

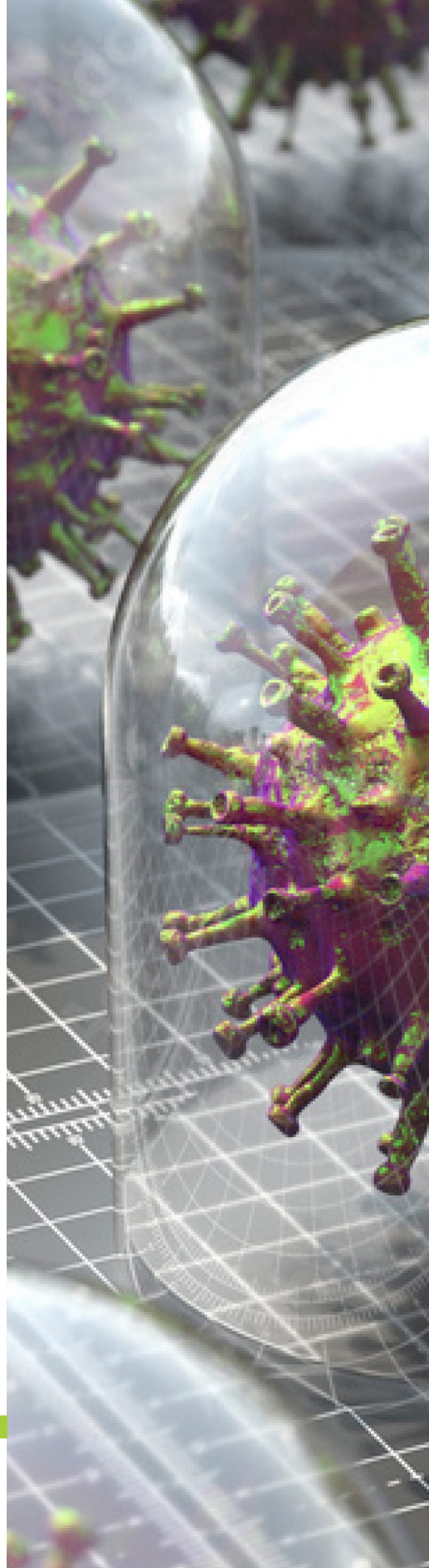


**NATIONAL INSTITUTE FOR
COMMUNICABLE DISEASES**

Division of the National Health Laboratory Service

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COMMUNICABLE DISEASES COMMUNIQUÉ



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Editor's Notes

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The 28th September was World Rabies Day. It is celebrated each year to raise awareness about rabies prevention and marks the anniversary of Louis Pasteur's death. He was the French chemist and microbiologist who developed the first rabies vaccine. Safe and efficacious animal and human vaccines are important tools to eliminate human deaths from rabies. The theme for this year is "One Health, Zero Deaths". In the past two years, there has been an increase in human rabies cases in South Africa as a result of dog rabies outbreaks, so there is still work to be done in our country to reach the first target for rabies elimination – zero dog-mediated human rabies deaths.

Although reported malaria cases were substantially lower in the last season than in previous years, healthcare workers should consider malaria in febrile patients living in or travelling from a malaria-endemic region. People intending to visit malaria risk areas should follow appropriate malaria prevention measures. Remember to think of tick-borne diseases in patients presenting with acute febrile illness. September brought with it the second case of Crimean-Congo haemorrhagic fever reported this year. With regards to the multi-country monkeypox outbreak, the number of reported cases globally is on a downward trend and South Africa still only has 5 laboratory-confirmed cases.

While very few pertussis cases were reported through our pneumonia surveillance programme in the past two years, there has been an increase in pertussis cases detected in 2022. Clinicians should be on alert for cases, especially in very young children who may not present with typical symptoms. Pertussis is a vaccine-preventable disease, so ensure that children's vaccinations are up to date. Numbers of COVID-19 tests, cases, admissions and deaths remained low in the past month but individuals eligible for COVID-19 vaccines are encouraged to vaccinate and get their booster shots in order to reduce severe disease.

In this edition, we also describe a cluster of multidrug-resistant *Acinetobacter baumannii* in a neonatal intensive care unit at a hospital in KwaZulu-Natal and provide an update on congenital syphilis surveillance in South Africa.

Beyond our borders, an Ebola virus disease outbreak was declared in Uganda on 20 September. This is the first Ebola disease outbreak caused by Sudan virus in Uganda since 2012. There are no licensed vaccines or therapeutics for the prevention and treatment of Sudan virus disease, however, several candidate vaccines are in development and are being evaluated for use during this outbreak. We also provide updates on cholera in Malawi, yellow fever in the Africa region and global polio cases.

Crimean-Congo haemorrhagic fever

On 10 September 2022 Crimean-Congo haemorrhagic fever (CCHF) was confirmed in a 32-year-old man from Burgersdorp, Eastern Cape Province. Prior to falling ill, the patient was working in different areas in the Eastern Cape and Free State provinces. A tick bite was identified as the source of infection. It is, however, important to note that the patient is involved with culling operations on farms and reserves, so exposure to the virus through contact with raw meat or blood of infected wildlife is also a possibility. On 4 September 2022, the patient reported a high temperature of more than 40 °C, as well as headaches, dizziness, and a loss of appetite. The patient was consulted by a general practitioner who prescribed doxycycline treatment to treat possible tick bite fever. The condition of the patient however continued to deteriorate with sustained pyrexia of more than 39°C for the next two days, as well as nausea, vomiting, diarrhoea, and back pain. On 7 September, he manifested with epistaxis and was referred and admitted to a hospital in Bloemfontein, Free State Province. In the days following hospitalisation, the risk for CCHF was appreciated. The patient was isolated and subsequently confirmed for CCHF by RT-PCR testing. During his hospitalisation, bleeding gums, bone marrow venipuncture haemorrhage and haematoma were recorded. Blood testing revealed severe thrombocytopenia with a platelet count of $27 \times 10^9/L$ on admission and $8 \times 10^9/L$ on 9 September, after which he improved to $35 \times 10^9/L$ following treatment with platelet transfusions. In addition, elevated

transaminases were reported (AST > 200 IU/L and ALT > 200 IU/L) with lymphocytopenia ($< 1 \times 10^9/L$). All contacts of the patient were identified and monitored for a period of 14 days following exposure. It is probable that additional culling team members were exposed to a common source rather than human-to-human transmission, and that direct patient exposure in family members and medical staff occurred, although no secondary cases have been identified. The patient developed an adequate antibody response against the infection (IgM and IgG antibody titres of 1:100 and 1:1000, respectively) and recovered, so he was discharged from the hospital.

This is the second case of CCHF to be reported in South Africa for 2022 to date. The first was a fatal case of CCHF reported from the Western Cape Province.

In South Africa, CCHF is a notifiable medical condition (NMC) of category 1 since prompt public health responses are required to reduce the risk of person-to-person transmission of the virus. CCHF is a rare human disease in South Africa with 220 cases reported from 1981 (when CCHF was first recorded in South Africa) and including the case reported here. More information on CCHF and other viral haemorrhagic fevers, in addition to guidelines for submitting samples for testing, can be found at www.nicd.ac.za.

