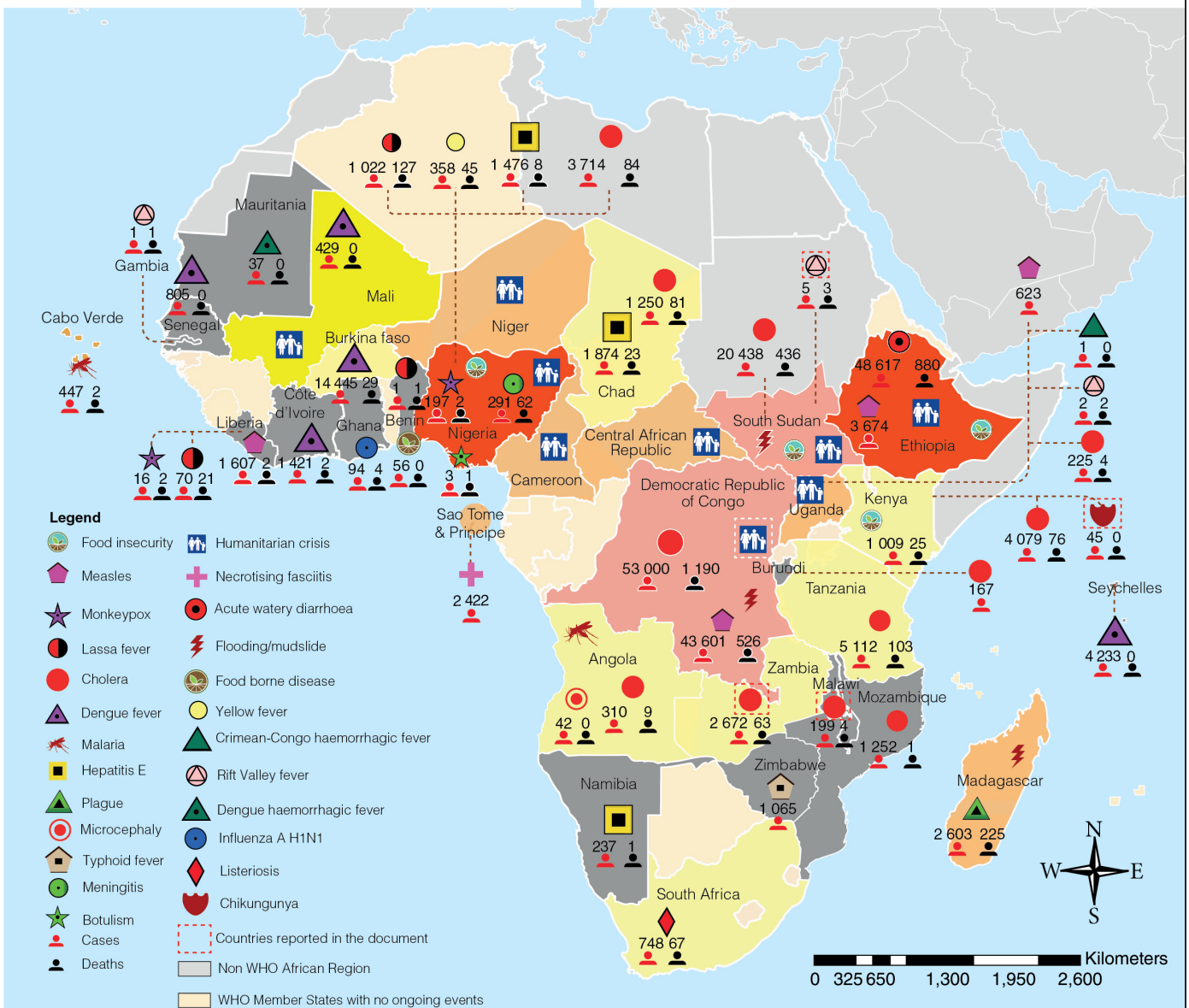
WEEKLY BULLETIN ON OUTBREAKS AND OTHER EMERGENCIES

Week 2: 6 – 12 January 2018
Data as reported by 17:00; 12 January 2018

World Health Organization
REGIONAL OFFICE FOR Africa
WHO Health Emergencies Programme

5	50	44	11
New events	Ongoing events	Outbreaks	Humanitarian crises



2 Grade 3 events	6 Grade 2 events	8 Grade 1 events	36 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 54 events in the region. This week's edition covers key ongoing events, including:

  - Chikungunya in Kenya
  - Cholera in Malawi
  - Cholera in Zambia
  - Suspected Rift Valley fever in South Sudan
  - Humanitarian crisis in the Democratic Republic of the Congo

- 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 humanitarian crisis in the Democratic Republic of the Congo continues to deteriorate. While the cholera outbreak trend has been declining steadily, the recent flash floods in Kinshasa and ongoing rainy season in the country may accelerate further transmission and escalate the situation. There is already a sharp increase in cholera incidence in Kinshasa. Further escalation of the cholera outbreak in the Democratic Republic of the Congo should be averted.

  - The continued propagation of cholera in Zambia and the rising trend of the disease currently seen in Malawi are concerning. The national authorities in both countries need to work towards halting these trends.

Ongoing events

Chikungunya	Kenya	45 Cases	0 Deaths	0% CFR

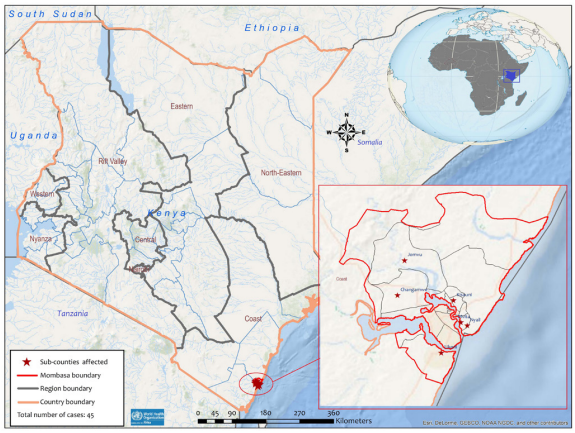
EVENT DESCRIPTION

The Kenyan Ministry of Health has reported an outbreak of chikungunya in the coastal city of Mombasa. The outbreak started in mid-December 2017 when clinicians observed an increasing number of cases of an undiagnosed febrile illness, presenting with very high fever, joint pains and general body weakness, and testing negative for malaria and sometimes dengue fever. On 13 December 2017, health authorities collected eight blood specimens from two private hospitals in Mombasa and submitted these to the Kenya Medical Research Institute (KEMRI) Arboviral Laboratory in Nairobi. Four out of the eight specimens (50%) tested positive for chikungunya virus infection. In addition, two specimens were positive for both chikungunya and dengue virus (co-infection).

On 21 December 2017, a national rapid response team was deployed to conduct further investigations. The team collected an additional 32 blood specimens from suspected cases, which were shipped to KEMRI on 4 January 2018. Test results released from KEMRI on 11 January 2018 indicated that 27 of the 32 specimens tested positive for chikungunya on polymerase chain reaction.

