CANDIDA AURIS (C. AURIS)

REPORTING INFORMATION
• **Class B:** Report a case, suspect case, and/or positive laboratory result to the local public health department in which the reporting healthcare provider or laboratory is located by the **close of the next business day.**
• Reporting Form(s) and/or Mechanism:
  The Ohio Disease Reporting System (ODRS) should be used to report lab findings to the Ohio Department of Health (ODH). For healthcare providers without access to ODRS, you may use the Ohio Confidential Reportable Disease form (HEA 3334).
• Key fields for ODRS reporting include: purpose of culture (clinical or screening/surveillance), whether there has been a previous positive, when that culture was collected, sensitive occupation (e.g., direct patient care, child care provider, food handler), sensitive setting (e.g., day care or preschool attendee, long term care facility resident), import status (whether the infection was travel-associated or Ohio-acquired), date of illness onset, the interview fields, the fields in the Travel and Other Exposures module.

AGENT
*Candida auris* (*C. auris*) is a species of ascomycetous fungus, of the *Candida* genus, which grows as yeast. *C. auris* was first isolated in 1998 and described in 2009. Its name comes from the Latin word for ear, *auris*. It forms smooth, shiny, whitish-gray, viscous colonies on growth media. There are at least four major clades of *C. auris* based on geographic origin.

**Infectious dose:** Unknown.

CASE DEFINITION
**Laboratory Criteria for Diagnosis**
**Presumptive laboratory evidence:**
- Detection of *C. haemulonii* from any body site using a yeast identification method that is not able to detect *C. auris* (Appendix 1), **AND**
- Either the isolate/specimen is not available for further testing, or the isolate/specimen has not yet undergone further testing.

**Confirmatory laboratory evidence:**
Detection of *C. auris* from any body site using either culture or a culture independent diagnostic test (CIDT) (e.g., Polymerase Chain Reaction [PCR]).

Note: When additional test results are available, case re-classification may occur, including making this a non-case.

**Epidemiologic Linkage**
- Person resided within the same household with another person with confirmatory or presumptive laboratory evidence of *C. auris* infection or colonization, **OR**
- Person received care within the same healthcare facility as another person with confirmatory or presumptive laboratory evidence of *C. auris* infection or colonization*, **OR**
- Person received care in a healthcare facility that commonly shares patients with another facility that had a patient with confirmatory or presumptive laboratory evidence of *C. auris* infection or colonization*, **OR**
- Person had an overnight stay in a healthcare facility in the previous one year in a foreign country with documented *C. auris* transmission ([https://www.cdc.gov/fungal/candida-auris/tracking-c-auris.html](https://www.cdc.gov/fungal/candida-auris/tracking-c-auris.html)).
*Note: the person with confirmatory or presumptive laboratory evidence of *C. auris* and potentially exposed individuals do not need to be present in a healthcare facility for any overlapping time period. Any case occurring in a facility with a confirmed or probable case identified in the prior 12 months would be considered epidemiologically linked.

**Case Classification**

Clinical cases are based on cultures or culture-independent diagnostic testing from specimens collected during the course of clinical care for the purpose of diagnosing or treating disease. Jurisdiction of a case is determined by the location of the healthcare facility where the specimen was collected.

**Candida auris case, clinical**

**Suspected**: A person with presumptive laboratory evidence from a clinical specimen collected for the purpose of diagnosing or treating disease in the normal course of care and no evidence of epidemiologic linkage. A clinical specimen includes sites reflecting invasive infection (e.g., blood, cerebrospinal fluid) and specimens from non-invasive sites such as wounds, urine, and the respiratory tract, where presence of *C. auris* may simply represent colonization and not true infection.

**Probable**: A person with presumptive laboratory evidence from a clinical specimen collected for the purpose of diagnosing or treating disease in the normal course of care and evidence of epidemiologic linkage. A clinical specimen includes sites reflecting invasive infection (e.g., blood, cerebrospinal fluid) and specimens from non-invasive sites such as wounds, urine, and the respiratory tract, where presence of *C. auris* may simply represent colonization and not true infection.

**Confirmed**: A person with confirmatory laboratory evidence from a clinical specimen collected for the purpose of diagnosing or treating disease in the normal course of care. This includes specimens from sites reflecting invasive infection (e.g., blood, cerebrospinal fluid) and specimens from non-invasive sites such as wounds, urine, and the respiratory tract, where presence of *C. auris* may simply represent colonization and not true infection.

