April 2026

Candidozyma (formerly *Candida*) *auris* (*C. auris*)
Surveillance and Investigation Protocol

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West Virginia Department of HEALTH

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I. ABOUT THE DISEASE

Public Health Significance

Candidozyma (formerly *Candida*) *auris* (*C. auris*) is an emerging, multidrug-resistant yeast that poses a significant threat in healthcare settings. *C. auris* infections are associated with high morbidity and mortality, particularly among patients with complex medical conditions and frequent healthcare exposures.

Since the first United States of America (U.S.) case was identified in 2016, the number of reported clinical cases has increased annually, with 6,304 new cases reported to the Centers for Disease Control and Prevention (CDC) in 2024. Although the rate of increase has recently slowed, *C. auris* continues to spread rapidly within healthcare facilities, particularly in high-acuity long-term care (LTC) settings.

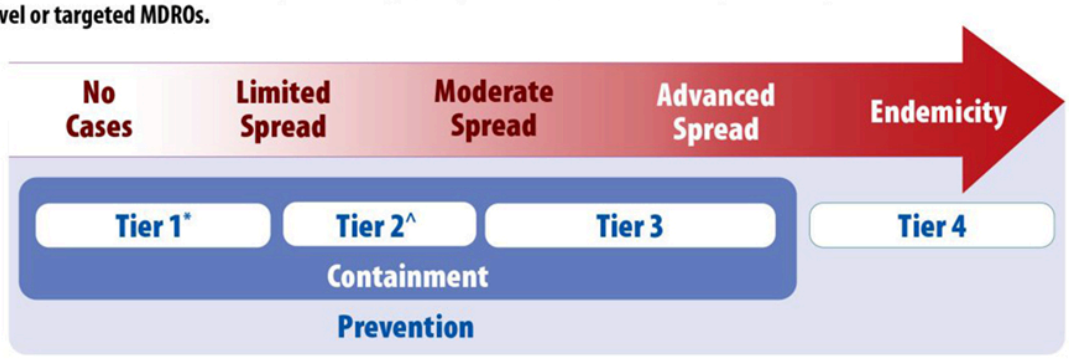
Public health concern for *C. auris* is driven by several key factors:

- Frequent resistance to multiple antifungal drug classes.
- Challenges in laboratory identification leading to potential misclassification.
- Ability to persist in healthcare environments.
- Can cause outbreaks that are difficult to control.

Targeted organisms have been chosen based on local epidemiology, CDC recommendations, and the Healthcare-Associated Infection-Antimicrobial Resistance Multidisciplinary Advisory Group (HAI-AR MAG).

In West Virginia, *C. auris* is classified as a Tier 2 organism, indicating it is primarily associated with healthcare settings and has limited to moderate transmission within the state. As a Tier 2 organism, response activities focus on containment, including rapid identification, contact investigation, and targeted screening.

Figure 1. Relationship between epidemic stages, response tiers, containment response, and prevention activities for novel or targeted MDROs.



Organism or resistant mechanism that have
*Never (or very rarely) been identified **in the United States** and for which experience is extremely limited are Tier 1.
^Never (or very rarely) been identified **in a public health jurisdisction but are more common in other parts of the U.S.** are Tier 2.

Clinical Presentation

Clinical manifestation of *C. auris* infection depends upon the site of infection. Patients with *C. auris* bloodstream infection typically have sepsis and severe illness. Other invasive infections, such as intra-abdominal candidiasis, can also occur. It can also cause wound infections and otitis. *C. auris* has been found in urine and respiratory specimens, though its contribution to clinical disease in these sites is unclear. It can also colonize the skin, nose, ears, and other body sites of asymptomatic people.

Patients who develop invasive *Candida* infections often have underlying medical comorbidities, which can make diagnosing a *C. auris* infection challenging. A *C. auris* infection can only be confirmed through laboratory testing. Individuals who have recently been hospitalized or resided in LTC facilities and have invasive medical devices (e.g., mechanical ventilation or tracheostomy, feeding tubes, and central venous catheters) appear to be at the highest risk for infection. Additional risk factors include recent surgical procedures, diabetes mellitus, the use of broad-spectrum antibiotics, and antifungal exposure. Infections have been documented in patients across all age groups.