As of 8 January 2018, a total of 45 suspected cases of chikungunya and no deaths have been documented. All six sub-counties in Mombasa have reported cases, namely Mvita, Kisauni, Nyali, Changamwe, Jomvu, and Likoni. Most of the cases are from the island of Mvita.

Geographical distribution of chikungunya cases in Kenya, 13 December 2017 – 8 January 2018



PUBLIC HEALTH ACTIONS

- The County Outbreak Management Team initiated chikungunya control activities, including regular coordination meetings.
- A chikungunya outbreak alert and fact sheet was issued to all sub-counties and health facilities, including private hospitals.
- Information, education and communication (IEC) materials were developed and are being distributed to households through community health volunteers. The IEC materials have been integrated with cholera and dengue fever control messages.
- Vector control activities have been strengthened, including environmental fogging. A total of 200 litres of insecticide and four fogging machines were procured. The fogging exercise was launched by the Governor of Mombasa County on 8 January 2018. This activity will continue for the next 2 to 3 weeks.

SITUATION INTERPRETATION

Chikungunya is a viral disease transmitted to humans by infected mosquitoes. It causes fever and severe joint pain, which is often debilitating. Other symptoms include muscle pain, headache, nausea, fatigue, and rash. The disease shares some clinical signs with dengue and Zika, and can be misdiagnosed in areas where they are common. As there is no cure, treatment is focused on relieving the symptoms. The proximity of mosquito breeding sites to human habitation is a significant risk factor for the disease. Both *Aedes aegypti* and *Aedes albopictus* have been implicated in large outbreaks of chikungunya. However, several other mosquito vectors have been implicated in disease transmission in Africa.

In 2016, Kenya reported an outbreak of chikungunya in Mandera East sub-county, resulting in more than 1 700 suspected cases. Previous outbreaks occurred in 2004 and 2005 in Mombasa and Lamu coastal region, during which about 1 300 cases were documented. The extent of the current outbreak is likely to be underestimated since many symptomatic cases do not report to healthcare facilities. The risk of further spread of this outbreak cannot be ruled out. The national authorities and partners need to strengthen implementation of outbreak control measures. Meanwhile, basic precautions should be taken by people travelling to risk areas and these include use of repellents, wearing long sleeves and long pants and ensuring rooms are fitted with screens to prevent mosquitoes from entering.

EVENT DESCRIPTION

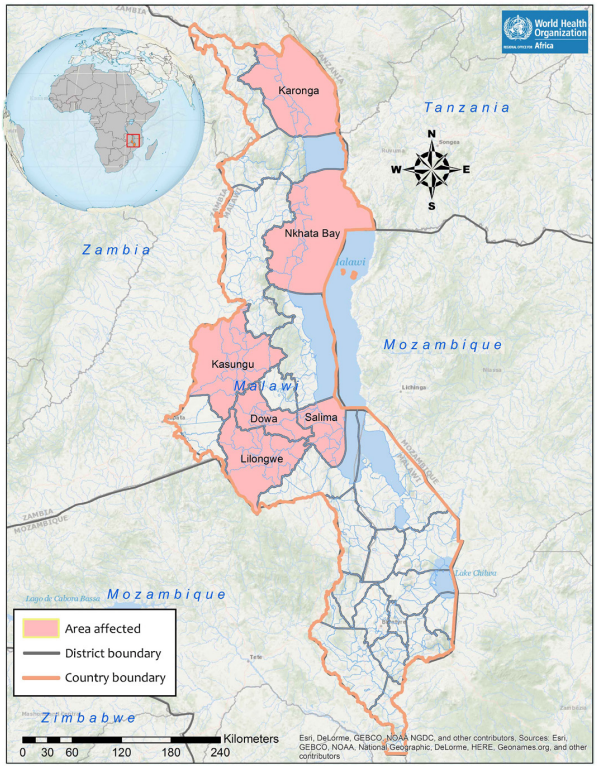
On 24 November 2017, the Malawi Ministry of Health reported an outbreak of cholera in Karonga District, located in the northern part of the country (at the shore of Lake Tanganyika) and bordering Tanzania. The initial cholera cases emerged on 20 November 2017 and presented to Iponga Health Center in Karonga District. On 24 November 2017, four out of five stool specimens obtained from the initial cholera cases isolated *Vibrio cholerae* 01 by culture, confirming the outbreak. By 25 December 2017, Nkhatabay District (a second district) located in the Northern Region reported its first cholera case. The outbreak subsequently spread to four other districts in the central region of the country, with Lilongwe reporting its first case on 29 December 2017.

During week 1 (week ending 7 January 2018), a total of 58 new suspected cholera cases (with no deaths) were reported, compared to 59 cases reported in week 52 (week ending 31 December 2017). The new cases reported during the week came from four districts, namely Karonga (33), Lilongwe (18), Salima (5), and Nkhatabay (2). As of 8 January 2018, a cumulative total of 199 suspected cholera cases with 4 deaths (case fatality rate 2.0%) have been reported. The majority (80%, 155) of the reported cases are from Karonga District, where the outbreak originated. The other affected districts are Lilongwe (18), Nkhatabay (18), Salima (5), Dowa (2), and Kasungu (1).

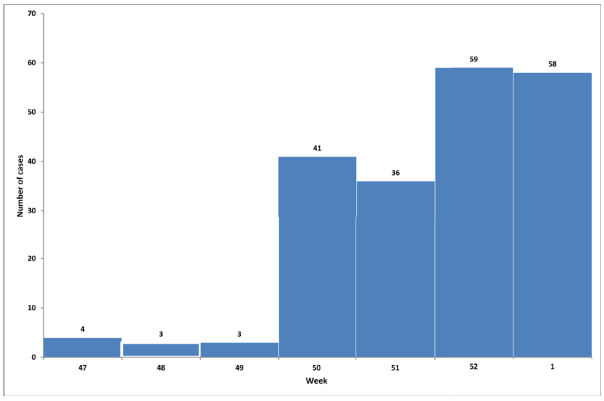
PUBLIC HEALTH ACTIONS

- The Ministry of Health is coordinating the response to the cholera outbreak, in collaboration with other government agencies and partners. At the national level, the Health Cluster is meeting weekly on Fridays. WHO provided financial support to facilitate field visits to high risk districts by the national authorities.
- Implementation of water, sanitation and hygiene (WASH) activities has been intensified, including treatment of household water with chlorine tablets, and improving access to sanitation facilities.
- Cholera treatment facilities have been established in affected districts. Médecins Sans Frontières (MSF) is supporting the Ministry of Health on case management of cholera patients.
- Active surveillance has been enhanced in the affected districts and in the whole country, conducted by health surveillance officers.
- UNICEF is supporting provision of WASH supplies, including water treatment tablets (chlorine).

