

# Microbe of the month

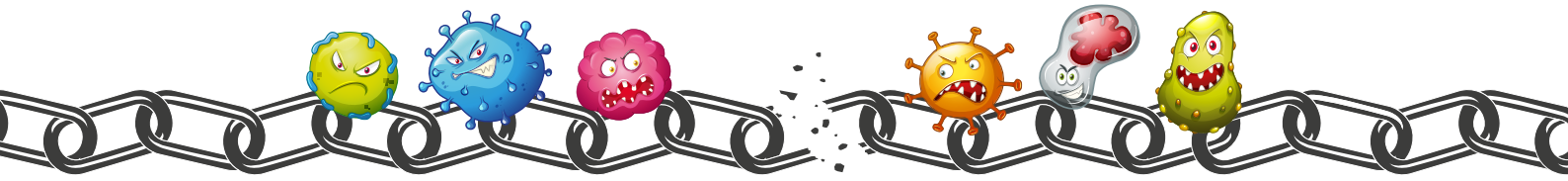
Breaking The Chain of Infection

Cutimed®

OCTOBER 2019

Newsletter

Compiled by Helen Loudon, Independent IPC Practitioner



Featured  
this  
month:

## Candida auris

Fast facts about the novel fungal superbug

### WHAT is *Candida auris*?

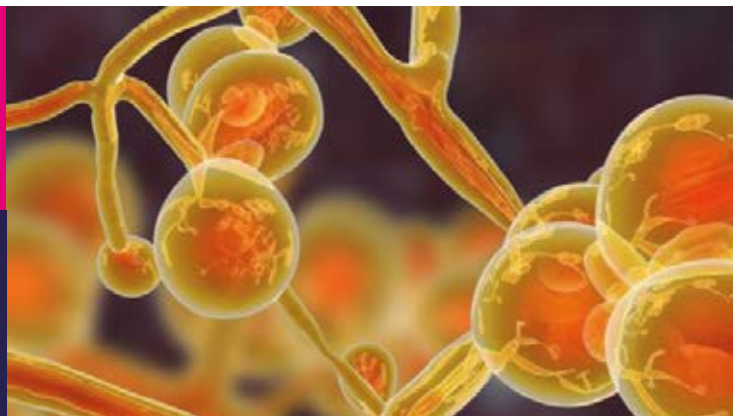
The fungal (yeast-like) pathogen *Candida auris* (*C. auris*) was first described in 2009 after isolation from the ear of a patient in Japan ('auris' is from the Latin term for 'ear') and has since been responsible for serious outbreaks on several continents across the world.

*Candida auris* can live on the skin, inside the gut or in the environment, and causes invasive infections such as bloodstream infections (candidaemia), meningitis, bone infections, burns / wound infections and urinary tract infections.

Several intrinsic properties of the pathogen probably facilitated its rapid spread in hospitals. *C. auris* produces **biofilms**, and while this fungus rarely colonises the hands of healthcare workers, it can survive for prolonged periods in the immediate environment around infected or colonised patients and on re-useable patient equipment.

The reported in-hospital mortality rate of patients with *Candida auris* infection is up to **70%**.

*Candida auris* has now been detected at almost 100 South African hospitals, causing large outbreaks at some facilities. This pathogen now accounts for approximately 1 in 10 cases of invasive candidaemia.<sup>1,2</sup>



Get in touch with us for more information and free samples of our wound care solutions - [askcutimed@essity.com](mailto:askcutimed@essity.com)

**CLICK HERE** for more information on our wound care solutions

**CLICK HERE** to find out more about Essity

**CLICK HERE** 

Watch a short video on **Cutimed® Sorbact®**, including benefits, uses and instructions



## A major concern

*C. auris* was the second-most common cause of candidaemia in the South African private sector in 2016 based on active, laboratory-based surveillance, with most cases occurring in the Gauteng province. In public sector hospitals, *C. auris* was the fourth-most common species of *Candida* causing candidaemia, again with most cases in the Gauteng province.

Overall, there have been over 1500 cases in South Africa to date (Govender NP, et al. unpublished data), with 70 to 80 new cases every month since April 2016. Large on-going outbreaks have occurred at several Johannesburg and Pretoria hospitals, with most cases occurring in private sector facilities.<sup>1</sup>

The fungus is difficult to identify in a routine laboratory setting, and of most concern, it is often multi-drug resistant - almost all *C. auris* isolates tested are resistant to fluconazole, and in some countries, more than 40% of isolates are also resistant to amphotericin-B and/or the echinocandins. Prior systemic antifungal drug therapy is associated with a 40% increased risk of *C. auris* fungaemia compared with bloodstream infection caused by other *Candida* species.<sup>1,2</sup> (Refer to Microbe of the Month August 2019.)



