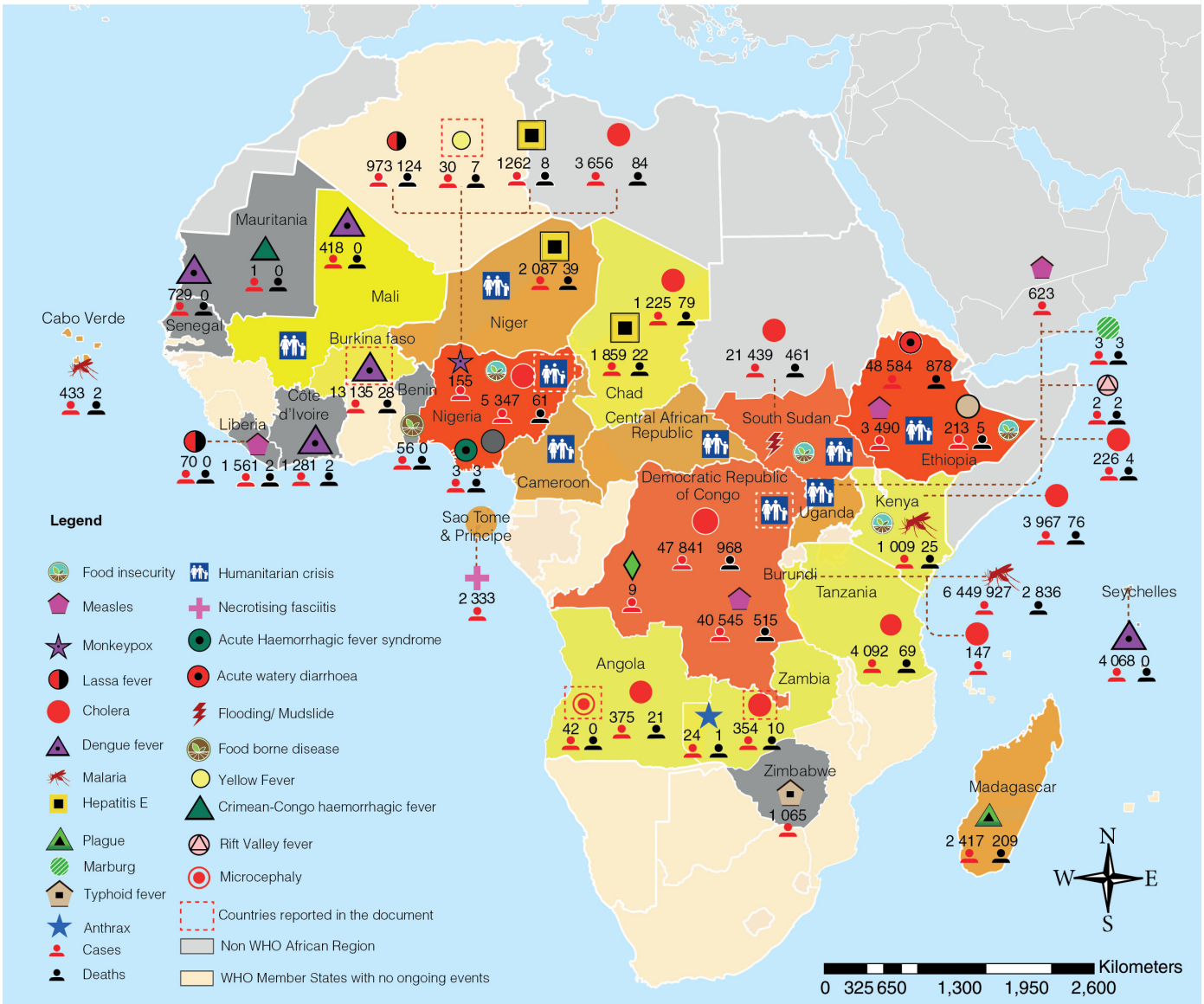
WEEKLY BULLETIN ON OUTBREAKS AND OTHER EMERGENCIES

Week 48: 25 November - 1 December 2017
Data as reported by 17:00; 1 December 2017

World Health Organization
REGIONAL OFFICE FOR Africa
WHO Health Emergencies Programme

2	46	38	10
New events	Ongoing events	Outbreaks	Humanitarian crises



2 Grade 3 events	**7** Grade 2 events	**10** Grade 1 events	**26** Ungraded events
2 Protracted 3 events	**0** Protracted 2 events	**1** Protracted 1 event	

Health Emergency Information and Risk Assessment

Overview

Contents

- This Weekly Bulletin focuses on selected acute public health emergencies occurring in the WHO African Region. The WHO Health Emergencies Programme is currently monitoring 48 events in the region. This week's edition covers key ongoing events, including:

  - Microcephaly in Angola
  - Cholera in Zambia
  - Dengue fever in Burkina Faso
  - Humanitarian crisis in the Democratic Republic of the Congo
  - Humanitarian crisis Nigeria
  - Yellow fever in Nigeria

- For each of these events, a brief description followed by public health measures implemented and an interpretation of the situation is provided.

- A table is provided at the end of the bulletin with information on all new and ongoing public health events currently being monitored in the region, as well as events that have recently been closed.

- **Major challenges include:**

  - The complex humanitarian crisis in the Democratic Republic of the Congo remains serious, with huge unmet needs. The incidences and mortality rates of both cholera and measles have remained high, above acceptable levels. This situation calls for urgent attention from the international community.

  - Angola is experiencing a slow but gradually increasing incidence of microcephaly, particularly in the suburbs of Luanda, the capital city. This event needs in-depth investigations to establish the extent and etiology of the condition.

Microcephaly – suspected congenital Zika syndrome | Angola

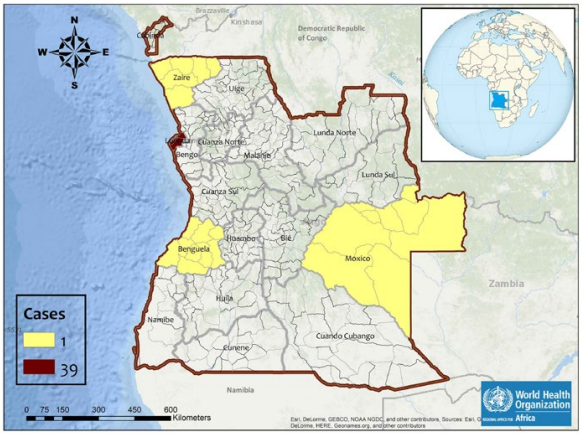
42	0	0%
Case	**Deaths**	**CFR**

EVENT DESCRIPTION

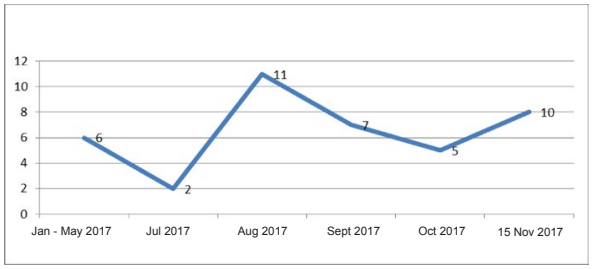
Health authorities in Angola are observing a gradually increasing number of microcephaly cases, particularly in Luanda Province, where the capital city is located. The event was initially reported in late September 2017 when a cluster of seven cases of microcephaly were detected. However, retrospective investigations established that the initial cases occurred as early as May and June 2017. In November 2017, 10 new cases of microcephaly have been reported. As of 29 November 2017, a total of 42 cases of microcephaly have been reported, of which 39 occurred in live births and three were in stillbirths. Most of the cases (39, 93%) originated from Luanda Province, especially in the southern part of the city. The other cases came from Zaire Province (1), Moxico Province (1) and Benguela Province (1).

