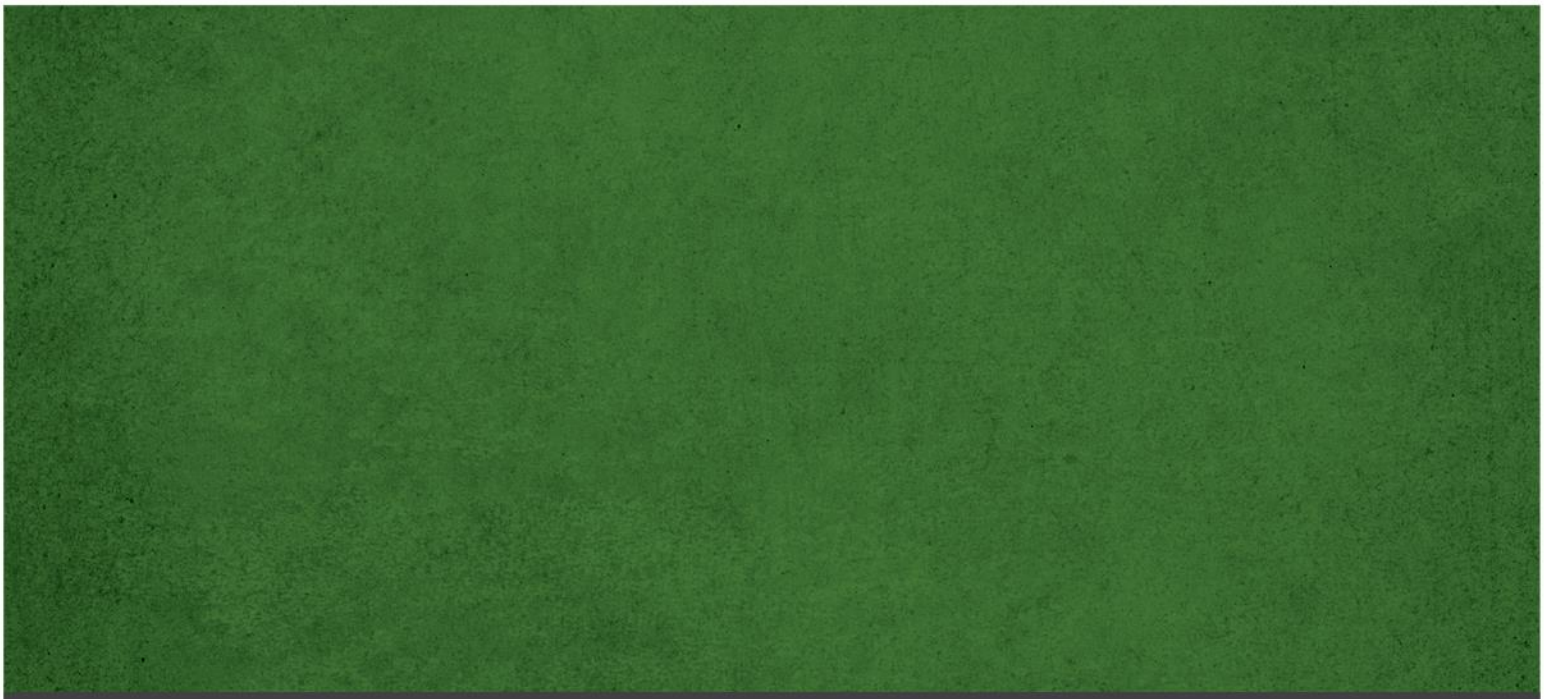
Candida auris Infection Prevention and Control in Canadian Healthcare Settings



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Summary of recommendations

In addition to PHAC's Routine Practices and Additional Precautions for Preventing the Transmission of Infection in Healthcare Settings, the following are recommended:

