WEEKLY BULLETIN ON OUTBREAKS AND OTHER EMERGENCIES

Week 48: 25 November - 1 December 2019

Data as reported by: 17:00; 1 December 2019

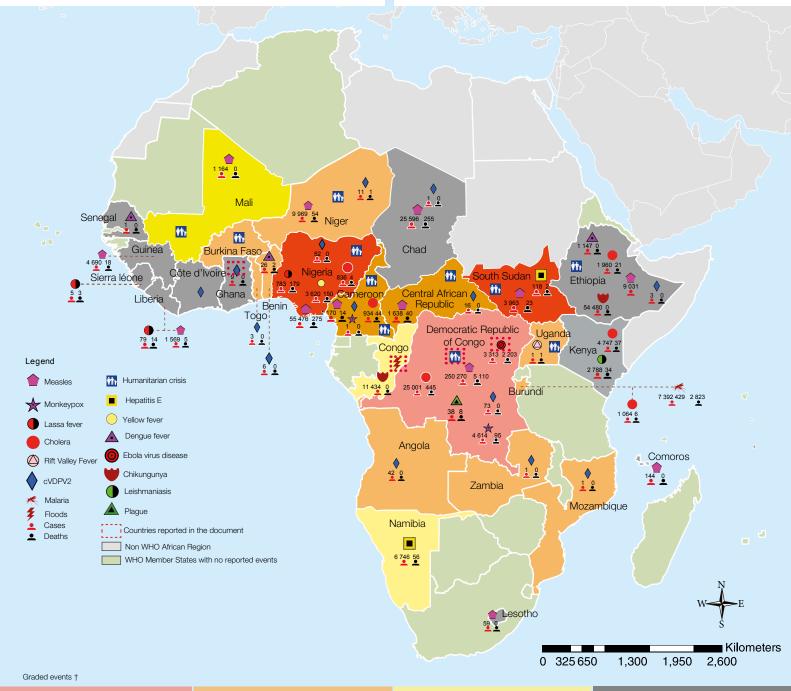


New event

61
Ongoing events

51
Outbreaks

Humanitarian crises



Grade 3 events

Protracted 3 events

15
Grade 2 events

Protracted 2 events

Grade 1 events

Protracted 1 events

36
Ungraded events

Overview

Contents

- 2 Overview
- 3 6 Ongoing events
- 7 Summary of major issues, challenges and proposed actions
- 8 All events currently being monitored

This Weekly Bulletin focuses on public health emergencies occurring in the WHO African Region. The WHO Health Emergencies Programme is currently monitoring 62 events in the region. This week's main articles cover key new and ongoing events, including:

- Circulating vaccine-derived poliovirus type 2 in Ghana
- Ebola virus disease in Democratic Republic of the Congo
- Floods in Congo
- Humanitarian crisis in 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 recent events that have largely been controlled and thus closed.

Major issues and challenges include:

- The response to the Ebola virus disease (EVD) outbreak in Democratic Republic of the Congo suffered a major setback in the past week, with the attacks and killing of responders in Biakato Mines and Mangina. These attacks and the ensuing civil unrest have severely impacted on Ebola response activities, with most operations in the security-affected areas temporarily suspended. These security incidents only serve to facilitate deeper penetration of Ebola infections in the community, and the resultant resurgence of the outbreak. WHO and all the partners remain committed and dedicated to seeing the end of the EVD outbreak, however, this requires access to the affected communities and safety of the responders.
- Of Ghana reported four confirmed paralytic cases of circulating vaccine-derived poliovirus type 2 (cVDPV2) during the reporting week, in addition to isolating cVDPV2 in two environmental samples. In similar events in the African region, paralytic cases of cVDPV2 were reported in Democratic Republic of the Congo (5), Benin (4) and Togo (2). Outbreaks of cVDPV2 appear to be gaining a foothold in the African region, with the events spreading from conflict-affected countries (initial hotspots) to relatively stable countries. Health authorities in the African region need to take bold and decisive measures to address this situation at this early stage before it becomes worse and thus a major public health problem.

Ongoing events

cVDPV2 Ghana 9 0 0% Cases Deaths CFR

EVENT DESCRIPTION

The Ministry of Health in Ghana reported four new confirmed paralytic cases of circulating vaccine-derived poliovirus type 2 (cVDPV2), one each from Savelugu District in Northern Region, Jaman North in Bono Region, Nkwanta North in Oti Region and Gonja Central District in Savannah Region. The dates of onset of paralysis in the reported cases ranged between 8 and 23 October 2019

In a related event, two environmental samples collected from Ayawaso East Municipal, Greater Accra Region tested positive for cVDPV2. The samples were collected on 23 October 2019.

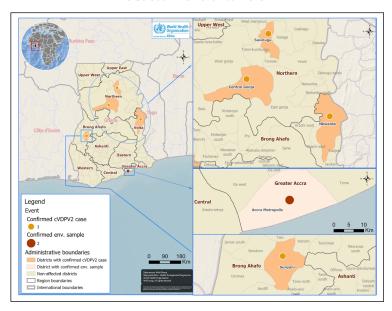
Since 8 July 2019, when cVDPV2 was first isolated in an environmental sample collected from Tamale Municipal in Northern Region, a total of nine paralytic cases of cVDPV2 have been confirmed in Ghana. The other districts that previously confirmed cVDPV2 are Chereponi in North East Region; Saboba, Kumbungu and Tamale in Northern Region; and Gonja Central in Savannah Region. Additionally, cVDPV2 had previously been isolated from an environmental sample collected from Agbobloshie and Nima Free Town in Greater Accra Region and Nyanshegu in Northern Region. The strain of the vaccine-derived poliovirus type 2 circulating in Ghana is linked to the Jigawa outbreak in Nigeria, which is circulating in many other countries.

