

HEALTHCARE-ASSOCIATED INFECTIONS, ANTIMICROBIAL RESISTANCE AND MYCOSES

Changing distribution of *Candida* species causing bloodstream infections in South Africa, 2019-2021

To describe the species causing *Candida* bloodstream infections (BSI) in South Africa, we summarized electronic blood culture data obtained from the NICD surveillance data warehouse and the South African Society of Clinical Microbiology from 1 January 2019 through 31 December 2021. A case of *Candida* BSI was defined as a person who had a blood culture from which one of the six common *Candida* species (*C. albicans*, *C. auris*, *C. glabrata*, *C. krusei*, *C. parapsilosis* or *C. tropicalis*) was isolated either at an NHLS or private pathology laboratory (Ampath, Lancet Laboratories, PathCare/ Vermaak and Partners).

Over the three-year period, 12 959 culture-confirmed cases of *Candida* BSI were reported, 71% (9 142/12 959) from the private sector. *Candida parapsilosis* BSI accounted for 40% of cases (5 244/12 959), followed by *C. auris* (25% (3 235/12 959)). There

was a notable increase in the proportion of cases of *C. auris* BSI from 17% in 2019 to 31% in 2021 ($p < 0.01$), and a corresponding decrease in the proportion of *C. parapsilosis* BSI from 46% in 2019 to 37% in 2021 ($p < 0.01$) (Figure 4). Gauteng province accounted for 50% (6 496/12 959) of all *Candida* BSI cases, followed by KwaZulu-Natal province (14% (1 833/12 959)).

Fewer than 30% of cases of *Candida* BSI were reported from the public sector, suggesting differential specimen-taking practices or a relatively smaller population at risk.¹ *Candida auris*, a multi-drug resistant pathogen, was the second most common cause of candidaemia. This represents a further shift in epidemiology since a national survey in 2016-2017 found that *C. parapsilosis* was the most common species (44% (2 600/5 876)), followed by *C. albicans* (23% (1 353/5 876)) and *C. auris* (14% (794/5 876)).²

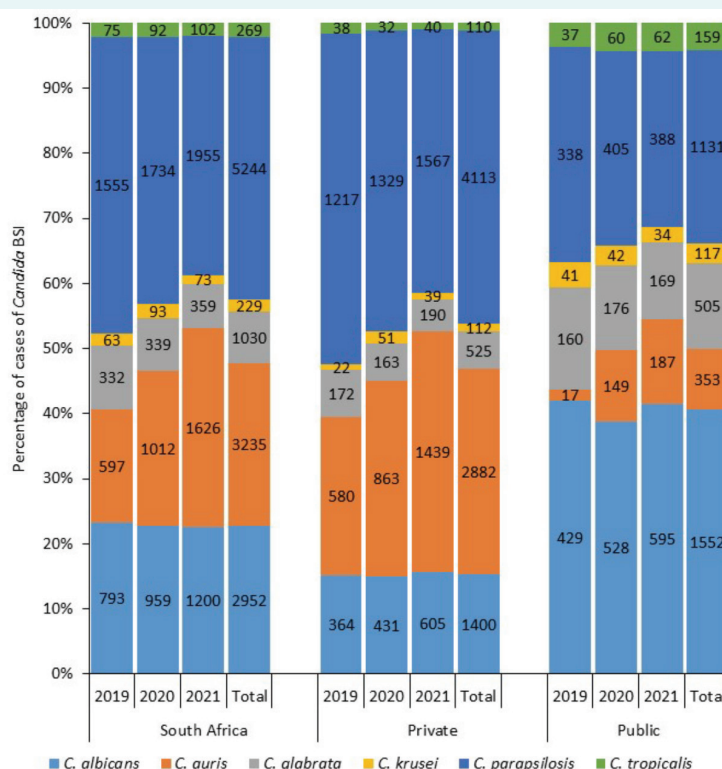


Figure 4. Distribution of six *Candida* species by the health sector in South Africa, 2019 to 2021 (n=12 959)

References:

1. Moema I, Shuping L, Kuonza L, Perovic O. Blood culture specimen collection practices among patients with suspected bloodstream infections at an emergency department of a tertiary hospital in Johannesburg, 14-20 June 2018. NICD Bull. 2018;18(1):14-20.
2. van Schalkwyk E, Mpembe RS, Thomas J, et al. Epidemiologic Shift in Candidemia Driven by *Candida auris*, South Africa, 2016–2017¹. Emerg Infect Dis. 2019;25(9):1698-1707. doi:10.3201/eid2509190040.

Source: Centre for Health-Associated Infections, Antimicrobial Resistance and Mycoses, NICD-NHLS; husnai@nicd.ac.za