NATIONAL INSTITUTE FOR COMMUNICABLE DISEASES
Division of the National Health Laboratory Service

2023

COMMUNICABLE DISEASES COMMUNIQUÉ

October 2023, VOL.22(10)

NATIONAL INSTITUTE FOR COMMUNICABLE DISEASES
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October 2023, VOL.22(10)

EDITORIAL

Dr Kimantha Moodley

As we head into warmer months, we expect to see an increase in malaria cases in South Africa. Malaria is endemic in parts of the country and can cause serious and life-threating illness. Our Case of the Month highlights the importance of maintaining a high index of suspicion for malaria in anyone presenting with fever, and a history of travel to or residence in a malaria-endemic area.

We are sad to report on another case of human rabies in KwaZulu-Natal Province. This is the province's fifth case for the year so far and brings the country's cumulative cases to nine. Rabies is 100% fatal, but preventable through vaccination of domestic animals and prompt administration of post-exposure prophylaxis.

For 2023 to date, South Africa has recorded 12 confirmed cases of diphtheria, including five toxigenic diphtheria cases. There has also been an increase in pertussis cases which was first noted in July 2022. Both diphtheria and pertussis are vaccine-preventable diseases and are included in the Expanded Programme on Immunisation (EPI). We urge all healthcare workers to ensure that patients are up to date with their immunisations, and to provide catch-up and booster doses where necessary.

Western Cape Province has seen an increase in rubella (German measles) cases in recent weeks. Sporadic cases have been recorded in other parts of the country, however, there has been a notable increase in cases in Khayelitsha sub-district in the Cape Town Metropolitan area. Rubella is also a vaccine-preventable disease, but access to the measles, mumps, and rubella (MMR) vaccine is currently only available through the private sector.

Looking beyond our borders, we provide an update on the ongoing cholera outbreaks in the African Region, as well as the increase in dengue fever cases globally. Dengue fever outbreaks are becoming more severe and less predictable, raising concerns about the disease from the World Health Organization. Healthcare workers should maintain a high index of suspicion for dengue fever in anyone presenting with signs and symptoms of the disease, with a history of travel to an affected area.

We have begun phasing out the Communiqué in preparation for the transition to the Public Health Bulletin of South Africa (PHBSA). The PHBSA is an accessible platform for the publication of relevant surveillance and epidemiological information. It aims to disseminate accurate public health surveillance information to inform public health practice, policy, and programme development in South Africa. For more information, please visit the PHBSA website: https://www.phbsa.ac.za.

On behalf of the Communiqué editorial team, we thank you for your ongoing support and hope you enjoy this month's issue!

QUICK UPDATES

Measles, South Africa

The ongoing measles outbreak which began in October 2022, has resulted in a cumulative total of 1214 laboratory-confirmed cases (as of 9 October 2023). Three of the eight affected provinces met the criteria to declare the measles outbreak over (Northern Cape Province in week 15, North West Province in week 24 and Free State Province in week 25). Cases continue to be reported from Gauteng, KwaZulu-Natal, Limpopo, Mpumalanga and Western Cape provinces.

For the latest case numbers and more information on the outbreak, please visit the NICD alerts page (https://www.nicd.ac.za/media/alerts/).

Source: *https://www.nicd.ac.za/south-african-measles-outbreak-update-2023-09-october-2023/*

Cholera, South Africa

Since the cholera outbreak was declared in February 2023, the country has recorded a cumulative total of 199 laboratory-confirmed cases, 1 073 suspected cases and 47 deaths. The latest confirmed case was reported on 25 July 2023. The six affected provinces are as follows: Gauteng, Free State, KwaZulu-Natal, Limpopo, Mpumalanga and North West.

Healthcare workers are urged to maintain a high index of suspicion for cholera in anyone presenting with acute diarrhoeal disease. All suspected cases should be notified immediately using the Notifiable Medical Conditions (NMC) mobile application or website (https://mstrmobile.nicd.ac.za/nmc/), and samples should be submitted to local laboratories for testing. Healthcare workers attending to persons with suspected or confirmed cholera should observe strict contact precautions and hand hygiene, including isolation, where possible.

Comprehensive guidelines on management can be accessed using the following link: https://www.nicd.ac.za/assets/files/2014%20SA%20Cholera%20Guidelines.pdf.

For additional information please visit the NICD website (https://www.nicd.ac.za/diseases-a-z-index/cholera/). For latest case numbers, please visit the National Department of Health press statement webpage (https://www.health.gov.za/press-statement/).

Sources: *https://www.health.gov.za/wp-content/uploads/2023/07/Health-Department-provides-update-on-cholera-outbreak-in-SA-05-July-2023.pdf, https://www.health.gov.za/wp-content/uploads/2023/07/Health-Minister-announces-another-imported-cholera-case-25-July-2023.pdf*

CASE OF THE MONTH

On 5 October 2023, a female patient in her sixties was referred by her General Practitioner (GP) to a private healthcare facility in Gauteng Province, with features of pneumonia. She presented with cough, fever, worsening effort tolerance and shortness of breath, and was admitted for treatment and further workup. Upon further enquiry, it was noted that she had travelled to her holiday home in Marloth Park two weeks prior to admission. Marloth Park is a town in Mpumalanga Province on the southern border of Kruger National Park.

On examination, she was tachycardic and hypotensive (heart rate 103 beats per minute, blood pressure 99/65 mmHg) with a fever of 39.3°C. There were no signs of overt respiratory depression, with a respiratory rate of 18 breaths per minute and oxygen saturation of 96% in room air. Her systemic examination was unremarkable.

Her blood results revealed liver dysfunction, acute renal failure, an elevated C-reactive protein (CRP) and thrombocytopenia (platelet count 51 000/µL). Other investigations included a chest x-ray and abdominal ultrasound which were both normal. Liver dysfunction and more notably, thrombocytopenia, with a background of travel to a malaria-endemic area, prompted testing for malaria.