Etiologic Agent

C. auris is a budding yeast that rarely forms short pseudohyphae and does not form germ tubes.

Reservoir

The reservoir for *C. auris* infections in the U.S. is colonized and infected individuals, especially patients with frequent contact with the healthcare system. It has been isolated from many specimen sources, including blood, urine, respiratory tract, biliary fluid, wounds, and the external ear canal.

C. auris can survive on inanimate objects such as bed rails, countertops, and on medical equipment such as catheter tubing and flexible endoscopes. Testing suggests that it can survive on surfaces for weeks.

Incubation Period

The incubation period of *C. auris* is unknown.

Mode of Transmission

C. auris is transmitted primarily through direct contact with colonized or infected individuals or through contact with contaminated environmental surfaces and shared medical equipment.

Transmission is not thought to occur via persistent colonization of healthcare workers but may occur through contaminated hands or equipment if appropriate infection prevention and control (IPC) measures are not followed.

Period of Communicability

C. auris is highly persistent in healthcare environments and is transmissible as long as the organism is present. Individuals who are colonized or infected may remain so for prolonged or indefinite periods. Environmental services are critical to controlling the spread of this organism. Please see the

Healthcare-Associated Infections/Antimicrobial Resistance (HAI/AR) Program Environmental Services Toolkit for additional resources and guidance on environmental cleaning and the U.S. Environmental Protection Agency's List P for a list of disinfectants effective against *C. auris*.

II. DISEASE INVESTIGATION

Case Definition

CSTE Position Statement Number: 22-ID-05

Laboratory Criteria

***Confirmatory laboratory evidence*:**

- Detection of *C. auris* in a specimen from a swab obtained for the purpose of colonization screening using either culture or validated culture-independent test (e.g., nucleic acid amplification test [NAAT]), OR
- Detection of *C. auris* in a clinical specimen obtained during the normal course of care for diagnostic or treatment purposes using either culture or a validated culture-independent test (e.g., NAAT).

Case Classifications

Confirmed:

- *C. auris* case, screening: Person with confirmatory laboratory evidence from a swab collected for the purpose of screening for C. auris colonization, regardless of site swabbed.*
- *C. auris* case, clinical: Person with confirmatory laboratory evidence from a clinical specimen collected for the purpose of diagnosing or treating disease in the normal course of care.**

Probable:

N/A

Suspect:

N/A

*Typical screening specimen sites are skin (e.g., axilla, groin), nares, rectum, or other external body sites. Swabs collected from wound or draining ear as part of clinical care are considered clinical specimens.‡

** 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. This does not include swabs collected for screening purposes (see *Candida auris* case, screening).

‡Because it can be difficult to differentiate screening specimens from clinical specimens based on microbiology records, any swabs except wound swabs or draining ear swabs can be assumed to be for screening unless specifically noted otherwise. Laboratories do not need to change their practice; public health wants to identify all *C. auris*, whether from screening or clinical specimens.

Criteria to distinguish a new case:
A patient who is colonized or infected with *C. auris* is considered colonized indefinitely. The following provides guidance for health departments to distinguish a new case for patients who test positive for *C. auris* in either a screening swab or in a clinical specimen.

- For screening cases, count a patient only once as a screening case; do not count if the patient has been previously identified as a clinical or screening case. A person with a screening case can be later categorized as a clinical case (e.g., a patient with a positive screening swab who later develops bloodstream infection would be counted in both categories).
- For clinical cases, count a patient only once as a clinical case, even if the patient has already been counted separately as a screening case. A person with a clinical case should not be counted as a screening case thereafter because all clinical cases are considered to also be colonized with *C. auris* (e.g., patient with clinical *C. auris* specimen who later has positive screening swab is not counted as a screening case).

Reporting Timeframe to Public Health
C. auris infection is a Category II Reportable Disease and must be reported to the Local Health Department (LHD) within 24 hours.

Outbreak Recognition
Outbreak recognition involves ongoing and systematic multidrug-resistant organisms (MDRO) surveillance using a standardized case definition in each facility.

An outbreak investigation should be initiated when two (2) or more epidemiologically linked *C. auris* cases are identified within a facility. Cases may include either clinical or screening detection of *C. auris.*

MDRO surveillance allows facilities to determine when an increase in cases above their baseline occurs and should trigger an investigation into the reason for the increase. For *C. auris* outbreak response, see CDC's *Interim Guidance for a Public Health Response to Contain Novel or Targeted Multidrug-resistant Organisms (MDROs)*.