Geographical distribution of cholera cases in Malawi, 20 November 2017 – 7 January 2018



Weekly trend of cholera cases in Malawi, week 47, 2017 - week 1, 2018



SITUATION INTERPRETATION

The cholera outbreak in Malawi is rapidly evolving, with new districts being affected. The disease has now reached the densely populated urban Lilongwe District, at the heart of the country. This outbreak has the potential to spread further and become protracted, as is the case in the sub-region. The national authorities and partners in Malawi need to consolidate efforts, at this early stage, to ensure that the outbreak in contained effectively. There is, therefore, a need to intensify implementation of control interventions, including community engagement and socio-mobilisation, enhanced surveillance, as well as water and sanitation activities.

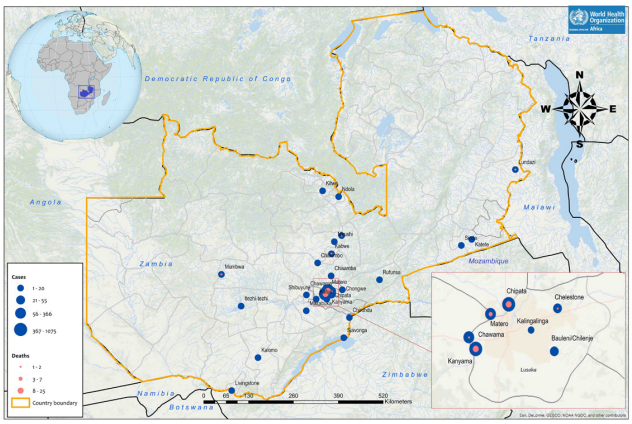
EVENT DESCRIPTION

The cholera outbreak in Zambia continues to escalate. During week 1 (week ending 7 January 2018), a total of 613 new suspected cholera cases were reported, while on 8 January 2018, 107 new cases, including two deaths, were reported. By this time, a total of 160 patients had been admitted and were being treated across seven cholera treatment centres.

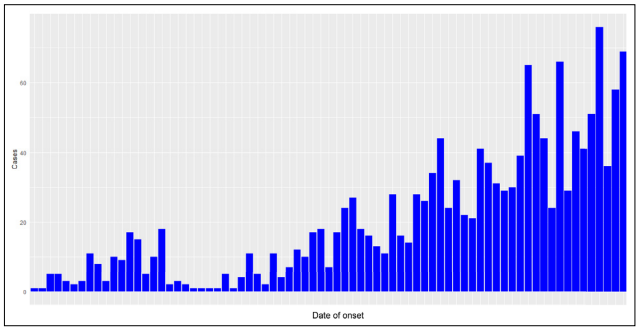
As of 8 January 2018, a cumulative total of 2 672 cases with 63 deaths (case fatality rate 2.4%) have been registered. Fifty-six percent (35) of the deaths occurred in the community. Most, 96% (2 558) of the reported cases and 92% (58) of the deaths have come from the urban Lusaka district. The majority of the cases are concentrated in four sub-districts of Lusaka: Chipata (1 075 cases), Kanyama (767), Matero (366), and Chawama (252 cases). The outbreak has also spread to 23 other districts outside Lusaka, where an additional 114 cases with five deaths have been reported. These include two cases reported in Kitwe for the first time since the beginning of the outbreak.

To date, 140 out of 469 stool samples have tested positive for *Vibrio cholerae* O1 by culture. A total of 2 792 water samples have been collected since the beginning of the outbreak, of which 1 062 (38%) were contaminated with *V. cholerae*, *Escherichia coli* and faecal coliforms.

Geographical distribution of cholera cases in Zambia, 4 October 2017 - 8 January 2018



Epidemic curve of cholera cases in Lusaka District, Zambia, 4 October 2017 - 8 January 2018



PUBLIC HEALTH ACTIONS

- A coordinated multi-sectoral public health response is ongoing in all affected districts.
- WHO is working with the Zambian health authorities to conduct an oral cholera vaccination campaign, which was launched on 10 January 2018. Two million doses of the oral cholera vaccine were procured from the Gavi-funded global stockpile.
- Water, sanitation and hygiene (WASH) interventions are ongoing in both affected and non-affected areas. Mass cleaning of some parts of Lusaka City has been conducted with the help of the Defence Forces.
- Inspection of public facilities is ongoing. To date, 7 686 public premises (including markets, restaurants, bars, and schools) have been inspected. Out of these, 517 premises found to harbour unsanitary conditions were closed.
- A total of 29 water bowsers are currently in service in Chawama (14), Chiapata (7), and Kanyama (8). An additional three are needed to meet the demand.
- Additional staff were mobilised from non-affected districts to support case management in cholera treatment centres in Chipata, Kanyama, Matero, Chawama, Chilenje, Chelston, and Kalingalinga sub-districts. To date, 2 391 patients have fully recovered and have been discharged.
- Active surveillance, contact tracing, health education, chlorine distribution, and environmental health monitoring are ongoing.

SITUATION INTERPRETATION

The cholera outbreak situation in Zambia is concerning. The total number of cases has increased by almost 7-fold in the past 4 weeks. The ongoing rainy season (lasting until April), coupled with the inadequate water and sanitation infrastructure, may intensify the outbreak. The recent occurrence of cholera cases in Kitwe is of concern, given that it is the second largest city in Zambia, in terms of size and population.

The outbreak has prompted the government to issue statutory instrument restricting public gatherings in areas prone to the outbreak. These restrictive measures, along with closure of a large number of markets and other small businesses that are deemed unsanitary, could ultimately have a negative social impact, in addition to affecting the country's economy.

Suspected Rift Valley fever | South Sudan | 5 Cases | 3 Deaths | 60% CFR

EVENT DESCRIPTION

WHO continues to closely monitor the outbreak of viral haemorrhagic fever (VHF) in Eastern Lakes State, South Sudan. Since our last report on 5 January 2018 *(Weekly Bulletin 1 of 2018)*, two new suspected cases have been reported and are being investigated. On 9 January 2018, one of the contacts of the initial cluster of cases, an 18-year-old, 7-months pregnant female from Thonabutkok village, developed chills, joint pains, headache, neck pains, and two episodes of epistaxis. Further updates on this case will be provided.

During the week, a 14-year-old girl from Arwa village in Yirol West (adjoining Yirol East where the initial cases originated) was admitted to a health facility with fever and conjunctival injection. There was no epidemiological linkage between this suspected case and the initial cluster of cases reported previously. A blood specimen has been collected and shipped for testing.

As part of investigations to establish the etiology of the event, six human blood samples were collected from close asymptomatic contacts and shipped to the Uganda Virus Research Institute (UVRI). On 10 January 2018, all six samples tested negative for Ebola, Marburg, Crimean-Congo haemorrhagic fever, Rift Valley fever (RVF), and Sosuga viruses by polymerase chain reaction. Follow up serological analysis showed that one sample had high RVF IgM and IgG titres and two other samples had high RVF IgG titres. A total of seven animal samples (two from sheep, two from goats and three from cattle) were also obtained and shipped to UVRI for testing. The test results are pending.