**Candida auris case, colonization/screening**

Screening occurs when swabs are collected from patients to determine whether they might be carrying the organism somewhere on their bodies without signs of active infection. Colonization means that a patient is found to be carrying *C. auris* on their body without signs of active infection. **Screening** of patients for *C. auris* colonization may be recommended when transmission or colonization of *C. auris* is suspected, to control further spread.

**Probable**: A person with presumptive laboratory evidence from a swab collected for the purpose of screening for *C. auris* colonization regardless of site swabbed. Typical colonization/screening specimen sites are skin (e.g., axilla, groin), nares, rectum, or other external body sites. Swabs from wound or draining ear are considered clinical.

**Confirmed**: A person with confirmatory laboratory evidence from a swab collected for the purpose of screening for *C. auris* colonization regardless of site swabbed. Typical colonization/screening specimen sites are skin (e.g., axilla, groin), nares, rectum, or other external body sites. Swabs from wound or draining ear are considered clinical.
Criteria to Distinguish a New Case from an Existing Case

- A person with a clinical case should not be counted as a colonization/screening case thereafter (e.g., patient with known infection who later has colonization of skin is not counted as more than one case).
- A person with a colonization/screening case can be later categorized as a clinical case (e.g., patient with positive screening swab who later develops bloodstream infection would be counted in both categories).

SIGNS AND SYMPTOMS
Varies. Symptoms of *C. auris* infection depend on the part of the body affected. *C. auris* can cause many different types of infection, such as bloodstream infection, wound infection, and ear infection. Symptoms may not be noticeable, because patients with *C. auris* infection are often already receiving care for another serious illness or condition. Because symptoms can vary greatly, a laboratory test is needed to determine whether a patient has a *C. auris* infection.

DIAGNOSIS
*C. auris* infections are usually diagnosed by culture of blood or other body fluids. Commonly used yeast identification methods often misidentify *C. auris* as other yeasts (especially *Candida haemulonii*). Appendix 1 contains a list of fungal species commonly reported in place of *C. auris* by different laboratory identification methods. *C. auris* should be suspected when *C. haemulonii* (especially when isolated from an invasive site) or other organisms listed in Appendix 1 are identified by a yeast identification method that cannot accurately identify *C. auris*. This includes specimens from sites reflecting invasive infection (e.g., blood, cerebrospinal fluid) and specimens from non-invasive sites such as wounds, urine, and the respiratory tract, where presence of *C. auris* may simply represent colonization and not true infection.

EPIDEMIOLOGY

Source
*C. auris* is an emerging multidrug-resistant yeast that can cause invasive infections and is associated with high mortality. Some strains of *C. auris* are resistant to the three major classes of antifungals, severely limiting treatment options. *C. auris* can spread in healthcare settings and cause outbreaks. *C. auris* can colonize patients’ skin and other body sites, perhaps indefinitely. Colonization poses a risk both for invasive infection and transmission. *C. auris* persists in the healthcare environment for weeks, and quaternary ammonia-based disinfectants, which are routinely used in healthcare settings, are not effective against the organism.

Occurrence
*Candida auris* is an emerging fungus that presents a serious global health threat. *C. auris* can cause severe illness among patients with immunocompromising conditions or those receiving high acuity care. Patients can remain colonized with *C. auris* for months, perhaps indefinitely, and *C. auris* can persist on surfaces in healthcare environments. This can result in spread of *C. auris* between patients in healthcare facilities. In the U.S., most cases of *C. auris* infection result from local spread within healthcare facilities in the same city or state. However, healthcare facilities should be alert for new introductions of *C. auris* colonization or infection from patients who received healthcare elsewhere in the U.S. or abroad in areas with *C. auris* transmission.

Most reported *C. auris* cases in the U.S. have been detected in the New York City area, New Jersey, Florida, California, and Chicago area. Strains of *C. auris* detected in the U.S. have been linked to other parts of the world. *C. auris* cases detected in the U.S. are
primarily the result of local spread following the inadvertent introduction into the U.S. from a patient who recently received healthcare in a country with C. auris transmission.

**Reservoir**

C. auris has been predominantly identified among patients with extensive exposure to ventilator units at skilled nursing facilities and long-term acute care hospitals, and those who have received healthcare in countries with extensive C. auris transmission. Other risk factors for C. auris infection are similar to those for invasive infection with other Candida species and include central venous catheter use, and recent broad-spectrum antibiotic or antifungal use.