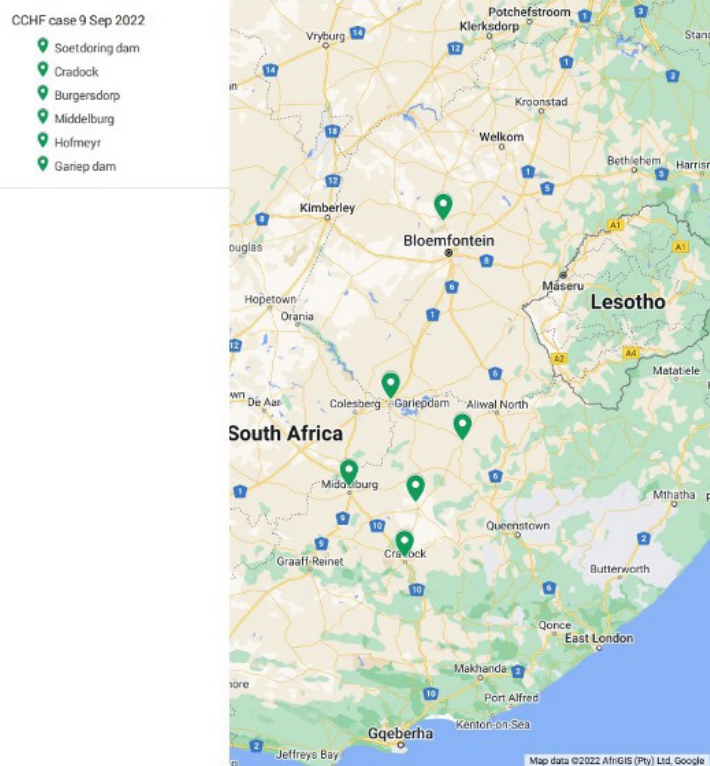


Figure 1. Locations of residence and game culling done by CCHF case in August and September 2022.

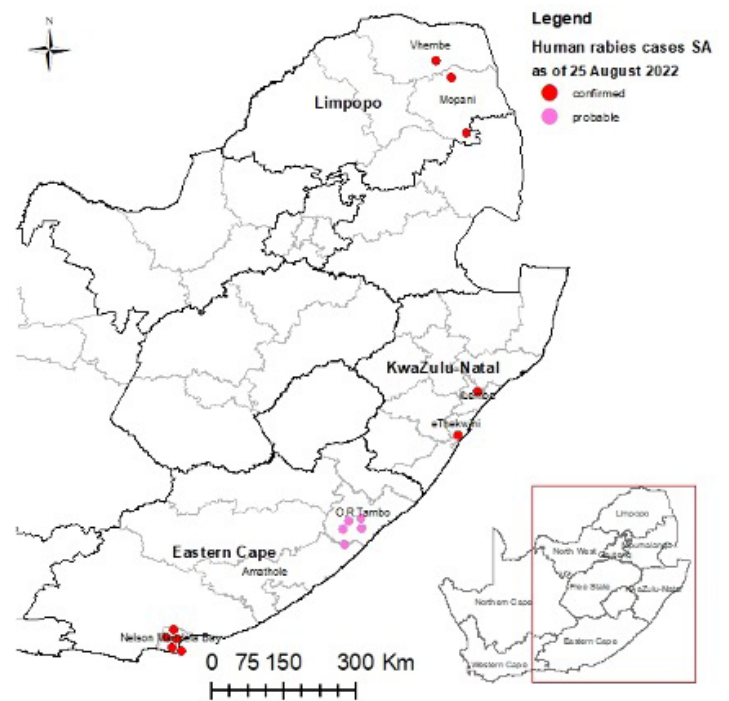
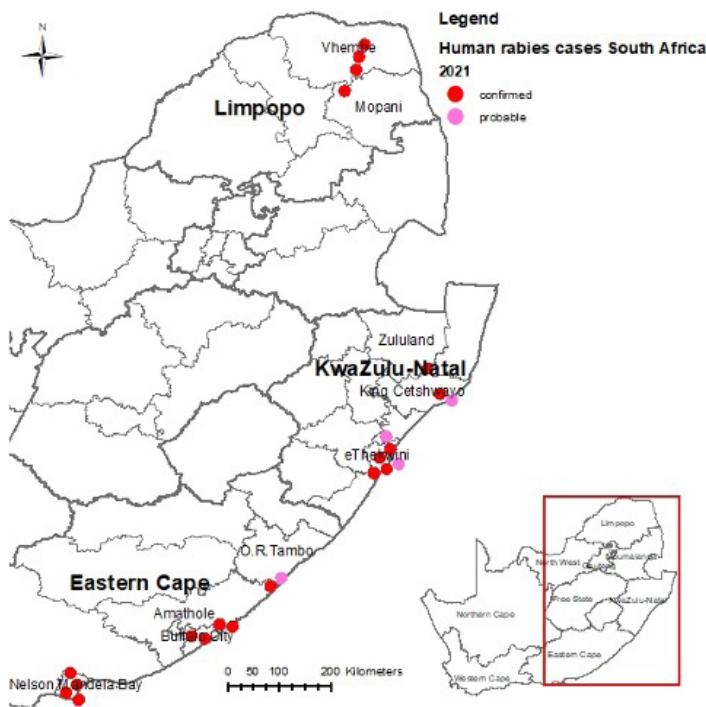
Source: Centre for Emerging Zoonotic and Parasitic Diseases, NICD-NHLS; JacquelineW@nicd.ac.za

Rabies update - World Rabies Day

Rabies is a zoonotic disease with a high fatality rate that is typically contracted by being bitten by a rabid dog. Despite the existence of rabies vaccination for more than a century and the elimination of canine rabies in many regions of the world, dog-transmitted rabies remains a serious public health concern with 37% of cases in the world occurring in Sub-Saharan Africa, followed by 35% in India, 25% in the rest of Asia excluding India and Central Asia, and 3% in the Middle East, including northern Africa and Central Asia. Sub-Saharan African countries are estimated to spend the least on post-exposure prophylaxis (PEP), resulting in the highest costs associated with human rabies deaths and the wide underreporting of such deaths.

In the past two years, there has been an increase in human

rabies cases in South Africa as a result of dog rabies outbreaks. In areas where it was previously unheard of, human rabies cases have also been reported. To date (22 September 2022), 29 cases of human rabies have been laboratory confirmed in South Africa in 2021 and 2022. The Eastern Cape (EC=14), Limpopo (LPP=7), and KwaZulu-Natal (KZN=8) were the three provinces that reported cases. Additionally, nine other probable cases of human rabies deaths were reported from the EC and from KZN (Figures 2 and 3). Nelson Mandela Bay district, which had an unprecedented number of human cases, Buffalo City, OR Tambo and Amathole districts (EC); Vhembe and Mopani districts (LPP) and eThekweni and King Cetshwayo, Zululand and iLembe districts (KZN) all reported cases (Figures 2 and 3). However, no cases have been reported in the most recent month after 25 August 2022 (Figure 3).



Figures 2 and 3. Laboratory-confirmed and probable cases of human rabies cases in South Africa in 2021 and 2022 up until 22 September (from NICD data source).



The World Health Organization, the World Organization for Animal Health, the Food and Agriculture Organization of the United Nations, and the GARC proposed this strategy in 2016. It deliberately designates dog-mediated human rabies deaths as the first target for rabies elimination because of its importance for public health as well as its possibility to be achieved in the short term. The longer-term objective of stopping the spread of the disease and completely eliminating canine rabies would take more time, but precedents from many different nations show that it is feasible. The National Strategy for the Elimination of dog-mediated rabies in South Africa (2019-2030) was signed by the Department of Agriculture, Land Reform and Rural Development and the Department of Health in 2021 (Introduction (dalrrd.gov.za)). The proposed strategy focuses on using a One Health approach to manage rabies outbreaks in both humans and animals through interdisciplinary collaboration between public health and veterinary sectors, moving countries from having endemic rabies to eliminating dog-mediated rabies.

Since 2007, the anniversary of Louis Pasteur's death on 28 September has served as the date for World Rabies Day. In 1885, Louis Pasteur, a French chemist and microbiologist, successfully administered the rabies vaccine to a dog bite victim for the first time. World Rabies Day strives to promote rabies elimination globally and increase public awareness of the disease. More than thirty rabies vaccination and awareness and learning activities coordinated by governmental and private stakeholders in South Africa have been registered with the Global Alliance for Rabies Control (GARC) (www.rabiesalliance.org), to be organized and held in September 2022. Additional details regarding rabies and PEP as well as the Rabies World Day may be found on the NICD website (www.nicd.ac.za) and GARC website (www.rabiesalliance.org).