### IMPORTANT RESOURCES FOR *Candida auris*

- **South Africa:** The National Institute for Communicable Diseases  
<http://www.nicd.ac.za/diseases-a-z-index/candida-auris/>
- **International:** The Centres for Disease Control (CDC) also have up-to-date guidance on identifying, treating and controlling the spread of *C. auris*  
<https://www.cdc.gov/fungal/candida-auris/index.html>



The SA National Health and private laboratory services are closely monitoring their data and alerting facilities to be on the lookout for *Candida auris* in their patients.

**Healthcare facilities are requested to urgently report all suspected clusters / outbreaks to the relevant district CDC team as well as the NICD if a new outbreak in a hospital or long-term care facility is suspected!**



Contact the NICD Centre for Healthcare-Associated Infections, Antimicrobial Resistance and Mycoses on **011 - 555 0396**



### Follow this link to a CDC expert commentary

[https://www.medscape.com/viewarticle/884470?src=par\\_cdc\\_stm\\_mscpedt&faf=1#vp\\_2](https://www.medscape.com/viewarticle/884470?src=par_cdc_stm_mscpedt&faf=1#vp_2)



## A LINK TO CLIMATE CHANGE?

Most fungi and yeasts prefer the cooler temperatures in soil, but *Candida auris* is able to grow at relatively high temperatures (42°C). It has reportedly never been isolated from the natural environment, and it does not seem to have been a common colonizer of humans before 2009. It is believed that changes in environmental temperatures may have led to its emergence; however, the reasons for the dramatic incidence of *C. auris* as a pathogen in healthcare settings are not clear.

East Asia, South Asia, Africa and South America have unique *C. auris* clades (a group of organisms believed to comprise all the evolutionary descendants of a common ancestor). This is consistent with the theory that *C. auris* emerged independently and simultaneously on several continents.<sup>1,3</sup>



## LABORATORY IDENTIFICATION OF *Candida auris*<sup>1,2,3</sup>

Like other *Candida* infections, *C. auris* infections are usually diagnosed by culture of blood or other body fluids. However, *C. auris* is harder to identify from cultures than other more common types of *Candida*, and it can be confused with other types of yeasts, particularly *Candida haemulonii*.

Misidentification delays the initiation of appropriate antifungal treatment and the rapid institution of IPC measures.

---

**Healthcare facilities that suspect they have a patient with *C. auris* infection should contact the Medical Microbiologist for immediate guidance.**

---



## WHO IS AT RISK FOR INFECTION WITH *C. auris*?

People who have recently spent time in hospitals and nursing homes, are debilitated, immune-compromised or have had invasive devices (e.g., endotracheal and feeding tubes, and central venous catheters) seem to be at highest risk for *C. auris* infection.

Limited data also suggests that the risk factors for *Candida auris* infection are similar to those for other types of *Candida* infections; for example, recent surgery, diabetes mellitus and prior broad-spectrum antibiotic and antifungal use. Infections have been found in patients of all ages, from preterm infants to the elderly.<sup>3</sup>