Healthcare Provider (HCP) Responsibilities
Some responsibilities may occur concurrently or in a different sequence from the listed responsibilities in the guidance. The order does not reflect their relative importance.

Preparation for *C. auris*

- Ensure that your laboratory is immediately reporting *C. auris* test results to you and that your office staff notifies you of *C. auris* results immediately.
- Consider screening patients being admitted who have a recent exposure to a LTACH and other epidemiologic important/high risk settings.
- Educate staff, including admissions, environmental services, contracted services (e.g., podiatry, cosmetology, respiratory, therapy).

***C. auris* Case Investigation**

- When you are notified by your laboratory that your patient has *C. auris*:
  - Follow CDC recommendations: www.cdc.gov/candida-auris/hcp/infection-control.
  - Quickly implement IPC measures for the index case.
  - Notify the patient, family, provider, LHD, and transferring/receiving facility.
  - Conduct contact investigation:
    - Contact is generally defined as any patient or resident who had a meaningful exposure to the index case in a healthcare setting where transmission could occur (e.g., roommate, shared environment, equipment, or healthcare personnel). Facilities should also consider screening additional patients/residents on the same unit if ongoing transmission is suspected.
    - Assist the LHD with the investigation by providing information about case contacts in a timely manner. Anticipate the need to provide information on clinical history, clinical findings, laboratory findings, and history of travel or other exposures to support the investigation.
    - Provide LHD with the contact list.
  - Patient screening to assess for transmission:
    - If the index patient had recent inpatient healthcare exposure, screen epidemiologically linked patients.
      Screening should occur even if the index patient was being managed with Contact Precautions or Enhanced Barrier Precautions (exceptions include short stays <24 hours).
      - Screen roommates and patients who shared a bathroom with the index patient.
      - Screen these contacts even if they have been discharged from the facility to another inpatient setting. If discharged to home, consider notifying the contact and offering screening or flagging the chart to facilitate preemptive Contact Precautions and admission screening if they are readmitted in the next six months. Consider working with the LHD to notify and screen discharged contacts.
      - Due to the risk of persistent environmental contamination, screen all patients **currently** admitted to the room(s) and bed spaces where the index patient stayed for at least one night in the healthcare facilities identified during the investigation.
      - Screening support is available through the CDC's Antimicrobial Resistance Laboratory Network (ARLN). Please contact OEPS for prior approval.
      - Ensure all screening test results, both positive and negative, are reported to the LHD and OEPS.
      - If the patient is transferred to another facility, notify the Infection Preventionist (IP) of the receiving healthcare facility BEFORE transferring the patient.
      - Confirm/recommend contact precautions and ensure adequate supplies.

- Notify the IP at the facility where the patient is hospitalized or a resident of a nursing home; and/or
- Ensure that the IP and other providers are notified before a patient is admitted or transferred so that they can also follow CDC guidelines.

- Immediately notify the LHD of a *C. auris* outbreak, defined as two or more epidemiologically linked cases, in your facility.
  - Work with the LHD and OEPS to implement additional infection prevention and control strategies if transmission is suspected or ongoing.
- If *C. auris* was present on admission, notification of the transferring facility should occur so appropriate review can occur at that facility.

For more information, see CDC's *Interim Guidance for a Public Health Response to Contain Novel or Targeted Multidrug-resistant Organisms (MDROs)*.

Laboratory Responsibilities

Some responsibilities may occur concurrently or in a different sequence from the listed responsibilities in the guidance. The order does not reflect their relative importance.

- Report any *C. auris* results immediately to healthcare providers. Clearly highlight *C. auris* so it is readily apparent to healthcare providers.
- Report any positive *C. auris* results to the LHD within 24 hours that meet the following criteria:
  - Detection of C. auris in a specimen using either culture or a culture-independent diagnostic test (CIDT) (e.g., Polymerase Chain Reaction [PCR])
  - Detection of an organism that commonly represents a C. auris misidentification (see Appendix 1 for details by method) in a specimen by culture
- Follow the current CDC and Clinical and Laboratory Standards Institute (CLSI) guidance for testing.
- Immediately report *C. auris* outbreaks to your LHD.
- Retain isolate(s) and submit them to the West Virginia Office of Laboratory Services (OLS) and/or the CDC ARLN for confirmatory testing and characterization.
- Ensure all test results, both positive and negative, are reported to the LHD and OEPS.
- Conduct prospective surveillance for at least three months after the index patient's identification, or three months after the last case if transmission is identified. Report findings to the LHD and OEPS.
- Perform retrospective surveillance of lab results to identify similar resistance patterns, extending three months prior to the index case (or suspected acquisition if shorter). Report findings to the LHD and OEPS.

