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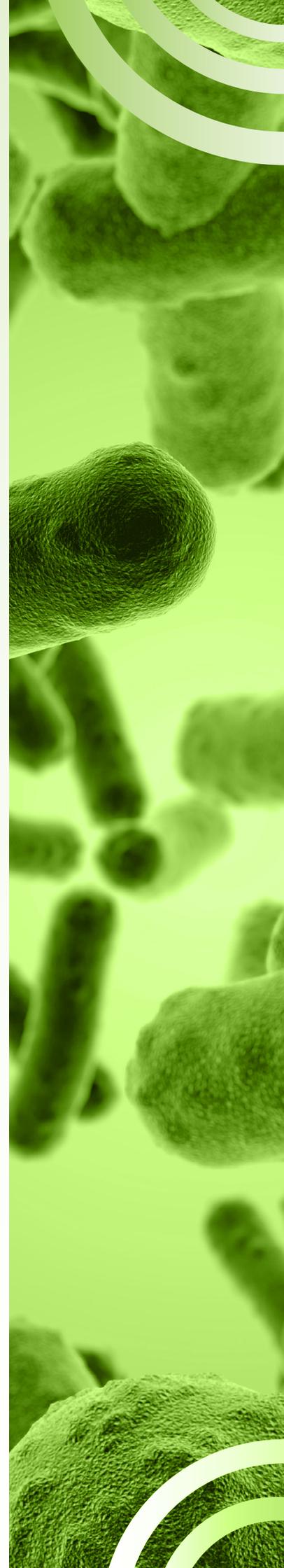


COMMUNICABLE
DISEASES
COMMUNIQUÉ



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EDITORIAL

Dr Kimantha Moodley

As the year draws to a close, the time has come to bid farewell to the beloved NICD Communicable Diseases Communiqué in its current format. On behalf of the editorial team, I thank everyone who has contributed to the publication's success since its inception. We look forward to witnessing the transition to the Public Health Bulletin of South Africa and the exciting opportunities it brings. Please note that the National Institute for Communicable Diseases (NICD) will still provide timely updates on infectious disease outbreaks within South Africa and beyond our borders. Look out for the new "Alerts" page, which will be launched on the NICD website in January, including a new "Beyond our Borders" sub-section.

In the final issue of the Communiqué, we provide an update on rabies in South Africa. We are sad to report on a new case of human rabies in a child from the Eastern Cape Province. The country has recorded 11 cases for the year so far. Rabies is virtually 100% fatal but preventable through vaccination of domestic animals, health promotion and education, adequate wound management, and the appropriate administration of rabies post-exposure prophylaxis.

We also report on the detection of clusters of a fungal infection of *Wickerhamomyces anomalus* in multiple provinces which is currently under investigation. Investigations have revealed the clusters may have been linked to the use of contaminated sachets of a lubricating jelly used in ultrasound procedures. While there been no deaths reported to date, healthcare workers are urged to monitor their patients for signs of infection in cases where such procedures are performed or a positive fungal culture is found after the use of the product.

Looking beyond our borders, we continue to provide updates on the global cholera outbreak, focusing on the increase in cases in Zimbabwe and the risk of importing cases to South Africa. Dengue virus transmission is a worldwide concern, as recent dengue fever outbreaks have been more severe and less predictable than in previous years.

This month's issue discusses the mpox outbreak affecting the Democratic Republic of the Congo and the change in transmission dynamics of Clade I mpox virus in 2023. An overview of the increase in respiratory illness among children in northern China is also presented in this issue.

The festive season is a time to rest and reflect on the past year as we look forward to 2024. It is also a time for travel both within South Africa and abroad, increasing the risk of contracting infectious diseases. We recommend that all travellers consider preventative measures, such as vaccines and chemoprophylaxis, where necessary. We also urge healthcare workers to maintain a high index of suspicion for travel-related infectious diseases, particularly if there is a history of travel to areas with ongoing outbreaks.

On behalf of the Communiqué editorial team, we thank you for your ongoing support of the publication over the years, and we wish you a safe and happy festive season.