Figure 4. The theme for the 16th annual World Rabies Day in 2022 is 'One Health, Zero Death'.

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

Malaria season alert

Although reported malaria cases were substantially lower in the last season than in previous years, the factors that influence malaria incidence are unstable or unpredictable (e.g. climatic, economic, population migration, and political issues), and the relaxation of COVID-19 travel restrictions is likely to contribute to increased malaria incidence in endemic areas, with corresponding increased travel-related cases. People intending to visit malaria-risk areas should be appropriately advised about malaria prevention measures (https://www.nicd.ac.za/wp-content/uploads/2019/03/National-Guidelines-for-prevention-of-Malaria_updated-08012019-1.pdf).

While COVID-19 is often the main concern when a person becomes ill with non-specific symptoms, it is now as pertinent as ever to remind healthcare workers of the need to

consider malaria in febrile patients living in or travelling from a malaria-endemic region, regardless of their COVID-19 test status. Late-diagnosed malaria in patients with or without positive COVID-19 tests is a life-threatening situation. Action to diagnose and treat suspected malaria should not be delayed by waiting for COVID-19 test results.

The capability of vector mosquitoes to hitchhike into non-endemic malaria areas and infect local residents, frequently with serious clinical consequences, should not be forgotten (airport, minibus, taxi, or suitcase malaria). This type of malaria should be considered in any patient with a progressively worsening febrile illness of unknown cause, particularly if thrombocytopenia is present (see Communicable Diseases Communiqué Vol. 21 (3), March 2022).

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

Monkeypox update

Monkeypox, a zoonotic infection caused by the monkeypox virus was declared the latest public health emergency of international concern (PHEIC) by the WHO on the 23rd of July 2022. As of the 21st of September 2022, according to the WHO, this multi-country outbreak has resulted in 61 753 lab confirmed cases and 23 deaths in over 100 countries worldwide.

Globally, there has been a downward trend in cases noted since August of this year partially due to the decline in cases noted in the Americas and Europe, but overall the global risk assessment still remains moderate.

According to the WHO report, the 10 countries that make up 86,7% of monkeypox cases are the United States of America, Spain, Brazil, France, Germany, the United Kingdom, Peru, Canada, Colombia and the Netherlands.

In terms of epidemiological findings, the following have been noted:

- Young men are making up 97,4% of all monkeypox cases reported, with a median age of 35 years old.
- 90,9% of all cases have reportedly identified gay or bisexual or other men who have sex with men (MSM) and 90,9% of all cases have been transmitted through sexual contact.
- At least 44,2% of all reported cases are HIV positive and
- The most commonly reported symptoms are rash (mainly systemic and genital (85%)) and fever (57%).

The WHO still advises that all cases be monitored closely and that case finding, laboratory investigation, contact tracing and clinical management still be performed with care. Practising infection prevention and control (IPC) and risk communication and community engagement (RCCE) remain of utmost importance in reducing the transmission of disease amongst our communities.

Source:

1. WHO. Multi-country outbreak of monkeypox [Internet]. World Health Organisation; 2022 Jul p. 13. Report No.: 2. Available from: <https://www.who.int/emergencies/situation-reports>
2. WHO. Multi-country outbreak of monkeypox [Internet]. World Health Organisation; 2022 Sep p. 12. (Multi-country outbreak of monkeypox). Report No.: 6. Available from: <https://www.who.int/emergencies/situation-reports>

Increase in pertussis cases in South Africa

There were very few pertussis cases reported through the pneumonia surveillance programme in 2020 ($n=9$) and 2021 ($n=1$) in South Africa, likely as a result of decreased transmission related to non-pharmaceutical interventions to prevent the spread of SARS-CoV-2. In 2022, there has been an increase in pertussis cases detected in the pneumonia surveillance programme. From January to June 2022, 35 of the 6 624 (0.5%) patients who were tested for *Bordetella pertussis* tested positive. The increased detection of pertussis cases was seen in July, with the percentage of cases testing positive at 11.4 % ($n = 4/35$) in July, 62.0% ($n = 22/35$) in August and 14.3% ($n = 4/35$) in September (testing for September is ongoing) (Figure 5). The increase in laboratory-confirmed pertussis cases was predominantly from sentinel surveillance sites in one province (Western Cape) (Figure 6). At pneumonia surveillance sites, the pertussis detection rate was 1.7% (232/1911) for Western Cape Province, 0.07% (1/1349) for Gauteng Province and 2.0% (2/722) for Mpumalanga Province. Of all pertussis cases, 83.9% (29/35) were children under 5 years of age and of those 51.7% (15/29) were children <3 months. Among the 32 pertussis-positive cases with data available on the outcome, there was no mortality reported.

An increase in pertussis cases was also observed from the Notifiable Medical Conditions (NMC) surveillance system. From January to September 2022, 147 cases of pertussis were reported to the NMC system, of which 109/147 (74%)

have been reported since July 2022. The highest number of cases was reported by Western Cape Province (62/147, 42%). In July and August 2022, the cases reported were evenly distributed across provinces and in keeping with numbers reported before COVID-19, while in September 2022, the majority of cases, 79% (38/48) were reported from Western Cape Province. Of the cases reported by the Western Cape Province, the majority ($n=34$, 89%) were in children <5 years of age, of which 74% (25/34) were children aged <3 months.

Pertussis, commonly known as 'whooping cough' is a vaccine-preventable disease caused by *Bordetella pertussis* and is a category 1 notifiable medical condition. Clinicians are advised to be vigilant for cases, especially in very young children who may not present with typical symptoms of pertussis (cough and whoop), to conduct diagnostic testing where appropriate, to notify cases and prescribe post-exposure prophylaxis to close and high-risk contacts of suspected or confirmed cases. NICD recommendations for pertussis diagnosis, management and public health response may be found on the NICD web page (<http://www.nicd.ac.za/index.php/pertussis/>). Notification forms can be accessed at <http://www.nicd.ac.za/index.php/nmc/>. An alert for increased pertussis cases was released on the 21st of September 2022 (<https://www.nicd.ac.za/increase-in-pertussis-cases-in-south-africa-21-sept-2022/>).

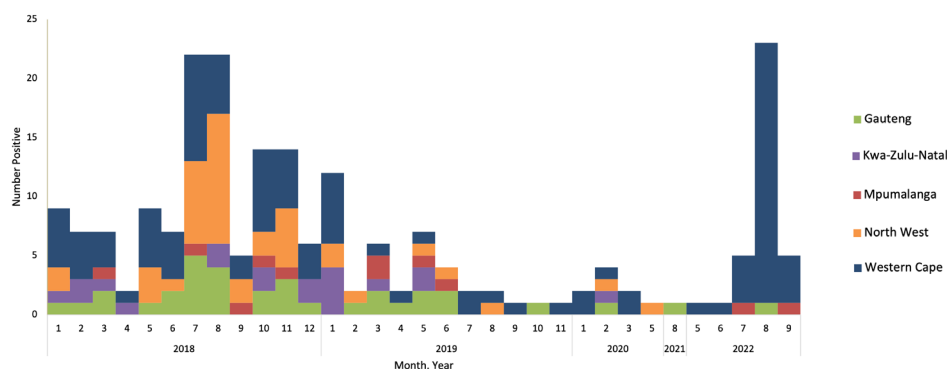


Figure 5. Number of laboratory-confirmed pertussis cases from pneumonia surveillance programme by year, month and province, 2018-2022

