

# Candida auris: Infection Prevention and Control for Healthcare Facilities



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# Virginia Department of Health

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# Why Are We Concerned About C. auris?

#### It is becoming more common

- It was discovered in 2009 and has spread rapidly throughout the United States.
- <u>*C. auris* cases are on the rise</u>. Every health planning region within Virginia has identified persons infected or colonized with *C. auris*.
- Case counts are available on the Virginia Department of Health's <u>Candida auris</u> in the State of Virginia data dashboard.

#### It is easy to transmit from person to person, especially in the healthcare setting

- *C. auris* can be carried on the skin without signs of infection (colonization) and cause spread to others.
- C. auris has caused outbreaks in healthcare facilities.
- It spreads through contact with affected patients/residents, contaminated surfaces, or shared medical equipment.
- C. auris can persist in the environment and live on surfaces for several weeks.
- Some commonly used healthcare disinfectants do not kill *C. auris*.

#### It can be misidentified

• It can be difficult to identify. *C. auris* can be misidentifed in routine lab testing as other types of fungi and requires specialized technology to identify it. This can cause a delay in appropriate treatment and containment measures.

#### It can be hard to treat

• It is often resistant to multiple drugs. Some strains of *C. auris* are resistant to all current antifungal drugs.

#### It can cause serious infections

- *C. auris* has been identified in wound, blood, urine and respiratory cultures. Patients who have longer length of stay in healthcare, invasive medical devices, or have received multiple courses of antibiotics or antifungal medications are at greater risk.
- More than one in three patients who develop an invasive *C. auris* infection will die.

# Early detection and implementation of infection prevention and control strategies are necessary to prevent further spread of *C. auris*



### How Do We Contain the Spread?

*C. auris* can be contained by using core infection prevention measures: Enhanced Barrier Precautions (nursing homes only) or Contact Precautions, hand hygiene, personal protective equipment (PPE), environmental cleaning and disinfection, and communication. The following sections will cover each measure in detail.

#### **Contact Precautions and Enhanced Barrier Precautions (EBP)**

All patients/residents who have been identified to have *C. auris* colonization or infection need to be placed on appropriate precautions. CDC recommends continuing Contact Precautions or Enhanced Barrier Precautions (nursing homes only) for the entire duration of the healthcare encounter. In a nursing home, a resident may be de-escalated from Contact Precautions to EBP when clinically appropriate (e.g., when a draining wound that is positive for *C. auris* heals such that it is able to be covered or contained).

#### • Contact Precautions

- Contact Precautions (gown and glove upon room entry) should always be used in the acute care setting and in all healthcare settings if a patient/resident has acute diarrhea, draining wounds, or other sites of secretions or excretions that are unable to be covered or contained.
- Dedicate non-critical patient/resident care equipment (e.g., stethoscope, blood pressure cuff) to the room if feasible.
- Enhanced Barrier Precautions (EBP) (only applicable in nursing homes)
  - EBP can be used for a resident with a *C. auris* infection or colonization who does not meet criteria for Contact Precautions.
    - For a limited period of time during a suspected or confirmed MDRO outbreak investigation, Contact Precautions should be used in place of EBP.
  - EBP involves the use of gown and gloves for high-contact resident care activities only.
    - For more information refer to CDC's <u>Implementation of Personal</u> <u>Protective Equipment (PPE) in Nursing Homes to Prevent Spread</u> <u>of Multidrug-resistant Organisms (MDROs)</u>.
    - See the Educational Resources and References section of this document for resources to aid with EBP implementation.
- Regardless of the type of precautions, place a sign exterior to the patient's/resident's door to indicate the type of precautions and PPE needed
  - o <u>Contact Precautions signage</u>
  - o <u>EBP signage</u>

#### **Patient/Resident Placement**

Whenever possible, a single room is the preferred placement for a patient/resident with a *C. auris* infection or colonization.