Geographical distribution of suspected Rift Valley fever cases in South Sudan, 7 December 2017 – 12 January 2018

On 28 December 2017, the South Sudan Ministry of Health reported a cluster of three severe haemorrhagic cases, epidemiologically linked by place (all occurred in Thonabutkok village) and time (onset of illness occurred in epidemiological weeks 49 and 51). Nonetheless, there was no close physical contact between them and no travel history. At least 60 contacts have been listed and are being followed up. There was also evidence of zoonotic haemorrhagic illness among goats, sheep and cattle. One death was reported in a wild bird.

PUBLIC HEALTH ACTIONS

- The national and state level multi-sectoral task forces have been activated to coordinate investigations and response activities. The Ministry of Health convenes regular multi-sectoral and inter-agency meetings to coordinate investigation and response activities, which include extended public health, animal health and entomological investigations. Agencies involved include the Ministry of Animal Health Resources and Fisheries, WHO, FAO, Health Cluster and partners. The Mentor Initiative has offered to lead entomological investigations after an official request from the task force, government and Health Cluster. A protocol for entomological investigations was drafted.
- A One Health multi-sectoral response team was constituted to conduct an in-depth investigation into the cause of deaths in the three people as well as reported deaths and abortions in domestic animals and wild birds.
- The Uganda Virus Research Institute (UVRI) and US Centers for Disease Control and Prevention (CDC) are on standby to support sample collection and testing.
- A multi-sectoral outbreak investigations and response plan is to be finalized.
- Animal and public health surveillance is being strengthened.
- UNICEF has drafted key messages on Rift Valley fever to enhance awareness and mitigate the risk of disease at community level.
- While there is currently no designated treatment centre for managing new suspected cases, there are plans for one to be established, and there are good supplies of personal protective equipment and sample collection kits to support outbreak response needs.
- Regular updates will be disseminated using situation reports and press releases as the situation evolves.

SITUATION INTERPRETATION

The suspected VHF outbreak in South Sudan needs to be closely monitored. While investigations to establish the etiology of the event are ongoing, surveillance in human and animal populations needs to be strengthened rapidly to detect new human and animal cases in a timely fashion, along with better clinical capacity to manage any new cases in affected areas. Preliminary indications are that Rift Valley fever is the etiological agent. However, more substantial confirmation is required.

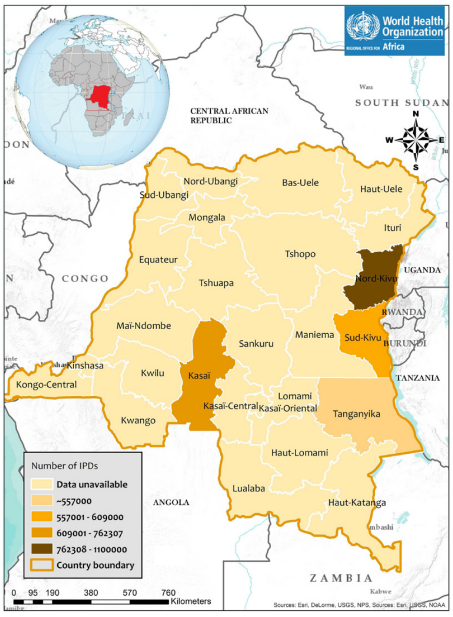
EVENT DESCRIPTION

General insecurity and social unrest in the Democratic Republic of the Congo have created one of the world's worst complex and long-standing humanitarian crisis. The situation remains highly volatile, with continuing fighting and population displacement, lately intensified in and around Kasaï, Kivu and Maniema Provinces. On 2 January 2017, an armed attack took place around Kananga airport in Kasaï Central Province, resulting in suspension of air flights from Kananga. During the same period, intercommunal conflict between two villages caused the locals to flee into the bush and left more than 100 houses damaged. In Beni territory of North Kivu Province, a military encampment was attacked by armed groups, leaving scores dead and several others wounded. Several other security incidents have occurred in various places.

By the end of December 2017, over 4.3 million people were internally displaced in the Democratic Republic of the Congo, with 1.9 million in Kasaï, North Kivu and Tanganyika regions. Over 7.7 million people are severely food insecure and 13.1 million people will need emergency assistance in 2018. On the contrary, financing of the humanitarian response plan decreased from 60 to 57% of the planned cost, creating gaps in provision of basic needs for the internally displaced persons.

Kinshasa, the densely-populated capital city with over 10 million people, experienced flash floods and landslides between 4 and 7 January 2018 following heavy rains. A total of 45 people died, over 5 000 homes were flooded and 192 houses collapsed. Electricity structures have been damaged, leaving at least 10 communes without power. Some health facilities have been damaged, including two cholera treatment centres. The event has exacerbated the ongoing cholera outbreak in the city, leading to a rapid increase in cholera incidence. In week 52 (week ending 31 December 2017), Kinshasa Province reported 120 new suspected cholera cases, including two deaths (case fatality rate 1.7%), compared to 33 cases reported in week 51. As of 11 January 2018, 697 cholera cases including 53 deaths (case fatality rate 7.6%) were reported from 21 of the 35 health zones. Sixty-nine patients were admitted to two cholera treatment units: Luka (47) and Pakadjuma (22). Out of 48 samples tested at the Institut National des Recherches Biomédicales, 16 (33%) were positive for *Vibrio cholerae* by culture.

Humanitarian crisis in Democratic Republic of the Congo, 15 - 29 December 2017



Meanwhile, there has been an overall decline in cholera trend across the country since attaining a peak of 2 072 cases in week 37 (week ending 17 September 2017). In week 52, 888 new cholera cases including 19 deaths (case fatality rate 2.1%) were reported. In 2017, a cumulative total of 55 000 suspected cholera cases were reported and 1 190 deaths (case fatality rate 2.2%) have occurred in the country. To date, Kinshasa, South Kivu and North Kivu are the major hotspots with enhanced cholera transmission.

In week 52, the number of measles cases decreased significantly, with 280 suspected cases and five deaths (case fatality rate 1.7%) reported, compared to 1 214 suspected cases and four deaths (case fatality rate 0.3%) reported in week 51. During this period, South Kivu Province reported the highest number of suspected cases: 123 out of 280 (44.2%). The measles trend is being closely monitored before any conclusion is drawn.