## WHAT INFECTION PREVENTION AND CONTROL MEASURES ARE APPROPRIATE TO LIMIT TRANSMISSION?<sup>1,2,3,4,5</sup>

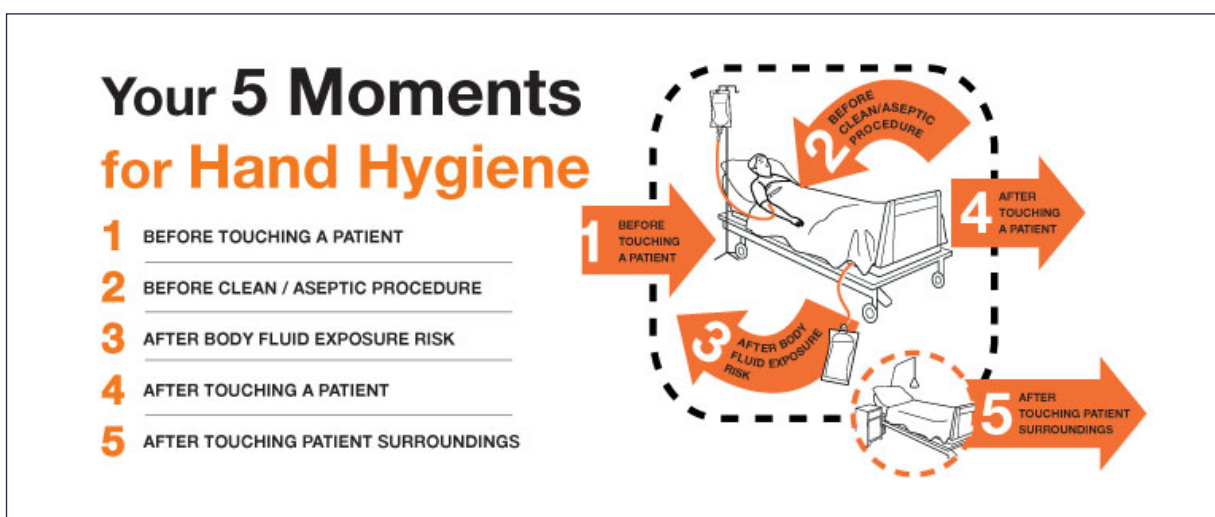


Although the dynamics of transmission of *C. auris* are not clearly established, *C. auris* is known to contaminate the immediate environment of infected or colonised patients, and onward transmission is believed to be on the hands of healthcare workers or via shared equipment ('indirect contact' route).

Even after treatment for invasive infections, patients generally remain colonised with *C. auris* for long periods, and perhaps indefinitely. **Therefore, all recommended infection prevention and control measures should be followed during and after treatment for *C. auris* infection.<sup>3</sup>**

It is essential to have commitment from hospital management, the Infection Control Committee, Microbiology Laboratory and clinical teams in order to curb the spread of this pathogen. Facilities must keep internal IPC policies updated and ensure that the recommendations are appropriately implemented.

- ✓ **Routine screening** of all newly admitted patients for *C. auris* colonisation is currently not recommended, owing to limited evidence; nor is the routine screening of healthcare personnel necessary.<sup>1,2</sup>
- ✓ The removal of central lines is strongly recommended.
- ✓ **Isolation:** Patients with *C. auris* infection or colonisation should be isolated in single rooms with en suite facilities, or cohorted with other *C. auris* cases, wherever possible.
- ✓ **Standard precautions** should be strictly adhered to, including hand hygiene using soap and water - especially with visible soiling and following glove removal. Between care activities, 70% alcohol hand rub should be used frequently if hands are not visibly soiled.
- ✓ **Contact precautions** are also recommended: these include the donning of appropriate personal protective equipment (gloves and aprons) before touching a patient or the patient's immediate surroundings (bed linen, bed rails, personal belongings, invasive devices).
- ✓ **PPE** should be donned after the application of alcohol hand rub, and hands should be washed with soap and water followed by alcohol hand rub after the removal of PPE.



- ✓ **Improved adherence to bundles of care** for venous and urinary catheters, as well as tracheostomy care, is essential.
- ✓ **Hand hygiene practices** among staff members should be evaluated on an ongoing basis and adherence to the WHO "5 Moments for Hand Hygiene" emphasised.
- ✓ **Clinicians and ancillary health professionals** (including dietitians, radiographers, physiotherapists, phlebotomists, etc.) should also be trained regarding IPC recommendations.
- ✓ **Affected patients, visitors and family members** should be briefed about the importance of hand hygiene, and visitors should be encouraged to use protective aprons.
- ✓ If a patient needs care or **investigations in another department** within a facility (including radiology, theatre, outpatient clinic, etc.), the receiving department should be notified of the patient's *C. auris* status and advised on what precautionary measures to take prior to and during the transfer or procedure. These patients should also be scheduled last on the list for the day, if feasible.
- ✓ **If a patient needs to be transferred** to another healthcare facility, including a long-term care facility, the referring facility should ensure that the receiving facility is appropriately notified of the patient's *C. auris* infection or colonisation status.
- ✓ **Surveillance:** at a facility level, all public sector hospitals and private hospital groups should monitor the number of laboratory-confirmed cases of *C. auris* disease and colonisation. At national level, the National Institute for Communicable Diseases (NICD) will conduct regular cross-sectional surveys in order to monitor epidemiological and geographical trends.

## ENVIRONMENTAL DISINFECTION



*C. auris* can persist on surfaces in healthcare environments. *C. auris* has been cultured from multiple locations in patient rooms, including high-touch surfaces, such as bedside tables and bedrails, and locations further away from the patient, such as windowsills.

*C. auris* has also been identified on mobile equipment, such as glucometers, temperature probes, blood pressure cuffs, ultrasound machines, trolleys and crash carts.

Meticulous cleaning and disinfection of both patient rooms and mobile equipment is necessary to reduce the risk of transmission.



