**Surveillance for *Candida auris***

**CNISP & CHEC**

**Hospital/Laboratory Survey**

The CNISP *C*. *auris* interest group is considering a CNISP surveillance program for *C. auris.* To assess feasibility, we are hoping that you and you microbiology laboratory will be willing to answer some questions about current identification methods and AST for *Candida spp.* in CNISP/CHEC labs. We anticipate that this survey will take 15-20 minutes to complete. We will get back to you with a summary of the information by the end of February. The CNISP *C. auris* working group will use the data to determine if a pilot of surveillance is possible in 2018. Survey analysis will be coordinated by Dr. Garcia Jeldes and Dr. McGeer; no laboratory or hospital will be identified or identifiable in any data they share with interest group without the express permission of the respondent.

Notes:

* If one laboratory serves more than one CNISP/CHEC member hospital with different answers to Q6-16, please send one survey, and copy&paste questions 1-5 to provide answers for each hospital
* The intent is that you do not look up any data; “not sure” is a perfectly acceptable answer to Q16

**Laboratory name (Q6-Q17):** Click here to enter text.

**SECTION A: INFECTION PREVENTION AND CONTROL QUESTIONS:**

Hospitals included (enter name or CNISP code): Click here to enter text.

1. Do you have an infection prevention and control policy that determines which patients should be screened for colonization with *C. auris*? *(check the single most applicable answer)*

[ ]  No, we don’t believe that the evidence supports screening of patients for colonization

[ ]  No, we don’t believe that risk in our geographic area warrants such a policy currently

[ ]  No, we haven’t yet seen a case and our program has more important priorities

[ ]  No, but we are considering it, as we believe it will be necessary in the near future

[ ]  Yes, but we don’t yet have a laboratory protocol or funding approval yet

[ ]  Yes, and we have a laboratory protocol, but funding for it is not yet approved

[ ]  Yes, and we are ready to implement if necessary

[ ]  Yes, and we have already screened patients

1. What patient screening do you currently recommend? *(check as many as applicable)*

[ ]  None

[ ]  Roommates of a patient identified as colonized/infected with **any** *C. auris*

[ ]  Wardmates of a patient identified as colonized/infected with **any** *C. auris*

[ ]  Roommates of a patient with recent healthcare in the Indian subcontinent identified as

 colonized/infected with fully susceptible *C. auris*

[ ]  Wardmates of a patient identified with recent healthcare in the Indian subcontinent identified as

 colonized/infected with fully susceptible *C. auris*

[ ]  Roommates of a patient identified as colonized/infected with an **MDR** *C. auris*

[ ]  Wardmates of a patient identified as colonized/infected with an **MDR** *C. auris*

[ ]  Patients with recent healthcare exposure in the Indian subcontinent

[ ]  Patients or patient populations with exposure to antifungals

 Please specify: Click here to enter text.

[ ]  Other, please specify: Click here to enter text.

1. What body sites would you recommend for screening? *(check as many as applicable)*

[ ]  Not applicable, we don’t recommend screening

[ ]  Not yet decided

[ ]  Rectum

[ ]  Groin

[ ]  Axilla

[ ]  Nares

[ ]  Other : Click here to enter text. :

1. If you had no resource limitations, what patient screening would you be recommending for your hospital(s) in 2018? *(check as many as applicable)*

[ ]  None

[ ]  Roommates of a patient identified as colonized/infected with **any** *C. auris*

[ ]  Wardmates of a patient identified as colonized/infected with **any** *C. auris*

[ ]  Roommates of a patient with recent healthcare in the Indian subcontinent identified as

 colonized/infected with fully susceptible *C. auris*

[ ]  Wardmates of a patient with recent healthcare in the Indian subcontinent identified as

 colonized/infected with fully susceptible *C. auris*

[ ]  Roommates of a patient identified as colonized/infected with an **MDR** *C. auris*

[ ]  Wardmates of a patient identified as colonized/infected with an **MDR** *C. auris*

[ ]  Patients with recent healthcare exposure in the Indian subcontinent

[ ]  Patients with a travel history to the Indian subcontinent but no healthcare exposure

[ ]  Patients with recent hospitalization outside of Canada (and not Indian subcontinent)

[ ]  Periodic point prevalence of leukemia or transplant patients

[ ]  Periodic point prevalence of medical or medical/surgical ICU patients

[ ]  Patients or patient populations with exposure to antifungals

Please specify: Click here to enter text.