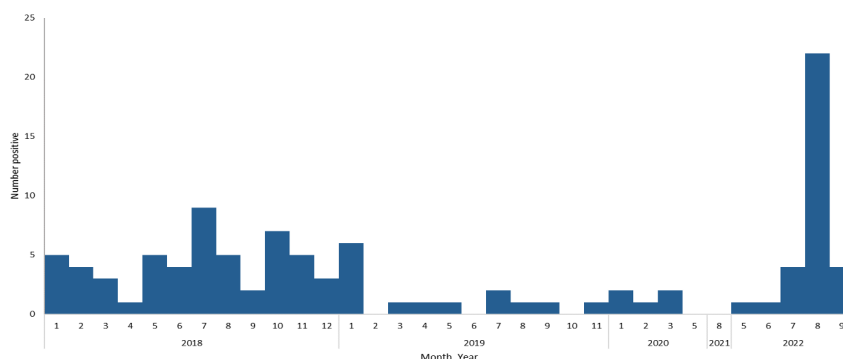


Figure 6. Number of laboratory-confirmed pertussis cases from pneumonia surveillance programme by year, month in Western Cape, 2018-2022

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

COVID-19 in South Africa update

From 3 March 2020 through to 17 September 2022 (week 37 of 2022), a total of 21 147 940 PCR tests for SARS-CoV-2, 4 016 081 laboratory-confirmed COVID-19 cases, 543 146 admissions and 104 366 deaths were reported in South Africa. In week 37, the PCR testing rate was highest in Gauteng Province (63 per 100 000 persons) and lowest in Limpopo Province (7 per 100 000 persons). The percentage testing positive in week 37 was highest in Northern Cape Province (7.4%) and lowest in North West Province (1.7%). The highest weekly incidence risk was reported in Gauteng Province

(4.8 cases per 100 000 persons), and the lowest in Northern Cape Province (0.5 cases per 100 000 persons). The highest weekly proportion of admissions was reported in Gauteng Province (46.5%), and the lowest was in the Northern Cape Province (0%). In summary, the testing rate, percentage testing positive, case numbers, number of admissions and deaths remained low in the past few weeks. Individuals eligible for COVID-19 vaccines are encouraged to vaccinate and to get booster shots.

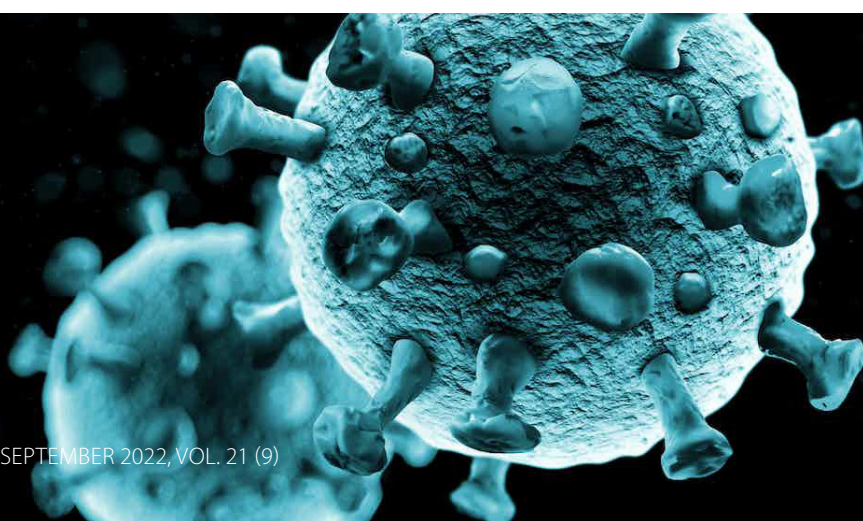
Table 1. Number and cumulative incidence risk of SARS-CoV-2 PCR testing, laboratory-confirmed cases of COVID-19, admissions and deaths per 100 000 persons by province, South Africa, 3 March 2020 – 17 September 2022

Province	Cumulative cases (n) (percentage, n/ total cases in South Africa)	Population in mid-2021 ¹ , n	Cumulative testing rate per 100,000	Cumulative incidence risk of cases / 100,000	Cumulative incidence risk of admissions / 100,000	Cumulative incidence risk of deaths / 100,000
Eastern Cape	364 822 (9.1)	6 676 590	24536.7	5 464.2	731.6	199.3
Free State	216 558 (5.4)	2 932 441	42430.2	7 384.9	1115.4	209.9
Gauteng	1 330 570 (33.1)	15 810 388	50009.8	8 415.8	1013.9	193.9
KwaZulu-Natal	718 940 (17.9)	11 513 575	31866.5	6 244.3	777.1	152.8
Limpopo	160 111 (4.0)	5 926 724	10298.3	2 701.5	358.1	90.2
Mpumalanga	202 826 (5.1)	4 743 584	22402.2	4 275.8	486.3	103.9
North West	202 714 (5.0)	4 122 854	43058.3	4 916.8	835.2	121.8
Northern Cape	115 477 (2.9)	1 303 047	22496.0	8 862.1	916.3	188.9
Western Cape	704 063 (17.5)	7 113 776	49260.2	9 897.2	1703.1	265.7
Unknown						
Total	4 016 081	60 142 978	35162.8	6 677.6	903.1	173.5

¹2021 Mid-year population Statistics South Africa

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

COVID-19



Influenza season update

Between 3 January 2022 and 18 September 2022 (week 37), 295 cases of influenza have been detected from pneumonia surveillance (public hospitals) sentinel sites. Of which 144 (49%) were influenza A(H1N1)pdm09, 74 (25%) influenza A(H3N2), 8 (3%) influenza A (subtype inconclusive), 5 (2%) influenza A (pending results), 36 (12%) influenza B (Victoria), 8 (3%) influenza B (lineage inconclusive and 20 (7%) influenza B (pending results) (Figure 7).

The 2022 influenza season began in week 17 (week starting 25 April 2022) when the detection rate among patients in pneumonia surveillance breached the epidemic threshold as determined by the Moving Epidemic Method (MEM) and in week 37, the impact was low (Figure 8). The 2022 seasonal wave so far has been of low impact, with a seasonal peak in week 25 (week starting 20 June 2022), however, the detection

rate has shown an increase in recent weeks. The majority of cases were children under 5 years old (128/295, 43%) (Figure 9). Moreover, most cases were enrolled from Gauteng Province (70/295, 24%) and followed by Western Cape Province sentinel sites (68/295, 23%) (Figure 10).

In the majority of otherwise healthy young persons, influenza is an uncomplicated infection, however in rare circumstances healthy individuals may present with severe influenza illness or complications. Complications of influenza, for example, pneumonia, are more common in pregnancy, in persons over the age of 65, in those with other medical conditions such as heart and lung disease and diabetes, as well as amongst immunocompromised individuals. Clinicians are reminded to encourage patients at increased risk of developing influenza illness and complications to vaccinate against influenza.

