Public Health Toolkit for Response to *Candida auris*

Materials for Public Health Professionals

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BUREAU OF EPIDEMIOLOGY

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Please note that page numbers are not included throughout the toolkit because individual documents are designed to be distributed or used together or as stand-alone resources. Please use your pdf viewing software to find documents by page number.

Introduction

Candida auris is a Tier 2 response organism in Pennsylvania. Please refer to the Centers for Disease Control and Prevention (CDC) guidance Interim Guidance for a Public Health Response to Contain Novel or Targeted Multidrug-Resistant Organisms (MDROs).

This toolkit contains materials developed by the Pennsylvania Department of Health, Bureau of Epidemiology, Division of Healthcare-associated Infection Prevention (HAIP) based on established best practices, conversations with the Centers for Disease Control and Prevention (CDC) and other state and local health departments, and a key publication on infection prevention and control of *C. auris*:

> **Infection Prevention and Control for *Candida auris***
> (January 2023)
> Available at: https://www.cdc.gov/fungal/candida-auris/c-auris-infection-control.html

This toolkit provides a comprehensive set of materials written for a public health audience and is designed to guide investigation and response to outbreaks, clusters, or single cases of *C. auris* in healthcare facilities. Materials are not designed to be shared with healthcare facilities or the public. For *C. auris* in healthcare facilities, the sample letter for a facility with one case is available on the HAIP website in Word version. It is designed to be edited and signed for each individual investigation. It is included in this toolkit as a reference.

Public health response to *C. auris* is a rapidly changing field, and the toolkit will be updated to reflect changing priorities and strategies. Please refer to the CDC website (https://www.cdc.gov/hai/containment/guidelines.html) and the HAIP Division website (https://www.health.pa.gov/topics/programs/HAIP-AS/Pages/HAIP-AS.aspx) for the most recent information.

Checklist for Initial Public Health Response to *Candida auris*

For use by public health staff during the investigation of suspected or confirmed *Candida auris*.

Epi Details – Clinical and Travel History

- ☐ Obtain details about the patient's clinical needs
  - ☐ Is the patient bed bound?
  - ☐ Does the patient require respiratory care?
  - ☐ Does the patient require wound care?
  - ☐ Does the patient require any indwelling devices?
  - ☐ Any bowel or bladder incontinence? Any catheter? If yes, what type?
  - ☐ How dependent is the patient on healthcare personnel for bathing, toileting, etc.?
- ☐ Determine the recent healthcare exposures and travel history of the patient
  - ☐ Is the patient currently hospitalized? Was the patient transferred from a nursing home? It is critical to gather any healthcare exposures 30 days prior to the positive culture to the time of identification.
  - ☐ Has the patient travelled or received medical care abroad in the last 12 months? If yes, obtain datesand description.
- ☐ Verify if patient had a roommate during any recent inpatient healthcare
  - ☐ Collect roommate information in the 30 days prior to the positive culture until the present to assist in screening decisions.
  - ☐ If the suspected or confirmed *C. auris* case had a roommate, screening of the roommate(s) may be required. Obtain the dates (start date to end date) of when the roommate(s) were present and the current whereabouts ofthe roommates.
  - ☐ Work with the Division of Healthcare-associated Infection Prevention (HAIP) to determine if screening is appropriate and to coordinate screening through a public health laboratory that can conduct mechanism testing. Note that this screening will use specific swabs provided by the ARLN and will be conducted at no cost to the facility.

Communication

- ☐ Facilities that are transferring patients colonized or infected with *C. auris* must notify the receiving facility of the patient's status to ensure that appropriate infection prevention measures can be promptly implemented upon the patient's arrival. Notification ideally should include a verbal report as well as written notice.
  - ☐ Use the facility transfer letter provided by the Pennsylvania Department of Health as a cover sheet to communicate infection prevention and control measures for *C. auris*: https://www.health.pa.gov/topics/programs/HAIP-AS/Pages/Healthcare.aspx
  - ☐ Use an Inter-Facility Transfer Form. Examples are provided by CDC: https://www.cdc.gov/hai/pdfs/toolkits/Interfacility-IC-Transfer-Form-508.pdf