A total of 15 blood specimens were collected either from the newborns or their mothers and sent to the National Public Health Institute laboratory. To date, all the specimens have tested negative for Zika virus by polymerase chain reaction (PCR). Nonetheless, the negative test result does not necessarily rule out the possibility of Zika infection during pregnancy. In a separate event, two cases of Zika virus infection were confirmed by PCR in Luanda Province in January 2017 – one in an adult with a febrile illness and the other in a stillborn with malformation of the central nervous system. No genotyping of the Zika virus was performed to determine the strain.

Geographical distribution of microcephaly – suspected congenital Zika syndrome cases in Angola, January - 29 November 2017



Trend of microcephaly – suspected congenital Zika syndrome cases in Angola, January - 15 November 2017



PUBLIC HEALTH ACTIONS

- The Ministry of Health is updating the Zika contingency plan, with a focus to strengthen implementation of priority interventions.
- The Ministry of Health is strengthening surveillance for Zika virus infection and its complications in all health facilities, prioritizing antenatal care, obstetrics and paediatric care services in the main hospitals in the country.
- In addition to PCR capability, the Ministry of Health is working to enhance diagnostic testing for Zika infection to include plaque reduction neutralization test (PRNT), which confirm previous Zika virus exposure, as recommended by WHO.
- The Ministry of Health is planning to strengthen control of *Aedes aegypti* vectors to reduce the risk of Zika virus transmission.
- Case management and patients' follow up are being strengthened through designated referral hospitals.
- Zika-related risk communication and social mobilization activities are being enhanced, including involvement of local leaders and communities to increase participation in Zika control activities.

SITUATION INTERPRETATION

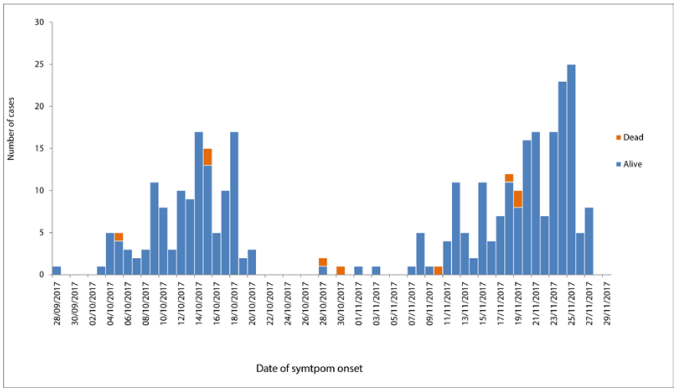
The incidence of microcephaly appears to be slowly but steadily rising in Angola, particularly in Luanda. The true magnitude of this event is not well understood because of the relatively recent implementation of active surveillance and lack of laboratory confirmation. However, the manifestation of the condition is suggestive of congenital Zika syndrome. While Zika virus infection was confirmed in Angola in January 2017, there is no evidence to suggest ongoing active transmission. Health authorities have also established that most of the microcephaly cases are coming from populations in lower socio-economic groups, in the suburbs of the city; and that the same areas were previously most affected during the yellow fever outbreak. More investigations are required in order to gain a better insight into this event. Nonetheless, implementation of priority control measures identified by the Ministry of Health need to commence immediately. Particular focus should be given to enhancing surveillance for early detection, case management in healthcare facilities and ongoing investigations/research.

EVENT DESCRIPTION

The cholera outbreak in Zambia has flared up in recent weeks, after initial indications that it was under control. The upsurge in cholera incidence started in week 45 (week ending 12 November 2017) following several days of zero reporting. During week 47 (week ending 26 November 2017), a total of 108 suspected cases of cholera were reported in the country. On 1 December 2017, there were 23 new suspected cases with no deaths and at this time, 48 cases had been admitted in four cholera treatment centres.

Since the beginning of the outbreak on 28 October 2017, a cumulative total of 389 cases and 10 deaths (case fatality rate 2.6%) have been reported, as of 29 November 2017. The cholera outbreak, initially localized to peri-urban townships on the western side of Lusaka city, has spread to the eastern side, with six sub-districts currently affected, namely: Chipata, Kanyama, Chawama, Matero, Chilenje, and Chelston. A total of 19 townships have been affected.

Epidemic curve of cholera cases by clinical outcome, Lusaka District in Zambia, 28 September - 27 November 2017 [N=327]



To date, 230 specimens have tested positive for cholera on rapid diagnostic tests (RDTs) and 53 isolates cultured *Vibrio cholerae* O1 Ogawa at the University Teaching Hospital laboratory.

PUBLIC HEALTH ACTIONS

- The Ministry of Health and the Disaster Management and Mitigation Unit (DMMU) under the Office of the Vice President, in collaboration with WHO and partners, are responding to the cholera outbreak. An Incident Management System (IMS) has been established in the affected sub-districts to coordinate the response.
- On account of the increasing cases of cholera, WHO has graded the cholera outbreak in Zambia as Grade 1, based on its internal Emergency Response Framework. Accordingly, WHO has deployed an epidemiologist to support the response, in addition to strengthening its internal response capacity.
- Five cholera treatment centres have been established in Chawama, Chipata, Kanyama, Matero and Bauleni Sub-districts to manage cases.
- Cholera control guidelines and standard operating procedures have been updated and disseminated to healthcare workers.
- Active surveillance has been enhanced in all the affected sub-districts.
- The water, sanitation and hygiene (WASH) group continues to undertake interventions to improve safe water supplies, including provision of household chlorine, erecting water tanks and installing water purifiers and intensify water quality monitoring. Contaminated water points have been closed. Other WASH interventions include disinfection of households and pit latrines.
- The Lusaka City Council has intensified collection of garbage and emptying of septic tanks in Kanyama and Chipata as priority areas.
- Risk communication, community engagement and social mobilization activities are ongoing through various channels such as radio and television shows, media briefings, and door-to-door campaigns.
- A total 1 000 Red Cross volunteers are being trained to support health promotion activities at community level.