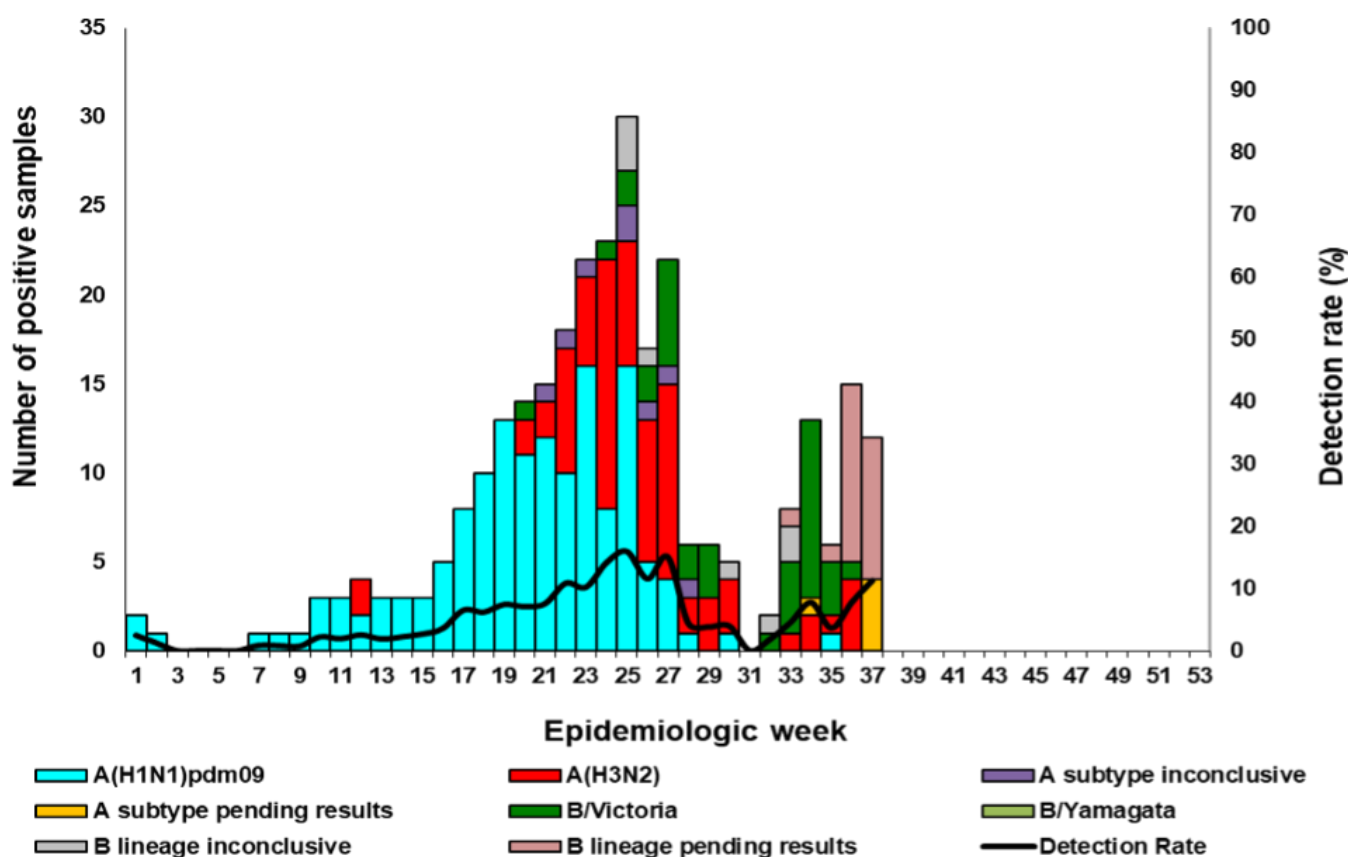


Figure 7. Number of influenza-positive cases by influenza subtype and lineage and detection rate by week, pneumonia surveillance public hospitals, 03/01/2022 – 18/09/2022

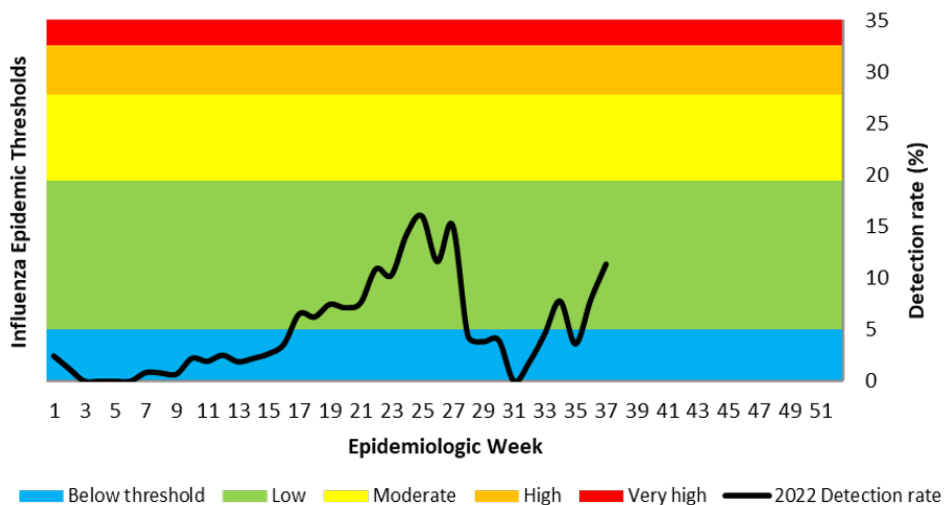


Figure 8. Influenza percentage detections and epidemic thresholds among cases of all ages, pneumonia surveillance public hospitals, 03/01/2022 – 18/09/2022

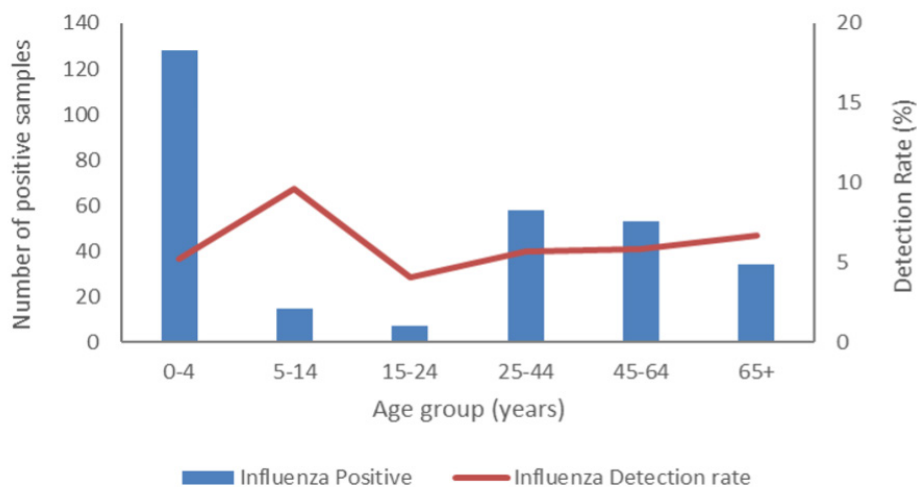


Figure 9. Number of patients testing positive for influenza by age group and detection rate, pneumonia surveillance public hospitals, 03/01/2022 – 18/09/2022

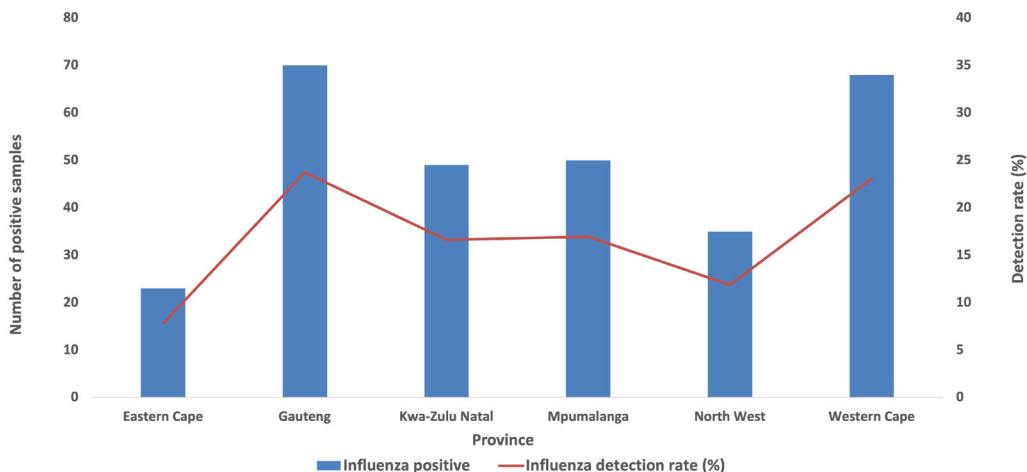


Figure 10. Number of patients (all ages) testing positive for influenza by province and detection rate by week, pneumonia surveillance public hospitals, 03/01/2022 – 18/09/2022

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

A cluster of multidrug-resistant *Acinetobacter baumannii* infections in a neonatal intensive care unit at a regional hospital in KwaZulu-Natal, August 2022.