PUBLIC HEALTH ACTIONS

- WHO has set up an incident management system in Kinshasa to improve coordination of response operations at field level.
- WHO provided operational and logistical support to the new National Cholera Elimination Program in the form of a rental vehicle for the coordination team, and communication and internet access for daily collection of data from the cholera treatment centres.
- The Ministry of Health, with support from WHO and partners, developed an emergency response plan for the control of the cholera outbreak. Similarly, WHO developed its response plan to support the Ministry of Health plan.
- WHO supported the Ministry of Health to establish a toll-free telephone line in Central Kasaï Province to facilitate receipt of community alerts of suspected cholera cases and deaths. In addition, WHO distributed hand wash facilities to healthcare centres in Kasai Oriental, as well as supporting media campaigns on cholera in Kasaï Central and Kasaï.
- The Ministry of Health and WHO supported the Provincial Health Teams to assess and identify areas most at risk of cholera transmission. This aims to avert the spread of cholera infection along the major water bodies, namely Congo River, Kasaï River and Lake Tanganyika and Kivu. Based on the assessments, the Provincial Teams developed/updated their preparedness plans to strengthened preparedness and readiness. A special focus was put on Ilebo in Kasaï Central and Mwenditu in Lomami.
- WHO has re-strategized its response operations in the Kasaï region, focusing on conducting situational assessment/evaluation, strengthening case management, setting up water purification points and deploying key health experts, including epidemiologists, and water and sanitation experts. The interventions are also targeting health areas with a high disease incidence and case fatality rate, as well as areas poorly supported by other partners such as Haut Lomami, North Kivu and Kongo Central.

SITUATION INTERPRETATION

The humanitarian situation in the Democratic Republic of the Congo remains serious, as fighting continues, compounded by ongoing political and social unrest, as well as a deteriorating economy.

While the cholera outbreak has been improving gradually, the flash floods in Kinshasa and the ongoing rainy season are likely to escalate further transmission, given the high population density and the sub-optimal water and sanitation infrastructure. This is in addition to the prevailing gaps in the current response. The city of Kinshasa is currently experiencing an increase in cholera incidence. Furthermore, the country is responding to a level 3 humanitarian emergency, with more than 4 million internally displaced people and 600 000 refugees. The country's resources and capacity to effectively respond to the ongoing outbreaks are limited. Similarly, partners' response capacities have been equally constrained. The response efforts to the humanitarian crisis and ongoing outbreaks are being hampered by inadequate resources, particularly underfunding. The other challenges include insecurity, restricted access to the people in need and operational complexity in the country.

Go to overview | Go to map of the outbreaks

Summary of major challenges and proposed actions

Challenges

- The humanitarian situation in the Democratic Republic of the Congo continues to deteriorate. The response efforts to the crisis and ongoing outbreaks are being hampered by inadequate resources, particularly underfunding, insecurity, restricted access to the people in need, and operational complexity in the country. While the cholera outbreak trend has been declining steadily, the recent flash floods in Kinshasa have accelerated further transmission in the city and escalated the situation. This is in addition to the prevailing gaps in the current response.
- The continuous propagation of cholera in Zambia and the rising trend of the disease observed in Malawi are concerning. In Zambia, cholera incidence increased by almost 7-fold in the past 4 weeks, in spite of ongoing interventions. While in Malawi, the disease has quickly spread from the northern part of the country to the central urban region, including Lilongwe. These phenomena in Zambia and Malawi require specific attention from the national authorities and partners.

Proposed actions

- The national authorities and humanitarian partners in the Democratic Republic of the Congo need to sustain implementation of cholera prevention, preparedness and response interventions in Kinshasa and the entire country, in order to avoid reversal of the observed declining trend. Meanwhile, provision of critical life-saving interventions should be maintained, in spite of the difficult circumstances.
- The national authorities and partners in Zambia and Malawi need to review strategies and ongoing cholera control interventions. This exercise should lead to designing more targeted high-impact interventions, as well as mobilizing additional resources to control these outbreaks.

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										
Kenya	Chikungunya	Ungraded	mid-December 2018	mid-December 2018	8-Jan-18	45	31	-	-	Detailed update given above.
Nigeria	Botulism	Ungraded	12-Jan-18	9-Jan-18	12-Jan-18	3	-	1	33.3%	On 9 January 2018, the NCDC was notified of two suspected cases of botulism involving a husband and his wife, both with symptoms onset on 7 January 2018. The wife died on 8 January 2018, within 24 hours of being admitted to the Zenith Medical and Kidney centre in Abuja. A third suspected case, their daughter, was later admitted with similar symptoms. Laboratory confirmation is still pending. So far, the source of infection has not been identified.
Benin	Lassa fever	Ungraded	13-Jan-18	8-Jan-18	13-Jan-18	1	1	1	100.0%	On 8 January 2018, a confirmed case of Lassa fever was reported in the Tanguiéta-Matéri-Cobly health zone in Benin. The case was a 35-year-old male from Nadoba village in Togo, which borders Benin's Boukombé village. The case became ill on 25 December 2017, while visiting Nigeria. Upon his return, he sought care at the Boukombé healthcare center prior to being transferred to the Tanquiéta hospital. He died on 9 January 2018 and received a safe and dignified burial on 10 January 2018. To date 10 contacts have been listed, 9 of which are healthcare workers.
Democratic Republic of the Congo	Flood	Ungraded	20-Nov-17	20-Nov-17	11-Jan-18	-	-	-	-	From 4-7 January 2018, a flooding event occurred in Kinshasa. The flood resulted in 45 deaths, 5 100 flooded homes, 192 collapsed houses and 2 damaged cholera treatment centres. The flood affected areas of Kinshasa that are currently reporting cholera cases resulting in an upsurge in the incidence of cholera in Kinshasa.
Madagascar	Cyclone	Ungraded	5-Jan-18	5-Jan-18	6-Jan-18	-	-	-	-	On 5 January 2018, tropical Cyclone AVA reached the East coast of Madagascar. The most affected regions were Analanjirofo, Atsinanana andVatovavy-Fitovinany. As of 6 January 2018, 1 009 people had been affected, including 695 displaced. Two dead and 21 injured were reported in the Atsinanana region.

Country	Event	Grade†	WHO notified	Start of reporting period	End of reporting period	Total cases	Confirmed cases	Deaths	CFR	Comments
Ongoing events										
Angola	Cholera	G1	2-Jan-18	21-Dec-17	10-Jan-17	310	4	9	2.9%	On 21 December 2018, two suspected cholera cases were reported from Uige district, Uige province. Both of these cases had a history of travel to Kimpangu (DRC). On 29 December, the National Public Health Laboratory confirmed *Vibrio cholerae* infection in samples collected from the initial two cases. The trend in the number of cases is increasing, with 310 cases and 9 deaths reported as of 10 January 2018.
Angola	Malaria	Ungraded	20-Nov-17	n/a	30-Sep-17	-	-	-	-	The outbreak has been ongoing since the beginning of 2017. In the province of Benguela, a total of 311 661 malaria cases were reported from January to September 2017 as compared to 244 381 reported in all of 2016. In the province of Huambo, 155 311 malaria cases were reported from January to September 2017, as compared to 82 138 cases during the same period in 2016. Epidemiological investigations are ongoing in these two contiguous provinces.
Angola	Microcephaly - suspected Zika virus disease	Ungraded	10-Oct-17	End September	29-Nov-17	42	-	-	-	A cluster of microcephaly cases was detected in Luanda in late September 2017 and reported on 10 October 2017 by the provincial surveillance system. Of the 42 cases, three were stillbirths and 39 were live births. Suspected cases have been reported from Luanda province (39), Zaire province (1), Moxico province (1), and Benguela province (1).
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.
Burkina Faso	Dengue fever	G1	4-Oct-17	1-Jan-17	10-Dec-17	14 445	-	29	0.2%	Weekly case counts have decreased since week 44. The majority (62%) of cases have been reported in the central region, notably in Ouagadougou (the capital). Dengue virus serotypes 1, 2, and 3 are circulating, with serotype 2 predominating (72%).
Burundi	Cholera	Ungraded	20-Aug-17	15-Aug-17	6-Dec-17	167	14	0	0.0%	As of 6 December 2017, a cumulative total of 167 cases and no deaths were reported from 6 districts; DS Nyanza lac 30 cases, DS Mpanda 31 cases, DS Cibitoke 35 cases, DS Isare 33 cases, DS Bubanza 31 cases, and DS B M Nord 6 cases.