- ☐ Confirm the patient's charts are flagged to guarantee that the patient's status is communicated effectively

Containment and Prevention

- ☐ The patient should be placed on Contact Precautions or Enhanced Barrier Precautions (depending on healthcare facility type) in a private room, if available
  - ☐ If a private room is not available, the suspected or confirmed *C. auris* case may be placed with another patient that requires minimal support from healthcare personnel. Clinically dependent patients should not be paired with a suspected or confirmed *C. auris* case.
- ☐ Inpatient health care settings managing a suspected or confirmed *C. auris* case should implement the guidance in the CDC *C. auris* Toolkit for the following facility-level strategies:
  - ☐ Hand Hygiene
  - ☐ Contact or Enhanced Barrier Precautions (depending on healthcare facility type)
  - ☐ Healthcare Personnel Education
  - ☐ Minimize Device Use
  - ☐ Timely Laboratory Notification
  - ☐ Inter-facility Communication
  - ☐ Antimicrobial Stewardship
  - ☐ Environmental Cleaning
  - ☐ Patient and Staff Cohorting
  - ☐ Screening Contacts of *C. auris* Patients (in consultation with HAIP)
  - ☐ Active Surveillance Testing (as appropriate)

Surveillance

- ☐ For all healthcare facilities where the patient received overnight care in the 30 days prior to the positive culture:
  - ☐ Conduct a retrospective review of microbiology records for additional *C. auris* in the last 3 months using the positive culture date as the end point for look back
  - ☐ Conduct prospective surveillance for 3 months from the date of the positive culture looking for additional *C. auris* among all recent healthcare facilities

Monitoring and Tracking

- ☐ Enter information in PA-NEDSS as appropriate within 24 hours of notification. Enter as "carbapenemase-producing organism" for initial condition, complete the questionnaire, and choose "Candida auris" as the final condition.
- ☐ If part of your role at the PA Department of Health
  - ☐ Enter into Outbreak Tracking Spreadsheet
  - ☐ Create a folder on the N drive for HAI Investigations to document notes, lab results, line lists, timelines, etc.

Screening Coordination

- ☐ CMHDs may seek guidance from HAIP team on who and when to screen
- ☐ CMHDs should email Liore Klein (liore.klein@maryland.gov); copy the MD ARLN mailbox (mdphl.arln@maryland.gov) to coordinate the plan for screening; copy your PA DOH containment team contacts
- ☐ Swabs can be ordered directly from MD and sent to the facility directly or to the CMHD
- ☐ MD will provide an approval code such as PA2021-299
- ☐ CMHDs can coordinate screenings remotely or be on-site

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Investigation Guide: *Candida auris*

GENERAL INFORMATION AND COURSE OF DISEASE

Infectious Agent: *C. auris* is an emerging fungus that presents a serious global health threat. CDC and DOH are concerned about *C. auris* for three reasons:

- It is often multidrug-resistant, meaning that it is resistant to multiple antifungal drugs commonly used to treat *Candida* infections, resulting in significant morbidity and mortality in affected patients.
- It is difficult to identify with standard laboratory methods, and it can be misidentified in laboratories without specific technology. Misidentification may lead to inappropriate management. Recent advances in laboratory technology have made misidentification less common, however.
- It has caused outbreaks in healthcare settings. For this reason, it is important to quickly identify *C. auris* so healthcare facilities can take special precautions to stop its spread.

C. auris infection has been identified in many body sites including bloodstream, urine, respiratory tract, wounds, and the external ear canal. Based on information from a limited number of patients, CDC reports that 30–60% of people with *C. auris* infections have died. Many of these people had other serious illnesses that also increased their risk of death.

Mode of Transmission: *C. auris* can spread in healthcare settings through contact with contaminated environmental surfaces, equipment, or hands. Transmission is not thought to occur via persistent colonization of healthcare workers. *C. auris* is persistent in the environment and will survive many disinfectants routinely used in healthcare facilities. Although risk of transmission within a healthcare facility increases with length of stay, documented transmission has occurred during exposure periods as short as four hours.

Incubation Period: The incubation period is not well defined. It is unknown how soon after exposure a person can be colonized or infected with *C. auris,* but the timeframe is potentially short depending on dose and route of exposure.