SITUATION INTERPRETATION

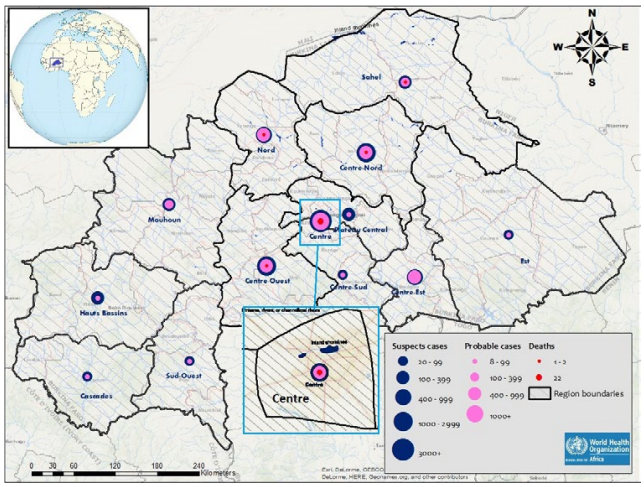
Zambia is experiencing a resurgence of a cholera outbreak, with new areas being affected. The outbreak is mainly affecting peri-urban areas of Lusaka, and transmissions have been linked to contaminated water supplies, inadequate sanitation and poor hygiene practices. The situation is likely to worsen with the ongoing rainy season, resulting in further contamination of water sources. While the country has ample experience and capacity to respond to cholera outbreaks, the current response is being challenged by inadequate logistics and supplies, including chlorine tablets, RDTs and water quality testing kits. The national authorities and partners need to mobilize the required resources to quickly control this outbreak.

EVENT DESCRIPTION

The incidence of dengue fever in Burkina Faso has been steadily declining since attaining a peak in week 43. In week 46 (week ending 19 November 2017), 971 new suspected dengue fever cases (with no deaths) have been reported, compared to 1 502 cases reported in week 45. During the reporting week, the attack rate in the Central Region fell from 35 cases per 100 000 people in week 45 to 22 cases per 100 000 people (in week 46) – a 50% reduction. Meanwhile, the attack rate for the whole country reduced from eight cases per 100 000 people in week 45 to 5 cases per 100 000 people in week 46.

Between 1 January and 26 November 2017, a cumulative total of 13 135 (suspected, probable, or confirmed) cases and 28 deaths (case fatality rate 0.2%) were reported across the country. The majority of the reported cases (61%) and 79% of the deaths occurred in the Central Region of the country, especially in Ouagadougou. Slightly more females, 52%, have been affected and more than 80% of the cases are aged 15 years and above. Over half, 53%, of the cases are in the age group 15 to 34 years.

Geographical distribution of dengue fever cases in Burkina Faso, week 43 - week 46, 2017



A total of 758 out of 920 specimens referred to the viral haemorrhagic fever (VHF) reference laboratory at the Centre Muraz, Bobo-Dioulasso, were analysed. Of the specimens analysed, 522 (69%) confirmed dengue virus infections: 349 by polymerase chain reaction (PCR), 69 by ELISA and 104 on both tests. Further characterization of 170 specimens identified three dengue virus serotypes (DENV): DENV-2 (126 positives, 74%), DENV-3 (34 positives, 20%) and DENV-1 (10 positives).

PUBLIC HEALTH ACTIONS

- The response to the outbreak continues to be coordinated by the National Epidemic Management Committee, with the support of technical sub committees.
- A meeting was held with partners to discuss resource mobilization to support community sensitization and destruction of mosquito breeding sites.
- The coordination of the WHO Incident Management System has now reverted to the Country Office after the end of a 4-week deployment of an Incident Manager from WHO African Regional Office.
- Training of healthcare providers at public and private facilities in diagnosis and case management of dengue fever began 28 November 2017. A total of 529 providers from university hospitals and five district hospitals will be trained, with support from WHO. A second training session supported by USAID is being planned.
- Entomological investigations have been conducted in the four most affected health regions to guide measures for vector control. The findings of these investigations demonstrated a weakness in the mobilization and sensitization of affected communities.
- Aerial insecticide spraying of areas with mosquito breeding sites is ongoing in Ouagadougou. A total of 105 sites, including public spaces and administrative buildings have been sprayed as of 27 November 2017.
- A total of 5 500 volunteers have been mobilized to destroy mosquito breeding sites in households in Ouagadougou.
- Twenty-four supervisors have been trained in vector control interventions with technical assistance from an entomologist deployed by WHO. Community leaders have also been trained.

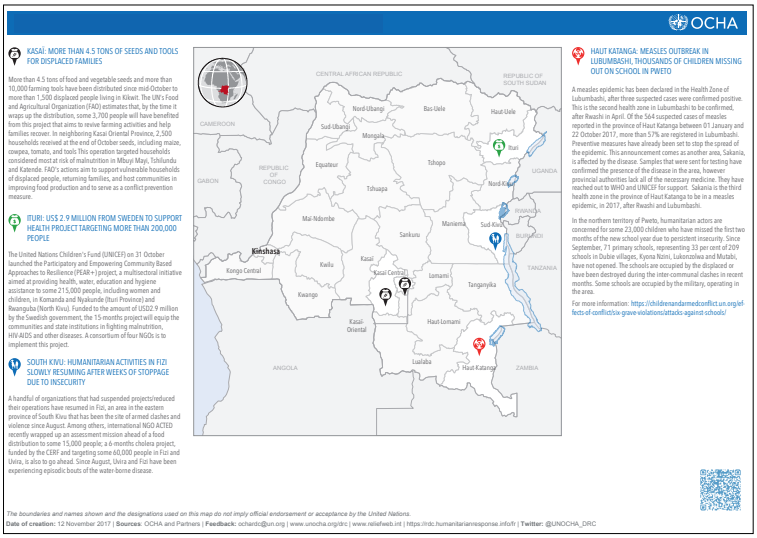
SITUATION INTERPRETATION

The outbreak of dengue fever in Burkina Faso has markedly improved, mainly due to scaling up of outbreak control interventions by the national authorities and partners. Nevertheless, it is critical that ongoing interventions are sustained until the outbreak is brought to a halt. Continued implementation of community sensitization, risk communication, and vector control measures is paramount. Resource mobilization by partners to support these activities is essential, and continued entomological technical support is needed to improve the effectiveness of ongoing activities.

EVENT DESCRIPTION

Decades of armed conflicts and intercommunal tensions in the Democratic Republic of the Congo have led to a complex humanitarian crisis. An estimated 4.1 million people have been internally displaced and 620 000 Congolese became refugees in neighbouring countries. In the Kasai Region alone, the number of internally displaced persons (IDPs) is still estimated at 762 000, down from 1.4 million IDPs at the peak of the crisis. The number of returnees is estimated to be 631 000 people. The humanitarian response in the region remains inadequate, with unmet needs for a large number of IDPs and returnees.

Map showing of weekly humanitarian, Democratic Republic of the Congo, 06 - 12 November 2017



The risk of communicable diseases remains a major public health problem. The country is currently experiencing a large cholera outbreak. During week 46 (week ending 19 November 2017), there were 1 908 new suspected cases and 58 deaths (case fatality rate 3%), compared with 1 841 cases and 48 deaths (case fatality rate 2.6%) in week 45. Most of the reported cases are from the Kasai and Lomami Regions. Lualaba Province reported cholera for the first time. Since the beginning of the year up to 19 November 2017, a total of 47 841 cases with 968 deaths (case fatality rate 2.0%) have been reported. The magnitude of this outbreak is much larger compared to those experienced in the previous 3 years. The most affected provinces were North Kivu, South Kivu, Tanganyika, and Congo Central.