Infection prevention and control measures for *C. auris* management	
1. Additional precautions for *C. auris* positive patients, residents or clients	**1.1** Placement in a private room with a private bathroom or dedicated commode.
2. Personal protective equipment (PPE)	**2.1** Health care workers (HCW) and visitors should wear a long-sleeved gown with gloves at all times while in the patient's room.
3. Environmental cleaning and disinfection	**3.1** Health Canada-approved hospital or healthcare disinfectant with claims of efficacy against *C. auris*. **3.2** In-vitro data shows that chlorine- and hydrogen peroxide-based disinfectants are effective against *C. auris*. **3.3** Quaternary ammonium compounds should not be used due to reduced activity. **3.4** UV-C and H_20_2 no-touch disinfection technologies may be considered only as a supplement to the above cleaning practices.
4. Device reprocessing	**4.1** Single use and disposable patient care supplies should be used for a patient with *C. auris* whenever possible. **4.2** Reusable, non-critical patient care equipment and supplies should be identified and stored in the patient's room, dedicated to the patient for the duration of their admission and appropriately cleaned and disinfected prior to use on another patient.
5. Patient transfers between or within facilities	**5.1** Transfer of patients colonized or infected with *C. auris* within or between facilities should be avoided unless medically necessary and for transitions of care (e.g. such as acute care to LTC). **5.2** The receiving unit, department or facility must be notified in advance. **5.3** *C. auris* colonization/infection should not be a reason to refuse the transfer.
6. Visitor considerations	**6.1** Visitors should be trained on PPE and hand hygiene requirements and wear the same PPE as HCWs while in the patient's room/care area.

7. AMR stewardship and resistance	**7.1** Antimicrobial therapy initiation, maintenance, efficacy and discontinuation should be collaboratively discussed on an ongoing basis among all relevant healthcare professionals involved in the care of the patient.
***C. auris* screening**	
8. Key risk factors for *C. auris* colonization or infection screening	**8.1** Admission screening should be considered for the following patients in acute and long-term care settings: 1. Admitted to a hospital or LTC home outside of Canada (including in the US) within the prior 12 months, or; 2. Transferred from a Canadian healthcare facility with an ongoing *C. auris* outbreak (if known). **8.2** Screening sites should include: 1. Bilateral axilla and groin; 2. Previously colonized sites; 3. Clinically relevant sites (e.g., wounds or exit sites of devices).
9. Screening timing and frequency	**9.1** For patients meeting admission screening criteria and for case contacts, additional screening should be performed in the event of a negative initial screen, in conjunction with IPC and/or relevant infectious disease experts, with a minimum of two additional screen performed a week apart.
10. Screening to determine clearance	**10.1** Screening to determine clearance of *C. auris* is not recommended.
11. Management of contacts	**11.1** All close patient contacts of new cases of *C. auris*, such as past and present unit/ward mates and bathroom mates, or patients who occupied an insufficiently-disinfected room immediately after an unrecognized case, should be placed in a private room with private bathroom/dedicated commode, on contact precautions and be screened for *C. auris*, as per the screening requirements previously mentioned.
Laboratory considerations	
12. Testing methods	The following methods may be used for *C. auris* isolate ID: **12.1** Matrix-assisted laser desorption/ionization time of flight (MALDI-TOF), if the database used contains *C. auris* spectra. **12.2** PCR methods specific for *C. auris*

	The following methods may be used for *C. auris* screening specimens: **12.3** Standard culture-based techniques using chromogenic growth media, with confirmation by MALDI-TOF or PCR.
13. Specimen collection and handling	**13.1** Specimens should be collected from the patient using routine IPC procedures and appropriate PPE, and handled in the laboratory as per Canadian Biosafety Standards and Guidelines.
Outbreak management	
14. Outbreak definition	**14.1** Any transmission of *C. auris* among patients within a healthcare facility should be considered an outbreak requiring additional infection prevention and control measures.
15. Case identification	**15.1** A patient is identified as being a *C. auris* case if they have: 1. Laboratory confirmation of *C. auris* obtained through routine or contact tracing screening samples. 2. Laboratory confirmation of *C. auris* obtained from a clinical sample for diagnostic or treatment purposes.
16. Outbreak management plan and supplemental measures	**16.1** Creation of a multi-disciplinary outbreak management team. **16.2** Conducting an epidemiological investigation to identify potential contacts, sources of transmission, and breaches in IPC practice. **16.3** Increased environmental cleaning/disinfection of the patient care area and common areas with particular focus on horizontal and frequently-touched surfaces. **16.4** Auditing of compliance with hand hygiene, PPE use, and cleaning and disinfection. **16.5** Decolonization of positive patients is not recommended. **16.6** Cohorting of patients and staff should be considered.
17. Contact tracing during an outbreak	**17.1** All close patient contacts of new cases of *C. auris*, such as past and present unit/ward mates and bathroom mates, or patients who occupied an insufficiently-disinfected room immediately after an unrecognized case, should be placed in a private room with private bathroom/dedicated commode, on contact precautions with gown and gloves, and be screened for *C. auris*. Screened close patient contacts should remain on contact precautions until negative results are available and cleared by infection prevention and control, as per screening requirements previously mentioned.

