

Candida auris

Recommended Practices for Healthcare Outbreak Response

A. Background

Candida auris (*C. auris*) is an emerging multidrug-resistant yeast that can cause invasive infections associated with high mortality. *C. auris* can persist on surfaces and medical equipment, spread between patients, and lead to outbreaks in healthcare settings. Nearly all cases of *C. auris* identified in the United States have occurred since mid-2015 and have been identified in facilities across the country. Approximately 40% of the U.S. clinical cases have been bloodstream infections; the rest involved non-sterile sites such as urine, respiratory tract, and wounds. *C. auris* can colonize the skin, nares, and other body sites. Patients can be colonized with *C. auris* for long periods of time, even after successful treatment of infection. Although patients colonized with *C. auris* in non-sterile sites may not need medical treatment, they can be a source of transmission to other individuals.

Risk of infection or colonization with *C. auris* is greatest among persons: a) with extensive healthcare exposures, especially in long-term care facilities providing ventilator care; b) infected or colonized with another multidrug-resistant organism, especially carbapenemase-producing organisms (CPOs); c) with invasive medical devices such as central venous catheters and with tracheostomy, or gastrostomy tubes. U.S. healthcare personnel and public health authorities should also remain vigilant for *C. auris* in persons who had healthcare exposures in other countries or parts of the United States where *C. auris* transmission has been reported (see the CDC *C. auris* website for details).¹

The following information is aimed primarily at public health agencies. Typically, health departments guide *C. auris* investigations, often with active consultation with CDC. The actions and considerations outlined below are most applicable when an acute or long-term care facility identifies its first *C. auris* case(s), especially in areas where *C. auris* is uncommon. Note that the term “patient” is used below in a broad sense to encompass residents of long-term care facilities.

B. Detection and Reporting of Potential Outbreaks

1. Proposed Investigation/Reporting Thresholds and Outbreak Definition for *Candida auris*

The thresholds and definitions listed below are intended as a general guide and are based on expert opinion, except as noted otherwise. State and local public health authorities may have their own outbreak definitions and requirements for reporting. Healthcare facilities are advised to remain vigilant for potential cases and to report these to public health officials. Also, while the table below describes facility investigation following identification of a case, there are other situations when an investigation may be initiated. For example, an investigation in one facility might identify

patient transfers or other connections involving additional facilities that have not yet identified *C. auris*. This aspect is addressed in section C, Investigation and Control.

ALL HEALTHCARE SETTINGS	
Threshold for facility to start investigation	1 <i>Candida auris</i> specimen from any source*
Threshold for reporting to public health	1 <i>Candida auris</i> specimen from any source*
Outbreak definition	≥ 2 cases of <i>Candida auris</i> including an epidemiologic link ^{†§}

* Including those obtained for clinical care, screening purposes, or point prevalence surveys.

† An epidemiologic link includes but is not limited to the following examples: patients reside on the same unit (or within the same facility, if the facility is small); patients had facility staff in common; and/or patients were exposed to common medical equipment.

§ Application of the outbreak definition requires judgment and may include weighing evidence whether or not transmission took place in the facility, accounting for likely sources of exposure outside the facility (informed by regional burden of *C. auris*) and other factors.

2. Diagnostic and Laboratory Considerations

- 2.1. Laboratory practices vary regarding *Candida* species identification methodologies.
- 2.2. In general, *Candida* isolates from sterile sites should be worked up to the species level to guide treatment.
- 2.3. Clinical laboratories may not routinely perform species identification for all *Candida* isolates. Consider requesting species identification of *Candida* from any body site for individuals with increased risk of *C. auris* (see Background) or to improve case detection as part of an investigation examining potential transmission within a healthcare facility (see section C).²
- 2.4. The CDC website³ provides information about when to suspect *C. auris* and potential species misidentifications based on the laboratory method used.
- 2.5. Health departments may contact their Antibiotic Resistance Laboratory Network (AR Lab Network) laboratory for confirmatory laboratory testing.