In nursing homes:

- Single-person rooms (if available) should be prioritized for residents who have other communicable diseases (such as influenza, SARS-CoV-2) or for residents placed on Contact Precautions for presence of acute diarrhea, draining wounds, or other sites of secretions or excretions that are unable to be covered or contained.
- Residents on EBP may share rooms with other residents. Facilities with capacity to offer single-person rooms or create roommate pairs based on MDRO colonization or infection may choose to do so. If there are multiple residents with the same MDRO in the facility, they may be cohorted in a room with a private bathroom. During an outbreak, the local health department may make further recommendations on resident placement in your facility.

In hospitals:

- If single-person rooms are limited or not available, prioritize single rooms for patients who have other communicable diseases or those with acute diarrhea, draining wounds, or other sites of secretions or excretions that are unable to be covered or contained.
- When making cohorting decisions, only place patients together if they have the same communicable disease diagnoses (e.g., both patients co-infected with NDM *E. coli*).

# When patients/residents are placed in shared rooms, facilities must implement strategies to help minimize transmission of pathogens between roommates including:

- Maintaining spatial separation of at least 3 feet between beds to reduce opportunities for inadvertent sharing of items between the roommates
- Use of privacy curtains to limit direct contact
- Cleaning and disinfecting any shared reusable equipment between the roommates (or dedicating equipment to a single person)
- Cleaning and disinfecting environmental surfaces on a more frequent schedule
- Changing PPE (if worn) and performing hand hygiene when switching care from one roommate to another

During an outbreak, if possible, consider dedicating staff to patients/residents with C. auris for the entire shift.

#### **Personal Protective Equipment (PPE)**

#### **Supplies**

- Ensure you have:
  - $\circ$  A designated area to put on and take off PPE
  - Sufficient PPE supplies available
  - Appropriate signage in place on the door that directs healthcare workers and visitors about what they need to do when entering the room



#### <u>Training</u>

- Have staff received an annual in-service on how to put on and take off PPE?
  - If yes, a reminder of proper technique may be useful.
  - If no, all staff should receive an inservice on how to put on and take off PPE which includes direct observation of technique (competency validation) as soon as possible.

#### <u>Auditing</u>

- Audits of PPE use should be done on all shifts. Observations should include:
  - Does hand hygiene occur prior to putting on PPE?
  - Is PPE put on prior to entering the room (or prior to high-contact care activity, if resident is on EBP)?
  - Is the right PPE used?
  - Is the sequence for putting on and taking off PPE done correctly?
  - Does the healthcare worker avoid performing other job tasks outside the room while wearing PPE?
  - Is PPE removed inside the room?
  - Does hand hygiene occur after PPE has been removed?

#### Hand Hygiene

#### **Supplies**

- Make sure all supplies for hand hygiene are available and easily accessible.
  - Are hand sanitizer products in date?
  - Who is responsible for filling soap and alcohol-based hand sanitizer (ABHS) dispensers?
  - Are ABHS dispensers located in convenient locations for patient/resident care?
  - Are hand washing sinks clear of obstructions? Keep patient/resident care items out of the splash zone (~3 ft on each side of the sink).

#### <u>Training</u>

- Have all staff received hand hygiene inservices which includes observation of technique (competency) in the past year?
  - If yes, a reminder of proper technique would be beneficial. Try posters, roving inservices, or other strategies that meet your facility's needs.
  - If no, schedule an inservice for all staff with competency validation as soon as possible.

#### <u>Auditing</u>

- Conduct hand hygiene audits on all shifts for
  - **Correct technique** use the correct product, cover all surfaces of the hand including the thumbs.
  - **Proper time** if soap and water, 15-20 seconds; if hand rub, until product evaporates



- **Right opportunity -** before touching the patient/resident, after contact with patient/resident or surroundings, before putting on PPE, after contact with body fluids, before assisting with an aseptic procedure, after taking off PPE, and upon exiting the room.
- Just-in-time teaching: Correct the action when you see it. Gentle coaching is an effective way to change poor practices.
- Share audit results on a routine basis with frontline staff and facility leadership.