Symptoms: Most individuals who have an invasive *C. auris* infection (e.g., an infection in the bloodstream or an internal organ), also have other serious medical conditions, which may mask symptoms of an infection. *C. auris* infections can range from mild to severe and can result in different sites of infections including urinary tract infections, bloodstream infections, respiratory tract infections, and skin/soft tissue infections.

Duration: A person's colonization status may vary over time, leading to intermittent positive and negative results if testing is repeated. For this reason, there is no established criteria for resolution of colonization, and testing for clearance is not recommended. Colonization with *C. auris* is likely to persist indefinitely; therefore, appropriate infection prevention and control measures should be immediate and utilized indefinitely when an individual known to be colonized with *C. auris* is admitted to an inpatient healthcare facility.

Communicability: *C. auris* can potentially be transmitted as long as the organism is present in a person's bodily tissues or fluids. Appropriate infection prevention and control measures should be used for both colonized and infected individuals in healthcare settings. Individuals colonized with *C. auris* are at increased risk for infection.

Treatment: 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. Similar to recommendations for other *Candida* species, treatment is generally only indicated if clinical disease is present. Patients who become colonized with *C. auris* are at risk of developing invasive infections from this organism. More information about how to prevent colonization from developing into infection is available from the CDC.

Complications: Persons who have recently spent time in hospitals and nursing homes and have invasive devices (e.g., mechanical ventilation or tracheostomy, feeding tubes and central venous catheters) seem to be at highest risk for *C. auris* infection. Like other types of *Candida* infections, risk factors include recent surgery, diabetes, and broad-spectrum antibiotic and antifungal use. These factors increase the risk for severe complications and death from *C. auris* infection.

Prevention: Patients with *C. auris* (both infected or colonized) should be placed on indefinite Contact Precautions or Enhanced Barrier Precautions depending on the healthcare setting. Patients should also be placed in a private room, if possible, to reduce the risk of spreading antimicrobial resistant bacteria. Additional prevention measures are addressed in the CDC Containment Strategy and the CDC Prevention Strategy which may include enhanced surveillance, colonization screening, infection control assessment, etc. It is critical that each report is assessed on a case-by-case basis to determine the appropriate prevention and control measures. Also, it should be noted that antimicrobial stewardship activities are critical to the prevention of multidrug-resistant organisms, including *C. auris*.

CASE DEFINITION

***Candida auris* (CSTE-2023) (see: *Candida auris* 2023 Case Definition)**
C. auris became nationally notifiable in 2018.

Laboratory Criteria for Diagnosis
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).

Criteria to Distinguish a New Case from an Existing Case

- For screening cases, count patient only once as a screening case; do not count if 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., patient with positive screening swab who later develops bloodstream infection would be counted in both categories).
- For clinical cases, count 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).

Subtype(s) Case Definition

***Candida auris*, screening**

Confirmed: 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 as part of clinical care are considered clinical specimens*.

*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.

***Candida auris*, clinical**

Confirmed: 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. This does not include swabs collected for screening purposes.

CASE INVESTIGATION

Priority for Investigations:	DISEASE/SITUATION	Start Investigation No Later Than:	Complete Investigation by:
	C. auris	One Day	Thirty Days

A single case of *C. auris* (infection or colonization) requires a robust containment response. Please refer to materials in the PA DOH *C. auris* toolkit for Public Health.