The peripheral blood smear was positive for *Plasmodium falciparum*, with a parasite density of 14%. Parasitaemia > 10%, is a marker of severe disease.[1] Other signs of severe disease in this patient, as defined by WHO and the Centers for Disease Control and Prevention (CDC), were hypotension (in this case requiring inotropes), renal impairment and metabolic acidosis.[1, 2]

Treatment for severe malaria was initiated and the patient was given four doses of intravenous (IV) artesunate, before being switched to oral artemether/lumefantrine (Coartem). Due to worsening renal function, dialysis was started 24 hours post-admission. Empiric antibiotic coverage with IV ceftriaxone (Rocephin) was stopped after blood and urine cultures came back negative.

Thirty hours post-admission, the patient developed atrial fibrillation and hypotension which required treatment with inotropes, amiodarone, as well as cardioversion. She then developed biventricular failure with mild pulmonary oedema, requiring increased dialysis ultrafiltration. Approximately 40 hours post-admission, the patient complained of crushing, left-sided chest pain. Her troponin T level was elevated at 450ng/L, however, there were no ischaemic changes on electrocardiogram (ECG). An echocardiogram revealed septal hypokinesia and a reduced ejection fraction, so there was concern for a non-ST-elevation myocardial infarction (NSTEMI). Repeat testing showed normal troponin T levels and the patient's cardiac symptoms were no longer present.

Serial peripheral smears were performed and showed a declining parasite count. The result of the smear from 10 October 2023 was negative for *P. falciparum*. The platelet count and CRP levels continued to improve. Once clinically stable, the patient underwent an angiogram, which revealed normal coronary arteries and an incidental finding of a left ventricular aneurysm. She is currently stable and in hospital.

This case highlights the importance of having a high-index of suspicion for malaria in anyone with a travel history to malaria-endemic areas, who presents with fever, particularly if thrombocytopenia is present. It also emphasises the importance of recognising signs of severe malaria and prompt initiation of treatment, as well as management of complications.

As we head into warmer months and enter malaria season in South Africa, we expect to see an increase in malaria cases, particularly in endemic areas (see malaria risk map below). Malaria should also be suspected in those with no travel history to an endemic area, who present with symptoms consistent with the disease, due to the possibility of odyssean malaria (see NICD Communicable Diseases Communiqué, vol. 21 (11)). Malaria is a category 1 notifiable medical condition (NMC). The rapid notification of all malaria cases in South Africa is mandatory to facilitate public health interventions to stop malaria transmission and implement vector control methods.

For more information on malaria, please visit the malaria page on the NICD website.

(https://www.nicd.ac.za/diseases-a-z-index/malaria/).