#### **Environmental Cleaning and Disinfection**

#### Actions for Environmental Cleaning

- Check all disinfectant products currently in use to determine if they are effective against *C. auris* (Environmental Protection Agency List P).
  - Many common disinfectants do not work, including numerous products with fungal and *Candida albicans* claims.
- Identify high-touch surfaces, any area where the patient/resident or the staff would have frequent contact with during daily activities and are most likely to be contaminated.
  - Use a risk assessment approach within each clinical area of your facility. Add all high-touch surfaces to your cleaning responsibility grid and review with staff.
    - Patient/resident rooms would include surfaces such as bed controls, bed rails, light switches, bedside tables and tables and surfaces touched by healthcare personnel (doorknobs, light switches, sink handles, medical equipment).
    - The nurses station would include commonly touched items by multiple personnel throughout the workday like phones and computer keyboards.
- Establish clear responsibilities for who cleans what and how often it must be cleaned.
  - This should distinguish between what the Environmental Services (EVS) department cleans and what nursing or other departments clean.



Item	Cleaning Frequency	Responsible Discipline	Disinfectant used and contact time
Floors	Once per day	EVS	
Hand rails	Once per day	EVS	
Isolation carts	Once per shift	Nursing	
Door handles	Once per day	EVS	
Medication dispense system	Once per shift	Nursing	
Medication carts	Once per shift	Nursing	
Privacy curtains	Terminal clean or when visibly soiled	EVS	
Keyboards	Once per shift	Staff member using the computer or if taken into a patient/resident's room	
Shared medical equipment (scales, lift equipment, BP cuffs, gait belts, exercise bands, etc.)	After each use	Staff member using equipment	

#### Example of Cleaning Responsibility Grid

An editable version of an environmental cleaning and disinfection responsibilities chart is available on the <u>VDH website</u>.

- Provide inservices for all staff on cleaning and disinfection
  - Do staff understand the difference between cleaning and disinfection?
  - Do staff know the contact time for all products they use?
  - Do staff know what the high-touch surfaces and frequency of cleaning and disinfection are?
- Round with the EVS director and conduct audits of environmental cleaning. Share audit results with frontline staff and facility leadership.
  - o Is the room cleaned systematically clean to dirty?
  - Are cleaning rags replaced when moving to a clean area?
  - Do EVS staff wear PPE when cleaning in an isolation room?
  - Do EVS staff perform hand hygiene appropriately?
  - If an isolation room is cleaned, is the mop head replaced and clean water placed in the bucket?
  - If the room is double occupancy, cleaning should occur as if each bed were a different room, including changing clean cloths, cleaning equipment, and replacing mop heads between each bed area.
- Ensure you have a method to determine between clean and dirty equipment
  - If not in place, establish a protocol.
  - If a protocol is in place, is it being followed? Consistently on all shifts? Can staff speak to the protocol if questioned?



# Communication: To Residents, Healthcare Workers, and Other Facilities

#### **Patient/Resident Communication**

Ensure that the patient/resident (or their medical decision maker, when appropriate) is aware of a *C. auris* diagnosis. Here is an example of a notification:

**To the resident and those authorized to receive health information**: You (or your loved one) has tested positive for *Candida auris* (we also call it *C. auris*). *C. auris* is a drug-resistant germ (fungus) that can spread from person to person.

If the resident has a *C. auris* infection: The *C. auris* is currently causing an infection in your [wound/blood/urine] and we will be treating this infection.

If the resident is colonized or colonization screening is positive: You are not sick from *C. auris* right now but the germ could still spread to other residents or staff.

We will be taking extra precautions like wearing gowns and gloves [and giving you care in your room, whenever possible (if the resident is on Contact Precautions)] to make sure the germ doesn't spread to others. We will also be washing our hands a lot and encourage you to do the same.

- Share education about *C. auris* such as VDH's <u>brochure for patients/residents</u> living with *C. auris*.
- Emphasize the importance of informing other healthcare providers of their history of having *C. auris* so that interventions can be implemented to prevent spread in the healthcare environment.
- When *C. auris* screening is recommended, healthcare workers will have to explain to the patient/resident why they are being tested and obtain consent. Consult the <u>CDC website</u> for more information about how screening works and what a positive result means.