Infections caused by multidrug-resistant *Acinetobacter baumannii* (MDR-AB) are among the most challenging to prevent and treat in new-born and immunocompromised individuals¹. Indwelling devices, pre-existing colonisation, prior exposure to antimicrobial agents, recent surgery, invasive procedures, and underlying illness-severity are risk factors for infection with this multidrug-resistant Gram-negative bacterium¹. On 16 August 2022, the Centre for Healthcare Infections, Antimicrobial Resistance and Mycoses (CHARM) at the NICD was informed of an increase in cases of MDR-AB infections in a neonatal ICU of a regional hospital in the KwaZulu-Natal Province. The cluster involved five new-born babies with MDR-AB cultured from cerebrospinal fluid (n=3), blood (n=1) and endotracheal aspirate (n=1). The specimens were collected ≥ 3 days after admission for all the babies and within a maximum of 4 days between each other. The organism was isolated from a blood culture taken on 31 July 2022 from the index case and from a CSF specimen from the same patient taken on 11 August 2022. All three CSF specimens from three cases were blood stained. All babies had underlying conditions and four of the five cases died. At the time of the notification, an outbreak investigation was supported by KwaZulu-Natal Provincial Department of Health, including Infection Prevention and Control (IPC), Provincial and District hospital outbreak teams, NHLS and NICD. As part of the investigation, several activities were undertaken by the team; including secondary data analysis for cases of bloodstream infections (AB isolated from blood

culture) and meningitis (AB isolated from CSF) from 1 January 2022 through to 16 August 2022. In addition, MDR-AB isolates cultured from the five cases were sent to the NICD for phenotypic and molecular characterisation including whole genome sequencing (WGS). During the investigation period, 16 incident cases of culture-confirmed *A. baumannii* were reported with an apparent increase in patients with suspected meningitis in August 2022 (Figure 11). Laboratory analysis showed that all five isolates from the cluster were phenotypically resistant to tested antibiotics including amikacin, gentamicin and meropenem. All isolates were susceptible to tigecycline and four of the five isolates were susceptible to colistin. Phylogenetic analysis showed two clusters, a major cluster consisting of four closely related isolates (all belonged to sequence type (ST) 2) and a minor cluster with one isolate that is different from isolates in the major cluster (ST79) (Figure 12). In this investigation, we found one dominant strain with four clonal isolates, indicating a possible common source and/or person-to-person transmission. The unit exceeded approved bed occupancy and was not adherent to staffing norms. Control measures included reducing bed occupancy in the unit, strengthening of IPC, such as hand hygiene and environmental cleaning, decontamination of equipment, aseptic technique for procedures, retraining of staff and surveillance. As of 26 August 2022, no further cases of MDR-AB infection were reported.



HEALTHCARE-ASSOCIATED INFECTIONS, ANTIMICROBIAL RESISTANCE AND MYCOSES

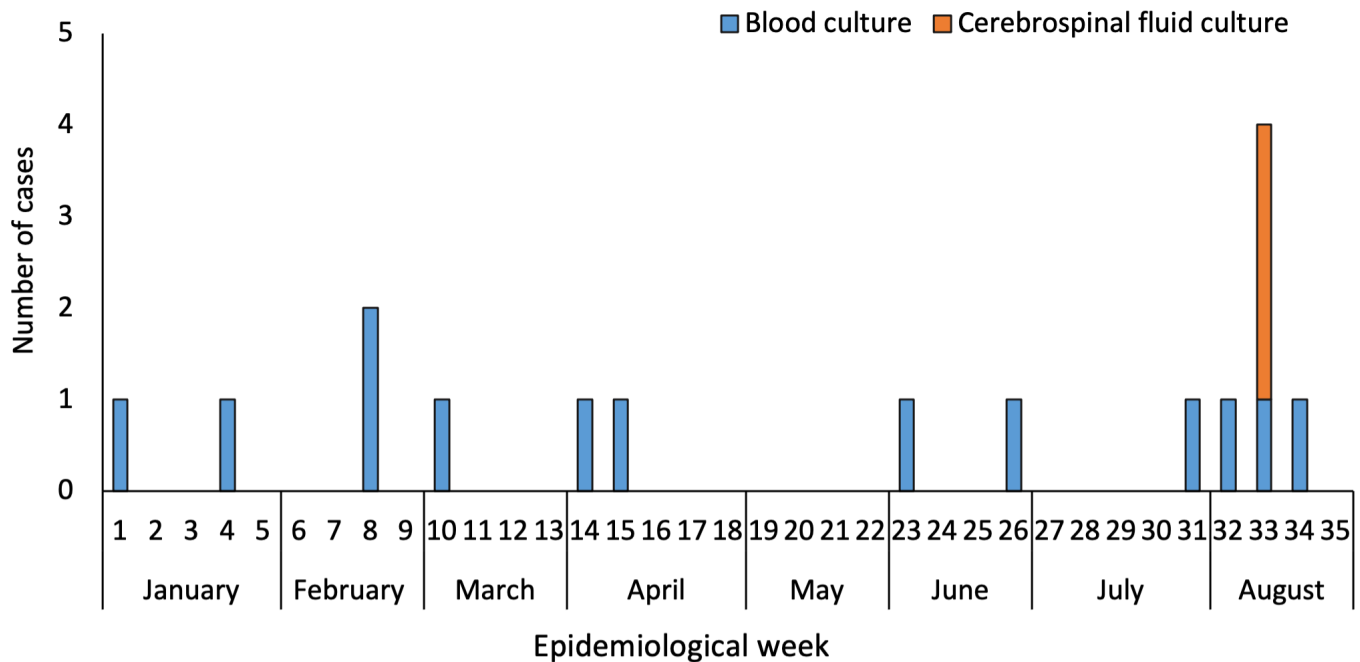


Figure 11. Cases of culture-confirmed *Acinetobacter baumannii* infection from neonates at a regional hospital in the KwaZulu-Natal Province of South Africa, 1 January 2022 to 16 August (n=16).

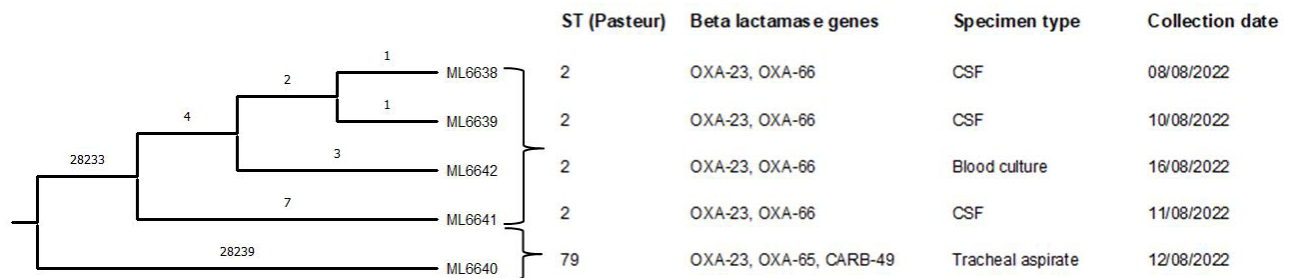


Figure 12. Phylogenetic comparison of phylogenetic tree of *Acinetobacter baumannii* isolates based on single nucleotide polymorphism (SNP) core distances.

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

1. Maragakis LL, Perl TM. *Acinetobacter baumannii*: Epidemiology, antimicrobial resistance, and treatment options. Vol. 46, Clinical Infectious Diseases. 2008. p. 1254–63

Update on congenital syphilis surveillance in South Africa

Syphilis in infants/children <2 years (congenital syphilis) - has been included on the national Notifiable Medical Conditions (NMC) surveillance platform since July 2017. It is a category 2 NMC- which means all healthcare workers are required to notify cases through paper-based or electronic case notification forms (CNFs) within seven days of diagnosis. In addition to clinical notifications collected via CNFs, data on RPR positive results from infants/children <2 years are obtained from the laboratory information system to monitor maternal syphilis exposure and/or testing. We present an update on clinical notifications and RPR positive results from infants <2 years for the period 1 July 2017 to 30 June 2022.

period, there was a general increase in the number of clinical notifications from Q3 2017, peaking in Q2 2020, followed by fluctuating numbers in the remaining quarters. There was a steady increase in the number of RPR positive results from infants/children with fluctuations in Q2 2018, Q4 2018, Q1 2019, Q3 and Q4 2020 as well as Q1 2022 and Q2 2022- Figure 13. Three provinces, Kwazulu-Natal, Gauteng and Western Cape, accounted for 89% of all clinical notifications and 67.9% of RPR positive results suggesting under-notification by facilities in some districts and provinces. There is a need to improve the prevention of, screening and treatment for maternal syphilis as notification of cases should they occur.

