

Healthcare-associated Infections (HAI)

A healthcare-associated-infection (HAI) is defined as a clinically-evident infection 48 hours after admission to a healthcare facility. The World Health Organization estimates that of every 100 patients admitted to an acute-care hospital, seven patients in high-income countries and 15 in low-and middle-income countries will develop at least one HAI during their hospital stay.

Since 2014, the NICD's Centre for Healthcare-Associated Infections, Antimicrobial Resistance and Mycoses (CHARM) has recorded 52 requests for investigations of HAI outbreaks in the following provinces: Eastern Cape (n=4; 8%), Free State (n=3; 6%), Gauteng (n=30; 58%), KwaZulu-Natal (n=10; 19%), Mpumalanga (n=2; 4%), Western Cape (n=3; 6%). The vast majority (n=46; 88%) of these requests for investigations came from public-sector hospitals. These outbreaks of predominantly bloodstream HAIs were caused by various

bacterial and fungal pathogens, some of which were antimicrobial resistant.

Outbreaks of HAIs are much more frequent than identified and/or reported. While laboratory detection of multi-drug resistant bacteria (i.e. carbapenem-resistant Enterobacterales, colistin-resistant *Pseudomonas* and *Acinetobacter*, glycopeptide-resistant *Staphylococcus aureus* and *Enterococcus*) is notifiable, HAIs which are caused by a much wider spectrum of susceptible and resistant pathogens are not notifiable. HAIs can result in prolonged hospital stays, long-term disability, massive additional costs for health systems, high costs for patients and their families and unnecessary deaths. Infection prevention and control (IPC) measures, including hand hygiene and evidence-based care bundles, are simple, low-cost and effective in reducing HAI rates.

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

Malaria

As South Africa enters summer, malaria cases are expected to increase, due to higher temperatures and increased rainfall in the malaria transmission areas. The National Department of Health has reported a total of 4 109 cases and 34 deaths for the period January to October 2022. These figures are slightly lower than those for the same period in 2021 (4 300 cases with 49 deaths) but are likely to increase due to delayed data-capturing in the malaria information system. Many more people will be exposed to malaria during the upcoming holiday season, due to the lifting of all COVID-related travel restrictions and associated travel to higher transmission areas, both internally and beyond the country borders, particularly in Mozambique. Individuals traveling to malaria-endemic areas are urged to take adequate anti-malaria measures. If visiting high-risk areas, people should consider antimalarial prophylaxis – both doxycycline and atovaquone-proguanil are available without prescription from pharmacies.

Travellers can also procure prophylactics from public sector travel clinics. All people in malaria risk areas should reduce contact with mosquitoes by limiting outdoor activity after

dark, covering up bare skin (not forgetting feet and ankles), using mosquito repellents containing at least 10% DEET, ensuring mosquito screens on windows are closed, and using bed nets, fans or air-conditioning, if available.

It is important to note that while these precautions will substantially reduce the chance of acquiring malaria, the risk is never completely removed. All travellers returning from malaria transmission areas, including very low risk ones, should immediately report 'flu-like illness' (headache, fever, chills, fatigue, muscle and joint pain) that occurs up to three weeks after first potential exposure, to a healthcare professional. Children with malaria may have very nonspecific signs (fever, loss of appetite, vomiting). Healthcare workers, particularly those in non-endemic area, seeing febrile patients must remember to ask about travel areas to malaria transmission areas.

Malaria risk map, FAQs and further information on prevention are available on the NICD website: www.nicd.ac.za.

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