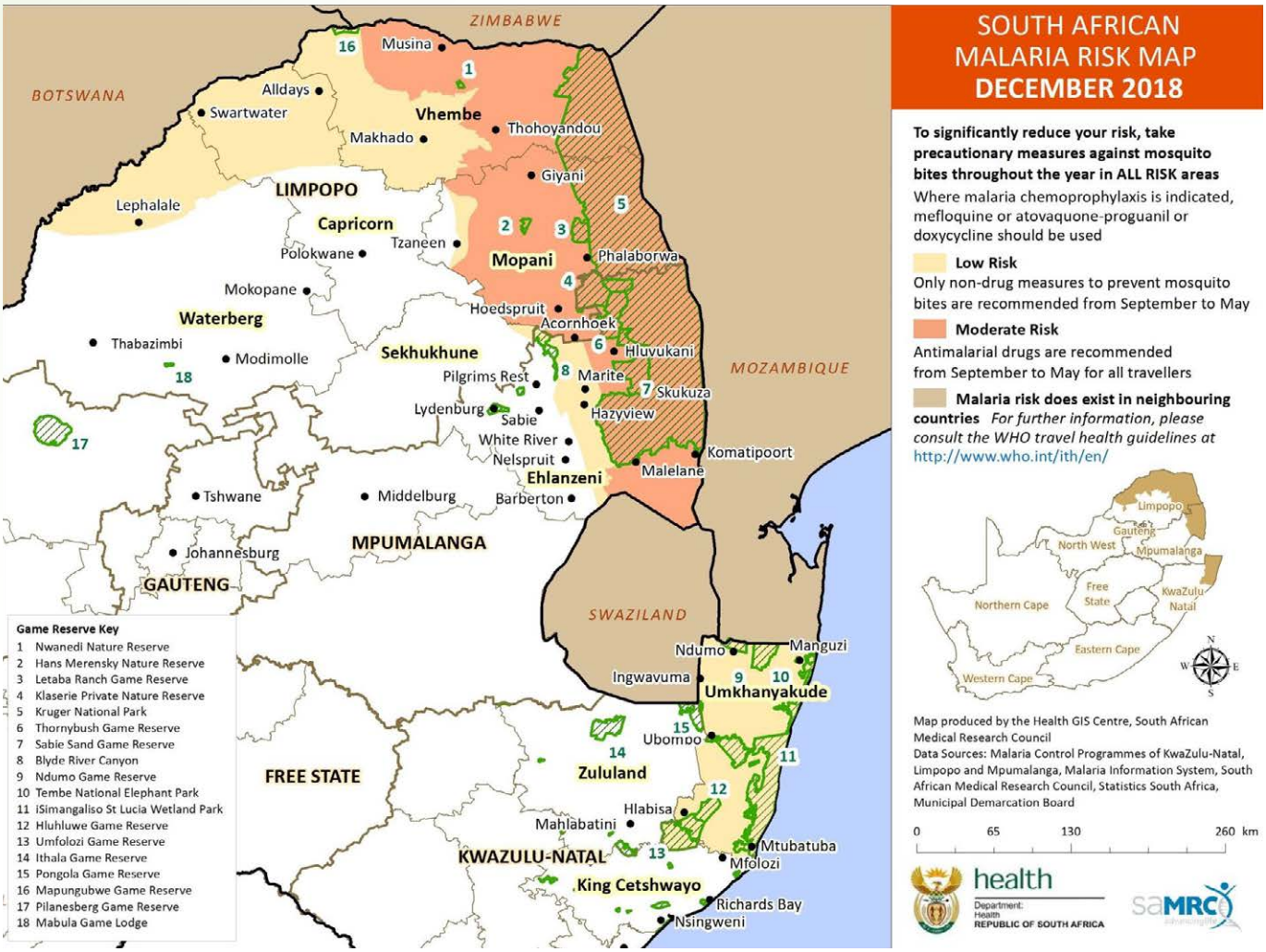

Figure 1. Malaria risk map for South Africa

References:

1. World Health Organization. WHO guidelines for malaria - 16 October 2023: World Health Organization 2023 [24 October 2023]. Available from: https://app.magicapp.org/#/guideline/LwRMXj/section/L0v9rE.
2. Centers for Disease Control and Prevention. Malaria: Centers for Disease Control and Prevention; 2022 [updated 16 March 202224 October 2023]. Available from: https://www.cdc.gov/malaria/about/disease.html.

Sources: *Outbreak response Unit, NICD-NHLS; kimantham@nicd.ac.za, lucilleb@nicd.ac.za; Centre for Emerging Zoonotic and Parasitic Diseases, NICD-NHLS; charlottes@nicd.ac.za; drkimpieton@yahoo.com*

ZOONOTIC & VECTOR-BORNE DISEASES

Rabies update

On 28 September 2023, a case of rabies was confirmed in Ugu District in KwaZulu-Natal Province. A 17-year-old male from eNkulu, Umzumbe Municipality, died in his home after experiencing a brief period of nausea, vomiting, hypersalivation, dyspnoea and agitated and aggressive behaviour. Two to three months prior, he reported being bitten by an unfamiliar dog while walking home after dark. He did not go to a local clinic for medical attention for the wound on his leg. The clinically-suspected diagnosis of rabies was confirmed by a post mortem investigation, including a positive Direct Fluorescent Antibody test. The province of KwaZulu-Natal has reported five human rabies cases for the year so far. Cumulatively, the country has reported nine cases for the same period, including three cases from Eastern Cape Province and one case from Limpopo Province (Figure 2). Rabies is 100% fatal and can be prevented through immunisation of domestic animals (dogs and cats). Post-exposure prophylaxis (PEP), including thorough wound washing, can prevent rabies after human exposure to a potentially rabid animal. Rabies PEP includes a four-dose course of rabies vaccination on days 0, 3, 7 and any time between days 14 and 28, following the first dose of vaccine. Additionally, for Category 3 exposures, rabies immunoglobulin should be infiltrated directly into and around the wound as soon as possible. Visit www.nicd.ac.za for more information.

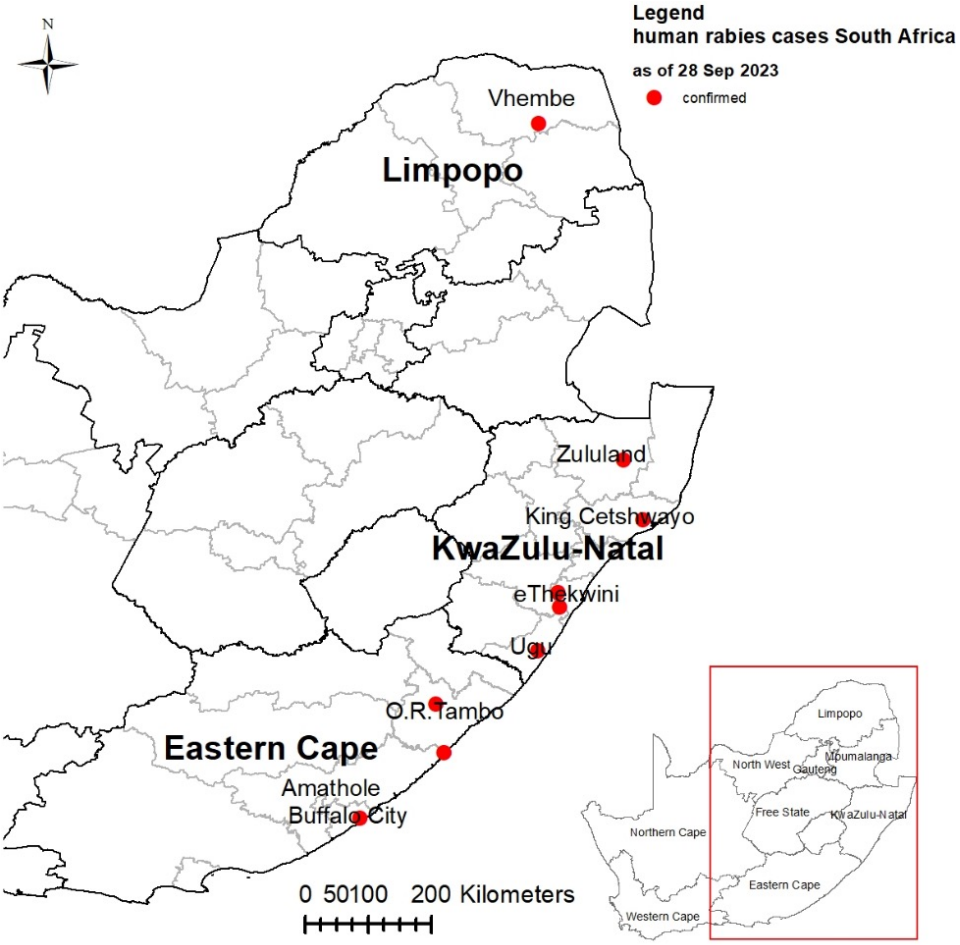

Figure 2. Human rabies cases, South Africa, 1 January - 23 October 2023 (Source: NHLS-NICD)

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

RESPIRATORY DISEASES

Corynebacterium diphtheriae disease in South Africa, 2023

Between 1 January and 20 October 2023, the Centre for Respiratory Diseases and Meningitis (CRDM) has confirmed 12 cases of *Corynebacterium diphtheriae* infection across South Africa.