	17.2 It is also recommended that ward/unit mates who are not close contacts also be tested, for example through point prevalence testing. Testing should be performed as per screening requirements indicated above. **17.3** Private rooms and contact precautions are not required for unit/ward mates who are not close contacts while awaiting the results of point prevalence testing.
18. Additional screening considerations	**18.1** Screening of staff is not recommended.

Introduction

Preamble

This guideline is an update to the Public Health Agency of Canada's (PHAC) "Notice: *Candida auris* interim recommendations for infection prevention and control". This version:

- Expands on recommendations found in the notice.
- Contains additional recommendations regarding outbreak management and screening.

Background

Candida auris (*C. auris*) is a multi-drug resistant fungal pathogen that can cause healthcare-associated invasive infections and outbreaks and, therefore, poses a serious threat to global human health. *C. auris* can be challenging to identify in the laboratory using conventional methods and its detection may therefore be underestimated. Mortality rates of invasive *C. auris* infections are estimated to be greater than 40%, which is similar to other drug-resistant microorganisms [1]. PHAC has noted the spread of *C. auris* in hospital and long-term care (LTC) settings across the globe. Recently, multiple healthcare-associated *C. auris* outbreaks and the identification of pan-resistant *C. auris* isolates internationally have increased concerns about the impacts of *C. auris* in healthcare settings.

Data from the National Microbiology Laboratory Branch (NMLB) and the Canadian Nosocomial Infection Surveillance Program (CNISP) indicate that *C. auris* has been isolated from hospitalized patients between 2012 and 2023. The peer-reviewed literature describes the first series of *C. auris* cases and a small hospital outbreak reported in Canada [2-4]. Given a general paucity of data, the current status of *C. auris* in Canadian hospitals and LTC homes is currently unknown.

Risk and transmission

The propensity of *C. auris* to spread can have serious implications for the Canadian healthcare system. Invasive *C. auris* infections can lead to severe morbidity and mortality, especially among hospitalized patients who are immunocompromised and or receiving intensive care [5, 6].

C. auris can:

- become resistant to all available antifungal drugs [7, 8];
- persist on surfaces and multi-use equipment for extended periods of time [9-11];

- extensively contaminate healthcare environments occupied by *C. auris* positive patients [12-16], and
- be resistant to quaternary ammonium-based hospital disinfectants [17, 18].

C. auris frequently colonizes the skin, respiratory tract, and urinary tract and is shed from the skin into the environment contaminating surfaces/equipment. This causes transmission of infection through direct and indirect contact in healthcare settings [1, 6].

Aim and scope of this guideline

PHAC develops evidence-informed infection prevention and control (IPC) guidance to complement provincial and territorial public health efforts in monitoring, preventing, and controlling healthcare-associated infections. Guidance will evolve with new scientific discovery, as well as with careful consideration of implications for practice in areas of uncertainty.

Guidance should always be read in conjunction with relevant provincial/territorial (P/T) and local policies and regulations. PHAC guidance does not supersede P/T or local policies and regulations. PHAC will continue to consider new evidence as it becomes available.

This guidance is for all Canadian healthcare settings. For the purposes of this document, the term "patient" will be used to include those receiving health care who are traditionally/routinely referred to as patients, clients or residents.

Recommendations for non-healthcare settings are beyond the scope of this document.

Guideline development and methodology

PHAC developed this guideline with technical expertise from the National Advisory Committee on Infection Prevention and Control (NAC-IPC) and subject matter experts. The recommendations are informed by a review of the evidence, expert opinion and core IPC principles as identified in PHAC's Routine Practices and Additional Precautions for Preventing the Transmission of Infection in Healthcare Settings (RPAP). This advice is based on currently available scientific evidence and expert opinion and adopts a precautionary approach where the evidence is lacking or inconclusive. It is subject to review and change as new information becomes available.

Please refer to Appendix A for a list of members.

