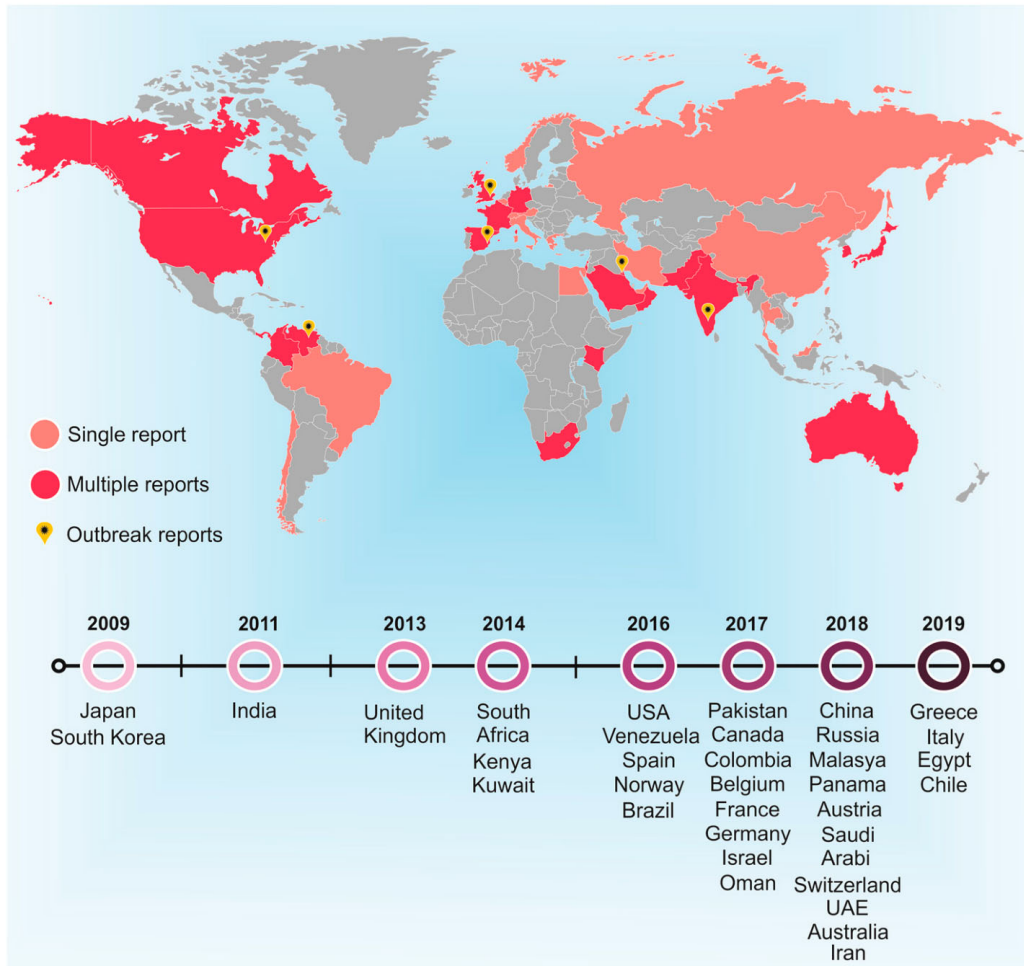


Epidemiology and public health
significance of *Candida auris*

Background

- *Candida auris* is an emerging multidrug-resistant yeast that can cause invasive infections and is associated with high mortality.
- It can enter bloodstream and spread throughout the body, causing serious invasive infections. Overseas data showed that about 30% - 60% of patients with invasive infection have died.
- First detected in 2009 from external ear discharge of a patient in Japan. Since then, *C. auris* infections have been reported in over 50 countries.
- Studies have suggested that *C. auris* emerged simultaneously and independently in four global regions (South Asia, East Asia, Africa and South America) with genetically distinct clades.
- In the last few years, *C. auris* infections have increased worldwide.
- WHO classified it into “critical” category in the list of fungal priority pathogens.
- US CDC considered it as an urgent antimicrobial resistance threat.



