Candida auris

Signs and Symptoms	*Candida auris* has no definitive clinical symptoms. Common sites of infections caused by *C. auris* include wound, urine and blood stream.	
Incubation	*C. auris* can colonize the skin and other body sites without causing infection, therefore the incubation period is not well defined.	
Case classification	**Clinical criteria**: None	
	Confirmed clinical case: Person with confirmatory laboratory evidence from clinical specimen collected for diagnosing or treating disease.	**Confirmed colonization/screening case:** Person with confirmatory laboratory evidence from a swab collected for screening for *C. auris* colonization.
	Candida species that undergo testing at PHL and are not confirmed as *C. auris* should be classified as "ruled out."	
Differential diagnosis	*C. auris* can be mistakenly identified as other *Candida* species by some traditional phenotypic methods, see section 4.	
Treatment	Consultation with an infectious disease specialist is highly recommended when caring for patients with *C. auris* infection. CDC does not recommend decolonization or treatment of *C. auris* identified from noninvasive sites (such as respiratory tract, urine, and skin) when there is no evidence of infection. See Clinical Treatment of *C. auris* Infections.	
Duration	*C. auris* can colonize human skin and persist for long periods.	

Exposure	• Healthcare, particularly high acuity healthcare settings and indwelling devices.
	• Direct contact with colonized or infected skin or body fluids.
	• Indirect contact
	  ○ *C. auris* survives on surfaces for long periods, including shared/mobile medical equipment, and bedrails, etc.
	  ○ Healthcare workers' hands.
	• Travel or healthcare in certain parts of the world (including the US)	

Laboratory testing	• Species identification and fungal susceptibility for *C. auris* and other non-albicans *Candida* isolates. Pre-approval not required. Use Antibiotic Resistance Lab Network Requisition Form • *C. auris* screening. Pre-approval required. Must use Electronic Test Order and Reporting (ETOR). *Specimen shipping (Section 4):* • Submit isolates on Sabouraud's Dextrose slant (or plate only if submitted via courier), ambient, category B. • Colonization screening swab from bilateral groin and axillae using BD ESwab collection and transport system, 4°C or on with a chemical ice pack, Category B, overnight. Swabs must be received at the PHL within 9 days of collection.	
Public health actions	Local health jurisdictions: notifiable to Washington State Department of Health (DOH) Office of Communicable Disease Epidemiology (CDE) within 3 days of receipt of case or lab report. Transmission in healthcare facilities may elicit media attention. *Infection Control:* • Cases should be placed on Contact Precautions in a private room. Nursing homes should consult with LHJ before transitioning to Enhanced Barrier Precautions. • Reinforce hand hygiene, proper PPE use, environmental cleaning with effective disinfectant (see EPA list P or List K). • See What to do if you identify a targeted multidrug resistant organism in your facility, a guide for local health and facility staff for response to targeted MDROs.	

Candida auris

1. DISEASE REPORTING

A. Purpose of Reporting and Surveillance

1. To increase awareness of *Candida auris* by public health and healthcare professionals.
2. To promote appropriate infection control interventions to prevent transmission of *Candida auris* between patients in healthcare facilities and between healthcare facilities.
3. To rapidly identify *Candida auris* and prevent or eliminate sources or sites of ongoing transmission within Washington.
4. To characterize the epidemiology of *Candida auris* infections in Washington to guide response.

B. Required Reporting

1. Health care providers and Health care facilities: notifiable to the **local health jurisdiction** within 24 hours.
2. Laboratories: Positive lab results by any method are notifiable to **local health jurisdiction** within 24 hours;
   - Culture independent test (CIDT) including but not limited to nucleic acid detection (NAT or NAAT), or whole genome sequencing do not need to be submitted to PHL.
   - Isolate submission required within 2 business days and should be accompanied by a Public Health Laboratories (PHL) Antibiotic Resistance Lab Network (ARLN) Requisition Form. See ARLN Test Menu for specimen collection and submission instructions.

   Reporting and submission of other non-*albicans Candida* species is strongly encouraged but not mandated by law. See Section 4A for details about laboratory testing results.
3. Local health jurisdictions: notifiable to Washington State Department of Health (DOH) Office of Communicable Disease Epidemiology (CDE) within 7 days of case investigation completion or summary of information required within 21 days.

C. Local Health Jurisdiction (LHJ) Investigation Responsibilities

1. LHJs should investigate and report all *C. auris* cases in order to identify the source and whether transmission has occurred. Enter the case into the Washington Disease Reporting System (WDRS) under Highly Antibiotic Resistant Organism (HARO).