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 worsened. Terrorist attacks and suicide bombings are continuing and causing 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 of the camp. In addition, approximately 238 000 Internally Displaced People have been registered.
Cape Verde	Malaria	G2	26-Jul-17	1-Jan-17	20-Dec-17	447	-	2	0.4%	As of 20 December, a total of 447 cases have been reported including 418 indigenous, 12 imported cases, and 17 reinfections/recurrences.Two deaths have been reported (1 in an indigenous case and 1 in an imported case). The outbreak has been contained to the city of Praia. Cases reported from other areas/islands likely acquired the infection during travel to Praia or overseas, and there is currently no evidence of indigenous transmission outside of Praia.
Central African Republic	Humanitarian crisis	G2	11-Dec-13	11-Dec-13	11-Dec-17	-	-	-	-	The eastern part of the country currently has the greatest need for humanitarian assistance. There continue to be insecure zones that are left unserved by humanitarian actors and medical providers.
Chad	Hepatitis E	G1	20-Dec-16	1-Aug-16	3-Dec-17	1 874	98	23	1.2%	Outbreaks are ongoing in the Salamat Region predominantly affecting North and South Am Timan, Amsinéné, Mouraye, Foulonga and Aboudeia. The number of cases has been decreasing since week 39. Of the 64 cases in pregnant women, five died (CFR: 7.8%) and 20 were hospitalized. Water chlorination activities were stopped at the end of September 2017 due to a lack of partners and financial means. Monitoring and case management are continuing.
Chad	Cholera	G1	19-Aug-17	14-Aug-17	10-Dec-17	1 250	9	81	6.5%	The case incidence has been decreasing since week 43. In week 49, no new cases were reported. A total of 817 cases and 29 deaths were reported in the Salamat region from 11 September 2017 to 10 December 2017. No new cases have been reported in the Sila Region since 22 October 2017.
Cote d'Ivoire	Dengue fever	Ungraded	3-May-17	22-Apr-17	16-Dec-17	1 421	322	2	0.1%	The outbreak has been on a downward trend since week 35, with no cases being reported in weeks 49 and 50. This is likely due to the decrease in rainfall. Abidjan remains the epicentre of this outbreak, accounting for 95% of the total reported cases. 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, 50 samples were confirmed IgM positive by serology.

Country	Event	Grade†	WHO notified	Start of reporting period	End of reporting period	Total cases	Confirmed cases	Deaths	CFR	Comments
Democratic Republic of the Congo	Humanitarian crisis	G3	20-Dec-16	17-Apr-17	7-Jan-18	-	-	-	-	The humanitarian crisis remains serious. An estimate of 13.1 million is in need of emergency aid assistance, including around 4.3 million Internally Displaced Persons (IDPs), and 552 000 refugees. In addition, an estimated 7.7 million people are at risk of critical food insecurity. More than 74% of the country's total IDPs are from Kasai region, North, and South Kivu. During week 1 of 2018, security incidents were reported in Central Kasai, including an attack on the Kananga airport and a fight between two villages.
Democratic Republic of the Congo	Cholera		16-Jan-15	1-Jan-17	7-Feb-18	55 000	841	1 190	2.2%	The trend of the outbreak continues to improve nationwide. During week 52 a total of 888 suspected cases and 19 deaths (CFR: 2.1%) were reported, compared to 939 suspected cases and 16 deaths (CFR: 1.7%) during week 50. Despite this general downward trend, an upsurge of cases has been noted during week 52 in the provinces of South Kivu (23.8%), Tanganyika (26.0%) and especially Kinshasa (310%), compared to week 51. From 4-7 January 2018, a flooding event affected areas of Kinshasa that are currently reporting cholera cases. As of 11 January 2018, 697 cholera cases with 53 deaths (CFR: 7.6%) were reported across 21 health zones.
Democratic Republic of the Congo	Measles		10-Jan-17	2-Jan-17	23-Dec-17	43 601	624	526	1.2%	The trend of the outbreak has decreased this week. During week 50, a total of 396 cases and 2 deaths (CFR: 0.5%) were reported, compared to 692 cases and 4 deaths (CFR: 0.6%) in week 49. Most of the suspected cases this week were reported from South Kivu province.

Country	Event	Grade†	WHO notified	Start of reporting period	End of reporting period	Total cases	Confirmed cases	Deaths	CFR	Comments
Ethiopia	Humanitarian crisis	Protracted 3	15-Nov-15	n/a	3-Dec-17	-	-	-	-	This complex emergency includes outbreaks (acute watery diarrhoea, 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 million people are food-insecure and in need of humanitarian assistance. 6.3 million people are in need of health assistance and 0.4 million children are severely malnourished. Estimates of the number of internally displaced people range from 660 000 to 900 000. Over 889 071 refugees have left Ethiopia as a result of this crisis.
Ethiopia	Acute watery diarrhoea (AWD)		15-Nov-15	1-Jan-17	3-Dec-17	48 617	-	880	1.8%	The outbreak is showing a downward trend. Only 11 new cases have been reported this week from 4 regions: Amhara, Somali, Diri Dawa and B.Gumuz regions. Nine 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	24-Nov-17	3 674	-	-	-	The outbreak of measles continues to improve. During week 47, 37 cases were reported from Dollo zone and Jijiga City. Oromia Region remains the most affected region with approximately 46% of the total reported cases, followed by Amhara (21%), Addis Ababa (16%) and Somali (20%).
Gambia	Rift Valley fever (RVF)	Ungraded	3-Jan-17	25-Dec-17	3-Jan-18	1	1	1	100.0%	A 52 year-old man presenting with severe malaria was medically evacuated from the Gambia and hospitalized in Fann, Dakar. A blood sample collected from the case was positive for Rift Valley fever virus on IgM testing done at Institut Pasteur Dakar. The sample was negative for RVF and other arboviruses on PCR testing. An investigation is ongoing.
Ghana	Influenza A H1N1	Ungraded	6-Dec-17	30-Nov-17	14-Dec-17	94	0	4	4.2%	On 6 December 2017, the Ministry of Health notified WHO of a focal outbreak of influenza A H1N1 in a school in Kumasi City, Ashanti Region. As of 14 December 2017, 94 cases with four deaths (CFR: 4.2%) have been the reported. Thus far, the disease is still localized in the school as no cases have been reported among community members.
Kenya	Cholera	G1	6-Mar-17	1-Jan-17	7-Dec-17	4 079	724	76	1.9%	Detailed update given above.
Liberia	Suspected monkeypox	Ungraded	14-Dec-17	1-Nov-16	14-Dec-17	16	0	2	12.5%	During weeks 48 and 49 of 2017, three suspected cases of monkeypox were reported from Maryland and Rivercess counties. Since November 2016, a cumulative of 16 suspected cases and two deaths have been reported in Grand Cape Mount(4), Rivercress(11) and Maryland(1). No cases have been confirmed to date and laboratory confirmation is ongoing.