ZOONOTIC & VECTOR-BORNE DISEASES

Rabies Update

A case of rabies was confirmed on 5 December 2023 in a 14-year-old male from Qonce, Eastern Cape Province. In early October 2023, the adolescent sustained several bites to the head and face from a dog in the neighbourhood. The dog could not be traced afterwards. Medical attention was sought, but the patient did not receive rabies post-exposure prophylaxis. Two months after the incident, the patient developed fever, malaise, headache, nausea, vomiting, pain and paraesthesia at the sites of the wounds, muscle spasms, dysphagia, ataxia, aerophobia, confusion, anxiety, aggression, agitation, hyperactivity, and hypersalivation. The patient died during the second week of

December 2023. Testing was performed on antemortem saliva specimens, confirming the diagnosis of rabies.

In total, 11 cases of human rabies have been confirmed in South Africa for the year 2023 to date. These cases were reported from the following provinces: Eastern Cape (n=5, notably 2 cases from Qonce), KwaZulu-Natal (n=5), and Limpopo (n=1). Visit the NICD website (<https://www.nicd.ac.za/rabies/>) for additional information on rabies and live-saving post-exposure prophylaxis.

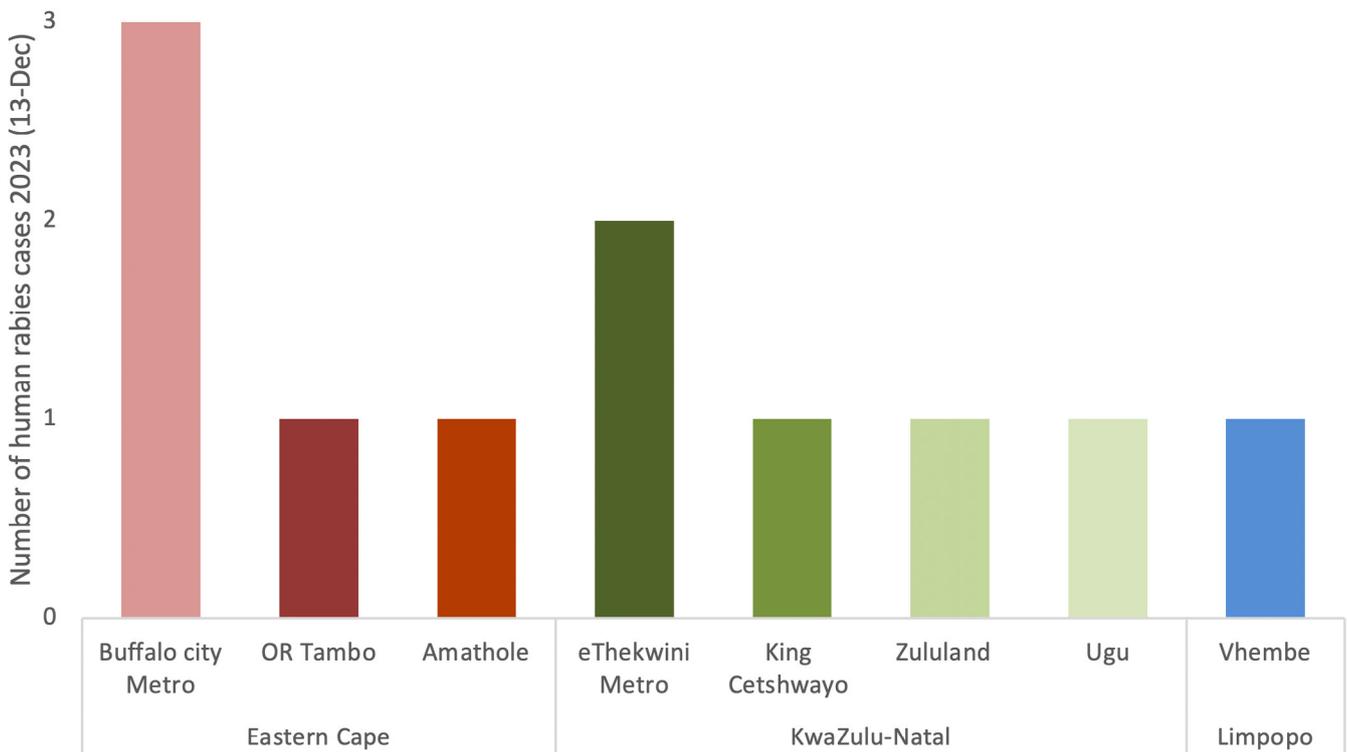


Figure 1. Districts and provinces in South Africa that have reported human rabies cases in 2023, as of 13 December 2023 (source: NHLS-NICD)