[ ]  Other, please specify: Click here to enter text.

1. If CNISP/CHEC were to do surveillance targeted to *C.auris* in sterile site cultures*,* how should identification of isolates for this surveillance be approached?

[ ]  surveillance should focus on identifying all *C. auris* isolates, with any susceptibility pattern

[ ]  surveillance should focus on identifying *C. auris* among fluconazole resistant isolates

[ ]  surveillance should focus on identifying all MDR *Candida spp.,* not only *C. auris*

[ ]  Other, please specify: Click here to enter text.

**SECTION B: MICROBIOLOGY LABORATORY QUESTIONS**

1. For which types of *Candida* isolates do you identify or attempt to identify to the species level? *(check as many as applicable)*

[ ]  All clinically significant Candida isolates

[ ]  No Candida isolates

[ ]  Candida isolates from blood cultures

[ ]  Candida isolates from CSF cultures

[ ]  Isolates from cultures of other sterile sites

[ ]  Some isolates from non-sterile sites

 If yes, please specify the criteria: Click here to enter text.

1. Which method do you use for the identification of *Candida* to the species level? (check all that apply)

[ ]  Vitek 2 YST (bioMerieux)

[ ]  API 20C AUX (bioMerieux)

[ ]  Phoenix Yeast ID system (BD)

 [ ]  Microscan (Beckman Coulter)

 [ ]  Matrix-assisted laser desorption/ionization time-of-flight (MALDI-TOF)

 [ ]  Biotype (Bruker) – clinical/commercial database

 [ ]  Biotype (Bruker) – RUO/research database

 [ ]  Vitek MS (bioMerieux) clinical/commercial database

[ ]  Vitek MS (bioMerieux) RUO/research database

 [ ]  Chromogenic agar

[ ]  PCR/Sequencing, if yes, please specify which isolates have PCR/sequencing, and what type of

 sequencing is done : Click here to enter text.

 [ ]  Other (please specify): Click here to enter text.

1. If you use MALDI-TOF, how do you prepare isolates?

 [ ]  N/A, we don’t identify yeast with MALDI-TOF

 [ ]  Direct smear onto slide/target plate

 [ ]  On slide/target plate formic acid extraction

[ ]  Complete Etoh/formic acid tube extraction

1. What do you do if your system does not identify a *Candida* isolate from a sterile site to the species level? (*check all that apply*)

[ ]  Report is as *Candida* species, or *Candida* spp., not *Candida albicans*

[ ]  Send it to a reference lab for identification

[ ]  Other, specify: Click here to enter text.

1. For which types of *Candida* isolates do you perform (or send to reference lab for) antifungal susceptibility testing? (*check as many as applicable)*

[ ]  All *Candida* isolates

[ ]  No *Candida* isolates

[ ]  All isolates from blood cultures (ie. at least one isolate per episode of candidemia)

[ ]  All isolates from CSF cultures (i.e. at least one isolate per episode)

[ ]  All isolates from cultures of other sterile sites (i.e. other than blood and CSF)

[ ]  Some isolates from blood cultures, specify criteria: Click here to enter text.

[ ]  Some isolates from cultures of other sterile sites (i.e. other than blood)

specify criteria: Click here to enter text.

[ ]  Some isolates from non-sterile sites,- specify criteria: Click here to enter text.