**Mode of Transmission**

C. auris is transmitted person-to-person through direct contact with infected bodily tissues or fluids. C. auris can cause infections when it enters the body, often through medical devices including ventilators, intravenous catheters, urinary catheters, or wounds caused by injury or surgery. In healthcare settings, C. auris is spread mainly through the hands of healthcare workers and direct contact with contaminated environmental services, such as bed rails and computer keyboards. C. auris can persist on surfaces in healthcare environments. C. auris has been cultured from multiple locations in patient rooms, including both high-touch surfaces, such as bedside tables and bedrails, and general environmental surfaces farther away from the patient, such as windowsills. C. auris has also been identified on mobile equipment that is shared between patients, such as glucometers, temperature probes, blood pressure cuffs, ultrasound machines, nursing carts, and crash carts.

**Period of Communicability**

C. auris can potentially be transmitted as long as the organism is present in a person’s bodily tissues or fluids. It is unknown how long C. auris can live on inanimate surfaces.

**Incubation Period**

The incubation period is not well defined, particularly due to the ability of C. auris to colonize an individual for an extended period of time.

**PUBLIC HEALTH MANAGEMENT**

**Case Investigation**

Review patient records to identify healthcare exposures before and after the positive culture, particularly overnight stays in healthcare facilities in the month prior to the patient’s positive culture. Facilities that are identified as part of this review should be targeted for contact investigation and a complete review of clinical microbiology records to identify other cases at the facility. At a minimum, targeted facilities should include:

- Patient’s current facility
- Facilities at which the patient stayed overnight in the past month
- Facilities at which the index patient stayed for more than 7 days in the prior 3 months
- Facilities with longer length of stays (e.g., long-term acute care, nursing homes)

State or local health department involvement will be necessary to coordinate activities at other facilities.

**Specimen**
CDC recommends that all *Candida* isolates obtained from a normally sterile site (e.g., bloodstream, cerebrospinal fluid) be identified to the species level so that appropriate initial treatment can be administered based on the typical, species-specific susceptibility patterns.

Approximately 54% of *C. auris* cases have been identified from blood; the remaining 46% of cases were identified in other body sites, including, but not limited to, urine, wounds, sputum, and bile. Some clinical laboratories do not typically determine the species of isolates from non-sterile sites since presence of *Candida* in these sites may represent colonization rather than infection and would not require treatment. However, *C. auris* is important to identify even from a non-sterile body site because presence of *C. auris* in any body site can represent wider colonization, posing a risk for transmission and requiring implementation of infection control precautions.

Species identification for *Candida* isolates from non-sterile sites should be considered in certain circumstances, including:

- When clinically indicated in the care of a patient.
- When a case of *C. auris* infection or colonization has been detected in a facility or unit, to detect additional patients colonized. Species identification of isolates from non-sterile sites can be implemented for at least one month until no evidence exists of *C. auris* transmission.
- When a patient has had an overnight stay in a healthcare facility outside the U.S. in the previous one year. Colonization for longer than a year has been identified among some *C. auris* patients; therefore, hospitals might also consider determining the species for *Candida* isolated from patients with more remote exposure to healthcare abroad.
- Residents of states with historically high incidence of *C. auris*, who also have extended stays in healthcare facilities (acute care and long-term care).
- Patients presenting from long-term acute care facilities, skilled nursing facilities, or rehabilitation facilities who, within the past 12 months, have a history of:
  - Multidrug-resistant organisms (MDROs)
  - Mechanical ventilation or tracheostomy
  - Chronic or non-healing wounds

Contact the ODH Bureau of Infectious Diseases Healthcare-Associated Infections/Antimicrobial Resistance (HAIAR) Program at (614) 995-5599 or HAIAR@odh.ohio.gov during normal business hours to arrange specimen testing at Ohio’s regional Antibiotic Resistance Laboratory Network (ARLN) lab in Wisconsin.

**Antifungal Susceptibility Testing for *C. auris***

All *C. auris* isolates should undergo antifungal susceptibility testing. Although *C. auris* is commonly multidrug-resistant, levels of antifungal resistance can vary widely across isolates.

There are currently no established *C. auris*-specific susceptibility breakpoints. Therefore, breakpoints are defined based on those established for closely related *Candida* species and on expert opinion. Correlation between microbiologic breakpoints and clinical outcomes is not known at this time. For this reason, the information referenced in the CDC guidance linked below should be considered as a general guide and not as definitive breakpoints for resistance. Please note that a finding of an elevated minimum inhibitory concentration (MIC) for an antifungal drug should not necessarily preclude its use, especially if the use of other antifungal drugs for the patient has been ineffective.
For additional details, please see CDC guidance for Antifungal Susceptibility Testing and Interpretation.