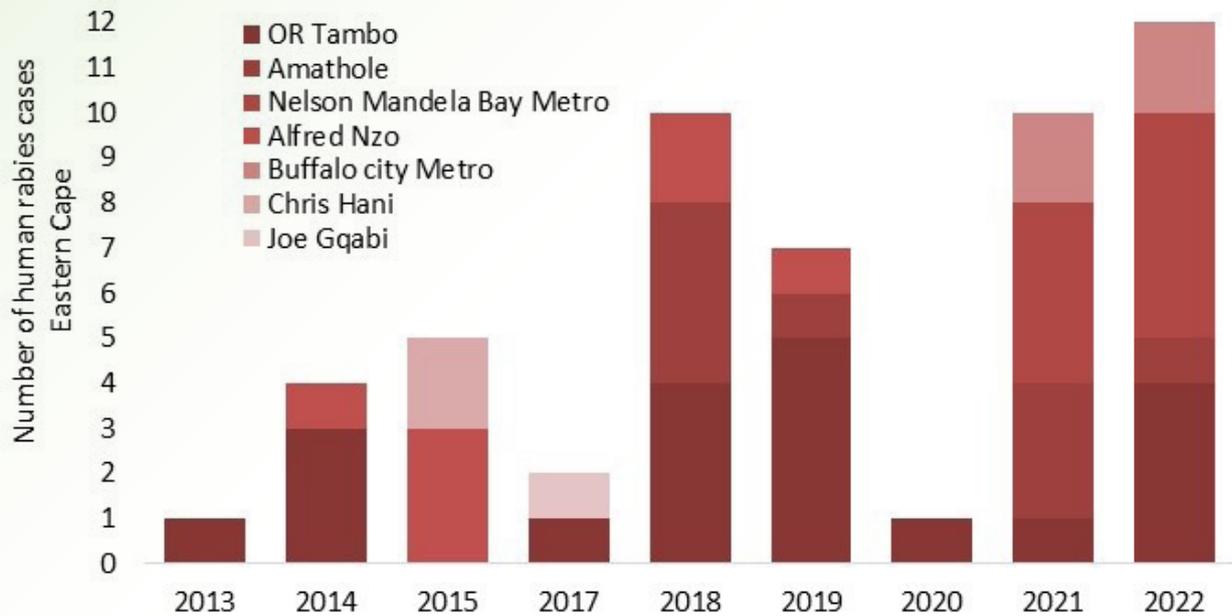


Figure 2. Districts in Eastern Cape Province that have reported human rabies cases from 2013-2022 (source: NHLS-NICD)

Source: Centre for Emerging Zoonotic and Parasitic Diseases, NICD-NHLS; veerlem@nicd.ac.za, jacquelinew@nicd.ac.za

HEALTHCARE-ASSOCIATED INFECTIONS, ANTIMICROBIAL RESISTANCE AND MYCOSES

Multi-Province Clusters of *Wickerhamomyces anomalus* (previously *Candida pelliculosa*) cases associated with Use of Medical Lubricating Jelly

Wickerhamomyces anomalus, formerly known as *Candida pelliculosa*, is a yeast-like fungus present in the natural environment in soil and on plants. It constitutes a minor portion of the human body's normal microflora but is recognised as an emerging opportunistic pathogen, occasionally causing serious infections among immunocompromised individuals, critically-ill patients, and infants in neonatal units ^[1].

In November 2023, the National Institute for Communicable Diseases (NICD) was notified of increasing isolation of *W. anomalus* from both sterile and non-sterile specimens at a KwaZulu-Natal microbiology laboratory. One possible explanation for this increase was an upgrade in laboratory instruments for yeast identification. However, the timing of the instrument change did not coincide with the increasing

case detection. An independent investigation conducted by two hospitals in the Western Cape Province revealed that their clusters of *W. anomalus* cases may have been linked to the use of contaminated single-use sachets of a lubricating jelly (i.e. Lubri-A-Sterile Lubricating Jelly sachets, supplied by Electro Spyres Healthcare). This product was confirmed to be used as a skin lubricant during ultrasound-guided central venous catheter placements, potentially introducing the fungus directly into the patient's bloodstream. In a hospital cluster comprising of 16 patients, no deaths were reported and most cases were considered to be pseudo-infections. A pseudo-infection (defined as a positive culture in the laboratory without a true infection in the patient) may have occurred, for example, if there was fungal contamination of the patient's skin by contaminated lubricating jelly before collection of a specimen.