Isolate Shipping instructions:

After collection, make sure that the specimen collection vessel is labeled with the patient's name, date of birth, and date of collection. Complete the WV OLS Microbiology Laboratory Specimen Submission Form and include it in the shipment. Mark "Reference- ARLN Reference DST" https://dhhr.wv.gov/ols/forms .

For packaging and shipping instructions to WV OLS, see "Packaging and Shipping Information" at https://dhhr.wv.gov/ols/support. Packages must be properly labeled as **UN3373 Biological Substances** and

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Shipped per current regulations.

Send isolates to: WV Office of Laboratory Services
ATTN: Microbiology/ARLN
167 11th Avenue
South Charleston, WV 25303
Telephone: 304-558-3530

Laboratory-Epidemiology Standard Operating Plan for Isolate Submission

2023 Update

Local Health Department (LHD) Responsibilities

Some responsibilities may occur concurrently or in a different sequence from the listed responsibilities in the guidance. The order does not reflect their relative importance.

PREPARATION

- Educate healthcare personnel and laboratories to report *C. auris* to the LHD within 24 hours. Notification should be done by telephone to ensure the report is received.
- Educate healthcare personnel about *C. auris* infection, colonization, testing, and prevention and control measures. www.cdc.gov/candida-auris/about/index.html.

CASE INVESTIGATION

- When a case of *C. auris* is reported:
  - Complete a *C. auris* Disease Reporting Form by contacting the provider and/or facility listed on the lab report, as well as the patient and/or their family. Provide education to the patient and/or family, ensuring understanding of the need to communicate infection/colonization status to healthcare providers going forward.
  - Assess the knowledge of facility staff, then provide education and resources based on the assessment results, including resources from the Office of Epidemiology and Prevention Services (OEPS) website.
- When a case of *C. auris* is identified in an outpatient setting, or the case's LTACH residential status is "No" or "Unknown":
  - Contact the patient and/or their family, as appropriate, to verify LTC residential status.
  - If you notice an increase above your county endemic level or baseline, or you notice multiple cases with a healthcare provider(s), contact the provider(s) to supply education and resources, including the link to the CDC clinician FAQ information page. www.cdc.gov/candida-auris/hcp/clinical-overview.
  - For providers/facilities with multiple *C. auris* cases, consult Bureau for Public Health (BPH) for assistance.
- Conduct a healthcare investigation:
  - Review the patient's healthcare exposures from 30 days prior to the initial positive specimen collection to the present. Information to include:
  - Admission/discharge dates (in-state, other states, international)
  - Care unit locations and types
  - Roommate presence/duration
  - Type of care (surgery, dialysis, respiratory, wound care, etc.)
  - Functional status (e.g., bedbound, incontinent of stool)
  - Comorbidities
  - Antibiotic and antifungal use
  - History of travel and/or healthcare outside of the U.S. in the prior 12 months.

- Based on the contact investigation, notify healthcare facilities that the patient visited 30 days prior to the initial culture.
    - Provide healthcare facilities with educational resources.
- Ensure laboratories send isolates to OLS for further characterization. See Laboratory Responsibilities section for more information.
- Enter lab results and complete information from the *C. auris* Disease Reporting Form into the West Virginia Electronic Disease Surveillance System (WVEDSS) in a timely manner. Enter all test results, both positive and negative, into the system.
- Encourage labs to report electronically when feasible.
- Advise healthcare providers to ship patient isolates to OLS.
    - See the Laboratory section for detailed information on isolate submission.
    - If sending specimens to OLS, facilitate the transport of specimens to OLS.