**Treatment**
Consultation with an infectious disease specialist is highly recommended when caring for patients with *C. auris* infection. Treatment is generally only indicated if clinical disease is present. CDC does not recommend treatment of *C. auris* identified from noninvasive sites (such as respiratory tract, urine, and skin colonization) when there is no evidence of infection.

Based on the limited data available to date, an echinocandin drug is the recommended initial therapy for treatment of *C. auris* infections. Because this organism appears to develop resistance quickly, patients on antifungal treatment should be carefully monitored for clinical improvement and follow-up cultures and repeat susceptibility testing should be conducted.

Even after treatment for invasive infections, patients generally remain colonized with *C. auris* for long periods, and perhaps indefinitely. Therefore, all recommended infection control measures should be followed during and after treatment for *C. auris* infection.

For the most up-to-date treatment recommendations go to CDC’s Recommendations for Treatment of *C. auris*.

**Surveillance**
When *Candida* is isolated from non-sterile sites, species-level identification should be considered in certain circumstances, including:

- When clinically indicated in the care of a patient.
- When a case of *C. auris* infection or colonization has been detected in a facility or unit, to detect additional patients colonized. Species identification when *Candida* is found in non-sterile sites can be implemented for at least one month until no evidence exists of *C. auris* transmission.
- When a patient has had an overnight stay in a healthcare facility outside the U.S. in the previous one year. Colonization for longer than a year has been identified among some *C. auris* patients; therefore, hospitals might also consider determining the species for *Candida* isolated from patients with more remote exposure to healthcare abroad.
- Residents of states with historically high incidence of *C. auris*, who also have extended stays in healthcare facilities (acute care and long-term care).
- Patients presenting from long-term acute care facilities, skilled nursing facilities, or rehabilitation facilities who, within the past 12 months, have a history of:
  - MDROs
  - Mechanical ventilation or tracheostomy
  - Chronic or non-healing wounds

All laboratories, especially laboratories serving healthcare facilities where cases of *C. auris* have been detected, should do the following:

- Review past microbiology records (as far back as 2015, if possible) to identify cases of confirmed or suspected *C. auris* (see When to suspect *C. auris* infections).
- Conduct prospective surveillance to identify *C. auris* cases in the future.
- Consider screening close contacts of patients with *C. auris* for presence of colonization.
Contacts
Screening Close Contacts of Newly Identified Patients with *C. auris* Infection or Colonization, for the Presence of Colonization

Because patients with *C. auris* could have been colonized for months prior to detection of the organism, there is a potential that transmission of *C. auris* occurred to other patients around the case-patient while specific infection control measures were not in place. Therefore, it is important to identify the patient’s prior healthcare exposures and contacts.

Who to Screen
Screening should be performed to identify colonization among potentially epidemiologically linked patients; at a minimum this should include:

- Current roommates
- Roommates in the prior 3 months, at the current facility or other facilities at which the patient stayed. Roommates should be identified and screened even if they have been discharged from the facility.
- Consider also screening patients who require higher levels of care (e.g., mechanical ventilation) and who overlapped on the ward or unit with the index patient for 3 or more days, as these patients are also at substantial risk for colonization.

Health departments and healthcare facilities should strongly consider performing more extensive screening, such as a point prevalence survey, if there is evidence or suspicion of ongoing transmission in a facility (e.g., *C. auris* detected from multiple patients through contact screening or clinical cultures, increase in infections from unidentified *Candida* species). In a point prevalence survey, every patient on a given unit or floor where transmission is suspected should be screened. Consider doing a point prevalence survey even if all known *C. auris* patients have been discharged.

How to Screen
Screening for *C. auris* should be done using a composite swab of the patient’s axilla and groin. Patients have also been found to be colonized with *C. auris* in the nose, external ear canals, oropharynx, urine, wounds, and rectum. However, the axilla and groin appear to be the most common and consistent sites of colonization. Consult with the ODH HAIAR Program at (614) 995-5599 or HAIAR@odh.ohio.gov for more information on assessing patients for colonization. Once a patient is identified as colonized with *C. auris*, the same infection control precautions are needed as for patients with *C. auris* infection.

While awaiting screening results, healthcare facilities may consider using contact precautions for high-risk contacts of *C. auris* patients (i.e., current roommates or roommates within the past month) or patients admitted following recent overnight stays in healthcare facilities outside the U.S.