Following the notification from KwaZulu-Natal Province, NICD conducted a desktop analysis of NHLS pathology records archived in the NICD surveillance data warehouse. All patients from whom *W. anomalus* was isolated from any specimen type from 1 January 2022 through to 14 December 2023 were included in an analysis. Over this period, 392 cases of *W. anomalus* were identified in 7 provinces, of which 103 (36%) were from sterile specimens such as blood (Figure 3). In all provinces, except the Free State and Eastern Cape, cases were detected in the latter part of 2023, between May and November. The NICD urgently notified the National Department of Health (NDOH), provincial departments of health and hospitals with the highest number of cases. Affected hospitals were contacted directly and recommended to inform clinicians, implement surveillance for cases, quarantine implicated batches of the product and test all batches in circulation. As of 14 December 2023, *W. anomalus* had been cultured by NHLS laboratories from five different batches of unopened sachets of this product, including two not initially implicated in the Western Cape Province investigation. Recalls were initiated in some facilities (Figure 3), but some facilities continued to use the product. Twelve new cases were detected in epidemiological week 50 of 2023 (10 to 16 December). At least 57 cases were identified by private laboratories in 2023, indicating that both health sectors are involved.

The NDOH has issued a circular informing all provincial health departments of the situation. The South African Health Products Regulatory Authority (SAHPRA) initiated an urgent investigation and issued a Class 1, Type A countrywide recall notice dated 19 December 2023 (<https://www.sahpra.org.za/news-and-updates/sahpra-recalls-lubri-a-sterile-lubricating-gel/>).

The continued use of this product may place the health of vulnerable patients at risk. Though no deaths have been reported to date, the NICD continues to work with hospitals to collect clinical information from case patients to assess the clinical significance of positive cultures and patient outcomes. Infection prevention and control teams should initiate or continue surveillance of *W. anomalus*-positive specimens. Healthcare professionals who have used this product are urged to monitor their patients for any signs of an infection and to liaise with their local microbiology laboratories to check if any of their patients have had a positive fungal culture after use of this product. This fungal infection can only be diagnosed in a laboratory and the signs or symptoms of an infection will depend on the body site that is affected.

Reference

1. Zhang, Z., Cao, Y., Li, Y. et al. Risk factors and biofilm formation analyses of hospital-acquired infection of *Candida pelliculosa* in a neonatal intensive care unit. *BMC Infect Dis* 21, 620 (2021). <https://doi.org/10.1186/s12879-021-06295-1>

