Candida auris clinical update: case finding and public health reporting

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To: Clinical Laboratories, Infection Control Professionals, Infectious Disease Physicians, Long-Term Care
From: Janna Kerins, VMD, Epidemic Intelligence Service Officer, Communicable Disease Program
Massimo Pacilli, MS, Sarah Kemble, MD and Stephanie Black, MD, MSc, Communicable Disease Program
Subject: Candida auris clinical update: case finding and public health reporting

KEY MESSAGES and ACTION STEPS:
• All Candida isolates from sterile sites should be identified to the species level. C. auris is commonly misidentified as Candida haemulonii
• Testing Candida isolates from non-sterile sites to determine species should be considered if:
  o clinically indicated (e.g. suspected treatment failure)
  o there is an epidemiological link to a known C. auris patient, or
  o patient has recent hospitalization in a country with known C. auris transmission
• Report to public health any of the following:
  o C. auris
  o C. haemulonii
  o Any Candida isolate for which species identification was attempted, but could not be determined
  o Other organisms for which C. auris can be misidentified

Background: Candida auris is an emerging multidrug-resistant yeast that can be transmitted in healthcare settings and has been shown to cause healthcare-associated outbreaks. As of October 31, 2017, 186 clinical cases of C. auris infection and 212 colonized patients have been reported in 10 U.S. states. In Illinois, 9 confirmed and 2 probable cases of clinical C. auris infection have been identified. (https://www.cdc.gov/fungal/diseases/candidiasis/tracking-c-auris.html). Probable cases are those with supportive lab evidence and epidemiologic linkage (e.g. C. haemulonii identified in a facility with other known C. auris case(s) and no isolate is available for further testing).

Clinical Characteristics: About half (54%) of the clinical cases in the U.S. have been identified through blood cultures; however, patients have also been infected or colonized with C. auris in urine, wounds, sputum, bronchoalveolar lavage fluid, and other non-invasive sites (https://www.cdc.gov/fungal/diseases/candidiasis/c-auris-alert-09-17.html). In the United States to date, about 90% of C. auris isolates have been resistant to fluconazole, 30% have been resistant to amphotericin B, and 5% have been resistant to echinocandins (https://www.cdc.gov/fungal/diseases/candidiasis/recommendations.html). Some C. auris isolates from outside of the United States have been found to be resistant to all three classes of antifungal drugs, and many isolates are resistant to multiple classes of drugs. Patients with C. auris infection should be closely monitored for persistently positive clinical cultures, which may indicate treatment failure. Some patients diagnosed with C. auris in the U.S. have had recent hospitalization in countries with known C. auris transmission including India, Pakistan, South Africa, and Venezuela. Clinicians should have a low threshold to test these patients for C. auris, if clinically indicated. Patients can be persistently colonized with C. auris, posing a long-term transmission risk.

Infection Control: Patients suspected or confirmed to be colonized or infected with C. auris should be placed in a single-patient room using Standard and Contact Precautions. Consider screening close contacts of patients with C. auris for the presence of colonization (see https://www.cdc.gov/fungal/diseases/candidiasis/c-auris-infection-control.html). If multiple patients are colonized or infected with C. auris, please contact CDPH to discuss cohorting and other infection control interventions. To clean and disinfect the patient care environment, CDC currently recommends the use of an EPA-registered sporidical cleaner (list available here: https://www.epa.gov/pesticide-registration/list-k-epas-registered-antimicrobial-products-effective-against-clostridium).
Laboratory: C. auris can be misidentified as a different organisms when using traditional biochemical methods for yeast identification such as VITEK 2 YST, API 20C, BD Phoenix yeast identification system, and MicroScan. See https://www.cdc.gov/fungal/diseases/candidiasis/recommendations.html for more information. All laboratories, especially laboratories serving healthcare facilities where cases of C. auris have been detected should do the following:

- Review past microbiology records (as far back as 2015, if possible) to identify cases of confirmed or suspected C. auris.
- Conduct prospective surveillance to identify C. auris cases in the future.
- When a case of C. auris infection or colonization has been detected in a facility or unit, species identification of isolates from non-sterile sites can be implemented for at least one month until no evidence exists of C. auris transmission.

Reporting: If a patient with C. auris is detected or suspected, please report to the Communicable Disease Program at the Chicago Department of Public Health for further recommendations by contacting Janna Kerins (312-746-6219, Janna.Kerins@cityofchicago.org) or Massimo Pacilli (312-746-6225, Massimo.Pacilli@cityofchicago.org). CDPH will facilitate submission of available isolates to CDC via the Illinois Department of Public Health laboratory for further characterization.

What Public Health is doing:

- Meeting with stakeholders including infection control specialists to share information and solicit feedback
- Developing training for healthcare and environmental services workers
- Conducting surveillance and contact tracing
- Facilitating testing for accurate identification of C. auris infections
- Developing tools for healthcare facilities to properly identify, treat and control the spread of C. auris
- Conducting on-site visits to hospitals and long-term care facilities to assess and provide consultation on infection control practices
- Developing ongoing guidance for hospitals and long-term care facilities based on newly emerging information related to treatment and infection control
- Ensuring inter-facility communication when a patient with C. auris infection is transferred to other healthcare facilities
- IDPH is currently entering IL residents found to be colonized or infected with C. auris into the XDRO registry (https://www.xdro.org). Providers may query the XDRO registry to check if patients have been previously diagnosed with C. auris