   LHJs should be notified by laboratories, healthcare providers, or infection preventionists of suspected or confirmed *C. auris* cases and any isolates submitted to PHL. LHJs should ensure proper infection prevention precautions are in place in the healthcare facility where the case receives care.
2. Any outbreak or suspected outbreak of *Candida* species in a healthcare facility is mandated to be reported immediately to LHJs and should be investigated.

3. Because of the potential for transmission of *C. auris* to vulnerable patients in healthcare settings, providers, infection preventionists, and facilities should institute appropriate infection control precautions when suspected or confirmed *C. auris* cases are identified. See Section 5B for detailed recommendations about infection prevention in healthcare settings.

2. THE DISEASE AND ITS EPIDEMIOLOGY

A. Etiologic Agent

Candida auris is an emerging, often multidrug resistant, yeast first identified in Japan in 2009. It can cause invasive healthcare associated infections with high mortality. Whole genome sequencing suggests that several different clades of *C. auris* emerged simultaneously in different parts of the world.

B. Description of Illness

There are no definitive symptoms of *C. auris* infection. *C. auris* can cause a range of infections from superficial (skin) infections to more severe, life-threatening infections, such as bloodstream. Healthy people typically do not get *C. auris* infection. Patients requiring high acuity medical care including patients with invasive medical devices like breathing or feeding tubes or catheters are most commonly infected. Mortality associated with *C. auris* infections is estimated to be 30-60%, however, most cases have other serious comorbidities which may cause or contribute to death.

C. auris may also colonize the skin and other body sites. Colonized patients are at risk for invasive infection from their own endogenous colonization when indwelling devices are present.

C. *Candida auris* in Washington State

C. auris was first reported in Washington in 2023 and since January 2024 has been detected in patients in several healthcare facilities and counties. The DOH MDRO Dashboard provides a summary of *C. auris* surveillance in Washington. As has occurred in many US states, *C. auris* may continue to spread among highly vulnerable patients in high acuity long term care facilities. Facilities can prevent transmission by strengthening infection prevention programs and auditing practices.

D. Reservoirs

C. auris has been detected in the natural environment. It can tolerate hypersaline environments and higher temperatures than most *Candida* species. It can colonize human skin and persist for long periods, survive on inanimate surfaces for weeks, and withstand commonly used healthcare disinfectants such as quaternary ammonium compounds.

E. Modes of Transmission

Compared to other pathogenic fungi, *C. auris* has an unusual ability to spread between patients in healthcare facilities. Transmission of *C. auris* may occur through direct contact with bodily fluids, by skin contact, and by contamination from shed skin cells. In healthcare settings, *C. auris* can be spread via the hands of healthcare workers and by inanimate objects including shared/mobile medical equipment, such as thermometers, and frequently touched surfaces such as bed rails and computer keyboards. Transmission has occurred in healthcare settings even when contact precautions were in place.

F. Incubation Period

Because *C. auris* can colonize the skin and other body sites without causing infection, the incubation period is not well defined.

G. Period of Communicability

Persons can potentially transmit *C. auris* to others as long as the organisms are present in bodily fluids or on skin. Patients can be intermittently positive on serial surveillance cultures and may be colonized for long periods of time. Persons at highest risk for transmitting and contracting *C. auris* are those who require long term ventilator support, major assistance with activities of daily living, or have chronic wounds or indwelling devices. Epidemiologically linked patients within the healthcare environment (roommates, and those who shared healthcare staff or equipment), particularly those with indwelling devices, are thought to be at highest risk for contracting the organism.

H. Treatment

For infections, use antifungal susceptibility testing results to guide antifungal therapy and consider consulting an infectious disease specialist for treatment recommendations. CDC does not recommend treatment of *C. auris* identified from noninvasive sites (such as respiratory tract, urine, and skin) when there is no evidence of infection. See Clinical Treatment of *C. auris* Infections.

3. CASE AND CONTACT DEFINITIONS

A. Clinical Criteria for Diagnosis of Cases

There are no specific clinical criteria for diagnosis.

B. Laboratory Criteria for Diagnosis of Cases

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

C. Case Classification

Confirmed clinical case: 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.

Confirmed colonization/screening case: 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 wounds or draining ear are considered clinical.

Submitted *Candida auris* isolates that are not confirmed at PHL should be classified as "ruled out."

D. Criteria to distinguish a new case

A patient who is colonized or infected with *C. auris* based on culture or PCR should be considered colonized indefinitely. The following criteria should be used for surveillance of *C. auris*.

- 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 once in both categories).