Additional guidance on screening is available in the Interim Guidance for a Health Response to Contain Novel or Targeted Multidrug-resistant Organisms.

Screening Script
CDC has developed a script to help inform patients about why screening is being conducted and a handout with frequently asked questions about screening that can be given to patients
Prevention and Control of *C. auris* Colonization and Infection

Prompt identification of *C. auris* and immediate implementation of recommended infection control measures is the best way to prevent additional patients from becoming infected or colonized with *C. auris*.

Patients who become colonized with *C. auris* are at risk of developing invasive infections from this organism. Invasive infections can develop at any point after patients become colonized. Additional measures listed below can help prevent not only *C. auris* transmission, but also invasive *C. auris* infection once patients become colonized with *C. auris*.

Appropriate Care of Medical Devices

Many patients with *C. auris* colonization already have or may need various types of invasive lines and tubes, including central venous catheters, urinary catheters, and tracheostomy tubes. These devices may be associated with presence of *C. auris* and can serve as portals of entry for the organism into invasive body sites.

Appropriate care of medical devices is needed to prevent infections. This care includes strict adherence to recommended central venous catheter and urinary catheter insertion and maintenance practices and meticulous care of tracheostomy sites. Clinicians should continually assess the need for invasive devices and promptly remove them when they are no longer needed. When a healthcare facility determines that a patient has *C. auris* infection or colonization, the staff should review protocols for care of medical devices and evaluate current adherence to protocols. More information on appropriate care of medical devices is available on the CDC’s website at [Infection Prevention and Control for *Candida auris*](https://www.cdc.gov/candidaauris/index.html).

Surgical Procedures

Patients colonized with *C. auris* and undergoing surgical procedures may also be at increased risk for surgical site infections. Meticulous skin preparation in the operating room should be performed using an alcohol-based agent unless contraindicated. Further guidance on preventing surgical site infections is available in the CDC [Guideline for the Prevention of Surgical Site Infection](https://www.cdc.gov/hai/pac/ssiprevention-guideline/index.html).

Antibiotic Stewardship

Many patients with *C. auris* infection or colonization have received broad-spectrum antibacterial and antifungal medications in the weeks before their first culture yielding *C. auris*. Assessing the appropriateness of antibiotics, especially antifungals, and discontinuing them when not needed may help prevent *C. auris* colonization and infection.

Use of Transmission-based Precautions

Patients with *C. auris* in acute care hospitals and long-term acute care hospitals should be managed using [contact precautions](https://www.cdc.gov/hicpac/pdf/safety_briefing/CDC-CASP-048.pdf).

If a limited number of single rooms are available, they should be reserved for patients who may be at highest risk of transmitting *C. auris*, particularly patients requiring higher levels of care (e.g., bed-bound). Patients with *C. auris* could be placed in rooms with other patients with *C. auris*. Patients colonized with *C. auris* and other MDROs should be placed in rooms with patients colonized with the same MDROs. CDC does not recommend placing patients with *C. auris* in rooms with patients with other types of MDROs.
To the extent possible, minimize the number of staff who care for the C. auris patient. If multiple C. auris patients are present in a facility, consider cohorting staff who care for these patients.

**Setting Specific Infection Control Measures**

**Inpatient settings (acute care hospitals, long-term acute care hospitals)**

Infection control measures for C. auris in inpatient settings are as follows:

- Place the patient with C. auris in a single-patient room and use transmission-based precautions.
- Emphasize adherence to hand hygiene.
- Clean and disinfect the patient care environment (daily and terminal cleaning) and reusable equipment with recommended products.
- Screen contacts of newly identified case patients to identify C. auris colonization. Because patients colonized with C. auris can be a source of C. auris transmission, these patients should be managed using the same infection control measures as for patients with C. auris infection.
- Inter-facility communication about patient’s C. auris status when patient is transferred to another healthcare facility.
- Laboratory surveillance of clinical specimens to detect additional cases.

**Laboratory Settings**

All safety considerations should conform to the institution’s safety policy. Recommendations for lab safety when working with known or suspected isolates of C. auris are available on the CDC website [here](https://www.cdc.gov); these recommendations are not meant to supersede an institution’s own methods and policies.