Five of these individuals had toxigenic diphtheria (toxin-producing *C. diphtheriae*) and these cases were detected from the following provinces: Western Cape (n=2), KwaZulu-Natal (n=2) and Gauteng (n=1). Four of the individuals presented with respiratory tract symptoms (sore throat with pseudomembrane, enlarged cervical glands and low-grade fever). Two of the four individuals with respiratory symptoms received diphtheria anti-toxin (DAT), based on clinical symptoms (haemodynamically unstable, or electrocardiogram (ECG) changes consistent with myocarditis). One of these individuals demised despite administration of DAT, while the other survived. Unfortunately, the other two individuals with respiratory symptoms (a child aged 3 years and an adult aged 31 years) demised before receiving DAT. The fifth individual, an older patient (aged 86 years), had cutaneous diphtheria and presented with ulcers on the legs and the corners of the mouth. At the time of presentation, the clinician was unable to obtain a throat swab (patient was unable to open their mouth). The organism was identified as toxin-producing, and following administration of DAT based on laboratory-confirmation and clinical signs (haemodynamically unstable), the patient recovered. During the contact tracing and swabbing of close contacts of these five individuals, one asymptomatic carrier of toxin-producing *C. diphtheriae* in the pharynx was identified. Asymptomatic contacts who test positive for toxin-producing *C. diphtheriae* should be treated with a 2-week antibiotic course. Elimination of the organism must be confirmed after antibiotic treatment through laboratory testing of repeat swabs.

The seven non-toxigenic isolates came from blood samples (three individuals with endocarditis), swabs (three individuals with cutaneous diphtheria) and sputum (one asymptomatic carrier). In addition, 16 individuals with clinical signs and symptoms of diphtheria were notified to the National Notifiable Conditions (NMC) register, but were not confirmed by testing in the laboratory.

Diphtheria disease is a notifiable condition caused by infection with toxin-producing strains of *C. diphtheriae* (or rarely *C. ulcerans* or *C. pseudotuberculosis*) and presents most commonly as a membranous pharyngitis. Large neck glands (bull neck appearance) and low-grade fever are associated symptoms. A toxin produced by the bacterium causes necrosis of the tissues, resulting in respiratory obstruction, renal failure, neuropathy and myocarditis, which if left untreated causes heart failure and death. The mortality due to respiratory diphtheria may be as high as 50% in the absence of antitoxin[1]. Diphtheria may also present with cutaneous lesions caused by non-toxigenic or toxigenic strains. Although cutaneous diphtheria is generally less severe, cutaneous lesions may serve as a potential reservoir for the transmission of toxigenic and non-toxigenic *C. diphtheriae*[2]. Cutaneous infection with toxigenic strains may rarely be associated with systemic symptoms, such as myocarditis.

Early treatment with antitoxin, prior to the toxin binding to cells, is extremely important, and should be given based on clinical suspicion prior to laboratory confirmation. Clinicians are encouraged to collect samples from individuals with clinically suspected diphtheria. These sample may be sent to CRDM at NICD (contact details in the link below). Guidelines for diagnosis, details for sample collection, clinical management and laboratory diagnosis are available on the NICD website: https://www.nicd.ac.za/diseases-a-z-index/diphtheria/. Clinicians are required to notify suspected cases of diphtheria while awaiting laboratory confirmation.

Diphtheria is a vaccine-preventable disease, however a drop in vaccine coverage could potentially lead to increased numbers of cases. Diphtheria is a rare disease and clinicians need to have a high index of suspicion to make an early diagnosis. Rapid contact tracing, testing and the administration of prophylactic antibiotics can contain outbreaks.

Diphtheria antitoxin is in short supply globally; the World Health Organization is working to secure additional supplies of antitoxin. Limited supplies of antitoxin are available in South Africa. Treatment, in the absence of anti-toxin, is appropriate antibiotics and supportive care.

References:

1. WHO. Diphtheria vaccine. *Weekly Epidemiological Record*. 2006;81(3):24-32.
2. Belsey MA, Leblanc DR. Skin infections and the epidemiology of diphtheria: Acquisition and persistence of C. Diphtheriae infections. Am J Epidemiol [Internet]. Oxford University Press; 1975 [cited 2022 Feb 22]; 102(2):179–184. Available from: https://pubmed.ncbi.nlm.nih.gov/808123/.

Source: *Centre for Respiratory Diseases and Meningitis, NICD-NHLS; jocelynm@nicd.ac.za*

Pertussis update, Pneumonia Surveillance Programme, South Africa 2022-2023

From July 2022 to 10 October 2023 there has been an increase in the detection rate of *Bordetella pertussis* identified through the Pneumonia Surveillance Program (PSP) (detection rate 2%, 332/14 436). Pertussis cases were identified from all six provinces where the PSP programme is active, with the highest number reported from Western Cape (40%, 134/332), followed by Gauteng (21%, 68/332), Mpumalanga (15%, 48/332), North West (13%, 43/332) and KwaZulu-Natal (10% 32/332) (Figure 3).

Two thirds of the total number of individuals with pertussis (66%, 211/322) were aged <5 years. Of these, 71% (149/211) of infections were in infants aged <3 months, 5% (10/211) in infants 3-6 months, 9% (19/211) in infants 7-11 months and 16% (33/211) in children 12-60 months (Figure 4). In children aged <5 years with vaccine history available, 50% (85/171) were vaccinated up-to-date for age. Similarly, of the infants <3 months with pertussis, 40% (50/125) were vaccinated up-to-date for age.