- Initiate investigation within one day of report. The containment strategy is the same for both infected and colonized patients.
- As with carbapenemase-producing organisms (CPO) and other HAIs, *C. auris* investigations in PA-NEDSS will be assigned by jurisdiction of the ordering facility (not the patient's home address). The jurisdiction of the site where the test was conducted is the *Responsible Jurisdiction* in PA-NEDSS. The *CDC Reporting Jurisdiction* in PA-NEDSS reflects the patient's permanent address (private home, SNF or vSNF, not an LTACH or ACH). Jurisdiction for *C. auris* investigations will initially be assigned by HAIP staff.
- Complete the PA-NEDSS questionnaire for C. *auris* in real time as epidemiolocal information is gathered.
    - There are critical epidemiological details including laboratory results, health care exposures (e.g., hospital, nursing home, rehab, personal care home) and travel history that should be obtained by the investigator to help drive public health action.
    - If a health care exposure is identified, complete the *Candida auris* Report Form and discuss results with the Division of HAIP.
- Use the PA DOH Public Health Toolkit for Response to *Candida auris*, section entitled "Checklist for initial Public Health Response to *Candida auris"* to provide initial public health interventions.
- Notify the HAI team by email: RA-DHHAI@pa.gov or your HAIP point of contact.
- Follow guidance provided by the Division of HAIP as the response to each case will be customized based on the circumstances that are identified through the case investigation.
- Alert the HAI team if a case is cross-jurisdictional and notifications or further investigation need to be conducted.
- Assign final condition; either ***Candida auris*, clinical** or ***Candida auris*, colonization/screening**, and close within 30 days. All cases should be closed as **Confirmed Case.** The classification will ensure the case is counted in the MMWR data sent to CDC. The data gets pulled by the listed CDC Reporting County.
- If part of an outbreak of 2 or more epidemiologically linked cases, create an outbreak in NEDSS and link cases.

OUTBREAK PREVENTION

To provide adequate surveillance and preparation, and prevent outbreaks, facilities should implement the following prevention and containment measures:

- Develop and maintain *C. auris* action plans to assure measures are in place should a patient with *C. auris* be detected in, or transferred to, the facility.
- Maintain vigilance for clinical illness that could be consistent with *C. auris*, particularly in patients at higher risk.
- Evaluate surveillance protocols with the laboratory to ensure prompt notification to the infection prevention and control program when *C. auris* is suspected.
- Deliver education to staff and providers about *C. auris* and the infection prevention and control measures necessary to contain it. Resources are available on CDC's *C. auris* infection prevention and control page.
    - Educational in-services must include an emphasis on hand hygiene. Alcohol-based hand sanitizer is effective against *C. auris* and is the preferred method for cleaning hands when they are not visibly soiled. If hands are visibly soiled, wash with soap and water.
- Facilities that have not previously had *C. auris* cases should contact their local or state public health jurisdiction when admitting a patient known or suspected to be colonized or infected with *C. auris* if they require infection prevention and control consultation.
- Report to the local or state public health jurisdiction when a patient colonized or infected with *C. auris* will be transferred from your facility to another facility; this allows public health to work with the receiving facility to provide education and verify appropriate infection prevention and control measures are implemented.
- Review environmental health practices for effectiveness against *C. auris*. Use of an EPA-registered hospital-grade disinfectant with a claim against *C. auris* (List P) or a product with documented effectiveness against *C. auris* by CDC, is critical as *C. auris* can persist on surfaces in healthcare settings. If none of these products are currently available, an EPA-registered hospital-grade disinfectant effective against *Clostridioides difficile* spores (List K) can be used until List P products can be obtained. Note that many products with label claims against COVID-19 are not effective against *C. auris*.
- Increase audits for hand hygiene, personal protective equipment, and environmental cleaning on units where patients with *C. auris* are located. Consider re-educating healthcare personnel through an in-service or retraining, especially if audits demonstrate low adherence to recommended infection prevention and control practices.

RESOURCES

CDC: Infection Prevention and Control for *Candida auris*
CDC *Candida auris* laboratory resource
EPA-registered hospital-grade disinfectant with a claim against *C. auris* (List P)
PA DOH Candida auris toolkit - Public Health
PA DOH Candida auris toolkit- Healthcare

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Email Templates: Coordination of *C. auris* Screening

Here is an email template that can be used for the MD Lab. Please note that we always ask them to send a few extra swabs beyond what is needed to ensure that there is an adequate supply.

Hi!

Requesting to conduct *C. auris* colonization screening under approval code **PA2021-XXX** for [Insert Facility Name], the [Insert Facility Type] in [Insert Name of County], PA.

Background

We were notified by our PA DOH colleagues that a new clinical case of *Candida auris* (blood, collection: [date]) was detected at an ACH. In reviewing the patient's history, we learned:

- Pt was at Facility A from [Insert Admit Date] to [Insert Discharge Date]
- Dx: Sepsis; she was there for wound healing s/p failed gastric bypass
- This patient was not on contact precautions

Request: We plan to conduct a facility-wide PPS due to this high-risk setting. Census is 31. We are currently aiming for screening on [date]? Would that day work well for the MD Lab?