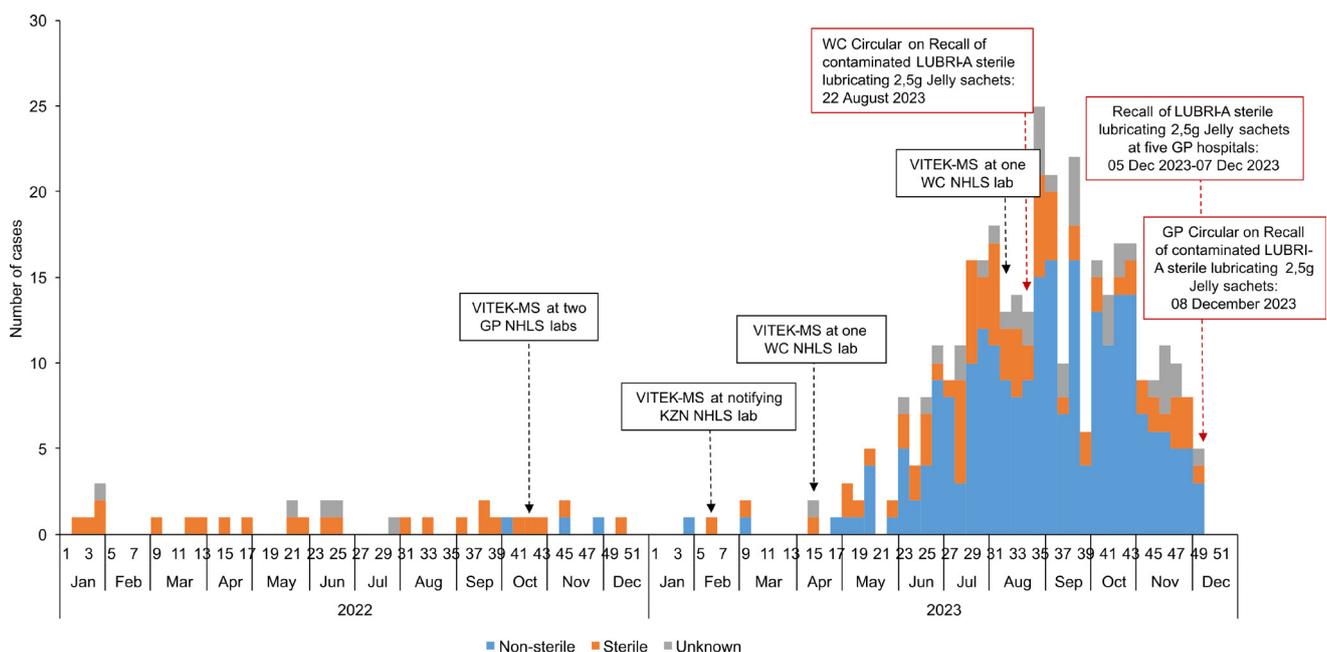


Figure 3: Epidemic curve of patients with *W. anomalus* isolated from either sterile and non-sterile specimens nationally, 01 January 2022 through to 14 December 2023 (n=392).

NHLS: National Health Laboratory Service, GP: Gauteng Province, KZN: Kwa-Zulu Natal; WC: Western Cape

Sources: Centre for Healthcare-Associated Infections, Antimicrobial Resistance and Mycoses, NICD-NHLS; neleshg@nicd.ac.za

BEYOND OUR BORDERS

The 'Beyond our Borders' column focuses on selected and current regional and international disease outbreaks that may affect South Africans travelling outside the country.

Cholera – African Region

Since the beginning of 2023 and as of 26 November 2023, a total of 29 countries have reported cholera cases globally. The World Health Organization (WHO) African Region (AFRO) remains the most affected region, with sixteen countries reporting cases, including Burundi, Cameroon, Congo, the Democratic Republic of the Congo (DRC), Ethiopia, Eswatini, Kenya, Malawi, Mozambique, Nigeria, South Africa, South Sudan, Tanzania, Uganda, Zambia, and Zimbabwe.

Zimbabwe has been experiencing a cholera outbreak that began in February 2023, affecting 46 of the country's 64 districts. As of 3 December 2023, Zimbabwe has recorded 9 567 cases (confirmed n=1 343, suspected n=8 224) and 214 deaths (CFR=2.2%). The Harare City Council declared a state of emergency on 16 November 2023 due to the high number

of cases in the city. There has been a notable increase in the weekly incidence of cases in the country since early October 2023. Some contributing factors include poor sanitation and an erratic supply of potable water.

The importation of cases to South Africa remains a possibility with the ongoing cholera outbreaks in the Southern African Region, more so with the expected increase in travel over the festive season. Healthcare workers are urged to maintain a high index of suspicion for suspected cases and to notify suspected and confirmed cases on the Notifiable Medical Conditions (NMC) mobile application or website (<https://mstrmobile.nicd.ac.za/nmc/>). For more information on cholera, please visit the NICD website: <https://www.nicd.ac.za/diseases-a-z-index/cholera/>.

Table 1. Cholera Cases and Deaths in African Region, 1 January 2022 to 3 December 2023

Country	Cumulative Cases (Suspected/confirmed)	Cumulative Deaths	CFR (%)
Malawi	43 006	1 261	2.9
Democratic Republic of the Congo	39 638	342	0.9
Mozambique	36 991	150	0.4
Ethiopia	27 196	376	1.4
Cameroon	21 207	508	2.4
Zimbabwe	9 567	214	2.2
Kenya	8 817	145	1.6
Nigeria	2 860	84	2.9
Zambia	1 804	36	2.0
South Africa	1 388	47	3.4
South Sudan	1 471	2	0.1
Burundi	1 227	9	0.7
United Republic of Tanzania	729	18	2.5
Congo	93	9	9.7
Uganda	78	10	12.8
The Kingdom of Eswatini	2	0	0.0