Target users

The target audiences for this document are IPC professionals, Occupational Health and Safety (OHS) professionals, healthcare organizations, and healthcare providers responsible for patient care and/or educating healthcare workers (HCWs) on IPC.

Hierarchy of controls to *C. auris*

Elimination and substitution

Elimination and substitution as part of the hierarchy of controls are not feasible approaches to preventing transmission of *C. auris* in healthcare settings. However, systems and protocols should be in

place to ensure accurate surveillance and prevention of transmission of *C. auris* in healthcare settings (see Engineering and Administrative controls, below).

Engineering controls

Examples of engineering controls in managing a patient with *C. auris* include:

- Private single rooms with designated private toilet and patient sink, as well as a designated area to don and doff personal protective equipment (PPE) safely;
- Designated staff hand washing sinks with soap;
- Furnishings and equipment designed to be easily and effectively cleaned and disinfected;
- Point-of-care alcohol-based hand rub (ABHR).

Administrative controls

Each healthcare organization should develop comprehensive policies and procedures for putting on and removing PPE and for effective hand hygiene. To be effective in preventing transmission of *C. auris* and/or detecting cases of *C. auris*, administrative controls should be applied from the first encounter with a suspect or confirmed case and continue until the patient leaves the healthcare setting, or is deceased (note, proper post-mortem care is required).

Examples of administrative controls in managing a patient with *C. auris* include:

- Development and maintenance of an up-to-date *C. auris* risk assessment policy;
- Ensuring the facility maintains sufficient quantity of hand sanitizer and non-expired, easily available PPE appropriate for the care of suspect or confirmed *C. auris* patients, consistent with the PPE that staff have trained on;
- Screening protocols for relevant risk factors for *C. auris* colonization/infection at points of entry;
- Triage procedures and prompt initiation of precautions and appropriate PPE;
- Policies for case and contact tracing.

In addition, organizations must comply with federal and P/T OHS Acts and Regulations. This is typically accomplished through implementation of policies, procedures, education and training. In individual provinces and territories, Joint Health and Safety Committees are also legislated and are jointly chaired by a management and HCW representative. Hospitals should have internal responsibility systems (IRS), which is the underlying philosophy of the occupational health and safety legislation in all Canadian jurisdictions. The fundamental principle of the IRS is that everyone in the workplace - both employees and employers - is responsible for their own safety and for the safety of co-workers.

Personal protective equipment

Federal and P/T OHS Acts define specific duties for the employer, supervisor and HCW regarding PPE. The employer must ensure that the appropriate PPE is available and in good working order. There must be comprehensive instruction, training and supervision for correct usage. Healthcare organizations need to ensure an adequate supply of appropriate PPE to protect HCWs and that their HCWs are adept in the application, use and removal of their PPE. Specific PPE requirements for care of individuals suspected or confirmed to have *C. auris* can be found below.

Organizational risk assessment

This organizational risk assessment (ORA) is central to any healthcare organization's preparation and planning to protect all individuals (e.g., HCW, patient, visitor, and contractor) from *C. auris* in all healthcare settings.

Conducting an ORA will help the facility identify the effectiveness of present control measures and the breadth of the hierarchy of controls to prevent transmission of *C. auris*.

Routine practices

Routine practices are the IPC measures used in the care of all patients, at all times, in all healthcare settings. Routine practices and additional precautions are covered in detail in PHAC's Routine Practices and Additional Precautions for Preventing the Transmission of Infection in Healthcare Settings guidance document.

Additional precautions

PPE

PPE should always be used in conjunction with engineering and administrative controls.

All PPE should be supplied in adequate amounts and sizes in all patient care areas, and stored so it is readily accessible at the point-of-care for all HCWs and visitors.

All HCWs and visitors should wear the following PPE at all times while providing care and/or when in the patient's room/care area:

- Long-sleeved gown;
- Gloves.

Gloves and gowns should be donned prior to entering the patient room/care area and discarded in an appropriate no-touch receptacle prior to exit.

PPE should be changed:

- before leaving patient care environment;
- between patients;
- when visibly soiled;
- when holes or tears are noticed or the integrity of the PPE is compromised.

Patient placement for *C. auris* positive patients and contacts

Patients suspected or confirmed to be positive for *C. auris* should be flagged as per facility protocols and placed on contact precautions with gowns and gloves, in a private room with private washroom or dedicated commode.

