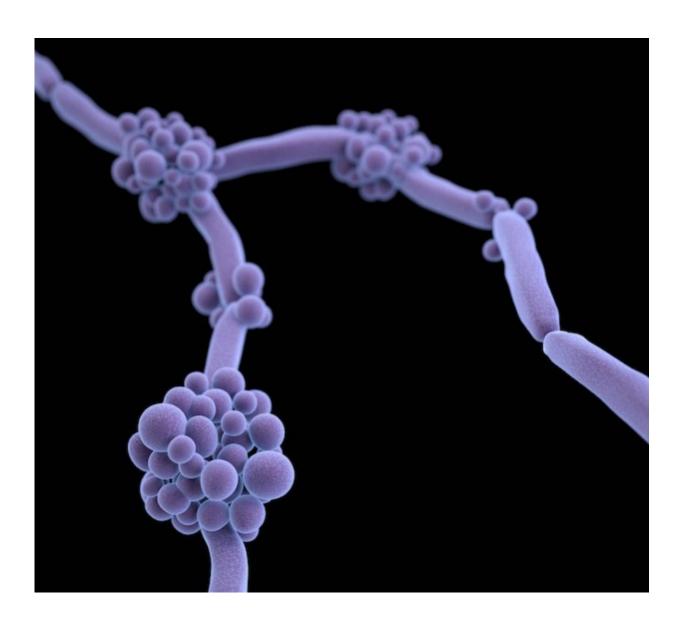


For hospitalized patients with fungal infections, specialists save lives

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Candida albicans, which is related to Candida auris. Credit: CDC



Bloodstream infections caused by the fungus *Candida* are among the most common and deadly infections in hospitals, with 25,000 such cases seen annually in the U.S. - mostly in people originally hospitalized for other reasons. About 40% to 45% of people with *Candida* in their blood die of the infection.

New research from Washington University School of Medicine in St. Louis shows that the death rate can be reduced by 20% if infectious disease specialists oversee care of such patients. Such specialists are more likely to follow evidence-based best practices for treating infections, which is likely why their patients do better, the researchers said. The findings, published Sept. 24 in *Lancet Infectious Diseases*, suggest that physicians should not hesitate to consult with infectious disease doctors if they suspect a fungal bloodstream infection.

"Candida infections are a major problem in hospitals large and small across the country," said senior author Andrej Spec, MD, an assistant professor of medicine and associate director of the university's Infectious Diseases Clinical Research Unit and director of the university's Invasive Fungal Infections Clinic. "Even uncomplicated versions of these infections are actually quite dangerous and require a detailed and well-thought out approach to make sure that people do well. Infectious disease doctors are the ones who have the expertise to best treat these infections."

Even in major medical centers, it has not been the standard of care to call in an infectious disease physician to help treat fungal bloodstream infections, said study co-author William G. Powderly, MD, the Dr. J. William Campbell Professor of Medicine at Washington University. "But our study indicates that bringing in a specialist to consult on such infections should be the standard of care. We're taking steps to adopt this protocol for our patients."



Large hospitals usually have an infectious disease physician on staff, but such experts may be rare in smaller community hospitals.

"Washington University provides a physicians' access line, where any community physician who has any concerns about a patient can call an infectious disease doctor 24 hours a day, 365 days a year, and ask questions," Spec said. "This is a service that we provide for free to the community."

To find out whether infectious disease specialists improve outcomes, first author Carlos Mejia-Chew, MD, an instructor in <u>infectious diseases</u>, worked with Spec and colleagues to analyze data from 1,691 patients with *Candida* <u>bloodstream infections</u> treated at Barnes-Jewish Hospital in St. Louis from 2002 to 2015. The team looked at what steps the Washington University doctors took to treat each infection, including whether they consulted with infectious disease specialists, and how many patients were still living 90 days after diagnosis.

Nearly half (45.9%) of the physicians with primary responsibility for the patients consulted with infectious disease specialists. Of the patients who were evaluated by an infectious disease expert, 28.6% died within 90 days. But of those whose doctors did not call the specialists, 50.5% died. Even after correcting for <u>risk factors</u> such as age and underlying disease, the benefit of a specialist consultation translated into a 20% lower risk of death.

When infectious disease experts were involved, patients were more likely to receive treatments that have been proven to save lives. More of the patients were prescribed antifungal medications, and they stayed on the drugs longer. Infectious disease doctors were more likely to check for serious complications such as infections of the heart. Perhaps most importantly, infectious disease physicians were more likely to remove central line catheters, which are used to administer IV medications.



"A lot of times doctors hesitate to remove central lines because they're necessary for the care of the patient and once you take it out it's hard to put a new one in," Spec said. "But these catheters are also often the source of the infection. When you're looking at a 40% chance of death, it's really important to stack the deck in the patient's favor by getting rid of the source of infection."

The study is one more piece of evidence that infectious disease physicians play a critical role in managing the care of hospitalized patients. Other studies have shown that consulting with infectious disease physicians in cases of *Staphylococcus aureus*, Cryptococcus and multidrug resistant infections leads to similarly impressive improved outcomes.

More information: Carlos Mejia-Chew et al, Effect of infectious disease consultation on mortality and treatment of patients with candida bloodstream infections: a retrospective, cohort study, *The Lancet Infectious Diseases* (2019). DOI: 10.1016/S1473-3099(19)30405-0

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