**Dialysis Centers**

Some patients with C. auris have required dialysis care. Recommendations for dialysis clinics are similar to infection control precautions for inpatient settings and include the following:

- Standard Precautions should be used with strict adherence to hand hygiene.
  - A mask and eye protection or face shield should be worn if performing procedures likely to generate splash or splatter (e.g., wound manipulation, suctioning) of contaminated material (e.g., blood, body fluids, secretions, excretions).
- Hand hygiene should be performed using an appropriate agent (e.g., alcohol-based hand sanitizer or hand washing with soap and water).
- Disposable gowns and gloves should be worn when caring for patients or touching equipment at the dialysis station. Gowns and gloves should be removed and disposed of carefully, and hand hygiene should be performed when leaving the patient’s station. Do not wear the same gown to care for other non-C. auris patients.
- If available, use a separate room that is not in use as a hepatitis B isolation room (in the case of dialysis clinics) for patient treatment. If a separate room is not available, dialyze the patient at a station with as few adjacent stations as possible (e.g., at the end or corner of the unit) and consider dialyzing the patient on the last shift of the day.
- Ensure any reusable equipment brought to the dialysis station is properly cleaned and disinfected before use with another patient. Items that cannot be disinfected should be discarded.
• The dialysis station (e.g., chairs, beds, tables, machines) should be thoroughly cleaned and disinfected between patients. Information specific to disinfection in dialysis facilities is available on CDC’s dialysis safety. Thoroughly clean and disinfect the dialysis station (e.g., chairs, side tables, machines) between patients by using a disinfectant effective against C. auris.
• If the patient needs to be admitted or referred to another facility, the receiving facility should be informed of the patient’s C. auris status.

Home Healthcare Settings
Recommendations for home healthcare settings are similar to infection control precautions for inpatient settings and include the following:
• Standard Precautions should be used with strict adherence to hand hygiene.
• A mask and eye protection or face shield should be worn if performing procedures likely to generate splash or splatter (e.g., wound manipulation, suctioning) of contaminated material (e.g., blood, body fluids, secretions, excretions).
• Hand hygiene should be performed using an appropriate agent (e.g., alcohol-based hand sanitizer or hand washing with plain or antibacterial soap and water).
• Disposable gown and gloves should be worn upon entering the area of house where the patient care will be provided. Gowns and gloves should be removed and disposed of carefully, and hand hygiene should be performed when leaving the patient care area.
• Ensure any reusable equipment is properly cleaned and disinfected before use with another patient.
• If the patient needs to be admitted or referred to another facility, the receiving facility should be informed of the patient’s C. auris status.

Nursing Homes Residents (Special Consideration)
Residents with C. auris in nursing homes, including skilled nursing facilities with ventilator units, should be managed using either contact precautions or enhanced barrier precautions, depending on the situation.
• Functional nursing home residents without wounds or indwelling medical devices (e.g., urinary and intravenous catheters and gastrostomy tubes) who can perform hand hygiene might be at lower risk of transmitting C. auris. Facilities could consider using enhanced barrier precautions for these residents. However, in these instances, healthcare personnel should still use gowns and gloves when performing tasks that put them at higher risk of contaminating their hands or clothing. These tasks include changing wound dressings and linens and assisting with bathing, toileting, and dressing in the morning and evening.
• If residents with C. auris receive physical therapy or other shared services (e.g., physical therapy equipment, recreational resources), staff should not work with other patients while working with the affected patient. They should use a gown and gloves when they anticipate touching the patient or potentially contaminated equipment. Ideally, affected patients should be the last to receive therapy on a given day. Shared equipment should be thoroughly cleaned and disinfected after use.
• Perform thorough daily and terminal cleaning and disinfection of patients’ or residents’ rooms and other areas where they receive care (e.g., physical therapy) using an appropriate disinfectant. Shared equipment (e.g., ventilators, physical therapy equipment) should also be cleaned and disinfected before being used by another patient.
• Increase hand hygiene audits on units where patients with C. auris reside. Consider re-educating healthcare personnel on hand hygiene through an in-
service or retraining, especially if audits demonstrate low adherence to recommended hand hygiene practices.

- If the patient needs to be admitted or referred to another facility, the receiving facility should be informed of the patient’s C. auris status.