In this period, there were 1 370 clinical notifications of CS cases and 18 518 RPR positive results. Notifications were received from 156 facilities in 44 districts in all nine provinces. Over the

More information on syphilis may be found on the NICD website (<https://www.nicd.ac.za/diseases-a-z-index/congenital-syphillis/>).



Figure 13. Number of specimens received and number of cases notified per quarter between 2017 and 2022

Source: Centre for HIV and STIs, NICD-NHLS; tendesayik@nicd.ac.za



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

Ebola virus disease - Uganda

On 20 September 2022, the Ugandan Ministry of Health declared an Ebola outbreak following confirmation of a case of Sudan Virus Disease (SVD) in Mubende district. To date, a total of 36 Ebola cases (18 confirmed and 18 probable) have been reported in the Mubende, Kyegegwa and Kassanda districts in the central part of the country. 23 deaths have been recorded, including five confirmed cases, bringing the case fatality ratio (CFR) to 28% amongst confirmed cases and 64% overall. The majority of cases are female (62%) and the median age of the cases is 26 years (range from 1 to 60 years). 223 contacts have been listed and are being followed up.

The confirmed primary case is a 25-year-old male peasant farmer who worked in Madudu Sub County. The Uganda Virus Research Institute (UVRI) confirmed the isolation of SVD on 19 September 2022 and the patient died at Mubende Regional Referral Hospital (RRH) on the same day. Prior to his admission to Mubende RRH, the patient was managed at both St. Florence Medical Center and St. John's Medical Clinic in Mubende district.

Currently, there are 13 patients hospitalised at Mubende RHH. There is also an ongoing investigation into reports of clustered deaths in one family in Kiruma Sub County, the first of which occurred on 1 September 2022. The surveillance teams in the area are conducting case investigations, active case finding, event-based surveillance, contact tracing and

management, alert management, rapid response and data management.

There are six species of ebolavirus, including Bundibugyo, Sudan and Zaire which have been responsible for large outbreaks in the past. Uganda's last Ebola outbreak was in 2019 and was caused by the importation of Zaire-EBV from the Democratic Republic of Congo (DRC). SVD has not been isolated in Uganda since 2012, and of the seven previous outbreaks caused by the species, four have occurred in Uganda and three in Sudan. The incubation period ranges from 2 to 21 days and people are only considered infectious once they have developed symptoms. Based on previous outbreaks, SVD has a CFR ranging from 41 to 100%.

The highly-effective Ervebo (rVSV-ZEBOV) vaccine, which has recently been used in ring vaccination campaigns in the DRC, has only been approved for use against Zaire and its effectiveness against SVD is unknown. There is another vaccine produced by Johnson & Johnson which may be used in this outbreak, however, its effectiveness has also not yet been tested against SVD. WHO is working closely with Ugandan health authorities to support the country's efforts to contain the outbreak, including dispatching staff, supplies and an isolation tent to the affected area. No travel restrictions in and out of Uganda have been put in place, however, caution is advised if visiting the affected areas.

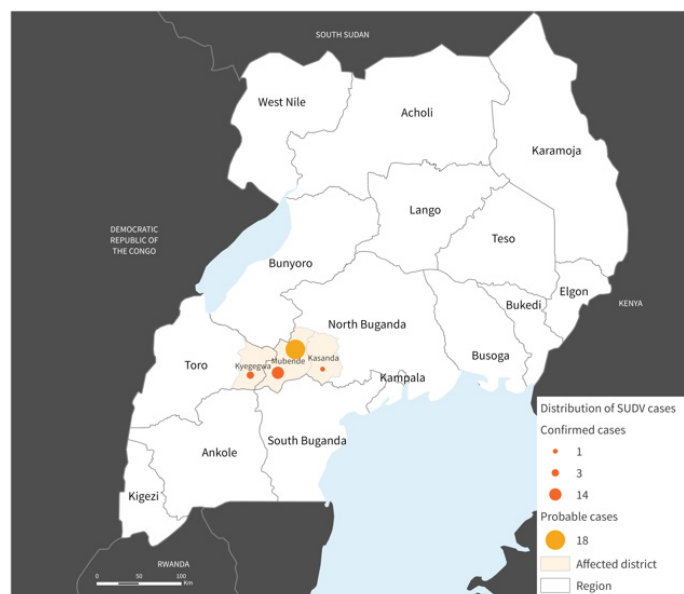


Figure 14. Map of confirmed (n=18) and suspected (n=18) cases of Ebola disease caused by Sudan virus, by district, Uganda (as of 25 September 2022).

Sources: <https://veoci.com/api/v2/p/files/5ppafwaxw1ihzocu/content>
<https://www.afro.who.int/countries/uganda/news/uganda-declares-ebola-virus-disease-outbreak>
<https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON410>

Cholera – global update with a focus on Malawi

Globally, approximately 1.3 to 4 million people are infected with cholera each year. Between 27 July 2022 and 27 August 2022, there have been 137 763 cases of cholera and 91 deaths reported worldwide, with Afghanistan, Bangladesh, Burkina Faso, Cameroon, the Democratic Republic of the Congo, India, Iraq, Malawi, Mozambique, Nepal, Pakistan, Philippines, Somalia, South Sudan, Syria, and Tanzania all reporting new cases.

Since the detection of the first case of cholera in March 2022, Malawi has reported a total of 2 479 confirmed cases and 85 deaths (CFR=3.4%) in the current outbreak. 19 districts have been affected, with concerns raised by UNICEF regarding previously unaffected lakeshore and urban areas that have reported cholera cases in this outbreak. This is most likely due to overcrowding and insufficient water and sanitation facilities. Of the 19 aforementioned districts, the majority of cases have been recorded by Nkhata Bay (n=612), followed by Blantyre (n=546) and Nsanje (n=291). WHO and UNICEF

have been working closely with the Malawian government to develop a response plan in the country, including the delivery of supplies and services to the affected areas, as well as the implementation of the national Oral Cholera Vaccination (OCV) campaign which has reached more than 1.1 million people since the start of the year.

The majority of people infected with *Vibrio cholera* are asymptomatic, however, can still shed the bacteria in their faeces for 1 to 10 days after infection. Of those who are symptomatic, a small percentage of people may develop severe acute watery diarrhoea and dehydration which can be fatal. Cholera infections and deaths are preventable with effective disease surveillance; adequate water, sanitation and hygiene; early access to treatment and the provision of OCVs. The ongoing transmission of the disease is a marker of global socio-economic inequity and remains a threat to public health worldwide.

Sources: <https://apps.who.int/iris/bitstream/handle/10665/362665/OEW37-0511092022.pdf>

<https://www.unicef.org/malawi/press-releases/unicef-and-who-step-efforts-contain-cholera-malawi-and-call-additional-funds-and>

<https://www.ecdc.europa.eu/sites/default/files/documents/Communicable-disease-threats-report-27-aug-2022-all-users.pdf>

<https://www.who.int/news-room/fact-sheets/detail/cholera>

Yellow fever – African Region

Between 1 January 2021 and 26 August 2022, there have been 184 confirmed and 274 probable cases of yellow fever reported by 12 countries on the African continent. The ongoing viral transmission of yellow fever, which is endemic in the WHO African Region, has resulted in 21 deaths since January 2021. In 2022, the 8 African countries that have reported confirmed cases are Central African Republic (n=11), Cameroon (n=8), Democratic Republic of Congo (n=4), Kenya (n=3), Chad (n=2), Republic of Congo (n=2), Uganda (n=2) and Ghana (n=1), bringing the total to 33 cases this year.