Since January 2017, a measles outbreak has been reported in all 26 provinces. In week 46 (week ending 19 November 2017), a total of 879 new suspected cases and 16 deaths (case fatality rate 1.8%) were reported in the country. Between 1 January and 19 November 2017, a cumulative total of 40 545 suspected cases, including 515 deaths (case fatality rate 1.3%), have been reported across all regions in the country.

PUBLIC HEALTH ACTION

- WHO, working with other partners (MSF, UNICEF, and ALIMA), continue to support the Ministry of Health in the response to the cholera outbreak.
- WHO has deployed a senior coordinator for the emergency programme in Kinshasa Region, to strengthen the coordination and implementation of emergency operations.
- WHO continues to support the cholera response through provision of medicines and medical devices, technical assistance in epidemiological surveillance and case management, and coordination of partners (MSF, UNICEF, ALIMA, etc.). Particular attention has been directed towards strengthening case management in the Kasai Region, as well as enhancing preparedness measures in at-risk areas, including enhancing community-based surveillance and prepositioning of cholera kits.
- WHO signed an agreement with ALIMA to support cholera response activities in Kanda-Kanda Health Zone, in Lomami Province. The agreement includes setting up cholera treatment centres, establishing oral rehydration points, distribution of hygiene kits, and supporting water, sanitation and hygiene (WASH) activities in the community.

SITUATION INTERPRETATION

The humanitarian crisis in the Democratic Republic of the Congo remains serious, with huge unmet needs. The incidence of cholera has remained high as well as the case fatality rate. The outbreak of measles is not improving, with an equally high case fatality rate. While the Democratic Republic of the Congo has been declared as a Level 3 emergency by the United Nations, this has not yet translated into resource mobilization efforts. Advocacy to strengthen the involvement of other sectors, for example WASH in the response to the cholera outbreak, is urgently needed. There is an urgent need to resume UNHAS operations to Kananga Hub to facilitate movement of experts between the provinces and improvement of cholera supply chain management based on needs.

EVENT DESCRIPTION

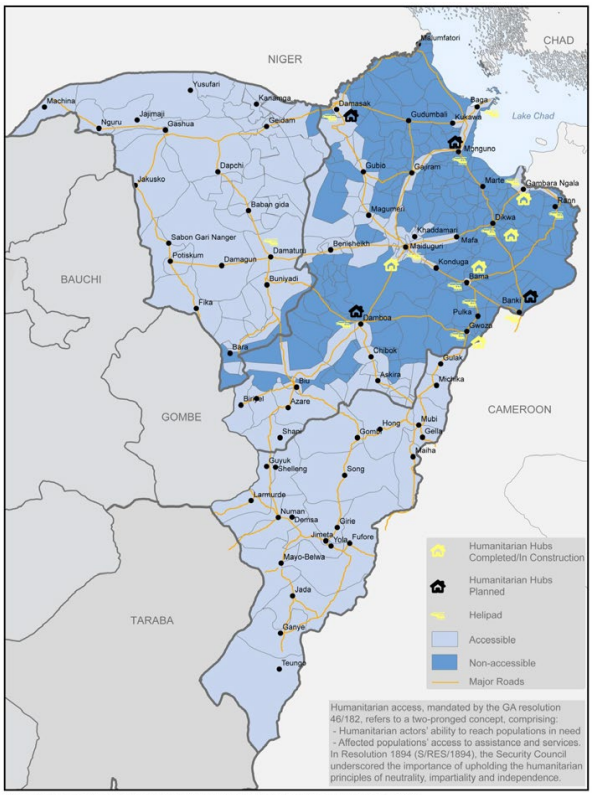
The protracted conflict in north-east Nigeria has resulted in widespread population displacement, restricted access to basic social services, including healthcare and protection needs, and a deepening humanitarian crisis. An estimated 8.5 million people are in need of life-saving assistance, out of which 6.9 million require healthcare assistance.

The security situation remains volatile, with frequent attacks targeting civilians. On 22 October 2017, a suicide bomb attack occurred in the outskirts of Maiduguri, leaving about 20 civilians dead and injuring a dozen others. Similar attacks are also widespread in the rural areas, claiming many lives. Human rights violations and abuses are prevalent, with women, girls and children often disproportionally affected, given their societal vulnerabilities such as fetching water and fuel (firewood).

The population in north-east Nigeria has endured a high prevalence of communicable diseases, including epidemic-prone diseases such as cholera, hepatitis E, measles, meningitis, Lassa fever, and yellow fever. The cholera outbreak in Borno State has significantly reduced in spite of the existing predisposing conditions such as overcrowding, poor infrastructure, limited access to potable water, and inadequate sanitation and hygiene practices. Two local government areas (LGAs), Jere and Guzamala, continue to report sporadic cases. As of 24 November 2017, a total of 5 347 cases with 61 deaths (case fatality rate 1.1%) have been reported from six out of 27 LGAs in Borno State. No new cases have been reported from Dikwa, MMC and Mafa for over six weeks.

Recent surveillance data has shown that the incidence of malaria has increased by 50% during the rainy season. This pattern is not unexpected. In addition to malaria, acute respiratory infections and watery diarrhoea are the top three leading causes of illness among the internally displaced people, along with high levels of severe acute malnutrition (SAM). It is estimated that more than 40 000 children are at risk of dying from a combined threat of SAM and medical complications, with background high malaria prevalence.

Map showing of humanitarian access by UN & NGOs, north-east, Nigeria, November 2017



PUBLIC HEALTH ACTIONS

- The Ministry of Health, in collaboration with WHO and other partners, continue to improve access to essential minimum healthcare services such as malaria control, diarrhoea prevention and treatment, immunization, and other mother and child health interventions to the affected communities.
- The Health Resources Availability Monitoring System (HeRAMS) exercise has been finalized in Borno and Adamawa States and it has been launched in Yobe State. A total of 560 health facilities have been covered.
- WHO and other partners are responding to the new displacement in some areas of Borno State, addressing the needs through the rapid response mechanism (RRM) team.
- WHO supported the State Ministry of Health to conduct training of 27 healthcare workers and nutrition partners on inpatient management of SAM with medical complications.
- UNICEF is supporting provision of integrated emergency primary healthcare services in Adamawa, Borno and Yobe States.

SITUATION INTERPRETATION

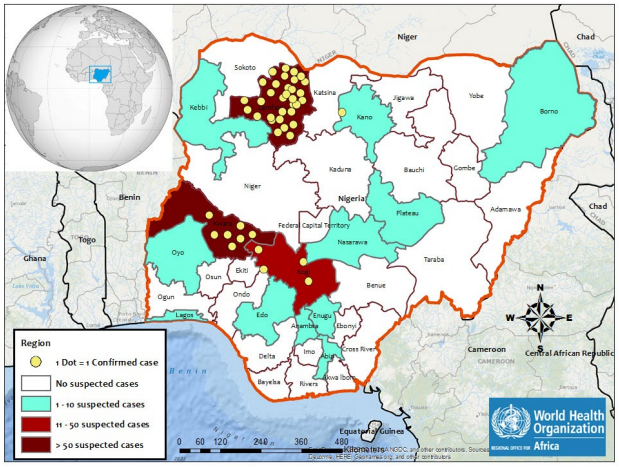
The humanitarian crisis in north-east Nigeria remains serious. Provision of healthcare services is being hampered by an acute shortage of skilled healthcare workers, particularly doctors, nurses, and midwives. Continuous population movement and influx of returnees and/or refugees pose further challenges to the implementation of health programmes. Access to secondary healthcare and referral services in remote areas are significantly limited. While the cholera outbreak has been contained, further assessment and preparedness to avoid resurgence remains a priority. In addition, strengthening active surveillance for early case-detection, as well as social mobilization is essential. A preventive cholera vaccination campaign in high-risk areas will continue to be a major intervention during the next rainy season.