**Outpatient Settings (e.g., primary care office, wound clinic)**

Recommendations for outpatient settings are similar to infection control precautions for inpatient settings and include the following:

- Standard Precautions should be used with strict adherence to hand hygiene.
- A mask and eye protection or face shield should be worn if performing procedures likely to generate splash or splatter (e.g., wound manipulation, suctioning) of contaminated material (e.g., blood, body fluids, secretions, excretions).
- Hand hygiene should be performed using an appropriate agent (e.g., alcohol-based hand sanitizer or hand washing with soap and water).
- Disposable gown and gloves should be used if extensive patient contact is anticipated or contact with infected areas is planned (e.g., debridement or dressing of colonized or infected wound). Gowns and gloves should be removed and disposed of carefully, and hand hygiene should be performed when leaving the patient’s room.
- Ensure any reusable equipment brought into the patient room is properly cleaned and disinfected before use with another patient.
- Meticulous cleaning and disinfection of the room/care area should be performed using a disinfectant effective against C. auris.
- To the extent possible, the number of persons who care for the C. auris patient should be minimized (e.g., dedicate a single staff person).
- Appropriate personnel should be educated and informed about the presence of a patient with C. auris and the need for special precautions.
- If the patient needs to be admitted or referred to another facility, the receiving facility should be informed of the patient’s C. auris status.

**Home and Family Members**

The risk of C. auris infection for otherwise healthy household members, even those with extensive contact, is believed to be low. Household members should practice good hand hygiene (frequent hand washing with soap and water or use of alcohol-based hand rubs). If household members are providing extensive care to a patient with C. auris (such as changing the dressing on an infected wound), these persons could consider wearing disposable gloves while providing this level of care.

**Duration of Infection Control Precautions**

Patients and residents in healthcare facilities often remain colonized with C. auris for many months, perhaps indefinitely, even after acute infection (if present) has been treated and resolves. CDC recommends continuing setting appropriate transmission-based precautions for the entire duration of the patient’s stay in the facility.

CDC does not recommend routine reassessments for C. auris colonization. Long-term follow-up of colonized patients in healthcare facilities, especially those patients who continue to require complex medical care, such as ventilator support, suggests that colonization persists for a long time and the results of repeat colonization swabs may alternate between C. auris being detected and not detected. A considerable number of patients have had a positive C. auris specimen after multiple negative swabs. Additional information is being collected to understand the duration of colonization and the role of colonization in spread of C. auris.
Appendix 1

Identification of *C. auris* (as of May 29, 2020). This appendix will be updated as new information about *C. auris* identification becomes available. For the most up to date testing information see Identification of Candida auris.

Some yeast identification methods are unable to differentiate *C. auris* from other yeast species. *C. auris* can be misidentified as a number of different organisms when using traditional biochemical methods for yeast identification such as VITEK 2 YST, API 20C, API ID 32C, BD Phoenix yeast identification system, RapID Yeast Plus, and MicroScan.

The most common misidentification of *C. auris* is *Candida haemulonii*. *C. haemulonii* have been less commonly observed to cause invasive infections. Therefore, *C. auris* should be suspected when *C. haemulonii* is identified on culture of blood or other normally sterile site unless the method used can reliably detect *C. auris*. *Candida* isolates from the urine and respiratory tract ultimately confirmed as *C. auris* have been initially identified as *C. haemulonii*; less data are available about the ability of *C. haemulonii* to grow in urine or the respiratory tract, although true *C. haemulonii* infections in general appear to be rare in the U.S.

The table below summarizes common misidentifications based on the yeast identification method used. If any of the species listed below are identified using the specified identification method, or if species identity cannot be determined by any method, further characterization using appropriate methodology should be sought. See also CDC’s Algorithm to identify Candida auris based on phenotypic laboratory method and initial species identification.

<table>
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<th>Common Misidentifications for <em>C. auris</em> by Yeast Identification Method</th>
<th>Organism <em>C. auris</em> can be misidentified as</th>
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<tr>
<td><strong>Identification Method</strong></td>
<td><strong>Vitek 2 YST</strong>*</td>
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<td><strong>API 20C</strong></td>
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<td><strong>BD Phoenix yeast identification system</strong></td>
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<td><strong>MicroScan</strong></td>
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<td><strong>RapID Yeast Plus</strong></td>
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*There have been reports of *C. auris* being misidentified as *Candida lusitaniae* and *Candida famata* on VITEK 2. A confirmatory test such as cornmeal agar may be warranted for these species.