Also, can we send 35 swabs directly to the facility?

Facility A
Address Line 1
Address Line 2
Attn: Facility POC Name

Thank you,

Here is an email template that can be used to confirm specimen collection was successful and that the shipment is on its way to the MD Lab:

Hi!

30 swabs are en route from Facility A to the MD Lab. ETA is [date] by 10:30AM. TRK# [insert here]

Thank you,

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Helpful Hints for *C. auris* Colonization Screenings

- Facilities should hold on to the box that the swabs arrive in; they can use this to ship the swabs back to the MD Lab
- Consent is not required, only patient or responsible party agreement
- Supplies will include a biohazard bag, absorbent pack, and parafilm
- When the collection occurs, each collection tube should have the following identifiers (Name, DOB, and Date of collection)
- Completed test orders (also referred to as lab slips) go in the pocket of the biohazard bag
- Each specimen should be kept in an individual biohazard bag and kept at room temperature
- Facilities should send the name and DOBs of all patients to be screened to their public health contact
- Asking for a census sheet is often helpful
- If any patient on the list declines to be screened in real time, the facility needs to communicate that in order to cancel the test order
- A FedEx pickup can be set up and we can send a shipping label, no cost to the facility for shipping
- Specimens are sent priority overnight Monday through Thursday.
- **No weekend shipments**

Lab Web Portal 2.0 Training

- HAI Team can provide training to CMHDs on how to use the Maryland ARLN Lab Web Portal 2.0
- New users can start by registering here: https://lwp-web.aimsplatform.com/md2/#/auth/registration
- Send HAIP team names of any new users; we will notify MD of their need for access

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CMHDs should place this template on their department letterhead including signature of the authorized CMHD representative.

[DATE]

[Name, Title]
[Name of Facility]
[Address 1]
[Address 2]

Dear [Addressee],

The Pennsylvania Department of Health, Bureau of Epidemiology recently became aware of a report of a case of *Candida auris* in a patient at your facility (hereafter referred to as index case).

Containment of resistant organisms such as *C. auris* is a national problem and requires that health care facilities and public health agencies work together to prevent transmission. *C. auris,* due to its highly resistant nature, is particularly important to track, monitor and prevent, due to high mortality rates among infected persons, difficulty in identifying the species, and high transmissibility.

The Centers for Disease Control and Prevention (CDC) has published a containment strategy specifically designed to reduce the transmission of *C. auris* and other multi-drug resistant organisms (MDRO) in the United States (2022. The state and local health departments support this strategy for the safety of Pennsylvania patients and residents. The containment strategy guides public health and facility interventions by categorizing drug-resistant organisms into three different Tiers. *C. auris* is a Tier 2 organism in Pennsylvania. Organisms in this tier include MDRO that are primarily associated with healthcare settings and are not commonly identified in the region but may be found more commonly in other geographic regions.

The purpose of this letter is to provide you with recommended actions your facility should take in response to the identification of *C. auris* in a patient at your facility. We jointly emphasize the importance of infection control practices and other prevention activities to reduce the spread of *C. auris* which are based on CDC Guidelines for Infection Prevention and Control of *Candida auris*. **Please see the attached facility-level recommendation checklist.** These recommendations apply to the identification of a single clinical case of *C. auris* at your facility.

Identification of colonized persons can prevent the spread of antimicrobial resistance through routine facility-level actions such as flagging the patient chart, communicating the MDRO status at the time of patient transfer, and managing the patient with the appropriate precautions. Both colonized and infected persons can spread *C. auris*, and colonization can persist for months, perhaps indefinitely. Therefore, it is important to maintain infection prevention and control measures, including Enhanced Barrier Precautions (i.e., gown and gloves) for high contact resident care activities for the duration of a person's stay. There is no evidence that treatment will eradicate *C. auris* colonization, and persons who are colonized should not receive treatment.

We appreciate your commitment to infection control and prevention and your dedication to the well-being of your patients and staff. If you have any questions regarding this information, your primary contact is [insert name, email, phone and role for public health point-of-contact].