Of the individuals with pertussis and outcome data available, nine deaths have been reported (case fatality ratio (CFR) 3%, 9/286). Two deaths were in infants <3 months, of which one was HIV-exposed, and the remaining seven were in individuals >5 years of age (all of whom had significant underlying conditions).

The significant burden of pertussis in infants aged <3 months supports the introduction of maternal vaccination to protect these young infants. The National Department of Health is planning to implement pertussis vaccination for pregnant women in 2024.

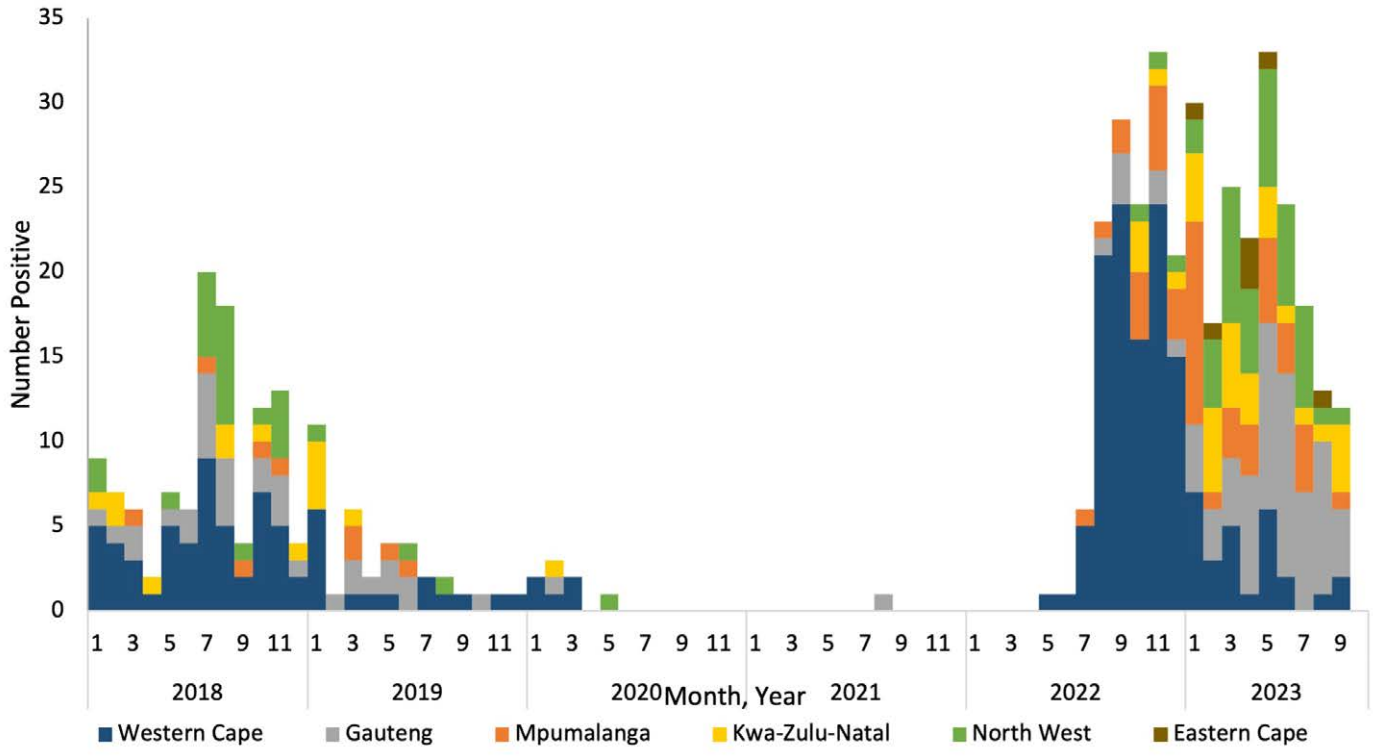

Figure 3. Number of laboratory-confirmed pertussis cases from the Pneumonia Surveillance Programme by year, month and province, South Africa 2018-2023