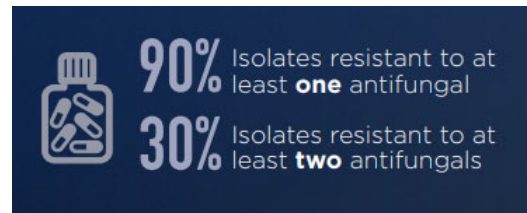


Source:

Echinocandinsas Biotechnological Tools for Treating *Candida auris* Infections. Journal of Fungi. 2020, 6, 185; doi:10.3390/jof6030185. <https://www.mdpi.com/2309-608X/6/3/185>

Why *C. auris* infection is of concern

- Often resistant to multiple antifungal drugs commonly used to treat *Candida* infections, making infections difficult to treat.



- Difficult to identify with standard laboratory methods, could be misidentified in laboratories leading to inappropriate management. Specialized laboratory methods are needed to accurately identify *C. auris*.
- High transmissibility and caused nosocomial outbreaks in healthcare settings.
 - Can be carried on patients' skin without causing active infection, allowing spread to others
 - Can survive for weeks on hospital environment and withstand commonly used surface disinfectants (e.g. Quaternary ammonium compound)

Carriage and infection in humans

- *C. auris* has been isolated from a range of body sites, including:
 - Skin / wound
 - urogenital tract
 - respiratory tract
 - External ear canal
- Could colonize patients for several months
- The risk of infection to otherwise healthy people is very low.
- Invasive infections with severe outcomes may be resulted, such as blood stream infections (candidaemia), pericarditis, urinary tract infections and pneumonia, especially in critically ill patients and immunocompromised patients.

Decolonization

- Currently no data on the efficacy of decolonization for patients with *C. auris*.
- May consider to use the following items for decolonization during outbreak situation as advised by infection control team:
 1. skin decontamination with chlorhexidine,
 2. mouth gargles with chlorhexidine,
 3. targeted topical management e.g. topical nystatin, chlorhexidine impregnated dressing at catheter exit sites

Who are at risk for *C. auris* infection?

- Patients who have been hospitalized in healthcare facility for long time
- Residents of old age homes/nursing homes
- Those have invasive medical devices and lines and tubes that go into their body (such as breathing tubes, feeding tubes, central venous catheters, hemodialysis catheters and permanent urinary catheters)
- Other groups: recent surgery, broad-spectrum antibiotic and antifungal use, underlying health comorbidities such as diabetes, sepsis, pulmonary diseases, bacterial pneumonia, renal diseases, transplants, immunosuppression, solid tumours, cardiovascular diseases, chronic otitis media and liver diseases
- Infections have been found in patients of all ages, from preterm infants to the elderly, most frequently occur in hospitalized patients (esp. ICU patients and those with surgery within 30 days).

Environmental persistence and spread

- Carriers represent an important reservoir, and continuous carriage for up to 3 months after initial isolation of *C. auris* has been documented.
- Widespread environmental contamination of surfaces and equipment surrounding patients carrying *C. auris* has been demonstrated.
- Can survive in environments for several weeks.
- Strong propensity for patient-to-environmental-to-patient transmission in healthcare settings, mostly in long-term healthcare facilities among patients with severe medical problems, through contact with contaminated environmental surfaces or equipment, or from person to person.
- Outbreaks have been difficult to control, with cases in the affected hospitals being detected over periods longer than a year.
- Important to quickly identify *C. auris* in a hospitalized patient so that healthcare facilities can take special precautions to stop its spread.

No. of cases reported to ICB for discharge arrangement **by cluster**

Cluster	C. auris					
	2019	2020	2021	2022	2023	Sum
HKEC	0	0	0	0	0	0
HKWC	0	0	0	0	0	0
KCC	0	0	0	1	15	16
KEC	0	0	0	0	0	0
KWC	8	57	20	21	5	111
NTEC	0	0	0	0	0	0
NTWC	0	0	0	0	0	0
Total	8	57	20	22	20	127