EVENT DESCRIPTION

The outbreak of yellow fever in Nigeria continues to evolve, with new states being affected – the latest being Kano State. During week 46 (week ending 19 November 2017), two new confirmed yellow fever cases were reported from Kogi State – based on test results from the Institute Pasteur Dakar (IPD). During the reporting week, 10 probable cases (positive test results from national laboratories) were reported from three states, namely Kogi (8 cases), Nasarawa (1 case) and Kano (1 case).

As of 21 November 2017, a total of 276 suspected yellow fever cases, including 45 deaths (case fatality rate 16%), were reported. Of these, 133 (48%) blood specimens were collected and sent to five national laboratories. Of the 133 specimens analysed in the national laboratories, 66 (50%) tested positive for yellow fever and one was inconclusive. Aliquots of all positive and inconclusive (67) specimens were subsequently shipped to IPD for further analysis. Of these, 30 (45%) specimens tested positive (confirming yellow fever), 23 (34%) were negative and 14 (30%) test results were being awaited. Seven of the confirmed cases died, giving a case fatality rate of 23% among this group. Sixty-seven percent (185) of the reported suspected cases are males. Young people are most affected, with 66% of the cases aged 20 years or less.

Geographical distribution of yellow fever cases in Nigeria, 19 - 21 November 2017



Four states in Nigeria have confirmed yellow fever, namely Kwara, Kogi, Kano, and Zamfara. In addition, 10 other states have reported suspected cases, including Abia, Anambra, Borno, Edo, Enugu, Kebbi, Lagos, Nasarawa, Oyo, and Plateau.

PUBLIC HEALTH ACTIONS

- The International Coordinating Group (ICG) on vaccine provision for yellow fever has approved 1.4 million doses of vaccine for an immunization campaign in Zamfara following the first campaign in Kogi and Kwara. The vaccines, funded by Gavi, the Vaccine Alliance, target 1.3 million people. The yellow fever vaccination campaigns will run from 2 December to January 2018.
- WHO and partners are supporting the Nigerian Government to assess epidemic risk, roll out vaccination campaigns, engage with communities and deliver other response activities. WHO also continues to support laboratory and surveillance activities and efforts to build long-term capacity in countries at risk of yellow fever epidemics.
- Active surveillance for acute jaundice syndrome has been intensified across the country and a national database has been developed. Case investigation and contact tracing are ongoing.
- Case management centres have been designated in the affected state.
- Five national laboratories with diagnostic capacity for yellow fever have been identified in-country, including the Central Public Health Laboratory in Lagos (ELISA capacity), the Nigeria Centre for Disease Control National Reference Laboratory in Abuja (PCR capacity) and the Lagos University Teaching Hospital (LUTH) Laboratory (PCR capacity).
- Risk communication and social mobilization activities are being implemented, including public information campaigns, radio messaging and community engagement through community leaders to dispel rumours and encourage uptake of vaccines.

SITUATION INTERPRETATION

The outbreak of yellow fever in Nigeria has evolved from one confirmed case in Kwara State (in August 2017) to 30 confirmed cases in three other states, Kogi, Kano and Zamfara, and a further 10 states reporting suspected cases. The Government of Nigeria, supported by WHO and partners, plans to conduct a pre-emptive yellow fever vaccination campaign to protect people in areas at high risk of yellow fever transmission, but not yet affected. This campaign aims to protect over a million people in Nigeria, saving lives and preventing a potentially devastating outbreak. The release of the 1.4 million doses from the global stockpile builds on earlier efforts in October 2017 that reached 874 000 people in Kwara and Kogi states. WHO and partners are supporting the Nigerian Government to assess epidemic risk, roll out vaccination campaigns, engage with communities and deliver other response activities. WHO also continues to support laboratory and surveillance activities and efforts to build long-term capacity in the health sector. Notably, the most important long term control strategy is high coverage of yellow fever vaccination in the routine immunization programme.

Summary of major challenges and proposed actions

Challenges

- The humanitarian crisis in the Democratic Republic of the Congo remains serious. The unmet needs remain huge. The incidence of cholera has remained high as well as the case fatality rate. The outbreak of measles is not improving, with an equally high case fatality.

- The incidence of microcephaly appears to be slowly but steadily rising in Angola, particularly in Luanda. The true magnitude of this event is not well understood as well as the etiology of the condition.

Proposed actions

- There is an urgent need to scale up the response to the humanitarian crisis in the Democratic Republic of the Congo, commensurate with the L3 status. Specifically, the response to the cholera and measles outbreaks needs to be prioritized. Advocacy for other sectors, especially WASH, to scale up operations is urgently needed. The national authorities are urged to facilitate rapid deployment of critical staff. Immediate resumption of UNHAS operations to Kananga Hub is necessary to improve supply chain management and internal deployment of technical staff.

- The national authorities and partners in Angola need to conduct in-depth investigation to establish the magnitude and etiology of the microcephaly being reported. In addition, implementation of priority control measures identified by the Ministry of Health need to commence immediately, including enhancing surveillance for early detection and case management in healthcare facilities.

All events currently being monitored by WHO AFRO

Country	Event	Grade†	WHO notified	Start of reporting period	End of reporting period	Total cases	Confirmed cases	Deaths	CFR	Comments
New events										
Zambia	Anthrax	Ungraded	22-Nov-17	29-Sep-17	14-Nov-17	24	-	1	4.2%	The index case was detected on 29 September at the Nasilimwe Health Centre in Nalolo. As of 17 November 2017, 24 cases had been reported from Nalolo (15), Shangombo (7) and Sioma (2) districts. One community death attributed to anthrax was reported in Nalolo.
Benin	Foodborne disease	Ungraded	29-Nov-17	27-Nov-17	1-Dec-17	56	-	0	0.0%	56 individuals residing in Sissèkpa became immediately ill with symptoms of vomiting after consuming a root vegetable locally known as "Léfé". Animals that were exposed to the vomit have reportedly died. The root vegetable has been collected for further analysis. Cases are currently under follow-up.
Ongoing events										
Angola	Cholera	G1	15-Dec-16	1-Jan-17	22-Oct-17	375	-	21	5.6%	The outbreak began during December 2016. From week 1-42 of 2017, cases have been reported from Cabinda (219), Zaire (151), Luanda (3) and Maquela de Zombo (2). Only one new case (from Maquela de Zombo) was reported in week 42. No new cases have been reported in Luanda since week 4, in Soyo Zaire since week 26, and in Cabinda since week 28.
Angola	Microcephaly - suspected Zika virus disease	Ungraded	10-Oct-17	Late September	29-Nov-17	42	-	-	-	Detailed update given above.
Burkina Faso	Dengue	G1	4-Oct-17	1-Jan-17	26-Nov-17	13 135	-	28	0.2%	Detailed update given above.
Burundi	Malaria	G1	22-Mar-17	1-Jan-17	30-Oct-17	6 449 927	-	2836	0.0%	Weekly case counts are below the epidemiologic threshold but have increased since week 41. In week 42, 117 917 cases and 42 deaths were reported. The most affected health districts (DS) are: Kirundo (5094), Muyinga (5 450) and Giteranyi (5 295).
Burundi	Cholera	Ungraded	20-Aug-17	15-Aug-17	30-Oct-17	147	-	0	0.0%	During week 43, 9 suspected cases were reported in the health zones of Cibitoke (6) et Isare (3). As of 30 October a cumulative total of 147 cases and no deaths were reported. Seven districts have reported suspected cases to date.