For the purpose of case investigation, *lost to follow-up* (LTF) is defined as a disease investigation outcome reported by LHD staff in WVEDSS after:

- All avenues (e.g., phone call, text messaging, visit, mailed letter, email, etc.) of obtaining patient information, on at least three separate occasions (different days and times), have been exhausted, AND
- Attempts to collect patient medical information from the HCP on at least three separate occasions have been exhausted, AND
- Attempts to contact the patient or obtain information has been clearly documented in WVEDSS *General Comments* section, AND
- Documentation has been completed within 30 days of the patient's laboratory report.

CONTACT TRACING
Conduct contact tracing and implement control measures as soon as a case is suspected.

- In coordination with the healthcare facility, identify all contacts of the *C. auris* case and sites of exposure. *C. auris* is considered communicable indefinitely once a person is colonized or infected.
- Ensure follow-up of discharged contacts identified during the facility contact investigation (see HCP Responsibilities above).
    - For contacts discharged to another healthcare facility or home, the LHD should conduct outreach, including notification of exposure, education of *C. auris*, and coordination of colonization screening. Screening may occur at the LHD, through the receiving facility, or through another coordinated arrangement.
- For contacts discharged to another state or jurisdiction, work with OEPS to complete notification.
- Conduct active (enhanced) surveillance for *C. auris* for at least three months after the last confirmed case is reported.

State Health Responsibilities
Some responsibilities may occur concurrently or in a different sequence from the listed responsibilities in the

guidance. The order does not reflect their relative importance.

- Assist LHD jurisdictions in responding to *C. auris*.
- Provide technical support on surveillance, investigation, case ascertainment, laboratory testing, and control and prevention of *C. auris.*
- Maintain *C. auris* awareness among public health partners and the public.
- Develop guidance documents, protocols, alerts, and information sheets for public health and HCPs.
- Review *C. auris* reports in WVEDSS for completeness prior to submission to CDC.

No Public Health Action is defined as an incomplete disease investigation and no activity occurring at the local level for at least 60 days since the date of the patient's laboratory report. The State Health Department staff should document "no public health action" in WVEDSS *General Comments* section before administratively closing the investigation.

III. DISEASE CONTROL AND PREVENTION

Disease Control Objectives

When a case is identified, prevent additional cases by:

- Assuring the case is placed in appropriate Transmission-Based Precautions (TBP).
- Communicating the patient's *C. auris* status before transferring to another healthcare facility occurs.
- Early identification and colonization screening of close contacts.

Disease Prevention Objectives

Prevent cases of *C. auris* by ensuring early identification of cases, prompt implementation of appropriate transmission-based precautions (TBP), communication of *C. auris* status during healthcare transfers, and screening of healthcare contacts when indicated.

Disease Prevention and Control Intervention

C. auris spreads in healthcare settings through contact with contaminated surfaces, shared medical equipment, or direct contact with colonized or infected individuals. Prevention and control measures should focus on:

- Prompt identification of confirmed or suspected *C. auris*.
- Placement of the affected patient(s) in the appropriate TBP.
- Clear communication of patients' *C. auris* status before transfer to another healthcare facility or level of care.
- Thorough cleaning and disinfection of the patient care environment and shared equipment using an EPA-registered disinfectant effective against *C. auris*.

There is no recommended or evidence-based decolonization strategy for *C. auris.* Individuals who are colonized or infected may remain colonized for prolonged and indefinite periods. Infection prevention measures should follow current CDC guidance.

IV. DISEASE SURVEILLANCE

Disease Surveillance Objectives

- Determine the incidence of *C. auris* in West Virginia
- Estimate the annual number of reported *C. auris* cases in West Virginia.
- Identify demographic and epidemiologic characteristics of persons with *C. auris*.
- Detect and support the investigation of *C. auris* outbreaks.
- Ensure timely, complete, and accurate surveillance and public health response.

Surveillance Indicators

- The proportion of confirmed *C. auris* cases reported to CDC National Notifiable Diseases Surveillance System (NNDSS) with complete information.
- Median time from laboratory identification to date of public health notification.
- The proportion of cases with an isolate submitted to the CDC ARLN for further characterization (e.g., confirmation, antifungal susceptibility testing, and /or whole genome sequencing).
- Proportion of cases with public health response initiated within an appropriate time frame (e.g., notification, contact tracing, colonization screening, facility outreach, Infection Control Assessment and Response (ICAR).
- Proportion of identified contacts who receive screening (when indicated).

V. REFERENCES

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