Thank you for your cooperation during this investigation.

Sincerely,

Authorized Representative Name
Title/Position

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Facility-Level Recommendation Checklist

1. Communication strategies

- ☐ Promptly notify positive cases' primary caregivers and other health care staff per facility policies/procedures. Inform the case-patient and their family. Share the CDC's fact sheet for colonized patients if appropriate.
- ☐ Consider engaging communications staff and be prepared to answer questions from patients and their family members. Resources are available from the CDC: https://www.cdc.gov/fungal/candida-auris/patients-qa.html
- ☐ Flag the medical chart with the patient's *C. auris* status. If possible, choose an MDRO or other flag that indicates the patient should be on contact precautions or Enhanced Barrier Precautions (depending on healthcare setting).
- ☐ If the *C. auris* is suspected to have been present on admission, notify the transferring facility so that appropriate review can occur at that facility.
- ☐ When transferring a case-patient to another facility, notify the receiving facility of the patient's *C. auris* status verbally and in writing so that they may implement infection control measures. Use the facility transfer letter provided by the Pennsylvania Department of Health as a cover sheet to communicate infection prevention and control measures for *C. auris*: https://www.health.pa.gov/topics/programs/HAIP-AS/Pages/Healthcare.aspx. Use of an Inter-Facility Transfer Form will also assist in this effort. Examples are provided by CDC: https://www.cdc.gov/hai/prevent/prevention_tools.html
- ☐ When transferring a case-patient to another facility, notify your public health contacts. This allows us to work with the receiving facility to assure they are prepared with appropriate infection prevention and control measures.

2. Detection protocols

- ☐ Work with your laboratory to understand the fungal identification methods used to identify *C. auris. C. auris* can be misidentified as a number of other different organisms when using traditional phenotypic methods for yeast identification such as VITEK 2 YST, API 20C, BP Phoenix yeast identification system or Microscan. Use the *Candida auris* laboratory resource available on the CDC's website to identify targets for surveillance based on the laboratory methods in use.
- ☐ Conduct a retrospective microbiology review to identify any signal for potential *Candida auris* from a patient of the facility. Retrospective microbiology review should span the original index case's admission time frame through the start date of prospective surveillance.
- ☐ Conduct prospective surveillance for three months from today (or from the date of the last positive case if cases were to be identified in the future). Track and report *any* specimens suspicious for *C. auris* from a patient of the facility. Instruct the laboratory to save any isolates for potential advanced testing at the public health laboratory.
    - Request that the laboratory perform speciation for all yeast identified from patients of your facility including from both normally sterile and nonsterile body sites, even if that is not the typical practice. If the volume of this request is not feasible, speciate all yeast from patients in the affected unit(s).
    - Discuss options for yeast speciation with public health if your laboratory does not have this capability.

3. Targeted screening practices

- ☐ Determine if the index case, at any time during their stay at your facility, had a roommate or shared a bathroom with another patient. Screening to look for *Candida auris* colonization in roommates and other close contacts, including sexual partners, is recommended. Screening specimens will be collected and sent to the public health laboratory, at no cost to the patient or facility. Screening will be facilitated by public health.

- ☐ Determine if the index case was on contact or Enhanced Barrier Precautions during his or her stay at your facility. Report this information to the Department. Additional colonization screening may be indicated.