Yellow fever is a vaccine-preventable disease that has become epidemic-prone due to low population immunity, population migration and various climate and ecological factors which have resulted in the spread of *Aedes* mosquitoes. Infected *Aedes* and *Haemagogus* mosquitoes transmit the yellow fever virus to humans through bites. The typical incubation period is between 3 and 6 days. Whilst many infected people are asymptomatic, some may develop the common symptoms of fever, myalgia, backache, headaches, loss of appetite and nausea and vomiting, which tend to last 3 to 4 days. A small percentage of patients will develop severe disease,

characterised by a “toxic phase,” which begins within 24 hours of recovering from initial symptoms. Signs and symptoms of severe disease include high-grade fever, jaundice, dark urine, vomiting, abdominal pain and bleeding, and occur as a result of multi-organ failure. 50% of patients who enter the toxic phase will die within 7-10 days.

WHO recommends three strategies for the prevention of yellow fever, namely vaccines, vector control and epidemic preparedness and response. Vaccines are the most effective method of preventing the disease and effective immunity is achieved within 10 days of administration for 80-100% of people. The two vaccination strategies that have been adopted by affected countries in Africa are reactive vaccination campaigns (RVC) and preventive mass vaccination campaigns (PMVC). Since 2021, approximately 3.9 million people have been vaccinated through RVC, while 80 million people are expected to be protected by PMVC in 2022. Only one dose of the WHO-approved yellow fever vaccine is needed to achieve life-long immunity against the potentially fatal disease, which is why vaccination remains the most effective method of protection against yellow fever.

Sources: <https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON405>

<https://www.who.int/news-room/fact-sheets/detail/yellow-fever>

Polio update

As of 13 September 2022, there have been 27 confirmed cases of wild poliovirus type 1 (WPV1) globally in the past 12 months, with the majority occurring in endemic countries (Pakistan n=17; Afghanistan n=4), as well as 5 imported cases in Mozambique and 1 in Malawi. There have also been 534 cases of circulating vaccine-derived poliovirus (cVDPV) globally for the same period, with the majority being VDPV type 2 (n=514).

In the past few months, the United Kingdom (UK) and the United States (US) have reported the detection of genetically-linked cVDPV2 in environmental samples, as well as the confirmation of a case of VDPV2 in Rockland County, New York. The emergence of circulating poliovirus in these countries is evidence that until polio is eradicated globally,

even previously polio-free countries with relatively high vaccination coverage rates (93% in the UK and 92% in the US), remain at risk for importation and re-infection.

WHO therefore emphasises the need for all member states to achieve and maintain a vaccination coverage of at least 95% at every level. There is also a recommendation for all countries to develop highly sensitive surveillance systems for the rapid detection of acute flaccid paralysis (AFP) and VDPV importation or emergence, in order to minimise the consequences of poliovirus transmission. The 32nd Polio IHR Emergency Committee which convened on 15 June 2022 unanimously agreed that the risk of international spread of poliovirus remains a Public Health Emergency of International Concern (PHEIC).

Sources: <https://polioeradication.org/polio-today/polio-now/>
<https://polioeradication.org/wp-content/uploads/2022/09/weekly-polio-analyses-WPV-20220913.pdf>
<https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON408>



Figure 15. Current outbreaks/events that may have implications for travellers. Numbers correspond to the text above. The blue dot is the approximate location of the outbreak or event.

Polio Virus Particles

WEEKLY BULLETIN ON OUTBREAKS AND OTHER EMERGENCIES

Week 37: 5 - 11 September 2022
Data as reported by: 17:00; 11 September 2022

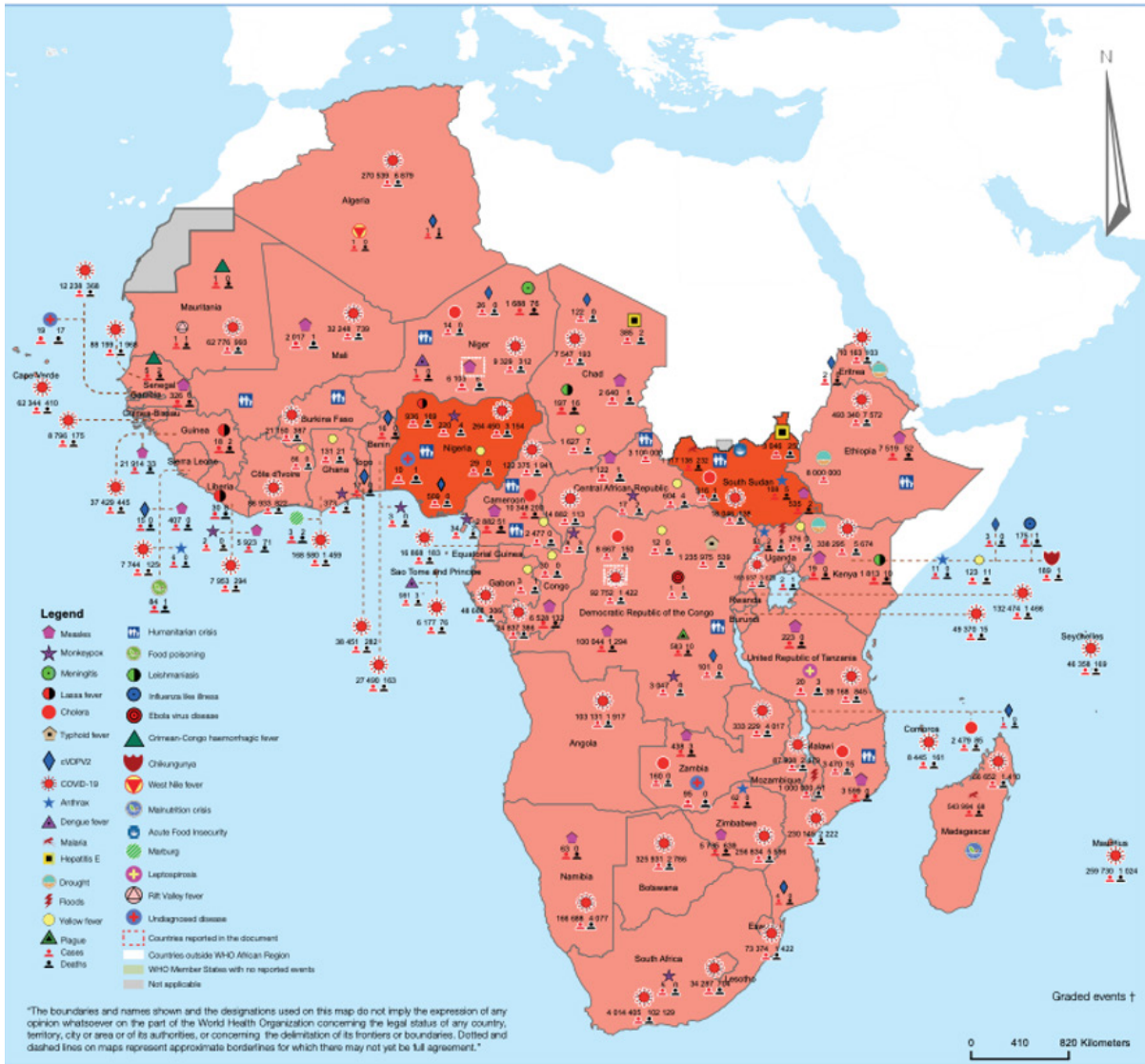


0 New event

156 Ongoing events

136 Outbreaks

20 Humanitarian crises



5 Grade 3 events	24 Grade 2 events	2 Grade 1 events	56 Ungraded events
2 Protracted 3 events	5 Protracted 2 events	0 Protracted 1 events	

Figure 16. 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 156 events. For more information, see the link: <https://apps.who.int/iris/bitstream/handle/10665/362665/OEW37-0511092022.pdf>