1. How/where is your antifungal susceptibility testing performed? (*check as many as applicable)*

 [ ]  In your laboratory

 Please specify method(s) used *(check as many as applicable)*

 [ ]  Broth microdilution according to CLSI M27 method

 [ ] YeastOne Y09 Panel (Thermofisher/Oxoid)

 [ ]  Gradient strips (E-test)

 [ ]  Disc diffusion (Kirby Bauer) according to CLSI M44

 [ ]  Referred to our provincial public health laboratory

[ ]  Referred to other lab, please specify lab: Click here to enter text.

1. Which antifungal agents are tested (by your lab, or your reference lab)?

 [ ]  None, we do not do or request susceptibility testing routinely on any *Candida* isolates

[ ]  Fluconazole

[ ]  Other azoles, specify: Click here to enter text.

[ ]  Amphotericin B

[ ]  Echinocandins, specify: Click here to enter text.

[ ]  Other, specify: Click here to enter text.

1. Are you confident that your current laboratory protocols ensure that *C. auris* will be identified if it is a **clinically significant isolate**?

[ ]  No [ ]  Yes If it is identified as being resistant to at least one anti-fungal

[ ]  No [ ]  Yes If the isolate is from a sterile site culture

[ ]  No [ ]  Yes If the isolate is from a non-sterile site culture AND is identified to the species level

1. Do you have a laboratory procedure/SOP for processing screening swabs from patients to detect **colonization** with *C. auris* (e.g. for exposed contacts of a case)?

[ ]  No (or not yet)

[ ]  Yes, we use the CDC protocol

[ ]  Yes, we would send to our provincial laboratory, which has a procedure

[ ]  Yes, we have our own policy/procedure (please attach policy if possible)

1. In order to have an idea of how many clinical isolates might be submitted to NML with different approaches to suriveillance , we‘d like to know if you would be willing/able to share your laboratory data for 2017 months regarding:

 Yes No

[ ]  [ ]  Number of Candida isolates from sterile sites with an uncertain species identification

 [ ]  [ ]  Susceptibility of these isolates to the azoles, ampho B and echinocandins

[ ]  [ ]  Number of Candida from sterile sites resistant to 2 azoles, ampho, any echinocandin

[ ]  [ ]  Number of presumptive isolates of *C.auris* from any sites

 *(if enough sites are able, we will send a follow-up email requesting information)*

1. Has *C. auris* been identified from any specimens in your laboratory?

[ ]  No

[ ]  Not sure

[ ]  Yes: if yes - *(Please enter actual number or estimate, or “unk” for unknown)*

1. How many patients had specimens that tested positive? : Click here to enter text.
2. How many patients had a sterile site culture positive? : Click here to enter text.
3. How many patients had a fluconazole resistant *C. auris* strain? : Click here to enter text.
4. How many patients had *C. auris*  resistant to other antifungals? : Click here to enter text.
5. In what year(s) were the positive specimens obtained? : Click here to enter text.
6. How were the *C. auris* isolates identified?

 [ ]  In our laboratory, as part of routine testing

[ ]  In our laboratory, as part of a project/study

 [ ]  By our public health laboratory, as part of routine testing

[ ]  By our public health laboratory, as part of a project/study

[ ]  By another reference laboratory

[ ]  Other, please specify : Click here to enter text.

17. PHAC or CPHLN might wish to expand this survey to other hospitals in Canada. In this circumstance, may we share this survey, with your hospital identified, with the investigators, so as not do duplicate requests?

[ ]  Yes

[ ]  Probably, but please check with us first

[ ]  No, please just let them send me the survey again

18. Do you have any other comments for the working group? : Click here to enter text.

THANKYOU!

Please feel free to email comments or questions at any time to any

member of the CNISP *C. auris* interest group. If you wish to join the interest group,

please email Allison McGeer or Amrita Bharat, who will add you to the group emails/teleconferences. If you have questions specific to this survey, please email Felipe Garcia Jeldes.

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