Country	Event	Grade†	WHO notified	Start of reporting period	End of reporting period	Total cases	Confirmed cases	Deaths	CFR	Comments
Liberia	Measles	Ungraded	24-Sep-17	6-Sep-17	3-Dec-17	1 607	255	2	0.1%	From week 1 to week 48, 1 607 cases were reported from 15 counties, including 225 laboratory confirmed, 336 clinically compatible and 199 epi-linked. Nimba county has had the greatest cumulative number of cases to date (235). Children between 1-4 years accounted for 49% of the cases.
Liberia	Lassa fever	Ungraded	14-Nov-17	1-Jan-17	24-Nov-17	70	28	21	30.0%	On 10 November 2017, four suspected cases of Lassa fever were reported from Phebe Hospital in Suakoko district, Bong County. One of the cases tested positive by RT-PCR and the other three tested negative. Since the beginning of 2017, a total of 70 suspected Lassa fever cases including 21 deaths (CFR: 30%) have been reported from nine counties in Liberia.
Madagascar	Plague	G2	13-Sep-17	13-Sep-17	7-Jan-18	2 603	526	225	8.6%	Cases include pneumonic (2 005, 77%), bubonic (393, 15%), septicemic (1) and unspecified (204, 8%) forms of disease. Of the 2 005 clinical cases of pneumonic plague, 397 (20%) have been confirmed, 632 (32%) are probable and 976 (49%) remain suspected. The trend in the number of cases has been decreasing since 10 October 2017.
Malawi	Cholera	Ungraded	28-Nov-17	20-Nov-17	8-Jan-18	199	5	4	2.0%	During week 1 of 2018, 58 new cases were reported. As of 8 January 2017, 6 districts had reported cholera cases: Karonga (155), Nkhatabay (18), Lilongwe (18), Salima (5), Dowa (7) and Kasungu (1). Cases are not epidemiologically linked by district.
Mali	Dengue fever	Ungraded	4-Sep-17	1-Aug-17	10-Dec-17	429	33	0	0.0%	In week 49, no suspected cases were reported. No confirmed cases have been reported since week 41. All cases have been reported from Bamako and the Kati health district northwest of Bamako.
Mali	Humanitarian crisis	Protracted 1	n/a	n/a	19-Nov-17	-	-	-	-	The security situation remains volatile in the north and centre of the country. At the last update, incidents of violence had been perpetrated against civilians, humanitarian workers, and political-administrative authorities.
Mauritania	Dengue haemorrhagic fever	Ungraded	30-Nov-17	6-Dec-17	13-Dec-17	37	37	-	-	On 30 November 2017, the MoH notified 3 cases of dengue fever including one haemorhagic case (Dengue virustype 2) with history of Dengue virus type 1 infection in 2016. Out of 100 samples collected at the Teyarett health centre, 83 cases tested positive for dengue on RDT. On 12 December, the national reference laboratory confirmed the diagnosis of 37 out of 49 RDT positive samples collected between 16 November and 11 December 2017.
Mozambique	Cholera	Ungraded	27-Oct-17	12-Aug-17	15-Dec-17	1 252	-	1	0.1%	The cholera outbreak is ongoing. Cases have been reported from three districts (Memba, Erati, and Nacaroa) in Namapula province. The outbreak started in mid-August 2017 from Memba district. Erati district started reporting cases from week 41 and Nacoroa started reporting cases from week 42.

Country	Event	Grade†	WHO notified	Start of reporting period	End of reporting period	Total cases	Confirmed cases	Deaths	CFR	Comments
Namibia	Hepatitis E	Ungraded	18-Dec-17	14-Dec-17	8-Jan-18	237	21	1	0.4%	A total of 237 cases have been seen at health facilities in Windhoek district. A total of 147 (62%) of cases were reported from Havana and Goreangab Dam informal settlements within the capital district.
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 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.
Nigeria	Humanitarian crisis	Protracted 3	10-Oct-16	n/a	17-Dec-17	-	-	-	-	The protracted conflict 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 have been affected and are in need of life-saving assistance, including 1.7 million IDPs.
Nigeria	Cholera (nationwide)	Ungraded	7-Jun-17	1-Jan-17	10-Dec-17	3 714	43	84	2.3%	Between weeks 1 and 49, 3 714 cases were reported from 20 states compared to 727 suspected cases from 14 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 (727 suspected cases, 32 deaths).
Nigeria	Lassa fever	Ungraded	24-Mar-15	1-Dec-16	24-Dec-17	1 022	308	127	12.4%	The outbreak is currently active in six states: Ondo, Edo, Plateau, Bauchi, Kaduna, and Nasarawa). In Week 51, eight new confirmed cases were reported from Ondo (6), Edo (1) and Nasarawa (1) states.
Nigeria	Hepatitis E	Ungraded	18-Jun-17	1-May-17	9-Dec-17	1 476	182	8	0.6%	The number of cases has been decreasing since week 47. Nineteen new cases were reported in Kala/Balge (18) and Monguno (1) LGAs in week 49 (ending 09 December 2017).
Nigeria	Yellow fever	Ungraded	14-Sep-17	7-Sep-17	2-Jan-18	358	33	45	12.6%	A total of 358 suspected cases have been reported from sixteen states: Abia, Anambra, Borno, Edo, Enugu, Kano, Katsina, Kebbi, Kogi, Kwara, Lagos, Nasarawa, Niger, Oyo, Plateau, and Zamfara. Thirty-three cases from seven states (Kano, Kebbi, Kogi, Kwara, Nasarawa, Niger, and Zamfara) have been laboratory-confirmed at IP Dakar.
Nigeria	Monkeypox	Ungraded	26-Sep-17	24-Sep-17	22-Dec-17	197	68	2	1.0%	Suspected cases are geographically spread across 22 states and the Federal Capital Territory (FCT). Sixty-eight laboratory-confirmed cases have been reported from 14 states/territories (Akwa Ibom, Abia, Bayelsa, Benue, Cross River, Delta, Edo, Ekiti, Enugu, Lagos, Imo, Nasarawa, Rivers and FCT).

