

# Aide-mémoire on infection prevention and control measures for *Candida auris* colonization and infection in patients in health facilities

Interim recommendations, 1 February 2021

PAHO/PHE/IHM/COVID-19/21-0004

## Objective

- To provide key recommendations about infection prevention and control measures for *Candida auris* colonization and infection in patients in health facilities.

## Target audience

- Infection Prevention and Control experts both from the national and health facility levels.
- Health workers from all levels of care.

## Background information

- *Candida auris* is an emerging fungus of public health concern because it is multidrug-resistant and easily spreads in healthcare settings, causing outbreaks.<sup>1</sup>
- *C. auris* can asymptotically colonize various body sites, including the axilla, groin, nostrils, or hands or cause infection in any body part.
- Dissemination of *C. auris* occurs through person-to-person contact and via contaminated environmental surfaces, equipment, or medical devices. *C. auris* may be spread by healthcare worker hands from patient to patient.
- The first case of *C. auris* in the Region of the Americas was reported in 2012. Since that time, Brazil, Canada, Chile, Colombia, Costa Rica, Guatemala, Mexico, Panama, Peru, Venezuela, and the United States have reported cases of invasive infections or colonization by *C. auris* in healthcare settings.<sup>2</sup>; more countries may have cases that are undetected or have not been reported.
- Reports suggest there has been an increase in *C. auris* infections and colonization among hospitalized patients during the COVID-19 pandemic, likely resulting from hospital crowding and cohorting; personal protective equipment, disinfectant, alcohol-based hand sanitizer, and laboratory supply and staffing shortages; breaches in or changes to standard infection prevention and control practices, and other forms of healthcare system strain.<sup>3,4</sup> Individual cases and outbreaks of *C. auris* among patients with COVID-19 have been reported in multiple countries in the Americas.

## Strategies for containment of *C. auris* in health facilities

- **The best strategy to prevent the spread of *C. auris* in health facilities environments is early identification and adoption of infection prevention and control measures.**

<sup>1</sup> Jeffery-Smith A, Taori SK, Schelenz S, Jeffery K, Johnson EM, Borman A; Candida auris Incident Management Team, Manuel R, Brown CS. Candida auris: a review of the literature. Clin Microbiol Rev. 2017 Nov 15;31(1). pii: e00029-17. DOI: 10.1128/CMR.00029-17. Print 2018 Jan.

<sup>2</sup> For more information of the epidemiological status of *Candida auris* in the Region of the Americas, please refer to Pan American Health Organization, World Health Organization. Epidemiological Alert: *Candida auris* outbreaks in health care – 3 October, Washington, D.C.: PAHO/WHO; 2016; <https://www.paho.org/hq/dmdocuments/2016/2016-oct-3-phe-candida-auris-epi-alert.pdf>.

<sup>3</sup> Prestel C, Anderson E, Forsberg K, et al. Candida auris Outbreak in a COVID-19 Specialty Care Unit — Florida, July–August 2020. MMWR Morb Mortal Wkly Rep 2021;70:56–57. DOI: <http://dx.doi.org/10.15585/mmwr.mm7002e3>.

<sup>4</sup> For more information on assessment of infection prevention and control practices for COVID-19 isolation areas in healthcare facilities, refer to <https://iris.paho.org/handle/10665.2/52028>.

## Early identification

- Investigate patients newly infected or colonized with *C. auris* to identify source of transmission and screen healthcare contacts to identify colonized individuals.

## Adoption of infection prevention and control measures

- Patients colonized or infected with *C. auris* should be managed through strict adherence to standard and contact precautions. Infected or colonized patients should ideally be placed in a single room. If this is not possible, consider cohorting patients.
- The most important IPC measures to prevent the spread of *C. auris* are:
  - (i) hand hygiene.<sup>5</sup>
  - (ii) use of personal protective equipment (PPE): Gloves and gown should be used while caring for patients colonized or infected with *C. auris*.
  - (iii) environmental cleaning and disinfection of medical devices and equipment.
  - (iv) good communication between laboratory and IPC team so that cases are quickly reported to the IPC team and they can take action to decrease the spread of the pathogen, ideally set up automatic alerts from the laboratory to the IPC team whenever a new case of *C. auris* is identified.
  - (v) good communication between IPC team and healthcare facility administration, as it can take significant resources and time to control the spread of *C. auris* in healthcare facilities, including resources for laboratory testing, increased environmental cleaning, improved use of PPE, and potentially keeping rooms or units closed to new admissions until the outbreak is under control. It is also important to establish good communication between facilities before and during transfer of patients with *C. auris* infection or colonization.
  - (vi) Set up *C. auris* task force or working group when it is first identified in a facility or for each outbreak. The task force should include personnel from administration, nursing, environmental cleaning, medical care, and laboratory as each of those pillars will be critical in the control of the pathogen.