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C. Investigation and Control

Components of an investigation and response to *C. auris* generally include those listed in CDC's [Interim Guidance for a Public Health Response to Contain Novel or Targeted Multidrug-resistant Organisms \(MDROs\)](#)⁴ and additional information outlined on the CDC's [C. auris infection prevention and control website](#).⁵ Collaboration between the facility and public health helps ensure a successful investigation. The health department should support the facility by providing guidance and resources. The health department may be able to assist with infection control assessment, medical record review, laboratory testing, data analysis, and other activities, on-site or remotely, as appropriate for the investigation.

Investigation of an Initial Isolated Case

1. Case Review/Coordination

- 1.1. Identify recent healthcare encounters, including stays at other healthcare facilities during, at least, the 3 months preceding *C. auris* identification. A review encompassing a longer period may be considered (e.g., if the initial review does not yield a likely exposure or information is available regarding an earlier exposure involving a high acuity facility).⁴
- 1.2. Engage both infection prevention/healthcare epidemiology and clinical microbiology laboratory staff.
- 1.3. Notify and coordinate with other health departments, as necessary, for situational awareness and to facilitate investigations at other facilities.

2. Healthcare Contact Screening

- 2.1. Consider conducting a point prevalence survey (PPS), targeting patients who overlapped on the same unit as the index patient.⁶
- 2.2. In a long-term care facility, consider conducting a PPS even if the index patient has been discharged.
- 2.3. If multiple previous healthcare facility stays are identified, consider prioritizing facilities which provide ventilator care.
- 2.4. Ideally, identify and screen roommates (or other patients on the same ward) of the index patient even if they were discharged,⁶ especially if receiving facilities are high risk for transmission if *C. auris* is introduced.
- 2.5. Coordinate with the CDC and the AR Lab Network to facilitate *C. auris* screening and testing.

General Control Measures During an Outbreak Response

3. Patient Placement and Cohorting

- 3.1. Patients on Contact Precautions should be placed in a single room whenever possible.
 - 3.1.1. If a limited number of single rooms are available, prioritize them for patients at higher risk of pathogen transmission (e.g., those with uncontained secretions or excretions, acute diarrhea, draining wounds).
 - 3.1.2. Consider placing patients together in one room, unit, or area based on *C. auris* and other MDRO status only if there is a high level of confidence patient movement and subsequent care practices will not increase the risk of pathogen spread between patients.

- 3.1.3. Facilities may consider dedicating healthcare personnel (e.g., nurses, nursing assistants) who provide the most regular care to these patients or residents during a shift.

4. Infection Control Practices

- 4.1. Implement Transmission-Based Precautions (or Enhanced Barrier Precautions in nursing homes) for patients colonized or infected with *C. auris*.^{5,7,8}
- 4.2. In multi-occupancy rooms, ensure healthcare workers implement strategies to help minimize transmission between roommates, including changing gloves and gowns and performing hand hygiene between patients and cleaning/disinfecting shared equipment after each use.⁵
- 4.3. Emphasize rigorous adherence to hand hygiene; alcohol-based hand rub is acceptable unless hands are visibly soiled, in which case soap and water are indicated.⁵
- 4.4. Dedicate patient care equipment such as blood pressure cuffs, thermometers, blood glucose meters, and stethoscopes; use single-use disposable items when possible. For shared or reusable equipment, see environmental cleaning and disinfection section below.
- 4.5. Audit infection control practices on affected unit(s).¹⁰⁻¹³ Provide feedback, education, and additional audits to raise compliance, as needed.^{4,10}