#### Healthcare Worker Communication

- Add a flag or alert to the patient/resident's medical record to heighten awareness of their *C. auris* infection or colonization.
- The Emergency Department Care Coordination (EDCC) system also has alerts for Virginia residents who have a confirmed case (infection or colonization) of *C. auris* or a carbapenemase-producing organism. Healthcare facilities are encouraged to participate in this system and enable these alerts. For more information about this system, refer to the EDCC website.



• Make sure the patient's/resident's *C. auris* status is communicated to ensure healthcare workers understand how to care for a patient/resident with *C. auris*. This is important if the patient/resident is transferred within the facility. Here is an example of how to talk to a healthcare worker about a patient/resident with a new *C. auris* diagnosis:

"This resident is now positive for *C. auris* and requires [Contact Precautions or Enhanced Barrier Precautions]. You must wear gown and gloves [every time you go into the room (if contact precautions) / every time you are doing a high-contact resident care activity (if enhanced barrier precautions], clean equipment after use, and always do good hand hygiene. *C. auris* can cause healthcare outbreaks. This puts all our residents at risk so it is important to be consistent with these infection prevention measures."

#### **Communication to Other Facilities**

- When transferring a patient/resident to another healthcare facility, the patient/resident's history of *C. auris* (colonization or infection) should be clearly communicated to the receiving facility. CDC has an example of an <u>interfacility</u> <u>communication form</u>.
  - If transferring to a facility that is not familiar with *C. auris*, consider including information for case management such as the template letter provided on the next page.
- It is also important to communicate the patient/resident's *C. auris* status to outside providers such as dialysis, wound care, and physician offices.
  - The following two pages offer a sample letter with language that describes
     *C. auris* and the steps healthcare facilities can take to prevent spread in the outpatient setting.



#### **Template Letter to Share with Case Management**

#### Attention: Case Management/Admission Screening

*Candida auris (C. auris)* is a multidrug-resistant organism and should not be confused with other types of fungi such as *Candida albicans*.

## Why We Are Concerned About *C. auris*

#### It is becoming more common

• <u>*C. auris* cases are on the rise</u>. Every health planning region within Virginia has identified persons infected or colonized with *C. auris*.

#### It is easy to transmit from person to person, especially in the healthcare setting

- *C. auris* can be carried on the skin without signs of infection (colonization) and cause spread to others.
- C. auris has caused outbreaks in healthcare facilities.
- It spreads through contact with affected patients, contaminated surfaces and shared medical equipment.
- *C. auris* can be persistent in the environment and live on surfaces for several weeks.
- Some commonly used healthcare disinfectants do not kill *C. auris*.

#### It can be misidentified

• It can be difficult to identify. *C. auris* can be misidentifed in routine lab testing as other types of fungi and requires specialized technology to identify. This can cause a delay in appropriate treatment and containment measures.

#### It can be hard to treat

• It is often resistant to multple drugs. Some strains of *C. auris* are resistant to all current antifungal drugs.

#### It can cause serious infections

- Patients who have longer length of stay in healthcare, invasive medical devices, or have received multiple courses of antibiotics or antifungal medications are at greater risk.
- More than one in three patients who develop an invasive *C. auris* infection will die.

A patient/resident who has an active infection or colonization requires <u>Enhanced Barrier</u> <u>Precautions</u> (applicable for nursing homes only, if certain criteria are met) or Contact Precautions. An admission with a history of *C. auris* should be discussed with your infection preventionist to determine best placement.



#### **Template Letter to Share with Outpatient Facilities**

Date\_\_\_\_\_

Dear \_\_\_\_\_(Provider Name),

\_\_\_\_\_(name) (MM/DD/YYYY) (DOB), a patient/resident of

(name of facility) has tested positive for *Candida auris* (*C. auris*) through a clinical culture or a surveillance swab. The Virginia Department of Health wants to be sure you are aware of the patient's status and share steps to take while providing healthcare to this person.

# Why We Are Concerned About C. auris

#### It is becoming more common

- This drug-resistant fungus was discovered in 2009 and has spread rapidly throughout the United States.
- <u>*C. auris* cases are on the rise</u>. Every health planning region within Virginia has identified persons infected or colonized with *C. auris*.
- Case counts are available on the Virginia Department of Health's *Candida auris* in the State of Virginia data dashboard: <u>https://www.vdh.virginia.gov/haiar/candida-auris-in-the-state-of-virginia/</u>.

