

5 SURVEILLANCE FOR ANTIMICROBIAL RESISTANCE

a *Candida auris* — a global alert

Government agencies in the United States of America and United Kingdom have recently issued alerts for an emerging fungal 'superbug', *Candida auris*.

- Public Health England (UK): <https://www.gov.uk/government/collections/candida-auris>
- Centers for Disease Control and Prevention (US): <http://www.cdc.gov/fungal/diseases/candidiasis/candida-auris-alert.html>

Reasons for the global alert and recommendation to the South African laboratories and clinicians are listed below:

***C. auris* is difficult to identify in the routine laboratory** using biochemical methods (including automated systems). Vitek 2 YST and VITEK Mass Spectrometry (MS) (BioMérieux) misidentify this as *Candida haemulonii*, API systems (BioMérieux) as *Rhodotorula glutinis* and Auxacolor (Bio-Rad) as *Saccharomyces cerevisiae*. The identification of this pathogen can be confirmed currently using the Bruker MS or molecular methods. Suspect *C. auris* in the laboratory if a cream-coloured yeast-like colony is identified as *C. haemulonii*, *S. cerevisiae*, *R. glutinis*, *Candida sake* or *Candida famata*.

***C. auris* is multidrug resistant.** Almost all isolates are resistant to fluconazole (almost uniformly high minimum inhibitory concentrations (MICs)) and a large proportion are resistant to voriconazole. In other regions, amphotericin B and echinocandin resistance has been seen. As there are no agreed-upon interpretive breakpoints for *C. auris* and any antifungal agent, it may be helpful to refer any isolates with high echinocandin or amphotericin B MICs to the NICD for confirmation. The first-line agent for the treatment of invasive

Candida infections should ideally be an echinocandin (i.e. caspofungin, micafungin or anidulafungin) but amphotericin B is more easily accessible in the public sector. No amphotericin B resistance has been confirmed in SA to date.

***C. auris* is already endemic in Gauteng Province.** *C. auris* has emerged as a common pathogen in the private sector (hundreds of cases since 2013) and in a few public-sector facilities in Gauteng. A few cases have been identified in neighbouring provinces. Urine, central venous catheter tips and blood cultures are among the most common specimens from which *C. auris* has been isolated in South Africa.

Nosocomial transmission of *C. auris* is likely. Person-to-person transmission is very likely based on findings from molecular epidemiology studies. Contact precautions and terminal environmental decontamination is recommended where feasible. Screening of patients for colonisation has been recommended in high-income countries where cases have not yet been detected, but this may not be feasible or appropriate in SA. Local epidemiologic studies to determine risk factors for *C. auris* invasive infection and patient outcomes are currently underway.

Diagnostic laboratories are requested to continue to send all bloodstream isolates to the NICD as part of routine GERMS-SA candidaemia surveillance. Please contact the Centre for Opportunistic, Tropical and Hospital Infections directly for assistance with identification of any suspicious non-sterile site isolates.

Source: Centre for Opportunistic, Tropical, and Hospital Infections, NICD-NHLS; (neleshg@nicd.ac.za)