

Large *Candida auris* outbreak linked to multi-use thermometers in UK ICU

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Outbreaks of the fungal pathogen *Candida auris* (*C. auris*) in healthcare settings, particularly in intensive care units (ICUs), may be linked to multi-use patient equipment, such as thermometers, according to research presented at the 28th European Congress of Clinical Microbiology and Infectious Diseases (ECCMID).

Researchers examined one of the largest outbreaks of the emerging drug-resistant [fungal pathogen](#) *C. auris* to date. The outbreak occurred in Oxford University Hospitals' Neurosciences Intensive Care Unit (NICU) in the United Kingdom. In investigating the possible source of the outbreak, researchers found a major source for spreading the fungus was multi-use patient monitoring equipment, such as axillary thermometers, those used to measure temperature in the armpit. These thermometers had been used in 57 of the 66 patients, or 86%, who had been admitted to the NICU before being diagnosed with *C. auris*. Use of these thermometers was still a strong risk factor for having *C. auris* after the research team controlled for other factors, such as how long a patient remained in the NICU, how unwell a patient was and their blood tests. Presenting author Dr David Eyre from the Nuffield Department of Medicine at the University of Oxford said: "Despite a bundle of infection control interventions, the outbreak was only controlled following removal of the temperature probes."

Between 2 February 2015 and 31 August 2017, the researchers analysed 70 patients who were either colonised with *C. auris*, meaning they had the fungus but showed no signs of illness, or infected, meaning they did

show symptoms. Sixty-six patients, or 94%, had been admitted to the NICU before being diagnosed. Seven patients developed invasive infections, but none died directly as a result of a *C. auris* infection. Most patients were colonised for between one to two months. There was no evidence that *C. auris* was associated with increased rates of death when adjusting for age, sex and the reason the patient had been originally admitted to the ward.

C. auris is an emerging fungal pathogen, which means its presence is growing in the population and it can be responsible for infections in wounds and the bloodstream. The reasons for *C. auris* spreading are not well understood, but this study offers hope of controlling the fungus' rise. The researchers found that the fungus tested was resistant to common treatments. *C. auris* is typically resistant to many of the available antifungal drugs, including in Oxford to fluconazole and related drugs, as well as occasionally amphotericin. *C. auris* was rarely detected in the general ward environment. However, researchers were able to both culture samples from the medical equipment and see it on the surface of [temperature probes](#) using a scanning electron microscope.

They were able to analyse the fungal samples' genetic information and determine that the fungus found on the equipment matched those of the [patients](#)' samples. It appears that these fungi were able to survive on the hospital equipment despite hygiene standards in place.

"This reinforces the need to carefully investigate the environment, and in particular multi-use patient [equipment](#), in any unexplained healthcare-associated outbreak," Eyre concluded. The team have successfully controlled the [outbreak](#).

More information: Abstract no: O0172, Epidemiology and successful control of a *Candida auris* outbreak in a UK intensive care unit driven by multi-use patient monitoring equipment; Interventions in infection

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