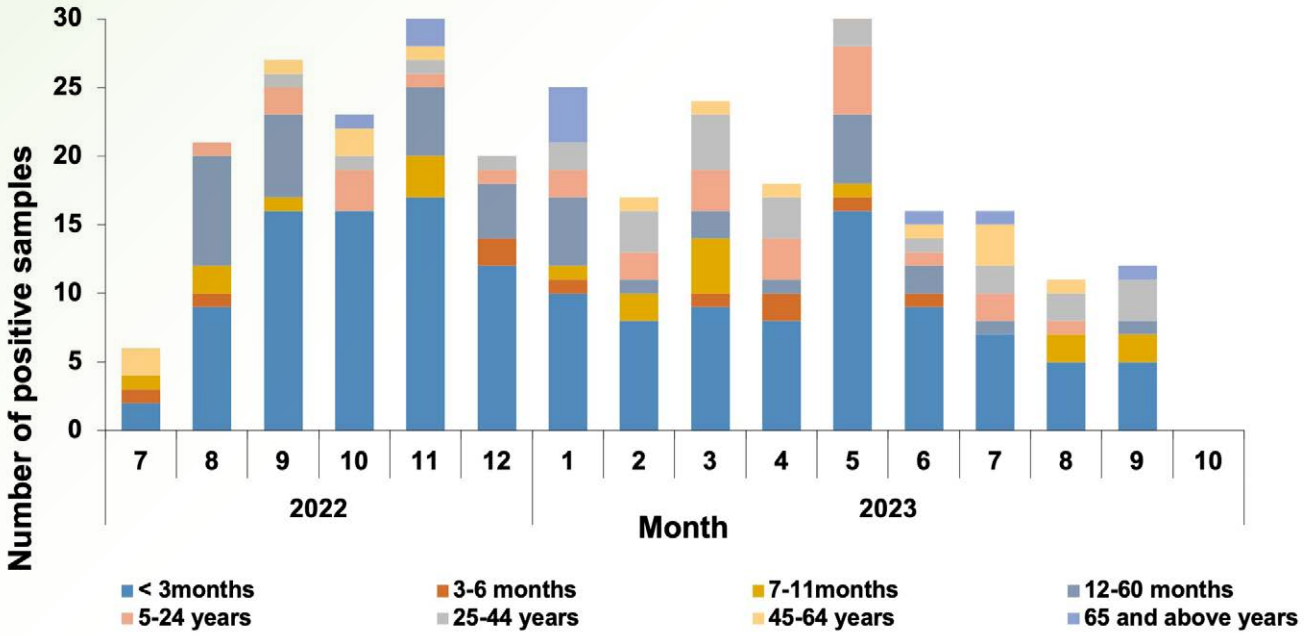

Figure 4. Number of positive pertussis cases aged <5 years from Pneumonia Surveillance Programme by year, month and age group, South Africa, 2022-2023

Source: *Centre for Respiratory Diseases and Meningitis, NICD-NHLS; thendor@nicd.ac.za*

VACCINES AND IMMUNOLOGY

Increase in rubella (German measles) cases in Western Cape Province

An increase in rubella cases has been noted in Western Cape Province since epidemiological week 38 (week ending 2 September 2023). A total of 19 cases have been identified through serological testing. All cases are in children aged 5-9 years. Whilst sporadic cases have been seen across the country, an increase in laboratory-confirmed cases has been identified in Khayelitsha sub-District in the City of Cape Town Metropolitan.

Rubella usually causes mild illness in children and adults, but can have severe consequences in pregnant women, particularly those infected in the first trimester of pregnancy. Rubella virus may infect the foetus, leading to congenital rubella syndrome (CRS). In children and adults, rubella infection typically presents with rash, low-grade fever (<39°C), nausea, sore throat, mild conjunctivitis, headache, cough, runny nose and swollen lymph nodes in the neck. The rash usually starts on the face and neck before spreading to the rest of the body, and lasts for approximately five days. Congenital rubella syndrome may lead to foetal death, or congenital anomalies, including congenital heart disease, cataracts, and deafness.

Healthcare workers are advised to maintain a high index of suspicion for rubella, and to notify and report cases. Currently, there is no vaccine available in the public sector to prevent rubella. The measles, mumps and rubella (MMR) vaccine is, however, available in the private sector.

VACCINES AND IMMUNOLOGY

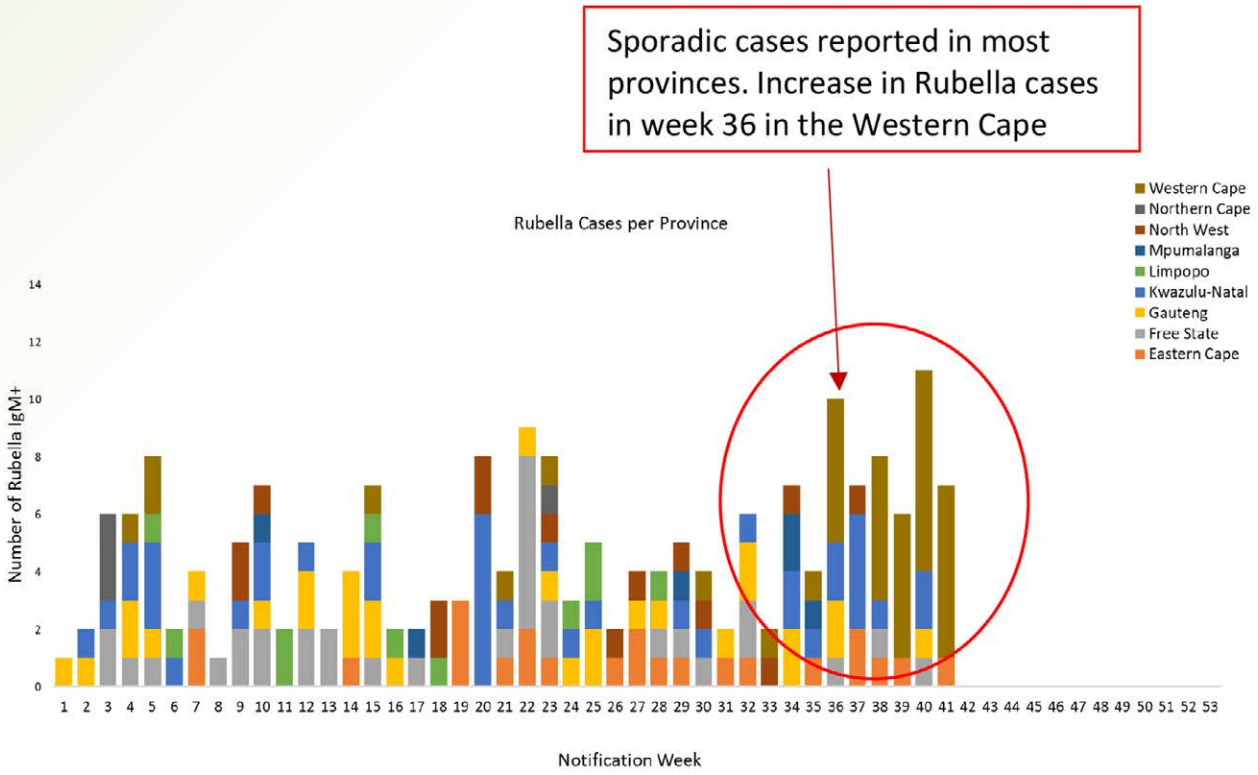

Figure 5. Cases of laboratory-confirmed rubella infection in South Africa by province, by epidemiological week of 2023

Sources: *Centre for Vaccines & Immunology, NICD-NHLS; matimbam@nicd.ac.za, niship@nicd.ac.za*

BEYOND OUR BORDERS

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

Cholera – African Region

With the increase in global cholera cases seen since 2021, there is increased risk of infections, illness and death, especially among children under 5 years of age and other vulnerable populations. As of 13 October 2023, a total of 28 countries have reported cholera cases globally since the beginning of the year. This includes fifteen countries in the African Region, namely, Burundi, Cameroon, the Democratic Republic of the Congo, Ethiopia, Eswatini, Kenya, Malawi, Mozambique, Nigeria, South Africa, South Sudan, Tanzania, Uganda, Zambia, and Zimbabwe.