Country	Event	Grade†	WHO notified	Start of reporting period	End of reporting period	Total cases	Confirmed cases	Deaths	CFR	Comments
Cameroon	Humanitarian crisis	G2	31-Dec-13	27-Jun-17	3-Nov-17	-	-	-	-	In the beginning of November, the general security situation in the Far North Region becomes worse. Terrorist attack and suicide bombings are continuing and causing continuous displacement. Almost 10% of the population of Cameroon, particularly in the Far North, North, Adamaoua, and East Regions, is in need of humanitarian assistance as a result of the insecurity. To date, more than 58 838 refugees, from Nigeria, are present in Minawao Camp, and more than 21 000 other refugees have been identified out camp. In addition around 238 000 Internal Displaced People have been registered.
Cape Verde	Malaria	G2	26-Jul-17	1-Jan-17	19-Nov-17	433	-	2	0.5%	As of 19 November, a total of 433 cases have been reported, including 419 indigenous and 18 imported cases. The outbreak has been contained to the city of Praia. Cases reported from other areas/islands all likely all acquired the infection during travel to Praia or overseas, and there is currently no evidence of indigenous transmission outside of Praia. Two deaths have been reported (1 in an indigenous case and 1 in an imported case).
Central African Republic	Humanitarian crisis	G2	11-Dec-13	11-Dec-13	31-Oct-17	-	-	-	-	The security situation in the Central African Republic has deteriorated in recent weeks, marked by widespread armed clashes across the country. Over 10 communities have been attacked in the past weeks, reportedly resulting in over 100 deaths, mostly civilians. These security incidents continue to cause new internal displacements.
Chad	Hepatitis E	G1	20-Dec-16	1-Aug-16	15-Oct-17	1,859	98	22	1.2%	Outbreaks are ongoing in the Salamat Region predominantly affecting North and South Am Timan, Amsinéné, South Am Timan, Mouraye, Foulonga and Aboudeia. Of the 64 cases occurring in pregnant women, five died (case fatality rate 7.8%) and 20 were hospitalized. Chlorination of water sources ended at the end of September 2017 because of a lack of partners and funding.
Chad	Cholera	G1	19-Aug-17	14-Aug-17	12-Nov-17	1 225	6	79	6.4%	The case incidence has been decreasing since week 42. In week 45, 9 new cases were reported in the Salamat region: Am-Timan (2), Mirer (5), Khachkhacha (1) and Mouraye (1). From week 37 to week 45, a total of 789 cases and 27 deaths occured in Salamat region. No additional cases have been reported in the Sila Region since week 42.

Country	Event	Grade†	WHO notified	Start of reporting period	End of reporting period	Total cases	Confirmed cases	Deaths	CFR	Comments
Cote d'Ivoire	Dengue fever	Ungraded	3-May-17	22-Apr-17	23-Oct-17	1 281	311	2	0.2%	Abidjan city remains the epicentre of this outbreak, accounting for 95% of the total reported cases. The main health districts affected include Cocody, Abobo, Bingerville and Yopougon. Of the 272 confirmed cases with available information on serotypes, 181 were dengue virus serotype 2 (DENV-2), 78 were DENV-3 and 13 were DENV-1. In addition, 39 samples were confirmed IgM positive by serology.
Democratic Republic of the Congo	Humanitarian crisis	G3	20-Dec-16	17-Apr-17	19-Nov-17	-	-	-	-	Detailed update given above.
Democratic Republic of the Congo	Cholera		16-Jan-15	1-Jan-17	19-Nov-17	47 841	841	968	2.0%	During week 46, 1 908 new suspected cases and 58 deaths were reported; these numbers have remained stable from week 42 (2 039 suspected cases, 67 deaths). The majority of cases this week were reported from North Kivu, South Kivu, Tanganyika, Haut Lomami, and Kongo Central. However, a new province, Lualaba province started reporting cases in week 45.
Democratic Republic of the Congo	Measles		10-Jan-17	2-Jan-17	19-Nov-17	40 545	449	515	1.3%	The outbreak still ongoing and has affected all 26 provinces. Although the current humanitarian situation disrupted the routine vaccination services, however, vaccination campaigns have been implemented early in 2017.
Ethiopia	Humanitarian crisis	Protracted 3	15-Nov-15	n/a	17-Nov-17	-	-	-	-	This is a complex emergency includes outbreaks (acute watery diarrhea, measles, and acute jaundice syndrome), the severe drought across northern, eastern, and central Ethiopia, and high levels of food insecurity and malnutrition. An estimate of 8.5 M poeple are food insecure and in need of humanitarian assistance. Including 6.26 M are in need of health assistance and 0.376 M child are severely malnourished. IDPs are estimated to be around 1 099 776 and refugees are estimated around 883,546 refugees.
Ethiopia	Acute watery diarrhoea (AWD)		15-Nov-15	1-Jan-17	19-Nov-17	48 584	-	878	1.8%	The outbreak is showing a downward trend. Only 61 new cases have been reported this week from 4 regions, and the majority of new cases are from Amhara and Somali regions. As of now, 9 regions in Ethiopia have been affected, and 73.6% of the total cases are from Somali region.
Ethiopia	Measles		14-Jan-17	1-Jan-17	3-Nov-17	3 490	-	-	-	The outbreak of measles is still ongoing but continues to improve. During week 44, 35 cases were reported including 3 lab-confirmed cases. Oromia Region remains the most affected region with 46% of the total reported cases, followed by Amhara 21 %, Addis Ababa 16 %, and Somali 20 %.