4. DIAGNOSIS AND LABORATORY SERVICES

A. Diagnosis

C. auris is diagnosed by species identification from an isolate or by PCR from a specimen.

C. auris can be misidentified as a number of different fungi when using traditional phenotypic methods. Some yeast identification assays, including VITEK 2 YST, API 20C, BD Phoenix yeast identification system, and MicroScan, can misidentify *Candida auris* as other *Candida* species such as *Candida haemulonii, Candida duobushaemulonii, Rhodotorula glutinis, Candida intermedia, Candida sake, Saccharomyces kluyveri, Candida catenulate, Candida famata, Candida guilliermondii, Candida lusitaniae*, and *Candida parapsilosis.* Laboratories should know the limitations of their yeast identification system by reviewing Identification of *Candida auris* to avoid mistakenly identifying *C. auris* as another fungal species. Labs should consider reporting and submitting these isolates to PHL for confirmatory testing. Other labs may serve as *Candida* sentinel labs and submit to PHL all *Candida* species except *albicans*. For information about sentinel labs, please contact the Washington Antibiotic Resistance Lab Network at ARLN@doh.wa.gov.

B. Services Available at the Washington State Public Health Laboratories (PHL)

At PHL, *C. auris* and non-*albicans Candida* isolates submitted for species identification undergo MALDI-TOF and fungal susceptibility testing by broth microdilution following the most current CLSI interpretations. Pre-approval for isolate submission is not required.

Specimens submitted from patients for *C. auris* screening undergo qPCR performed to confirm *C. auris.* Culture-based testing is performed on qPCR positive specimens and those with indeterminate results. PHL provides appropriate screening supplies and instructions for collection. **Pre-approval is required for *C. auris* screening.**

When submitting *C. auris* isolates or other samples to PHL for *C. auris* testing, follow submission instructions on the ARLN Lab Test Menu.

5. CASE INVESTIGATION

Any person suspected or known to have *C. auris* should be placed on Contact Precautions

if in a healthcare facility and the case should be investigated.

Review medical records and interview the case, parent/guardian, close family members, or others who may be able to provide pertinent information, if necessary. The guidance, What to do if you identify a targeted multidrug resistant organism in your facility, provides response actions for LHJs and healthcare facility infection preventionists in order to quickly collect data for the investigation and to prevent transmission to others. DOH HAI MDRO Program staff are available to assist and can be reached at 206-418-5500.

A. Case Management

See section 2.H. for treatment guidance. Decolonization is not recommended. Communicate *C. auris* status to healthcare providers in outpatient settings and upon return to a healthcare facility using an inter-facility infection control transfer form, or a similar method to avoid spread.

B. Case Follow Up

Conduct a public health investigation for all confirmed *C. auris* cases. Review clinical history, medical records and laboratory records and interview the case or others who may be able to provide pertinent information, as needed to collect necessary information. Complete a WDRS case report under "Highly antibiotic-resistant organism" (HARO) and complete the HARO wizard question package

C. Ensure Infection Control

Because of the potential for transmission of *C. auris* to vulnerable patients in healthcare settings, providers, infection preventionists, and facilities should immediately implement appropriate precautions when cases are identified. Facilities should also consult with their LHJ for guidance on infection prevention.

Providers should communicate infection or colonization status to patients and family members and educate about infection control in the home using the *Candida auris* Fact Sheet and to receiving facilities and providers when patients transfer care using an inter-facility infection control transfer form.

In general, in acute care settings such as hospitals and long-term acute care hospitals, *C. auris* positive patients should be cared for in private rooms with indefinite application of contact precautions. For nursing home residents infected or colonized with *C. auris*, contact precautions should be used and facilities should consult with their LHJ for guidance on when and how to transition to Enhanced Barrier Precautions. The following resources provide detailed guidance on infection prevention precautions for targeted MDROs including *C. auris*.

- Multi-Drug Resistant Organism Quick Reference Guide and Job Aid Combined (PDF)
- Enhanced Barrier Precautions Quick Guide (PDF)
- Infection Prevention and Control for *Candida auris* (CDC)
- Infection Prevention Recommendations for Carbapenemase-Producing Organisms and Candida auris in Outpatient Settings (PDF)

D. Identify Potential Sources of Acquisition and Potentially Exposed Persons

Public health should investigate all *C. auris* cases to identify the source and evaluate for lapses in infection control in healthcare settings and potential transmission to other patients. Public health should ensure that adequate infection prevention practices are in place, that the patient is educated, and that appropriate information regarding *C. auris* is communicated to healthcare providers and facilities where the patient receives care. Identify current and past healthcare and underlying conditions, including any hospital or long-term care admissions, surgeries, dialysis, indwelling catheters, or international healthcare or travel, focusing on the 12 months prior to diagnosis. If the index case has had many healthcare encounters and public health resources are limited, focus the investigation on the 1 month prior to diagnosis. The guidance What to do if you identify a targeted multidrug resistant organism in your facility will help LHJs and facilities quickly perform the investigation. See Section 6C for management of potentially exposed contacts.