Country	Event	Grade†	WHO notified	Start of reporting period	End of reporting period	Total cases	Confirmed cases	Deaths	CFR	Comments
Nigeria	Meningitis	Ungraded	26-Dec-17	1-Sep-18	4-Jan-19	291	57	62	21.3%	Cases have been reported from seven States; Zamfara (192), Sokoto (16), Katsina (28), Jigawa (17), Bauchi (17), Cross River (17) and Kebbi (4). As of 4 January 2018, 57 of 90 (63.3%) samples tested were positive, including 37 (64.9%) positive for *Neisseria meningitides* serogroup C (NmC).
São Tomé and Principé	Necrotising cellulitis/fasciitis	G2	10-Jan-17	25-Sep-16	17-Dec-17	2 422	0	0	0.0%	Over past 11 weeks the incidence of new cases remained stable with an average of 32 cases per week. In week 50, 37 cases reported across six of the seven districts: Me-zochi (12), Agua Grande (9), Lobata (2), Cantagalo (12), Lembá (1) and Príncipe (1). Currently, 22 cases are receiving care in hospital and no deaths have been directly attributed to the infection.
Senegal	Dengue fever	Ungraded	30-10-2017	28-Sep-17	7-Jan-18	805	138	0	-	Since 28 September, 138 cases have been confirmed from the Louga region (129), Fatick (2), Thies (2), and Dakar (5). Analyses by Institut Pasteur Dakar have shown that Dengue virus type 1 (DENV-1) is the only serotype circulating. No severe cases and no deaths have been reported.
Seychelles	Dengue fever	Ungraded	20-Jul-17	18-Dec-15	28-Nov-17	4 233	1 429	-	-	As of 28 November, 4 233 cases have been reported from all regions of the three main islands (Mahé, Praslin and La Digue). The trend in the number of cases has been decreasing since week 23.
South Africa	Listeriosis	G1	6-Dec-16	4-Dec-16	11-Jan-18	748	748	67	9.0%	The greatest numbers of cases have been reported from Gauteng (61%), Western Cape (13%) and KwaZulu-Natal (7%) provinces. Forty percent of cases are neonates aged 28 days or younger. The source of the outbreak has not been identified and investigations are ongoing.
South Sudan	Humanitarian crisis	G3	15-Aug-16	n/a	15-Dec-17	-	-	-	-	The situation remains volatile, fighting is ongoing on multiple fronts and displacement continues. The start of the dry season is expected to improve humanitarian access to the most vulnerable populations but at the same time communal conflicts are expected to be more frequent with subsequent injuries and deaths. Severe acute malnutrition, malaria, measles, kala-azar, and cholera are the top ranking public health risks affecting the already distressed populations.
South Sudan	Cholera	Ungraded	25-Aug-16	18-Jun-17	29-Dec-18	20 438	512	436	2.2%	Cholera transmission continues to decline nationally. Since week 47, the outbreak has been localized in two counties (Juba and Budi), and no new cholera cases reported during week 52, 2017. The last case in Budi was reported in week 47, 2017 and the last case reported from Juba was in week 50, 2017.
South Sudan	Suspected viral haemorragic fever (VHF)	Ungraded	28-Dec-17	7-Dec-17	7-Jan-18	5	-	3	75.0%	Detailed update given above.

Country	Event	Grade†	WHO notified	Start of reporting period	End of reporting period	Total cases	Confirmed cases	Deaths	CFR	Comments
Tanzania	Cholera	G1	20-Aug-15	1-Jan-17	7-Jan-18	5 112	-	103	2.0%	In week 1, a total of 127 cases with 4 deaths (CFR: 3.1%) were reported compared to 215 cases with 11 deaths (5.1%) in week 52. This week, cases have been reported from six regions: Rukwa (48 cases with one death), Kigoma (22 cases), Songwe (20 cases), Ruvuma (18 cases), Dodoma (10 cases and three deaths) and Manyara (9 cases). From epidemiological week 1 to 52 in 2017, a cumulative total of 4 985 cases and 99 deaths (CFR: 2%) were reported in the United Republic of Tanzania.
Uganda	Humanitarian crisis - refugee	Ungraded	20-Jul-17	n/a	31-Dec-17	-	-	-	-	The influx of refugees to Uganda has continued as the security situation in the neighbouring countries remains fragile. According to UNHCR, between 1 - 4 January 2018, 207 refugees from South Sudan entered Uganda. The total number of registered refugees and asylum seekers in Uganda stands at 1 395 146, as of 31 December 2017. Aproximately 75% of the refugees are from South Sudan and 61% are children under 18.
Uganda	Measles	Ungraded	8-Aug-17	24-Apr-17	3-Oct-17	623	34	-	-	The outbreak is occuring in two urban districts: Kampala (310 cases) and Wakiso (313 cases).
Uganda	Cholera	Ungraded	28-Sep-17	25-Sep-17	29-Nov-17	225	17	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	Rift Valley fever (RVF)	Ungraded	22-Nov-17	14-Nov-17	14-Dec-17	2	2	2	100.0%	On 21 November 2017, the Uganda Virus Research Institute (UVRI) alerted the MoH of a confirmed and fatal case of Rift Valley fever (RVF) in Kiboga district. On 23 November, a second confirmed and fatal case of RVF was reported in Mityana district. Prior to falling ill, both cases had contact sick animals that died in previous weeks. As of 14 December no additional cases have been detected through ongoing enhanced surveillance.

Country	Event	Grade†	WHO notified	Start of reporting period	End of reporting period	Total cases	Confirmed cases	Deaths	CFR	Comments
Uganda	Crimean-Congo haemorrhagic Fever (CCHF)	Ungraded	27-Dec-17	23-Dec-17	6-Jan-18	1	1	-	-	As of 6 January 2018 there has been no additional cases. To date 47 contact are under follow-up. They will complete follow-up on 27 January 2017. The index and only case was a 9-year-old male from Kasiiso, Luweero district. He was discharged on 5 January 2018 after being isolated at Kiwoko Hospital, Naseke district.
Zambia	Cholera	G1	4-Oct-17	4-Oct-17	8-Jan-18	2 672	238	63	2.4%	On 8 January 2018, 107 new cases with two facility deaths were reported in Lusaka district. Since the beginning of the outbreak, Lusaka district reported a total of 2558 cases with 58 deaths (CFR: 2.3%). An additional 114 cases with 5 deaths have been reported from other districts.
Zimbabwe	Typhoid fever	Ungraded	-	1-Oct-17	19-Nov-17	1 065	82	-	-	On 17 October, 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 areas outside of Harare.
Recently closed events										
Kenya	Malaria	Ungraded	-	25-Sep-17	26-Oct-17	1 009	604	25	2.5%	The outbreak affected 3 wards in Marsabit, namely Durkana (598 cases), North Horr (236 cases) and Loiyangalani (175 cases) wards. The outbreak ended and is no longer being monitored at the country level.
Niger	Meningitis	Ungraded	-	29-Sep-17	9-Dec-17	86	11	1	1.2%	The number of cases has decreased below the epidemic threshold and no district is currently under alert.
Niger	Hepatitis E	Ungraded	2-Apr-17	2-Jan-17	19-Nov-17	2 078	439	39	1.9%	No additional cases have been reported since week 46 of 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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