#### It is easy to transmit from person to person, especially in the healthcare setting

- *C. auris* can be carried on the skin without signs of infection (colonization) and be spread to others.
- C. auris has caused outbreaks in healthcare facilities.
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#### It can be hard to treat

• It is often resistant to multiple drugs. Some strains of *C. auris* are resistant to all current antifungal drugs.



As a healthcare provider, focusing on the basics of infection prevention is the best step you can take to prevent the spread of *C. auris*.

- **Hand hygiene** with soap and water or alcohol-based hand sanitizer is important when you have contact with the patient or surfaces that they have come in contact with.
- **Transmission-based precautions**: using Contact Precautions is recommended when providing direct care. This would include gown and gloves.
- Cleaning/disinfection
  - Cleaning and disinfection of any medical equipment or room where the patient has received care is very important since *C. auris* can live on surfaces for prolonged amounts of time.
  - Pay particular attention to high touch surfaces.
  - Many common disinfectants do not kill *C. auris*, including numerous products with fungal and *Candida albicans* claims. Check all products currently in use to determine if they are effective against *C. auris*.
    - Products that are effective against *C. auris* EPA List P: <u>https://www.epa.gov/pesticide-registration/list-p-antimicrobial-products-registered-epa-claims-against-candida-auris</u>
  - It is also important to adhere to the contact time on the label for products to have the needed time on the surface to effectively disinfect.

*C. auris*, while concerning, should not affect the patient's ability to be cared for in the outpatient setting. The risk for *C. auris* to others depends on their immune system, the presence of wounds, invasive devices and good infection prevention practices.

A brochure to educate patients on living with *C. auris* is available on the VDH website: <u>https://www.vdh.virginia.gov/content/uploads/sites/174/2023/09/patients-with-Candida-auris\_trifold\_final-printing.pdf</u>

If you have questions, please contact your local health department at



# Virginia Department of Health Response

#### Reporting

In Virginia, a systematic public health response and investigation occurs upon identification of every *C. auris* case. *C. auris* was added to the <u>Virginia Reportable</u> <u>Disease List</u> in 2018 and responsibility for reporting the presence of these organisms rests with physicians, directors of medical care facilities, and directors of laboratories.

Refer to the HAI/AR C. auris webpage for additional reporting information.

#### Investigations

Upon confirmation of *C. auris*, the <u>local health departmen</u>t will work with the facility/provider to implement the <u>CDC Containment Strategy for Novel or Targeted</u> <u>Multidrug-resistant Organisms</u>. Goals of this investigation include:

- 1. Identifying if transmission is occurring;
- 2. Identifying affected patients/residents, such as roommates and high-risk healthcare contacts;
- 3. Ensuring appropriate control measures are promptly initiated/implemented to contain potential spread; and
- 4. Characterizing the organism or resistance mechanism to guide additional response actions, patient management, and future responses.

What you can expect when collaborating with your <u>local health department</u> on the investigation:

- 1. **Gathering and sharing information** about the patient/resident. The health department will need to know details of the patient/resident's medical history, healthcare facility stay, and infection prevention measures that have been in place. Information requested may include:
  - Admission information (Date; admitted from another facility? If so, which one?)
  - Placement in a private vs semi-private room?
  - Was the patient/resident on Contact Precautions or EBP? If so, when?
  - Movement through your facility during their stay
  - Discharge information (Date; If discharged where?)
  - General medical history questions
  - Does the patient/resident have any indwelling medical devices?

This information will help determine risk factors for spread within the facility and if there are any affected patients/residents.

2. Discuss plans for an **onsite visit**, including an infection prevention assessment.



• An onsite visit is typically a part of the VDH investigation to help the facility respond to the case using the best infection prevention practices and decrease risk to other patients/residents.