The capacity to respond to outbreaks remains strained in the African Region, due to the large number of cholera outbreaks, simultaneous outbreaks of other diseases, and the lack of availability of vaccines and adequate water, sanitation, and hygiene (WASH). Countries in the region continue to strengthen public health response activities, such as enhanced surveillance, case management, risk communication and community engagements (RCCE), WASH interventions, and improved testing of samples. The World Health Organization (WHO) continues to assess the risk of cholera as very high at the global level.

The importation of cases to South Africa still remains a possibility, as ongoing cholera outbreaks in the Southern African Region continue. Healthcare workers are urged to maintain a high index of suspicion for cholera and to notify 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 the African Region, 1 January 2022 to 17 September 2023
*excluding South Africa

Country	Cumulative cases	Cumulative deaths	CFR (%)	Date outbreak started	Last update
Malawi	58 996	1 768	3.0	Mar 2022	27 Sep 2023
Democratic Republic of Congo	54 749	592	1.1	Jan 2022	10 Sep 2023
Mozambique	34 564	144	0.4	Sep 2022	17 Sep 2023
Nigeria	26 072	656	2.5	Jan 2022	30 Jul 2023
Cameroon	19 912	461	2.3	Jan 2022	17 Sep 2023
Ethiopia	19 277	252	1.3	Aug 2022	27 Aug 2023
Kenya	12 102	202	1.7	Oct 2022	10 Sep 2023
Zimbabwe	3 975	101	2.5	Feb 2023	16 Sep 2023
South Sudan	1 471	2	0.1	Feb 2023	16 May 2023
Zambia	931	19	2.0	Jan 2023	17 Sep 2023
Burundi	915	9	1.0	Jan 2023	17 Sep 2023
Uganda	81	10	12.3	Jul 2023	1 Sep 2023
United Republic of Tanzania	426	8	1.9	Feb 2023	15 Sep 2023
The Kingdom of Eswatini	2	0	0	Mar 2023	23 Jul 2023

Sources: *Outbreak response Unit, NICD-NHLS; https://iris.who.int/bitstream/handle/10665/373305/AFRO-Cholerabulletin30.pdf*

Dengue fever – global overview

Dengue fever cases, similarly to other infectious diseases, are expected to rise and fall at certain periods in the year. However, recent changes in dengue virus transmission globally have raised concerns from the WHO. Globally, the number of infections continue to rise for 2023, and outbreaks are more severe and less predictable than before, with Bangladesh recording its highest ever number of deaths due to dengue fever this year.

The following is a summary of notable dengue fever reports globally:

- **Central America and the Caribbean:** Costa Rica has reported a total of 14 403 cases of dengue fever for the year so far, as of 30 September 2023. This is a 62% increase in cases compared to the same period in 2022. There is concern over the high number of cases seen so far this year and a call for inter-institutional collaboration has been made from the Costa Rican government to the Costa Rican Red Cross.
- **Europe:** As of 17 October 2023, France has reported seven clusters of autochthonous cases of dengue fever this year, involving 35 cases. Italy's first case of dengue fever for the year was reported in August 2023. Between August 2023 and 17 October 2023, 58 locally-acquired dengue fever cases have been reported in Italy. The European Centre for Disease Prevention and Control (ECDC) expect further autochthonous cases to occur in the southern countries of the European Union, where the mosquito vector is present.
- **Asia:** Between 1 January 2023 and 15 October 2023, 239 614 confirmed cases of dengue fever and 1 169 dengue-related deaths were reported in Bangladesh (CFR=0.49%). The country's highest monthly number of deaths since 2019 was recorded in September 2023 (n=396).
- **Africa:** Chad officially declared its first ever outbreak of dengue fever on 15 August 2023. Ethiopia and Mauritius have also reported outbreaks this year. Cases have also been reported in Burkina Faso, Côte d'Ivoire, Mali, and Senegal.

Globally, response and control measures include vector control, education of the public and healthcare providers, and personal infection prevention measures. The WHO now recommends vaccination with the Qdenga vaccine, for children aged between 6-16 years who live in dengue hot spots. This recommendation follows the September meeting of the Strategic Advisory Group of Experts on Immunization (SAGE).

Local transmission of dengue 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.

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.ecdc.europa.eu/sites/default/files/documents/Communicable_Disease_Threats_Report_Week_42_2023.pdf; https://www.who.int/emergencies/disease-outbreak-news/item/2023-DON491; https://iris.who.int/bitstream/handle/10665/373489/OEW40-0208102023.pdf?sequence=1&isAllowed=y; https://reliefweb.int/report/bangladesh/who-south-east-asia-region-epidemiological-bulletin-13th-edition-18-october-2023-reporting-period-2-15-october-2023*

Bedbug infestation – France

France is currently hosting the Rugby World Cup, which began in September 2023, and is preparing to host the summer Olympics next year. The country has reported an ongoing infestation of bedbugs, which has affected a variety of spaces, including homes, public transport (trains, buses) and public spaces (cinemas, schools, hospitals, hotels). Despite efforts by the French government to control the infestation, including a Public Health campaign which was launched three years ago, cases continue to be reported.

