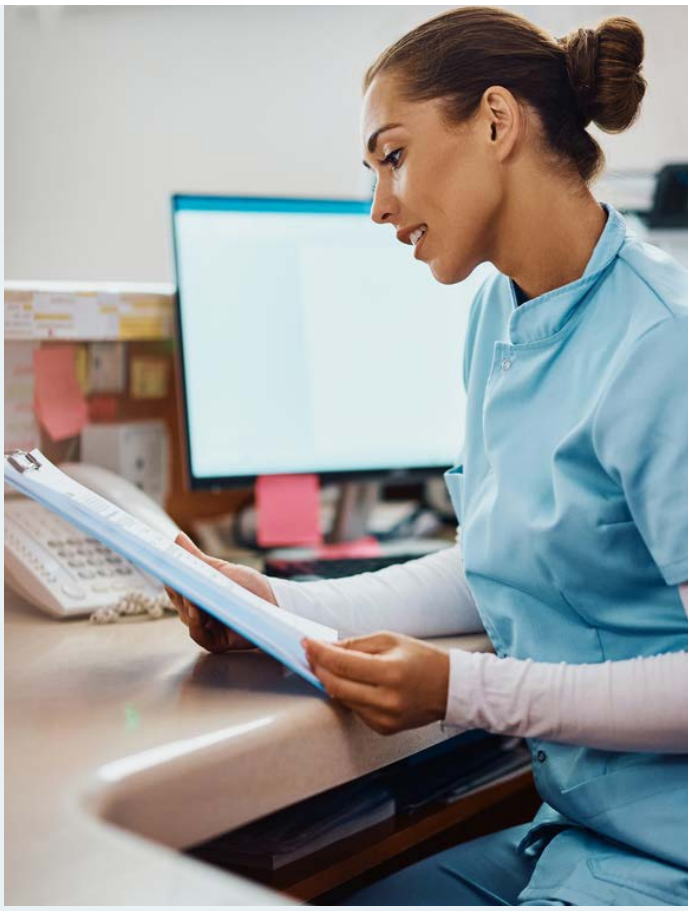
a. Contact Precautions

b. Enhanced Barrier Precautions

c. Standard Precautions

d. Contact or Enhanced Barrier Precautions

Healthcare providers should use Contact Precautions to manage patients with *C. auris* in acute care hospitals and long-term acute care hospitals. Nursing homes, including skilled nursing facilities, can use either Contact Precautions or Enhanced Barrier Precautions, depending on the situation and local or state recommendations.



3. Once *C. auris* has been diagnosed in a skilled nursing facility, what is the first step the Infection Preventionist should take?

a. Notify the Medical Director

b. Notify the local or state epidemiology department

c. Culture all residents for potential *C. auris*

d. Notify all families of the outbreak

Notify the Medical Director then the state or local health department. Guidance from public health experts (e.g., healthcare-associated infections team) at the state or local health department often direct the investigation. Depending on local conditions they may request a targeted approach, such as screening only certain residents with certain risk factors, such as epidemiologic links, or clinical characteristics or a broad approach such as a point prevalence survey. Notification of families may also be targeted or broad depending on the nature of the investigation. This is done on a need-to-know basis. If their loved one is to be tested, they will need to know.

4. In the scenario presented the length of precautions for Mr. Collins would be:

a. Until the next round of testing is completed

b. Indefinitely

c. Until treatment is completed for Mr. Collins

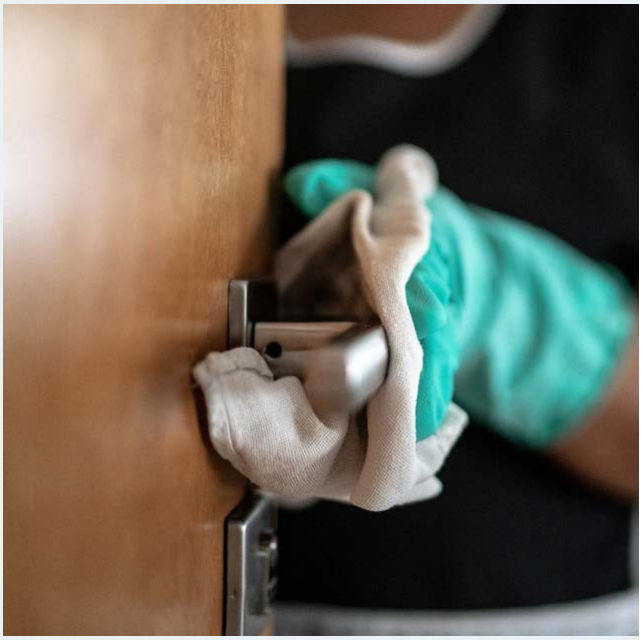
d. Until Discharge

e. A & B

f. B & D

g. All the above

Residents in healthcare facilities often remain colonized with *C. auris* for many months, perhaps indefinitely, even after an acute infection has been treated and resolved. The CDC recommends continuing Contact or Enhanced Barrier Precautions, depending on the healthcare setting, for the entire duration of all inpatient healthcare stays, including those in long-term healthcare facilities.



5. True or false – *C. auris* is easily killed, and most healthcare disinfectants will work to kill it on surfaces.

a. True

b. False

C. auris can persist on surfaces in healthcare environments. It has been cultured from multiple locations in residents' rooms, including both high-touch surfaces, such as bedside tables and bedrails, and surfaces farther away, such as windowsills. All healthcare personnel providing resident care should be trained on which mobile and reusable equipment they are responsible for cleaning and disinfection and how to clean and disinfect it properly.

Follow all manufacturer's directions for use of surface disinfectants and apply the product for the correct contact time. Some products with C. albicans or fungicidal claims may not be effective against *C. auris*.

The CDC recommends using an EPA-registered hospital-grade cleaner with a label claim against *C. auris* (List P).

References

CDC *C. auris* Research: Needs and CDC Resources. Last reviewed May 31, 2024.

CDC Infection Control Guidance: *Candida auris*. Last reviewed April 24, 2024.

CDC Infection Prevention and Control for *Candida auris*. Last reviewed April 24, 2024.

CDC Screening Recommendations for Healthcare Facilities. Last reviewed April 24, 2024.

Spaulding, Linda L. (2023). Preparing for a *Candida auris* Outbreak in Long-Term Care. Infection Control Today, (Vol. 27 No. 5)