5. Environmental Cleaning and Disinfection

- 5.1. Ensure thorough daily and terminal environmental cleaning and disinfection of patient rooms and areas where they receive care.^{5,10}
 - 5.1.1. Audit cleaning procedures on affected units. Consider the use of marking and/or direct observations to ensure cleaning effectiveness. Provide feedback to environmental services (EVS) staff.⁷
 - 5.1.2. In facilities with multi-occupancy rooms, consider increasing the frequency of cleaning⁵ and treating each bed or patient space as if it were a different room.
 - 5.1.3. Select an Environmental Protection Agency (EPA)–registered hospital-grade disinfectant effective against *C. auris* (List P); for additional details and alternatives, refer to the CDC’s [C. auris infection prevention and control website](#).⁵
 - 5.1.4. Ensure disinfectant product is used according to instructions for use and for the recommended contact time.
- 5.2. Although dedicated patient equipment should be used whenever possible (see section 4), equipment and devices that are shared must be cleaned and disinfected between uses (e.g., thermometers, blood glucose meters, vital signs machines, and equipment such as imaging devices that might be shared between multiple facilities).⁵ Ensure manufacturer’s instructions for use pertaining to cleaning and reprocessing of medical equipment are followed.

6. Communication

- 6.1. When patients are transferred to other units or healthcare facilities, ensure that the receiving units or facilities receive notification of the patient’s *C. auris* infection or colonization, and understand the necessary infection control precautions.

- 6.1.1. Decisions to transfer the patient from one level of care to another should be based on clinical criteria and the ability of the accepting facility to provide care, and not on the presence or absence of *C. auris* infection or colonization. Facilities able to care for patients with other MDROs, should also be able to care for patients with *C. auris*.
- 6.2. When initial cases or outbreaks are identified in an area, public health should communicate this information to healthcare facilities, clinical providers, and laboratories in the area that might be affected.
- 6.3. Healthcare facilities should consider engaging their public affairs/communications staff, especially when initial cases or outbreaks are detected in an area.
 - 6.3.1. For guidance on making notifications in the context of a suspected healthcare-associated infection (HAI) outbreak, such as to potentially exposed patients, see CORHA's [Framework for Healthcare-Associated Infection Outbreak Notification](#).¹⁴
- 6.4. Healthcare facilities and public health agencies should be prepared to address questions from patients, family members, and healthcare workers regarding the risk of *C. auris* colonization and infection. For example, healthcare workers and household contacts are believed to be at very low risk of *C. auris* infection and should not be screened. [Information for patients and family members is available from the CDC](#).¹⁵

7. Monitoring and Follow-up

If multiple cases of *C. auris* infection or colonization are identified at a healthcare facility, additional considerations include the following:

- 7.1. Conduct serial PPSs on wards or units where *C. auris* transmission was suspected to assess the impact of infection control measures to prevent spread.
 - 7.1.1. These PPSs can be conducted every 2–4 weeks until at least two sequential PPSs do not identify new cases.
 - 7.1.2. If high levels of transmission continue, serial PPSs may be paused or conducted less frequently while re-evaluating and strengthening infection control measures.
 - 7.1.3. Achieving a status of zero new cases may not be feasible for all facilities (e.g., large facilities with high *C. auris* colonization pressure). In such situations, very low rates of transmission may be an appropriate endpoint provided that adherence to infection control measures is high, particularly if paired with additional interventions (e.g., admission screening at receiving facilities, periodic prevention-focused PPSs).
 - 7.1.4. This approach may be modified in consultation with public health (e.g., if targets cannot be met).
- 7.2. Perform follow-up onsite infection control assessment(s) to reinforce adherence to infection control measures.
- 7.3. Discuss need for greater regional awareness of *C. auris* activity and attention to surveillance and enhanced case finding in coordination with other local/state public health department(s).
 - 7.3.1. Enhanced case finding may include interventions such as admission screening or proactive PPS in facilities that share patients with facilities where transmission of *C. auris* has been identified.

D. References

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15. Centers for Disease Control and Prevention. *Candida auris*. *Candida auris* information for patients and family members. <https://www.cdc.gov/fungal/candida-auris/patients-qa.html>.

Web Sites

<http://corha.org>

URLs in this document valid as of: August 17, 2022.

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