6. CONTROLLING FURTHER SPREAD

A. Infection Control Recommendations

In general, patients with *C. auris* infection or colonization should be cared for using Contact Precautions for direct patient care while in healthcare settings. In nursing homes, Enhanced Barrier Precautions may be used upon approval by the local health jurisdiction. Adult family homes and home health providers should strictly follow standard precautions and consult with their LHJ. When transferring patients, it is essential that all receiving facilities are notified of the patient's CPO status at the time of admission so appropriate infection control and disinfectants can be implemented. Use of the inter-facility infection control transfer form, or a similar method can ensure that complete information is communicated. Additional resources on infection control for *C. auris* are available

- Infection Control Guidance: *Candida auris* (CDC)
- Infection Prevention Recommendations for Carbapenemase-Producing Organisms and *Candida auris* in Outpatient Settings (PDF)
- Multi-Drug Resistant Organism Quick Reference Guide and Job Aid Combined (PDF)
- Enhanced Barrier Precautions Quick Guide (PDF)

B. Case Management

Patients with *C. auris* who return to a home setting should be instructed in good hand hygiene. People providing care at home for patients with C. auris should perform hand hygiene frequently, especially after contact with wounds, dressings and other contaminated objects or surfaces or helping the patient with toileting, and consider wearing gloves when anticipating contact with body fluids or blood. This is particularly important if the caregiver is caring for more than one ill person. When discharging a patient to home, health care providers should communicate *C. auris* status to the patient's

primary care team to and other healthcare providers in outpatient settings.

C. Contact Management

Patients who are epidemiologically linked to a *C. auris* case should be placed in in preemptive Contact Precautions, if feasible, and screened for *C. auris*.

Screening specimens from healthcare personnel and healthy household contacts is not recommended unless implicated in transmission.

When there is potential for spread to others in a healthcare setting, review What to do if you identify a targeted multidrug resistant organism in your facility to identify whom to screen. For further guidance on surveillance screening, see Interim Guidance for a Health Response to Contain Novel or Targeted MDROs (CDC).

Screening in response to a case can be performed free of charge at PHL. Consult with HAI Program staff available at 206-418-5500 for screening instructions and proper collection materials. See section 4.B for specimen collection and submission instructions.

D. Environmental Evaluation

In healthcare settings, ensure that environmental cleaning procedures adhere to CDC environmental disinfection guidance for C. auris. Facilities should audit environmental services practices and ensuring use of EPA-approved disinfectants for *C. auris*, adherence to proper contact time, and completeness of cleaning. Ensure that reusable medical equipment is properly cleaned and disinfected between use, and there is a clear procedure for identifying whether equipment is clean and ready for use.

7. ROUTINE PREVENTION

A. Routine Prevention

Prevention of *C. auris* transmission in healthcare settings requires collaboration and coordination between public health agencies and healthcare facilities, including surveillance, rapid identification of colonized and infected patients in healthcare settings, and implementing facility-specific and regional interventions to prevent transmission.

Core measures that facilities should follow include hand hygiene, contact precautions, education of healthcare personnel, minimizing device use, cohorting staff and patients, laboratory notification, antimicrobial stewardship, and screening for *C. auris* when indicated.

B. Prevention Recommendations

All persons can adhere to good health hygiene to stop the spread of pathogens by washing hands frequently, especially

- Before preparing or eating food
- After using the bathroom or helping another person with toileting or diapers
- After blowing the nose, coughing or sneezing
- After touching used tissues or handkerchiefs
- Before and after changing wound dressings or bandages

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We would like to acknowledge the Oregon Department of Human Services for developing the format and select content of this document.

UPDATES

December 2022:

For 2023 WAC revision combined provider and facility reporting requirement, updated laboratory submission (Section 1B)

Updated to include EPA List P of disinfectants effective against C. auris, and use of Electronic Test Order and Reporting (ETOR) for submission of screening specimens.

February 2024:

Updated to reflect detection of *C. auris* in Washington.

June 2024: CDC links updated.

August 2024:

Section 1: Revised laboratory submission section to indicate that positive samples other than isolates should not be submitted.

Section 2: Edited to align with current CDC surveillance findings and risk factors.

Section 6: Removed details infection prevention guidance and referred to CDC and DOH resources for details.