If placement in an open ward area is necessary, curtains should be kept closed and the patient provided a dedicated commode.

Clear, visible signage should be placed on the door, or on entry to the patient care area, indicating the level of precautions and PPE requirements.

In instances where multiple cases are present on the same ward/unit, cohorting of positive patients should be considered in conjunction with IPC, ensuring any additional precautions not applicable to *C. auris* (e.g. patient is also on precautions for influenza) are considered when determining patient placement.

Given the propensity of *C. auris* to persist in the environment, persist on surfaces, and be resistant to common quaternary ammonium disinfectants, it is recommended that whenever possible, patients should stay in their room for the duration of their admission, and only be allowed to leave when medically necessary and if they are able to exercise compliance with hand hygiene requirements and not contaminate their environment. When leaving their room, the patient's gown should be changed, any equipment leaving the room should be cleaned and disinfected appropriately, and they should be accompanied by a HCW in appropriate PPE who ensures all surfaces that come into contact with the patient are thoroughly cleaned with appropriate disinfectant (see Environmental cleaning/disinfection section). For other settings such as LTC, appropriate mitigation procedures should be in place to manage residents positive with *C. auris* when moving around the facility as necessary.

Patient transfers between or within facilities

Transfer of patients colonized or infected with *C. auris* within or between facilities should be avoided unless medically necessary and for transitions of care (e.g. such as acute care to LTC). The receiving unit, department or facility must be notified in advance. All healthcare facilities should be able to manage patients with *C. auris* and *C. auris* colonization/infection should not be a reason to refuse the transfer.

Appropriate PPE should be used to care for the patient during transport and at the transport destination. The patient should perform hand hygiene with assistance as necessary before leaving the room. The receiving department or healthcare facility is responsible for notifying their health care personnel involved in the care of the patient of the status of the patient.

All patient care equipment and furniture leaving the patient care area, including the bed, should be cleaned and disinfected prior to exit.

Environmental cleaning and disinfection

As *C. auris* has demonstrated an ability to persist in the environment, even after routine cleaning [17, 19], care should be taken to ensure adequate cleaning and disinfection of the patient room or care area during admission and after discharge, with an appropriate disinfectant.

Environmental cleaning and disinfection of a room of a patient with *C. auris* should be performed using a Health Canada-approved hospital or healthcare disinfectant with claims of efficacy against *C. auris*.

In-vitro data suggests that both chlorine- and hydrogen peroxide-based disinfectants are also effective against *C. auris* [11, 17, 20-22].

Manufacturer instructions for use, wet contact time and surface and equipment type should be followed.

Quaternary ammonium compounds should not be used due to evidence of reduced activity against *C. auris* [17].

Ultraviolet-C (UV-C) light and vaporized hydrogen peroxide (H_20_2) have also been shown to reduce *C. auris* bioburden on surfaces [17, 20, 21]. No-touch disinfection technologies should only be used as a supplement to the above cleaning practices.

All horizontal and frequently touched surfaces should be cleaned at a minimum of once daily and when visibly soiled.

Terminal cleaning of the patient equipment and environment, including the removal and cleaning of hospital linens and privacy curtains, should be done upon patient discharge or transfer.

All single use and disposable patient care supplies stored in the patient room should be discarded during terminal cleaning.

Environmental services workers should wear the same PPE as other HCWs when cleaning and disinfecting the patient room.

Medical care equipment

Single use and disposable patient care supplies should be used for a patient with *C. auris* whenever possible and disposed of in a no-touch waste receptacle after use.

Reusable, non-critical patient care equipment and supplies should be identified and stored in the patient's room, dedicated to the patient for the duration of their admission and appropriately cleaned and disinfected prior to use on another patient.

Waste, linen, and nutritional services

No special precautions are recommended for handling of waste, linen, dishes or cutlery. Routine practices should be used.

Visitor considerations

Visitors should be instructed to speak with a HWC before entering the room or care area of a patient on contact precautions for *C. auris* to evaluate the risk to the health of the visitor and the ability of the visitor to comply with precautions.

Families and visitors entering the patient care area should be educated about the precautions being used as well as the prevention of transmission of infection to others, with a particular focus on hand hygiene. They should be instructed on how to don and doff their PPE correctly and in the correct disposal of used PPE. Families and visitors who enter the patient care area should use the same PPE as HCWs.