Sources: Outbreak response Unit, NICD-NHLS; https://www.who.int/docs/default-source/coronaviruse/situation-reports/20231207_multi-country_outbreak-of-cholera_sitrep_9.pdf?sfvrsn=ee3f1c54_3&download=true; <https://iris.who.int/bitstream/handle/10665/374828/OEW46-1319112023.pdf>; <https://africacdc.org/download/africa-cdc-weekly-event-based-surveillance-report-december-2023/>; <https://promedmail.org/promed-posts/>

Dengue Fever - Global Overview

Throughout 2023, regions around the world have experienced an increase in dengue virus transmission. This NICD's Communicable Diseases Communiqué has previously reported on dengue fever outbreaks that are more severe and less predictable than before. Bangladesh is experiencing its worst dengue fever outbreak in history; cases have been reported in areas where the disease has never been seen before, and multiple countries have declared states of emergency. Public Health and Environmental Health experts have warned that rising temperatures and rapid urbanisation contribute to increased transmission. This is further exacerbated by poor sanitation, overburdened health systems, and inadequate surveillance, which is why certain regions have been harder hit than others. Bangladesh has the highest known death toll globally for 2023 (n=1 598 as of 3 December 2023), and Brazil has the highest number of cases.

The following is a summary of notable dengue fever reports over the past month:

- **Africa:** Between 1 January 2023 and 3 December 2023, 20 999 confirmed cases of dengue fever have been reported from 14 African countries. There are an additional 49 808 probable and 134 908 suspected cases reported from these countries. The Africa Centres for Disease Control and Prevention (CDC) assessed the risk to humans from dengue virus as high. In the last week of November, new cases were reported from Ethiopia, Mali, and Senegal.
- **Americas:** The World Health Organization (WHO) and the Pan American Health Organization (PAHO) published a risk assessment for public health related to dengue fever on 12 December 2023. This year has seen the highest historical record of dengue fever cases, with more than 4.1 million reported cases. Potential risk to human health is high, as is the risk of insufficient control capacities. The risk of geographical spread was classified as moderate.

Globally, response and control measures include vector control, education of the public and healthcare providers, and personal infection prevention measures. Further measures for the control of dengue transmission that were explored this year include the following:

- The WHO recommends vaccination with the Qdenga vaccine for children aged 6-16 years living in dengue hot spots. This recommendation follows the September meeting of the Strategic Advisory Group of Experts on Immunization (SAGE). Lessons learned from the COVID-19 pandemic show that providing vaccines alone is insufficient to ensure adequate vaccination coverage. Public health communication of evidence-based benefits, efficacy, and safety of vaccines is essential.
- The World Mosquito Program is currently testing a programme wherein mosquitoes bred to carry a *Wolbachia* bacteria are being released in over 12 countries. The bacteria blocks transmission of dengue, zika and yellow fever viruses, and the hopes are that these mosquitoes will overtake the natural mosquito population.
- Singapore, Boston, and London have all launched initiatives to improve surveillance and tracking of dengue clusters, with London set to introduce the world's first dengue dashboard in early 2024.

Local transmission of the dengue virus has not been reported in South Africa in 2023. Clinicians should continue to maintain a high index of suspicion for dengue fever in anyone returning from dengue-endemic regions beyond our borders, presenting with signs and symptoms of the disease. More information on dengue fever can be found on the NICD website: <https://www.nicd.ac.za/diseases-a-z-index/dengue-fever/>.

Sources: *Outbreak response Unit, NICD-NHLS*; <https://www.who.int/news/item/05-10-2023-message-by-the-director-of-the-department-of-immunization--vaccines-and-biologicals-at-who---september-2023>; <https://www.who.int/news/item/05-10-2023-message-by-the-director-of-the-department-of-immunization--vaccines-and-biologicals-at-who---september-2023>; <https://www.who.int/emergencies/disease-outbreak-news/item/2023-DON491>; <https://africacdc.org/download/africa-cdc-weekly-event-based-surveillance-report-december-2023/>; <https://reliefweb.int/report/world/risk-assessment-public-health-related-dengue-america-region-12-december-2023>; <https://time.com/6429963/dengue-fever-cases-symptoms-prevention-explainer/>; <https://reliefweb.int/report/world/dengue-fever-least-5-million-cases-and-5500-deaths-horror-year>