Bedbugs are small, reddish-brown, flat, parasitic insects that feed solely on blood of humans and animals. They are found across the globe, and although traditionally seen as a problem in developing countries, recent infestations have been reported in developed countries.

While bedbugs are not known to spread disease, they can be an irritation as their bites cause itching, resulting in difficulty sleeping. Allergic reactions to bites can range from mild reactions to, very rarely, anaphylaxis. Secondary infection can also occur as a result of continuous scratching of wounds.

Due to the insects' size and ability to survive without a blood meal for long periods of time, most people are unaware they may be transporting bedbugs when they travel. If you do suspect a bedbug infestation in your home, it is advisable to contact a pest control professional.

Sources: *Outbreak response Unit, NICD-NHLS; https://www.mayoclinic.org/diseases-conditions/bedbugs/symptoms-causes/syc-20370001; https://www.cdc.gov/parasites/bedbugs/faqs.html#:~:text=where%20people%20sleep.-,Do%20bed%20bugs%20spread%20disease%3F,of%20a%20secondary%20skin%20infection; https://www.epa.gov/bedbugs/bed-bugs-public-health-issue; https://www.epa.gov/bedbugs/top-ten-tips-prevent-or-control-bed-bugs; https://edition.cnn.com/2023/09/30/travel/france-bedbugs-paris-intl-hnk/index.html; https://extension.umn.edu/bed-bugs/bed-bug-prevention-and-control-home*

WHO AFRO UPDATE

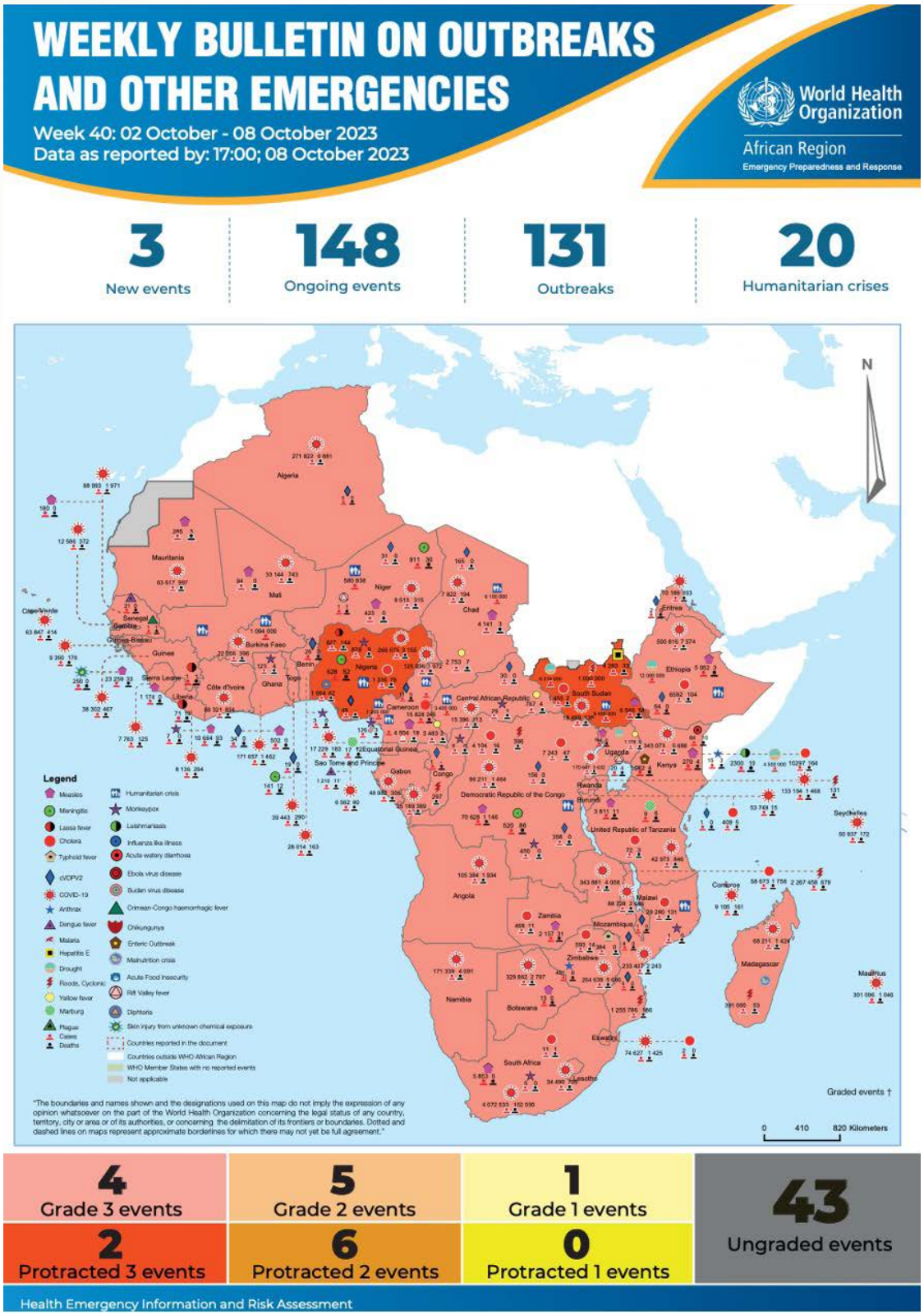

Figure 6. The Weekly WHO Outbreak and Emergencies Bulletin focuses on selected public health emergencies occurring in the WHO African Region. The African Region WHO Health Emergencies Programme is currently monitoring 148 events. For more information, see link below: https://www.afro.who.int/health-topics/disease-outbreaks/outbreaks-and-other-emergencies-updates