Communication materials for patients and visitors should address the needs of diverse populations such as those with disabilities and those who may not be fluent in either English or French.

Handling bodies of deceased patients

No special precautions are required for handling of deceased bodies. HCWs should follow their jurisdictional and organization-specific protocols for handling deceased bodies of *C. auris* positive patients.

Antimicrobial stewardship and resistance

Antimicrobial therapy for *C. auris* should be guided by culture and susceptibility results.

Ongoing antimicrobial therapy should be reviewed frequently by relevant healthcare workers to confirm effectiveness and to assess the need for continued treatment.

Pediatric considerations

There are no additional pediatric considerations for C. auris.

C. auris screening and surveillance

The most prevalent reported risk factors for *C. auris* colonization and infection include:

- Prolonged exposure to broad-spectrum antibiotics [22-27];
- Indwelling medical devices [22-25];
- Diabetes mellitus [22-25, 27];
- Prolonged ICU stay [22-27];
- Haemodialysis [22-27];
- Patient immunocompromised [22-27];
- Admission to a hospital or LTC home outside of Canada;
- Transfer from a healthcare facility with an ongoing *C. auris* outbreak.

Suspicion should be exercised if patients possess risk factors for *C. auris* colonization and/or have suspected or confirmed *Candida* spp. infection. In these cases, accurate species-level identification of *Candida* isolates from clinical samples is recommended to ensure any necessary IPC interventions can be put into place to prevent nosocomial transmission of *C. auris* [19, 24-26, 28, 29].

Admission screening

Patients being admitted to healthcare facilities should be screened for *C. auris* if:

1. they have been admitted to a hospital or LTC home outside of Canada (including in the US) within the prior 12 months, or
2. transferred from a Canadian healthcare facility with an ongoing *C. auris* outbreak (if known).

Screening should include a single bilateral swab of a patient's axilla and groin. In addition, single swabs of previously colonized or clinically relevant sites may also be indicated, for example, wounds and exit sites of devices.

Screening timing and frequency

In the event of a negative initial screen, individuals at high risk of *C. auris* colonization or infection should have additional screening performed, as evidence suggests the sensitivity of a single pooled axilla/groin swab may be limited [30, 31].

Additional screening should be determined in conjunction with IPC and/or relevant infectious disease experts. At a minimum, two additional screens a week apart should be considered. Patients should be accommodated as per the above "Patient placement for *C. auris* positive patients and contacts" section and remain on contact precautions until screening results are available.

Discontinuation of additional precautions

Routine screening to determine clearance of *C. auris* is not recommended. There are no proven clinical or microbiological criteria that can be used to reliably predict when *C. auris* colonization has cleared [1, 5, 22, 26, 28]. Evidence suggests colonization persists for a prolonged time period and repeated swabbing may return inconsistent results [28, 31]. Colonization of patients has been demonstrated to last more than 2 years in some cases [19, 28, 31].

Patients identified as being colonized with *C. auris* should be flagged by the facility and placed on contact precautions for all current and subsequent admissions. Individuals identified as contacts of a *C. auris* case after discharge should be flagged for screening upon any future admissions.

Patients identified as colonized or infected with *C. auris* should be flagged by the healthcare facility and placed in private room accommodation with a private bathroom/dedicated commode with contact precautions in place for the duration of the admission as well as any future admissions.

The duration of contact precautions for residents or clients with *C. auris* in LTC home settings should be determined in conjunction with local and regional epidemiology, facility administration and IPC.

Management of contacts

All close patient contacts of new cases of *C. auris*, such as past and present unit/ward mates and bathroom mates, or patients who occupied an insufficiently-disinfected room (e.g., disinfected with quaternary ammonium compounds) after an unrecognized case, should be placed in a private room with private bathroom/dedicated commode, on contact precautions and be screened for *C. auris*.

In the event of a negative initial screen, an additional screening approach should be determined in conjunction with IPC and/or relevant infectious disease experts. At a minimum, an additional screen performed at least a week after the initial negative result should be considered. Screened close patient contacts should remain on contact precautions until results are available. Discontinuation of precautions should be done in conjunction with IPC and/or relevant infectious disease experts, and, if applicable, local public health authorities (e.g., during an outbreak).