#### 3. Discuss plans for colonization screening

- Colonization screening is a CDC-recommended intervention that can help stop the spread of *C. auris* within a healthcare facility.
- The health department may request screening of close contacts (e.g., roommates, shared bathrooms) to determine if *C. auris* has spread to other patients/residents in the facility.
- VDH may also recommend to screen a larger number of patients/residents to determine if *C. auris* has spread to other patients/residents in the facility as well.
- For patients/residents who are awaiting colonization screening results, refer to <u>CDC guidance</u> to determine room placement and whether to use Contact Precautions (or Enhanced Barrier Precautions, for nursing home residents when Contact Precautions do not otherwise apply). Contact your <u>local health</u> <u>department</u> if guidance on determining appropriate precautions is needed.

#### **Colonization Screening**

*C. auris* can colonize many parts of the body such as the nares, axilla, and groin. *C. auris* colonization may persist for a long time, sometimes for years. More than 50% of patients who had a positive *C. auris* swab, followed by one or more negative screenings, retested positive.

Free colonization screenings are available to facilities through public health laboratories.

- The preferred specimen sources for *C. auris* colonization screening are the **axilla and groin areas**.
  - In general, CDC does not recommend screening individuals with a history of *C. auris* colonization or infection to assess for decolonization to inform discontinuation of infection prevention measures (e.g., Contact Precautions in acute care settings and EBP in nursing homes).
  - At this time there are no specific interventions known to reduce or eliminate *C. auris* colonization.



# **Educational Resources and References**

#### CDC

- C. auris website: https://www.cdc.gov/candida-auris/index.html
  - About C. auris:
    - https://www.cdc.gov/candida-auris/about/index.html
  - Infection prevention
    - Preventing the spread of *C. auris*: <u>https://www.cdc.gov/candida-auris/prevention</u>
    - Guidance: <u>https://www.cdc.gov/candida-auris/hcp/infection-control</u>
  - Resources for patients
    - Screening for C. auris: <u>https://www.cdc.gov/candida-auris/screening/index.html</u>
- Enhanced barrier precautions website (for nursing homes): <u>https://www.cdc.gov/long-term-care-facilities/hcp/prevent-mdro/ppe.html</u>

#### Society for Healthcare Epidemiology of America (SHEA)

 Webinar - "Strategies to Reduce Candida auris Hospital Acquired Infections" (note: cost associated if not a SHEA member): <u>https://learningce.shea-online.org/content/strategies-to-reduce-candida-auris-hai-demand</u>

#### VDH

- C. auris website: https://www.vdh.virginia.gov/haiar/cauris/
  - *C. auris* data dashboard: <u>https://www.vdh.virginia.gov/haiar/candida-auris-in-the-state-of-virginia/</u>
  - Infection prevention
    - Acute care and long-term acute care facilities: <u>https://www.vdh.virginia.gov/content/uploads/sites/174/2023/04/Ca</u> <u>ndida-auris-Infection-Prevention-in-Acute-Care-Long-Term-Acute-Care-Facilities.pdf</u>
    - Long-term care facilities: <u>https://www.vdh.virginia.gov/content/uploads/sites/174/2023/04/Ca</u> <u>ndida-auris-Infection-Prevention-in-Long-Term-Care-Facilities.pdf</u>
  - Patient education: <u>https://www.vdh.virginia.gov/content/uploads/sites/174/2023/09/patients-with-Candida-auris\_trifold\_final-printing.pdf</u>
- *C. auris* fact sheet: <u>https://www.vdh.virginia.gov/epidemiology/epidemiology-fact-sheets/candida-auris-infection/</u>
- C. auris Quick Guide for Nursing Home Infection Preventionists: <u>https://www.vdh.virginia.gov/content/uploads/sites/174/2023/09/Quick-Guide Cauris FINAL.pdf</u>
- Enhanced barrier precautions resources (for nursing homes): https://www.vdh.virginia.gov/haiar/ip/ipc-by-healthcare-setting/
- Rapid resources on *C. auris* (Essentials level, Foundations level, Testing): https://www.vdh.virginia.gov/haiar/education-training/infection-prevention-rapidresources/



#### References

 Rossow, Stephanie. (2019). CDC/Antibiotic Resistance Coordination and Strategy Unit <u>https://phil.cdc.gov/Details.aspx?pid=23239</u>

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