Mpox – the Democratic Republic of the Congo

Mpox is endemic (i.e. where natural host occurs and zoonotic transmission reported) in parts of Central, West, and East Africa. The two distinct genetic clades of mpox virus (MPXV) are clade I and clade II. Clade II is further subcategorised into clade IIa and IIb. Prior to 2022, mpox cases were mainly reported from within the endemic regions in Africa. In 2022 and 2023, a global epidemic of clade IIb MPXV was reported from multiple countries that had never previously recorded mpox cases. The global outbreak was associated with sexual transmission, particularly amongst men who have sex with men (MSM).

Clade I, previously known as the Congo Basin clade, has traditionally been transmitted through non-sexual routes. It is also thought to be more transmissible than Clade II MPXV. In the Democratic Republic of the Congo (DRC), Clade I MPXV is endemic in 11 out of 26 provinces. Since the start of the year and as of 7 December 2023, the DRC has recorded 12 569 suspected

cases of mpox and 581 deaths (CFR=4.6%). Compared to 2016-2021, where the median number of cases was 3 767 per annum, a substantial increase in cases was noted in 2023. Geographical expansion has also been observed, with 22 of the 26 provinces (including Kinshasa and South Kivu) reporting cases this year. Two provinces have also reported sexual transmission of Clade I MPXV for the first time, including cases amongst the MSM population.

Due to the change in transmission dynamics and geographical expansion of Clade I MPXV within the DRC, healthcare workers are urged to maintain a high index of suspicion for mpox in anyone presenting with signs and symptoms within 21 days of travel to the DRC. Mpox is a category 1 NMC in South Africa, so suspected cases should be reported within 24 hours. More information on mpox is available on the NICD website: <https://www.nicd.ac.za/diseases-a-z-index/monkeypox/>.

Sources: *Outbreak response Unit, NICD-NHLS; <https://emergency.cdc.gov/han/2023/han00501.asp>; <https://www.who.int/emergencies/disease-outbreak-news/item/2023-DON493>*

Clusters of Respiratory Illness in Children – Northern China

The World Health Organization (WHO) has been monitoring an increase in respiratory illness in children in Northern China since October 2023.

Based on information provided to WHO by the Chinese Center for Disease Control and Prevention (CDC) and the Beijing Children's Hospital on 23 November 2023, WHO advised against any travel or trade restrictions, which supports the narrative from China that there is no cause for international concern at present. The increase in respiratory illness has so far been related to known pathogens.

Data presented to WHO showed an increase in outpatient and inpatient management of children due to infections with the bacterium *Mycoplasma pneumoniae* since May 2023. Increases due to viral infections such as respiratory syncytial virus (RSV), adenovirus, and influenza virus have been noted since October 2023. A surge in respiratory infections is typically seen during winter, and Chinese authorities have attributed the relative

increase (compared to similar periods in previous years) to a phenomenon termed 'immunity debt' – immune systems were not able to mount adequate responses to circulating pathogens due to strict lockdown and other preventative measures during the COVID-19 pandemic. Similar increases have been seen in other countries, including the United States of America. However, these have been limited to increases in viral infections.

Neighbouring countries and WHO will continue to monitor respiratory cases in and around China. Respiratory pathogen outbreaks are unpredictable and recurrent in nature, so WHO has developed a checklist for respiratory pathogen pandemic preparedness planning. This will aid countries in developing specific preparedness plans. South Africa should also continue monitoring clusters of respiratory illness beyond our borders and maintain strict disease screening and detection procedures at points of entry.

Sources: *Outbreak response Unit, NICD-NHLS; https://cdn.who.int/media/docs/default-source/influenza/ipp/who-pret-guidelines-checklist-18.09.2023-v20-revised-final.pdf?sfvrsn=d4ae16cf_3&download=true; <https://www.who.int/news/item/22-11-2023-who-statement-on-reported-clusters-of-respiratory-illness-in-children-in-northern-china>; <https://www.who.int/emergencies/disease-outbreak-news/item/2023-DON494>; <https://promedmail.org/promed-post/?place=8713261,353#promedmailmap>*