Laboratory considerations

Testing method

Difficulty in identification of *C. auris* and differentiation from other closely-related species is well-documented [32]. Some of the standard culture-based approaches are not as effective at differentiating *C. auris* from other common *Candida* spp. However, newly formulated chromogenic media show efficacy at putative identification based on colony color and appearance [33]. Standard biochemistry-based methods also pose an issue in accurate identification of *C. auris*, since its biochemical assimilation profile is very similar to that of other closely related species [23, 32, 34].

The following methods are the most reliable to screen specimens for and identify *C. auris*:

- For *C. auris* isolate identification:
    - Matrix-assisted laser desorption/ionization time of flight (MALDI-TOF), as current databases all contain *C. auris* spectra;

    - PCR methods specific for *C. auris*. Laboratories that use other methods (e.g., Microscan, Vitek) may need additional time to correctly identify isolates.
- For *C. auris* screening specimens for colonization (e.g, axilla/groin swabs), culture using chromogenic agar. Presumptive isolates growing on these plates should be confirmed as *C. auris* by MALDI-TOF or PCR.

All laboratory identification methods for *C. auris* should follow Accreditation Canada guidelines regarding quality, safety and competence [35, 36]. Laboratories should ensure all databases are up-to-date to ensure accurate identification. Settings lacking access to molecular PCR assays or MALDI-TOF should consider sending isolates to local or regional public health reference laboratories for correct identification.

Specimen collection and handling

All specimens collected for laboratory testing should be regarded as potentially infectious and must be collected using routine practices and additional precautions, including appropriate PPE [37]. Clinical specimens should be collected and transported in accordance with organizational policies and procedures and required IPC measures. For proper laboratory biosafety procedures please refer to the PHAC's Canadian Biosafety Standards and Guidelines (CBSG).

Notifications

All newly identified cases of *C. auris* should be reported to IPC, and to any public health authority as per applicable jurisdictional reporting requirements.

Outbreak management

Organizations should have a management plan to specifically address *C. auris* outbreaks.

In an outbreak, a multi-disciplinary outbreak management team should be assembled to develop and coordinate outbreak interventions to halt ongoing transmission. The team should consist of, at a minimum, members from IPC, environmental services, and management of the affected patient care department or area. The team should meet regularly to discuss the progress of the outbreak and the need for additional outbreak measures. An epidemiological investigation of the outbreak should also take place to identify possible sources of transmission or breaches in IPC practices (e.g. missed screening). *C. auris* outbreak response measures should be implemented in consultation with facility administration, IPC professionals, and, in reportable jurisdictions, local public health authorities.

Outbreak definition

Any transmission of *C. auris* among patients within a healthcare facility should be considered an outbreak requiring additional IPC measures.

Given the paucity of data regarding environmental persistence and transmission characteristics, an outbreak should be declared over when no additional cases of *C. auris* are found:

- for a defined period of time;
- after a defined number of point prevalence surveys.

Case identification

A patient is identified as being a case of *C. auris* if they have [38]:

- Laboratory confirmation of *C. auris* obtained from a clinical or screening specimen.

When a single case of *C. auris* infection or colonization is identified in a patient not already on precautions, facilities are encouraged to request species-level identification on all isolates that would normally be reported as *Candida* spp. for a limited period (e.g., 4 to 8 weeks), in order to ensure no isolates are misidentified and additional transmission in the facility has not gone undetected.

Period of time until declaration of the outbreak being over should be determined based on the epidemiology of the outbreak and in conjunction with IPC and, in reportable jurisdictions, local public health authorities.

Point prevalence surveys should be performed at least weekly and based on the epidemiology and degree of transmission, in consultation with facility administration, IPC professionals, and, in reportable jurisdictions, local public health authorities.

Supplemental outbreak measures

Decolonization

Routine decolonization of patients positive for *C. auris* is not recommended. Current data indicates no specific intervention is known to effectively reduce or eliminate *C. auris* colonization [1, 5, 22, 26, 28]. Laboratory evidence suggests high levels of chlorhexidine are active against *C. auris* [26]. However, the effects of chlorhexidine on reducing *C. auris* skin burden or infection have not been systematically assessed [28, 39, 40]. *C. auris* outbreaks and transmission have been described in facilities that routinely use chlorhexidine bathing [10, 28].