**C. guilliermondii, C. lusitaniae, and C. parapsilosis** generally make pseudohyphae on cornmeal agar. If hyphae or pseudohyphae are not present on cornmeal agar, this should raise suspicion for *C. auris* as *C. auris* typically does not make hyphae or pseudohyphae. However, some *C. auris* isolates have formed hyphae or pseudohyphae. Therefore, it would be prudent to consider any *C. guilliermondii, C. lusitaniae,* and *C. parapsilosis* isolates identified on MicroScan or any *C. parapsilosis* isolates identified on RapID Yeast Plus as possible *C. auris* isolates and forward them for further identification.
**Disease Fact Sheet**

*Candida auris (C. auris)*

*Candida auris* (also called *C. auris*) is a type of fungus that can cause serious illness in hospitalized patients. Infections with this fungus can be difficult to treat. *C. auris* only recently appeared in the United States, and public health officials are researching more about how it is spread. Here’s what you need to know if you or a family member have a *C. auris* infection.

**What are the symptoms of *C. auris* infection?**  
Symptoms of *C. auris* infection depend on the part of the body affected. *C. auris* can cause many different types of infection, such as bloodstream infection, wound infection, and ear infection. Symptoms may not be noticeable, because patients with *C. auris* infection are often already sick in the hospital with another serious illness or condition.

**How are *C. auris* infections diagnosed?**  
Because symptoms can vary greatly, a laboratory test is needed to determine whether a patient has a *C. auris* infection.

**Who is most likely to get *C. auris* infection?**  
*C. auris* mainly affects patients who already have many medical problems. It often affects people who have had frequent hospital stays or live in nursing homes. *C. auris* is more likely to affect patients who have weakened immune systems from conditions such as blood cancers or diabetes, receive lots of antibiotics, or have devices like tubes going into their body (for example, breathing tubes, feeding tubes, catheters in a vein, or bladder catheters). Healthy people usually don’t get *C. auris* infections.

**Are *C. auris* infections treatable?**  
Most *C. auris* infections are treatable with a class of antifungal medications called echinocandins. Some *C. auris* infections have been resistant to all three main classes of antifungal medications, making them difficult to treat. In this situation, multiple antifungal medications at high doses may be needed to treat the infection.

**How serious can *C. auris* infection be?**  
Any invasive infection, which includes bloodstream infection with any *Candida* species, can be serious and even fatal. Many people who have died with *C. auris* had other serious illnesses that increased their risk of death.

**Why does a patient with *C. auris* infection need special precautions during care?**  
*C. auris* can spread from one patient to another in healthcare settings such as hospitals and nursing homes. Special precautions reduce the chance of spreading the fungus to other patients. These precautions include:

- Placing the patient in a room without a roommate.
- Wearing gowns and gloves when healthcare personnel care for the patient.
- Good hand hygiene for patients, family members, and healthcare personnel.

**How long does a patient with *C. auris* need to be under these special precautions?**  
Even after *C. auris* infection is treated, patients might continue to have *C. auris* on their skin or other body sites that doesn’t cause infection or illness but can still spread to other patients. For that reason, special precautions should continue as long the patient has *C. auris* on the skin or other body sites.
Can a nursing home patient with *C. auris* participate in activities with others, such as meals or social gatherings, if they are on these special precautions?

In general, residents of nursing homes who have *C. auris* on their skin or other body sites or are sick with a *C. auris* infection can leave their rooms to attend meals and group functions if:

- They can wash their hands thoroughly on a regular basis.
- Wounds are bandaged to prevent any fluids from seeping out and infecting others.
- Other types of secretions like phlegm are contained.
- Items that residents touch often and shared equipment (for example, physical therapy equipment or recreational resources) should be cleaned and disinfected after use.

Can family members get sick?

Family members who are healthy probably have a low chance of *C. auris* infection. *C. auris* is mainly a problem among people who are already sick with multiple medical issues and have spent a lot of time in healthcare settings. Family members and others caring for patients with *C. auris* should wash their hands thoroughly before and after touching the patient or touching medical devices. Handwashing is particularly important if the caregiver is caring for more than one ill person at home. Ask and remind healthcare personnel to wash their hands.

Should family members or other close contacts of patients be tested for *C. auris*?

In most instances, the Centers for Disease Control and Prevention (CDC) does not recommend that family members or other close contacts of patients with *C. auris* infections be tested for *C. auris*. However, if someone who has frequent contact with a patient with *C. auris* is admitted to a healthcare facility, a healthcare provider might test them for *C. auris* to determine if special precautions should be used.

What should people who have tested positive for *C. auris* do after being discharged from healthcare facilities?

People who have tested positive for *C. auris* should inform healthcare providers that they have tested positive for *C. auris* when visiting healthcare offices and when being admitted to hospitals and nursing homes.

The CDC, the Ohio Department of Health (ODH) and Ohio local public health officials are concerned about *C. auris* infection and are working closely to track and control its spread.