4. Prevention activities

- ☐ Place case-patients in a private room. It is acceptable for more than one patient with *C. auris* to share a room, if they do not have any other infectious diseases requiring transmission-based precautions, such as *C. difficile*.
- ☐ Use standard and contact precautions at all times for case-patients in acute care settings. Enhanced Barrier Precautions may be applied to residents in a nursing home. Cohort case-patients in the same area of the facility to decrease movement of healthcare workers and equipment.
- ☐ Consider cohorting healthcare personnel who provide the most regular care to positive patients (e.g., nurses; nursing assistants) during a shift.
- ☐ Dedicate equipment to case-patients or use disposable equipment wherever possible. Any shared reusable equipment must be thoroughly cleaned and disinfected after each contact with a case-patient or their environment. *C. auris* has 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.
- ☐ If out-of-room therapy is essential to the patient's medical treatment plan, arrange to have the case-patients receive therapy at the end of the day or before a lunch break so that terminal cleaning of the therapy room and equipment can occur.
- ☐ Provide formal re-education *to all staff* to include hand hygiene according to CDC's Clean Hands Count for Healthcare Providers, as well as proper use of Personal Protective Equipment (PPE)/contact precautions and how to manage patients with MDRO to reduce the likelihood of transmission. To aid in education effort, utilize the DOH Alcohol-Based Hand Rub (ABHR) memo to emphasize that ABHR is the preferred method for routine hand hygiene in health care settings.
- ☐ Ensure adequate opportunities exist to conduct hand hygiene (i.e., clean sinks that are not used for wastewater are available for hand washing and alcohol-based hand rubs) and adequate supplies (e.g., towels, soap, etc.). Regular inventory of supplies is critical.
- ☐ Perform hand hygiene audits at least monthly on each floor or unit. If possible, consider a "secret shopper" approach so that staff do not necessarily know they are being observed. Audits should occur during day, night, and weekend shifts. Refer to the DOH Hand Hygiene Audit Toolkit for additional resources.
- ☐ Provide formal education to environmental health staff to emphasize their critical role in disinfecting the environment and preventing transmission of drug-resistant organisms.
- ☐ Perform thorough daily and terminal environmental cleaning of patients' rooms and other areas where they receive care (e.g., radiology; physical therapy) using an EPA-registered disinfectant with label claims against *C. auris* or at a minimum, an EPA-registered hospital-grade disinfectant effective against *C. difficile* spores (List K). A 30-minute training on how to choose the proper EPA-registered disinfectant is available on TRAIN PA Course number 1102420.
- ☐ Frequently disinfect all high-touch surface areas (e.g., bed rails, phone or call bell, bathroom) to decrease the burden of organisms using an effective disinfectant (as above). It is critical to follow the manufacturer's instructions of each product and to observe the appropriate contact time for the product to work effectively.
- ☐ A cleaning schedule should be available to ensure that all environmental health staff are aware of which persons are responsible for which items or areas and with what frequency items and areas are to be cleaned and disinfected.
    - Waste containers may require more frequent disposal due to the amount of PPE that may be required during patient care.
- ☐ Perform regular environmental cleaning audits on each floor or unit. Audits should occur during all shifts and include observation of routine and terminal cleaning. CDC has created an Environmental Cleaning Checklist to assist with the auditing process for terminal cleaning: https://www.cdc.gov/HAI/toolkits/Environmental-Cleaning-Checklist-10-6-2010.pdf

Candida auris Report Form

Pennsylvania Department of Health
The Healthcare Associated Infection Prevention/Antimicrobial Stewardship Program
625 Forster Street
9th Floor, Room 912
Harrisburg, PA 17120
Telephone: (717) 787-3350 Fax: (717) 772-6975

PATIENT DEMOGRAPHIC INFORMATION

PATIENT'S NAME (LAST, FIRST)	D.O.B.	AGE (years)	SEX
		0	☐ Male ☐ Female ☑ Other

RACE ☐ African-American ☐ White ☐ Asian ☐ Pacific Islander ☐ Native-American ☐ Unknown ☑ Other | HISPANIC ☐ Yes ☐ No ☑ UNK

CURRENT ADDRESS ☐ Private Residence ☑ Healthcare/Assisted Living Facility	ZIP CODE	PATIENT TELEPHONE ☐ Work ☐ Cell ☑ Home

FACILITY NAME, if residing in a healthcare/assisted living facility	WAS FACILITY NOTIFIED ☐ Yes ☐ No ☑ Unknown	PART OF OUTBREAK/CLUSTER ☐ Yes ☐ No ☑ Unknown

CLINICAL DATA

HOSPITALIZED ☐ Yes ☑ No	HOSPITAL NAME	ADMIT DATE	DISCHARGE DATE	Admitted to Intensive Care Unit ☐ Yes ☐ No ☐ UNK Fatal ☐ Yes ☐ No ☑ Unknown Date of Death:

REASON FOR TESTING ☐ Screening/Surveillance ☑ Signs/Symptoms of Infection	SIGNS/SYMPTOMS ONSET DATE, if infection:	History of *C. auris* ☐ Y ☐ N ☑ UNK Date of first positive:

INFECTION(S) ASSOCIATED WITH CULTURE(S) (Check all that apply) ☐ None ☐ Candidemia (blood) ☐ Respiratory Tract Infection ☐ Urinary Tract Infection (UTI) ☐ Organ Space/Abscess ☐ Skin/Soft Tissue Infection or Wound ☐ Other:

UNDERLYING MEDICAL CONDITIONS (Check all that apply or **attach problems list or pertinent sections of medical records**)

☐ Chronic Heart/Cardiovascular Disease ☐ Kidney Disease; ☐ Dialysis in Past Year ☐ Wound(s), specify:
☐ Diabetes ☐ Neurological, specify: ☐ Other, specify:
☐ COPD ☐ Immunosuppression, specify: ☐ None ☐ Unknown

RISK FACTORS

IF AVAILABLE, HISTORY OF HEALTHCARE STAYS IN THE UNITED STATES IN THE PREVIOUS YEAR **(List where the patient was transferred from first)**

Facility: Admission/Discharge Dates: -

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Facility: Admission/Discharge Dates: -

HISTORY OF INTERNATIONAL TRAVEL and/or MEDICAL CARE ABROAD IN PREVIOUS YEAR (Check all that apply)

☐ International Travel ☐ Medical Care Abroad ☐ No ☐ Unknown Dates of travel: -

If yes, location(s):

SURGERY/PROCEDURE INVOLVING A SCOPING DEVICE IN THE PAST YEAR? ☐ Yes ☐ No ☑ Unknown If yes, date:

CURRENT INDWELLING / INVASIVE DEVICE(S)? ☐ Yes ☐ No ☑ Unknown If yes, specify:

LABORATORY (Please attach culture and sensitivity results and any other applicable test results available)

SPECIMEN COLLECTION DATE: RESULT DATE:

GENUS and SPECIES: ☐ *Candida auris* ☐ *Candida haemulonii* ☑ Other:

SPECIMEN TYPE (Check all that apply)

☐ Blood ☐ Urine
☐ Wound ☐ Respiratory Secretions
☐ Skin ☐ Ear
☐ Groin ☐ Axilla
☐ Other, specify:

DIAGNOSTIC METHOD

☐ MALDI-TOF ☐ VITEK 2 YST
☐ MALDI Biotyper ☐ API 20c AUX
☐ BD Phoenix ☐ MicroScan
☐ Whole Genome Sequencing (WGS)
☐ Other:

RESISTANT/INTERMEDIATE TO AT LEAST ONE DRUG IN THE CLASS: (Check all that apply)

☐ Azoles (e.g. Fluconazole, voriconazole, posaconazole) ☐ 5-fluorocytosine
☐ Polyenes (e.g. Amphotericin B) ☐ Pandrug-Resistant
☐ Echinocandins (e.g. anidula-, caspo-, mica-fungin) ☐ None
☐ Allylamines (e.g. terbinafine, amorolfin, naftifine) ☐ Unknown

REPORTER INFORMATION

REPORT DATE	REPORTER NAME: Role: ☐ DO/MD ☐ ICP ☐ PA/NP ☐ RN ☑ Other:	FACILITY NAME	REPORTER PHONE # & EMAIL

PLEASE FAX REPORT TO (717) 772-6975 UPON COMPLETION. RETAIN ISOLATE FOR ONE MONTH

Reporting Guidelines for *Candida auris*

Report **all** positive cultures of *Candida auris* and *Candida haemulonii* (*Candida auris* is frequently misidentified as *Candida haemulonii*).

Report cultures from all body sites (including but not limited to blood, wound, skin, ear, urine, rectum, and respiratory secretions) that were collected for diagnostic purposes as well as surveillance/screening purposes.

All positive test results should be reported to PADOH **within 24 hours**. Please call PADOH at 1-877-PA-HEALTH to report a case of *Candida auris*. A *Candida auris* case report form should also be filled out and **emailed to RA-DHHAI@pa.gov** or faxed to PADOH at **(717) 772-6975** after reporting the case via phone.

Isolates should be retained for one month. PADOH will follow up to coordinate further testing as needed.