Country	Event	Grade†	WHO notified	Start of reporting period	End of reporting period	Total cases	Confirmed cases	Deaths	CFR	Comments
Kenya	Cholera	G1	6-Mar-17	1-Jan-17	29-Nov-17	3 967	710	76	1.9%	Nationally, the outbreak still ongoing, with new districts being affected. Now the outbreak is active in 7 counties: Nairobi, Garissa, Mombasa, Wajir,Turkana, Embu, and Kirinyaga counties; with approximately 60% of the cases coming from Nairobi county.
Kenya	Drought/food insecurity	G1	10-Feb-17	n/a	24-Aug-17	-	-	-	-	As of 24 August, SMART surveys estimated the (low-medium-high) prevalence of global acute malnutrition (GAM in Kenya at 2.6-22.9-32.8, and SAM at 0.2-4.0-9.8%.
Kenya	Malaria	Ungraded	-	25-Sep-17	26-Oct-17	1 009	604	25	2.5%	The suspected outbreak is affecting 3 wards in Marasbit which are Durkana (598 cases), North Horr (236 cases) and Loiyangalani (175 cases) wards.
Liberia	Measles	Ungraded	24-Sep-17	6-Sep-17	24-Nov-17	1 561	227	2	0.1%	From week 1 to week 46, 1 561 suspected cases were reported from 15 counties, including 227 laboratory confirmed, 338 clinically compatible and 191 epi-linked. Nimba county displayed the highest cumulative incidence. Children between 1-4 years accounted for 38% of the cases. Of the 800 measles-IgM negative cases that were tested for rubella, 338 tested positive for rubella.
Liberia	Lassa Fever	Ungraded	14-Nov-17	3-Nov-17	24-Nov-17	70	28	-	-	On 10 November 2017, four suspected cases of Lassa fever were reported from Phebe Hospital in Suakoko district, Bong County. One of the cases was confirmed positive by RT-PCR and the other three were negative. Since the beginning of 2017, a total of 70 suspected Lassa fever cases including 21 deaths (case fatality rate 30%) have been reported from nine counties in Liberia.
Madagascar	Plague	G2	13-Sep-17	13-Sep-17	27-Nov-17	2 417	498	209	8.6%	Cases include pneumonic (1 854, 77%), bubonic (355, 15%), septicemic (1) and unspecified (207) forms of disease. Of the 1854 clinical cases of pneumonic plague, 390 (21%) have been confirmed, 618 (33%) are probable and 846 (46%) remain suspected.
Mauritania	Crimean-Congo haemorrhagic fever (CCHF)	Ungraded	20-Nov-17	11-Nov-17	29-Nov-17	1	1	-	-	On 20 November 2017 a confirmed case of Crimean-congo heamorragic fever (CCHF) was reported in Nouakchott. The case, a 48 year old man, developed symptoms on 11 November and was hospitalized on 15 November 2017. A collected sample tested positive by PCR. Twenty-four contacts are currently listed and under follow-up.
Mali	Dengue fever	Ungraded	4-Sep-17	1-Aug-17	19-Nov-17	418	33	-	-	In week 46 (13-19 November 2017), 38 suspected cases were reported. No confirmed cases have been reported since week 41.

Country	Event	Grade†	WHO notified	Start of reporting period	End of reporting period	Total cases	Confirmed cases	Deaths	CFR	Comments
Mali	Humanitarian crisis	Protracted 1	n/a	n/a	19-Nov-17	-	-	-	-	The security situation remains volatile in the north and centre of the contry. At the last update, incidents of violence had been perpetrated against civilians, humanitarian workers, and political-administrative authorities.
Niger	Humanitarian crisis	G2	1-Feb-15	1-Feb-15	11-Aug-17	-	-	-	-	The security situation remains precarious and unpredictable. On 28 June 2017, 16 000 people were displaced after a suicide attack on an internally displaced persons (IDP) camp in Kablewa. In another attack on 2 July 2017, 39 people from Ngalewa village, many of them children, were abducted. The onset of the rainy season is impeding the movements of armed forces around the region.
Niger	Hepatitis E	Ungraded	2-Apr-17	2-Jan-17	19-Nov-17	2 087	439	39	1.9%	The outbreak continue improving, with majority of cases have been reported from the Diffa, N'Guigmi, and Bosso health districts. Case incidence continues to decline, 11 suspected cases have been reported in week 46 (ending 19 November 2017).
Nigeria	Humanitarian crisis	Protracted 3	10-Oct-16	n/a	1-Oct-17	-	-	-	-	Detailed update given above.
Nigeria	Cholera (Borno State)		20-Aug-17	14-Aug-17	24-Nov-17	5 347	354	61	1.1%	As of 24 November 2017, three LGAs are still reporting cases : Jere (2 692 cases), Monguno (1 758 cases), and Guzamala (83 cases). No cases reported from Dikwa, MMC and Mafa for over six weeks. Out of the 431 samples tested using RDTs, 354 (82%) were positive while 175 (46%) of 381 samples were culture positive.
Nigeria	Cholera (nation wide)	Ungraded	7-Jun-17	1-Jan-17	24-Nov-17	3 656	42	84	2.3%	Between weeks 1 and 44, 3 656 cases were reported from 19 States compared to 714 suspected cases from 12 States during the same period in 2016. The cumulative total of cases and deaths in 2017, surpasses that observed during the same period in 2016 (560 suspected cases, 25 deaths).
Nigeria	Lassa fever	Ungraded	24-Mar-15	1-Dec-16	24-Nov-17	973	286	124	12.7%	The outbreak is currently active in five states: Ondo, Edo, Plateau, Bauchi, and Kaduna. In Week 47 (18-24 November 2017), two new confirmed cases were reported from Edo (1) and Plateau (1) States.
Nigeria	Hepatitis E	Ungraded	18-Jun-17	1-May-17	16-Nov-17	1 262	182	8	0.6%	Since the peak of the outbreak in Borno state in week 25. The number of cases has been re-increasing from week 42 to week 46, mainly due to the spread of the outbreak in Rann, Kala Balge. No case of acute jaundice was reported in Mobbar since week 35.
Nigeria	Yellow fever	Ungraded	14-Sep-17	7-Sep-17	21-Nov-17	276	30	45	16.3%	Detailed update given above.

Country	Event	Grade†	WHO notified	Start of reporting period	End of reporting period	Total cases	Confirmed cases	Deaths	CFR	Comments
Nigeria	Monkeypox	Ungraded	26-Sep-17	24-Sep-17	23-Nov-17	155	56	0	0.0%	Suspected cases are geographically spread across 21 States and the Federal Capital Territory (FCT). Fifty-six laboratory-confirmed cases have been reported from 12 states (Akwa Ibom, Bayelsa, Benue, Delta, Edo, Ekiti, Enugu, Lagos, Rivers, Imo, Katsina, and Nasarawa) and the FCT.
Nigeria	Acute Haemorrhagic fever syndrome	Ungraded	17-Nov-17	11-Nov-17	n/a	3	-	3	100.0%	Three people have died from an undiagnosed disease in Mabera area of Sokoto South LGA. Cases developped symptoms of bleeding from orifices, high fever and severe headache. The first case died on 11 November 2017, and the two other cases both died on 13 November 2017. No samples were collected from the deceased. Retroactive case search and clinicians sensitization are ongoing.
Nigeria	Event of unknown etiology	Ungraded	16-Nov-17	1-Jul-17	n/a	-	-	-	-	During week 44, the Nigerian CDC received reports of unknown disease and unexplained deaths in Gidan Dugus village of Wangara district. Cases were mostly children under 5 and onset dates of the first cases were in July 2017. Preliminary examination. Further investigation is ongoing.
São Tomé and Principé	Necrotising cellulitis/ fasciitis	G2	10-Jan-17	25-Sep-16	26-Nov-17	2 333	0	-	-	The incidence of new cases is fairly stable, with 27 cases reported during week 47. Six out of 7 districts in the country have reported cases in week 46. Currently, 25 cases are receiving care in hospital. No deaths have been directly attributed to the infection.
Senegal	Dengue fever	Ungraded	30-10-2017	28-09-2017	27-Nov-17	729	126	-	-	Since 28 September, the date of confirmation of the first cases of dengue fever in the Louga region, 115 cases confirmed from the Louga region (111), Fatick (2), Mbour(1), and Dakar(1). Analyses by IPD have shown that DEN-1 is the only serotype circulating. As of 27 November 2017, no severe cases and no deaths have been reported.
Seychelles	Dengue fever	Ungraded	20-Jul-17	18-Dec-15	23-Oct-17	4 068	1 413	-	-	As of 23 October, 4068 cases have been reported from all regions of the three main islands (Mahé, Praslin and La Digue).
South Sudan	Humanitarian crisis	G3	15-Aug-16	n/a	31-Oct-17	-	-	-	-	Situation remains volatile, fighting in multiple fronts and displacement continues. Humanitarian access to the most vulnerable population remains a major concern due to conflict and flooding in deep front areas. Severe acute malnutrition, malaria, measles, kala-azar, and cholera are the top ranking public health risks affecting the already distressed populations.