**Quaternary ammonium compounds (also known as "Quats" or "QACs") which are routinely used for hospital and long-term care facility disinfection may not be effective against *C. auris*.**

**It is important to follow all manufacturer directions for use of the surface disinfectants, including applying the product for the correct contact time.**

- ✓ Regular cleaning and terminal disinfection with a registered hospital-grade chlorine-releasing detergent agent with a strength of 1000 ppm is recommended; for example, products with proven efficacy against *Clostridium difficile* spores are suitable.
- ✓ Frequently touched areas should be cleaned and disinfected at least twice a day.
- ✓ Hydrogen peroxide vapour or wipes appear to be effective against *C. auris* and may be added as an additional measure after cleaning and disinfection.
- ✓ Single-use equipment is preferable, and multi-use equipment (including BP cuffs, thermometers, computers / equipment on wheels, ultrasound machines, etc.) should be thoroughly disinfected during a terminal clean.
- ✓ If a patient needs care or investigations in another department within a facility, they should be scheduled last on the list for the day, followed by thorough cleaning of the environment in the relevant department, as described above.
- ✓ Waste and linen disposal procedures for infectious and drug resistant micro-organisms should be followed.<sup>5</sup>
- ✓ Facilities must ensure buy-in from housekeeping services and outsourced service providers, and supervise operations with regard to IPC standards and special recommendations.



## Your input is important to us

Your feedback helps us make this newsletter a valuable resource for healthcare practitioners.  
Please send all queries, comments or requests for future topics to

[askcutimed@essity.com](mailto:askcutimed@essity.com)

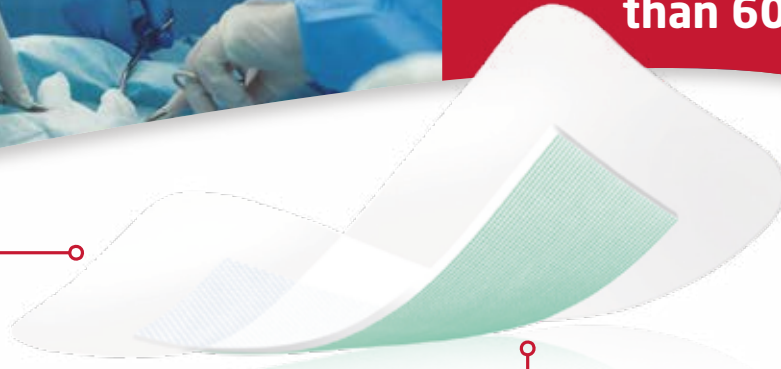
and we will do our best to address them in the next issue!

## REFERENCES

1. National Institute for Communicable Diseases (NICD): Centre for Opportunistic, Tropical and Hospital Infections (Dec 2016). Interim guidance for management of *Candida auris* infections in South African hospitals.
2. Govender, N.P., Avenant, T., Brink, A., Chibabhai, V., Cleghorn, J., du Toit, B., Govind, C. et al (2019). FIDSSA Guideline: Recommendations for Detection, Management and Prevention of Healthcare-Associated *Candida auris* Colonisation and Disease in South Africa. *Southern African Journal of Infectious Diseases [SAJID]* April 2019.
3. Centers for Disease Control and Prevention (CDC) *Candida auris* September 2019.  
<https://www.cdc.gov/fungal/candida-auris/index.html>
4. Centers for Disease Control and Prevention (CDC)/ Healthcare Infection Control Practices Advisory Committee (HICPAC) 2007. Guidelines for Disinfection and Sterilization in Healthcare Facilities
5. CDC/ HICPAC (2007). Guidelines for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings



**Reduces risk of infection by more than 60%\***



**Water-proof adhesive film**

**Unique DACC coating**

**Intelligent dressings. Reducing risk.**

- For effective bacteria management

# Leukomed<sup>®</sup> Sorbact<sup>®</sup>

Antibacterial & Antifungal Post-Operative Dressings

## For use on:

- IV sites
- Surgical incisions
- Post-op dehisced wounds
- Lacerations, cuts and abrasions
- Minor burns

\* P.J. Stanirowski, et al. Dialkylcarbamoyl chloride-impregnated dressing for the prevention of surgical site infection in women undergoing cesarean section: a pilot study. Arch Med Sci 2016; 12, 2

# Cutimed® Sorbact®

Antibacterial and Antifungal Wound Dressings

BEELE INC. 15371133 11/2019



START  
WITH SORBACT®



**S**

## SAFE

Suitable for **at risk** patient groups

**T**

## TOOLBOX

Full assortment for a **wide variety** of wound types

**A**

## ADVANCED

**Unique** microbial binding technology

**R**

## RESISTANCE

**No** bacterial or fungal resistance

**T**

## TIME

Suitable for **prolonged** treatment

**Management** and prevention  
of wound infection is possible  
when choosing **Cutimed® Sorbact®**  
as your **1<sup>st</sup> line** option