---

<sup>5</sup> For more information on hand hygiene, please refer to <https://www.who.int/gpsc/5may/tools/9789241597906/en/>. Access date 31 January 2021.

## Summary of infection prevention and control recommendations for containment of *Candida auris*

Implementation of Contact Precautions
<b>Hand hygiene</b>
<ul style="list-style-type: none"> <li>• Perform hand hygiene by handwashing with water and soap or rubbing it with an alcohol-based handrub solution.</li> <li>• Hand hygiene should be performed:               <ul style="list-style-type: none"> <li>○ before and after contact with the patient or the environment,</li> <li>○ before and after doffing PPE</li> </ul> </li> <li>• Ensure supplies for hand washing (water, soap, paper towels and alcohol gel) are easily accessible in patients care areas</li> </ul>
<b>Transmission-based precautions and Personal protective equipment (PPE)</b>
<ul style="list-style-type: none"> <li>• Standard and contact precautions should be used for patients with <i>C. auris</i> infection or colonization.</li> <li>• Because patients remain colonized for a long time, patients should remain on contact precautions for their entire stay.</li> <li>• Infected or colonized patients should ideally be placed in a single room. If this is not possible, consider cohorting patients with the same pathogens in the same room or area, but ensure use of strategies to minimize transmission between roommates.</li> <li>• Ensure PPE is used appropriately.               <ul style="list-style-type: none"> <li>○ Perform hand hygiene before donning and after doffing PPE.</li> <li>○ Put on PPE (gloves and gowns) before entering the patient care area.</li> <li>○ Remove gloves and gowns before exiting the patient care area.</li> <li>○ Change the PPE and perform hand hygiene between contacts with patients in the same room.</li> </ul> </li> <li>• Ensure PPE is easily accessible near patients with <i>C. auris</i>.</li> <li>• Use signage to notify hospital staff, family members, and visitors of isolation measures and PPE required.</li> </ul>
<b>Environmental Cleaning and Disinfection</b>
<ul style="list-style-type: none"> <li>• Clean and disinfect the patient area using a disinfectant effective against <i>C. auris</i> <sup>(a)</sup> at least daily, specially on frequently touched surfaces, including those in close contact with the patient (for example, chairs, beds, patient tables, monitors, pumps)</li> <li>• Some common healthcare disinfectants, especially some quaternary ammonium compounds, are not effective against <i>C. auris</i>. Surface cleaning should be performed with soap and water, followed by the application of a hospital disinfectant approved for use against <i>C. auris</i> or <i>C. difficile</i> spores for disinfection, such as 0.1% sodium hypochlorite solution (for non-metal equipment) <sup>(b, c)</sup>.</li> <li>• Ensure all manufacturers' directions are followed and disinfectants are applied for the appropriate contact time.</li> <li>• Equipment used for multiple patients (within the cohort area) must be cleaned and disinfected before use by another patient. If possible, dedicate equipment (sphygmomanometers, stethoscope, thermometers) to be used exclusively by the patient with <i>C. auris</i> or cohort area.</li> <li>• Dishes, glassware, and utensils should be cleaned between patients using water and detergent or disposable ones can be used.</li> </ul>
<b>Screening recommendations – Patients</b>
<ul style="list-style-type: none"> <li>• Screening is recommended to identify new colonized individuals on wards/units identifying new infected or colonized cases.</li> <li>• Colonization screening should be conducted by swabbing the groin and armpit, but other sites such as nose or fingers/toes can also be colonized.</li> <li>• If concerned about <i>C. auris</i> in the facility, consider species identification of candida from all body sites (not just sterile sites), including urine, wounds, and respiratory specimens.</li> <li>• Rescreening patients with previous colonization by <i>C. auris</i> are not recommended.</li> <li>• Inform the responsible authorities if patient is infected or colonized by <i>C. auris</i> in case of internal and interinstitutional patient transfers.</li> </ul>
<b>Decolonization procedures</b>
<ul style="list-style-type: none"> <li>• There are no recommended decolonization methods, high concentrations of chlorhexidine are required to kill <i>C. auris</i> and there has been transmission and outbreaks in facilities using chlorhexidine bathing.</li> </ul>

**References:** (a) <https://www.epa.gov/pesticide-registration/selected-epa-registered-disinfectants#candida-auris>; (b) – World Health Organization. (2016). Decontamination and reprocessing of medical devices for health-care facilities. World Health Organization. <https://apps.who.int/iris/handle/10665/250232>. Access date January 31, 2021; (c) – Front Microbiol. 2018; 9: 726. Published online 2018 Apr 12. doi: 10.3389/fmicb.2018.00726.