Country	Event	Grade†	WHO notified	Start of reporting period	End of reporting period	Total cases	Confirmed cases	Deaths	CFR	Comments
South Sudan	Cholera	Ungraded	25-Aug-16	18-Jun-17	15-Nov-17	21 439	1 585	461	2.2%	Cholera transmission continues to decline nationally. Twenty new cases and no deaths (CFR 0.0%) were reported in week 44 as compared to over 1 700 cases per week at the height of the most recent wave of the epidemic in week 23. In the past four weeks, only two counties (Juba and Budi) reported cases.
Tanzania	Cholera	G1	20-Aug-15	1-Jan-17	26-Nov-17	4 092	-	69	1.7%	The trend of the outbreak in Tanzania Mainland has increased. In week 47, a total of 117 new cases and 4 deaths (CFR:3.4%), have been reported, compared to 43 cases in week 46. The number of reporting regions this week has also increased to 9 out of 26 regions compared to 3 regions in week 46.
Uganda	Humanitarian crisis - refugee	Ungraded	20-Jul-17	n/a	30-Aug-17	-	-	-	-	The influx of refugees to Uganda has continued as the security situation in the neighbouring countries remains fragile. According to UNHCR, the total number of registered refugee and asylum seekers in Uganda stands at 1 326 750, as of 1 August 2017. More than 75% of the refugees are from South Sudan. Detailed update given in the week 35 bulletin.
Uganda	Measles	Ungraded	8-Aug-17	24-Apr-17	3-Oct-17	623	34	-	-	The outbreak is in the two urban districts of Kampala (310 cases) and Wakiso (313 cases).
Uganda	Drought/food insecurity	G1	1-Jul-17	n/a	24-Aug-17	-	-	-	-	This event forms part of a larger food insecurity crisis in the Horn of Africa. The northern and eastern regions are predominantly affected.
Uganda	Cholera	Ungraded	28-Sep-17	25-Sep-17	29-Nov-17	226	35	4	1.8%	The outbreak in Kasese District is still ongoing. The number of sub-counties affected by this outbreak has continued to rise and has now reached twelve sub-counties. Nyakiyumbu Sub County remains the most affected in the district. Another outbreak was identified in Kisoro district. So far, three cases were admitted, including 1 confirmed.
Uganda	Marburg	G2	17-Oct-17	20-Sep-17	21-Nov-17	3	2	3	100.0%	As of 21 November 2017, there is still a total of 3 cases (two confirmed and one probable). All previously suspected cases have tested negative. Active case finding is ongoing.
Uganda	Rift Valley fever (RVF)	Ungraded	22-Nov-17	14-Nov-17	23-Nov-17	2	2	2	100.0%	On 21 November 2017, the Uganda Virus Research Institute (UVRI) alerted the MoH of a confirmed case of Rift Valley Fever (RVF). The case was a 26 years old male from Kiboga district, Kibinga Sub-county, who worked with cattle in a forest reserve. He died on 15 November and was buried on 17 November 2017. On 23 November 2017, a second confirmed and fatal case of RVF was reported in Mityana district.

Country	Event	Grade†	WHO notified	Start of reporting period	End of reporting period	Total cases	Confirmed cases	Deaths	CFR	Comments
Zambia	Cholera	G1	4-Oct-17	28-Oct-17	29-Nov-17	354	230	10	2.8%	Detailed update given above.
Zimbabwe	Typhoid fever	Ungraded	-	1-Oct-17	19-Oct-17	1 065	82	-	-	On 17 October 2017, a confirmed case of typhoid fever was reported from Matapi area of Mbare in Harare. As of 19 November, the outbreak has spread from its epicentre in Matapi to other suburbs in Harare and other areas outside of Harare. The majority (n=50) of the confirmed cases were reported in Mbare sub-county, and the most affected suburb was Matapi (n=40). There has been no death so far.
Recently closed events										
Congo (Republic of)	Monkeypox	Ungraded	1-Feb-17	18-Jan-17	15-Oct-17	88	7	6	6.8%	Since January 2017, the northeast region has been going through an outbreak of monkeypox. However as of 15 october 2017, no new cases have been reported since epidemiological week 35.
Ethiopia	Acute jaundice syndrome (AJS) - hepatitis A suspected	G3	23-Aug-17	23-Aug-17	29-Sep-17	213	11	5	2.3%	Twenty-three blood samples were sent to IP Dakar. Laboratory results show that 11/23 samples were positive on hepatitis A RT-PCR, and one sample was IgM positive (PCR negative) for dengue virus. All other tests performed as part of the differiential diagnosis were negative. This outbreak was identified as hepatitis A. As hepatitis a is endemic in the region more cases are going to be expected.
Democratic Republic of the Congo	Circulating vaccine-derived polio virus type 2 (cVDPV2)	Protracted 3	17-May-17	20-Feb-17	4-Oct-17	10	10	-	-	Three separate outbreaks were reported in Haut Lomami Province (7 cases), Maniema Province (2 cases) and Tanganyika (1 case). As of 4 Pctober 2017, no new cases have been reported.
Gambia	Event of unknown etiology	Ungraded	07-Nov-17	n/a	29-Nov-17	15	-	-	-	An unknown public health event has been investigated in North Bank East Region after admission of a child with fever and severe arthralgia. Blood samples of all patients have been tested negative for Dengue fever, yellow fever, Zika, West nile, Chikungunya, Crimean-Congo heamorrhagic fever, and Rift Valley fever. Patients with fever have also been tested for malaria, all of them were negative. Since 2 November no additional cases were identified, as of 29 November 2017.

†Grading is an internal WHO process, based on the Emergency Response Framework. For further information, please see the Emergency Response Framework: http://www.who.int/hac/about/erf/en/.
Data are taken from the most recently available situation reports sent to WHO AFRO. Numbers are subject to change as the situations are dynamic.

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Data sources
Data is provided by Member States through WHO Country Offices via regular situation reports, teleconferences and email exchanges. Situations are evolving and dynamic therefore numbers stated are subject to change.

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