Environmental cleaning and disinfection

Increased cleaning and disinfection in affected areas should be conducted, including bathing and toileting facilities, recreational equipment, all horizontal surfaces in the patient's room and, areas/items that are frequently touched (hand and bedrails, light cords, light switches, door handles, furniture, etc.), as well as common areas and nursing stations.

Auditing and compliance

Auditing of compliance to additional precautions (e.g., hand hygiene practices, PPE use, cleaning and disinfection) should be performed routinely for the duration of the outbreak. Audit results should be reported to relevant individuals (e.g. administration, IPC, nursing staff, etc.) and education or training offered, when necessary, in instances of poor compliance.

Reporting

The outbreak should be reported to IPC, relevant facility administration, and to local public health officials as per regional and provincial/territorial reporting requirements.

Contact tracing during an outbreak

When a previously unknown *C. auris* colonization or infection is identified in a patient not already on contact precautions, contact tracing should be conducted to identify possible transmission.

All close patient contacts of new cases of *C. auris*, such as past and present unit/ward mates and bathroom mates, or patients who occupied an insufficiently-disinfected room (e.g. disinfected with quaternary ammonium compounds) immediately after an unrecognized case, should be placed in a private room with private bathroom/dedicated commode, on contact precautions and be screened for *C. auris*. Screened close patient contacts should remain on contact precautions until negative results are available and cleared by infection prevention and control.

It is also recommended that unit/ward mates who are not close contacts also be tested, for example through point prevalence testing. Extent of additional testing should be determined by the unit staff and IPC based on their individual scenarios. Contact precautions are recommended until additional screening/point prevalence results are available. Private rooms are not required for unit/ward mates who are not close contacts while awaiting the results of point prevalence testing.

Declaring an outbreak over

Given the paucity of data regarding environmental persistence and transmission characteristics, an outbreak should be declared over when no additional cases of *C. auris* are found:

- for a defined period of time;
- after a defined number of point prevalence surveys.

Period of time until declaration of the outbreak being over should be determined based on the epidemiology of the outbreak and in conjunction with IPC and, in reportable jurisdictions, local public health authorities. Point prevalence surveys should be performed at least weekly and based on the epidemiology and degree of transmission, in consultation with facility administration, IPC professionals, and, in reportable jurisdictions, local public health authorities.

Additional screening

Routine screening of staff for *C. auris* is not currently recommended.

Appendix A: Acknowledgements

This guideline was developed in collaboration with the National Advisory Committee on Infection Prevention and Control (NAC-IPC). The NAC-IPC is an external advisory body that provides subject matter expertise and advice to the Public Health Agency of Canada (PHAC) on the prevention and control of infectious diseases in Canadian health care settings.

The following individuals sat on the NAC-IPC at the time this document was developed. Please note that participation in the NAC-IPC does not constitute endorsement by a member's affiliated organization.

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Appendix B: National surveillance programs with *C. auris* data

PHAC has been conducting national surveillance specific to *C. auris* through CNISP (since 2019), and the Canadian Public Health Laboratory Network (CPHLN). CNISP is a collaborative effort of PHAC and sentinel hospitals across the country that participate as members of the Canadian Hospital Epidemiology Committee, a subcommittee of the Association of Medical Microbiology and Infectious Diseases Canada. The CPHLN consists of the NMLB and P/T public health laboratories. P/T laboratories forward all isolates of *C. auris* that they receive to the NMLB for whole genome sequencing.

Appendix C: Acronyms

ABHR	Alcohol-based hand rub
AGMP	Aerosol-generating medical procedure
AIIR	Airborne infection isolation room
AMR	Antimicrobial resistance
AMS	Antimicrobial stewardship
AMU	Antimicrobial use
CARSS	Canadian Antimicrobial Resistance Surveillance System
CBSG	Canadian Biosafety Standards and Guidelines
CNISP	Canadian Nosocomial Infection Surveillance Program
CPHLN	Canadian Public Health Laboratory Network
HAI (s)	Healthcare-associated infection(s)
HC	Health Canada

HCW	Healthcare worker
HH	Hand hygiene
IMS	Incident management structure
IPC	Infection prevention and control
LTC	Long-term care
NACIPC	National Advisory Committee on Infection Prevention and Control
NML	National Microbiology Laboratory
OHS	Occupational health and safety
ORA	Organizational risk assessment
PHAC	Public Health Agency of Canada
PPE	Personal protective equipment
RPAP	Routine practices and additional precautions

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