Further investigations and risk assessment into the events are ongoing and an update will be provided as new information comes available.

PUBLIC HEALTH ACTIONS

- The National Technical Coordinating Committee continues to hold coordination meetings to strategize, plan, implement and monitor the response to the cVDPV2 outbreak in the country.
- On 20 August 2019, a national rapid response team comprising experts from MOH, WHO, CDC, Noguchi Polio Laboratory was deployed to conduct outbreak investigation, risk assessment and support local response by the regional and district teams.
- Multi-disciplinary rapid response teams from Ghana MOH, WHO, CDC and UNICEF have been deployed to the affected districts and regions to conduct detailed investigations and risk assessments, and support local response, including plan to carry out reactive vaccination campaigns in the newly affected and surrounding high risk districts.
- The Ministry of Health in Ghana, with the support of Gavi, UNICEF, WHO and other partners, plans to conduct a nationwide inactivated polio vaccine (IPV) catch-up campaign targeting about 2.4 million vulnerable children of birth cohorts between 2016 and February 2018 who missed IPV vaccination because of operations challenges.

Geographical distribution of new confirmed cVDPV2 cases in Ghana, 8 October - 29 November 2019.



- Response activities in the other affected regions are being coordinated effectively through regional emergency operations centres.
- Enhanced surveillance activities including active case search for acute flaccid paralysis are ongoing. Environmental surveillance for poliovirus is being strengthened in all sentinel sites.
- Risk communication and social mobilization activities are ongoing in the whole country.

SITUATION INTERPRETATION

Health authorities in Ghana reported four new paralytic cases of cVDPV2, scattered across the country. In addition, cVDPV2 has been isolated from two environmental samples collected from a sentinel site in Greater Accra Region. With these, the number of cVDPV2 events is rapidly growing in Ghana, signifying a much deeper diffusion of the pathogen in the community and thus increasing potential for wider spread. Response efforts are ongoing to control the outbreak, with four rounds of monovalent oral poliovirus type 2 (OPV2) vaccination carried out. Preparations are also ongoing to conduct a country-wide IPV vaccination exercise. It is important for Ghana and indeed all the countries in the region to step up efforts to improve their routine immunization coverage to a minimum of 95% in all districts to minimize the consequences of any new virus introduction. Attaining this target has not been easy in many countries for various reasons including fragile health systems, conflicts and social disruption, insecurity, etc. Additionally, all countries in the African region should strengthen AFP surveillance to rapidly detect any new virus importation and to facilitate a rapid response.

3 313 | 2 203 | **Cases** | **Deaths**

67% CFR

C

EVENT DESCRIPTION

The Ebola virus disease (EVD) outbreak in North Kivu, South Kivu and Ituri provinces in Democratic Republic of the Congo continues, with four health zones and 11 health areas reporting confirmed cases in the past 21 days (7-27 November 2019). Since our last report on 24 November 2019 (Weekly Bulletin 47), there have been 12 new confirmed cases and six new deaths. The principle hot spots of the outbreak in the past 21 days are Mabalako (54%; n=14 cases), Mandima (23%; n=6) and Beni (15%; n=4). Four health zones, Beni, Mabalako, Mandima and Oicha have reported new confirmed cases in the past seven days.

On the evening of 27 November 2019, there were two separate attacks, one on the responder's camp in Biakato Mines and one on the Ebola coordination office in Mangina, in which four people have died (3 in Biakato Mines and 1 in Mandima), including a member of a vaccination team, two drivers and a police officer. WHO staff have been evacuated from Biakato Mines to Goma, while remaining in place in Mangina. In Oicha, a new incursion by rebels resulted in several civilian casualties and demonstrations have been reported in Goma. As of 2 December 2019, North Kivu Province has declared 'ville mort' and response activities have been suspended across the province.

As of 30 November 2019, a total of 3 313 EVD cases, including 3 195 confirmed and 118 probable cases have been reported. To date, confirmed cases have been reported from 29 health zones: Ariwara (1), Bunia (4), Komanda (56), Lolwa (6), Mambasa (78), Mandima (345), Nyakunde (2), Rwampara (8) and Tchomia (2) in Ituri Province; Alimbongo (5), Beni (689), Biena (18), Butembo (285), Goma (1), Kalunguta (193), Katwa (651), Kayna (28), Kyondo (25), Lubero (31), Mabalako (406), Manguredjipa (18), Masereka (50), Musienene (84), Mutwanga (32), Nyiragongo (3), Oicha (64), Pinga (1) and Vuhovi (103) in North Kivu Province and Mwenga (6) in South Kivu Province.

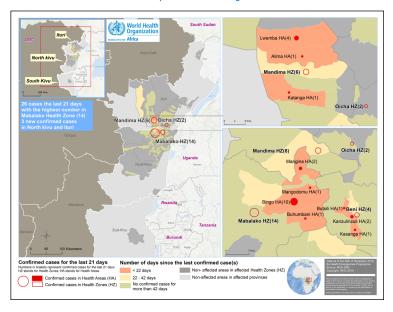
As of 30 November 2019, a total of 2 203 deaths were recorded, including 2 085 among confirmed cases, resulting in a case fatality ratio among confirmed cases of 65% (2 085/3 195). The cumulative number of health workers remains 163, which is 5% of the confirmed and probable cases to date.

Contact tracing is ongoing in three health zones. A total of 1 069 contacts are under follow-up as of 30 November 2019, of which 720 (67%) have been seen in the past 24 hours. Alerts in the affected provinces continue to be raised and investigated. Of 3 448 alerts processed (of which 3 295 were new) in reporting health zones on 30 November 2019, 3 208 were investigated and 349 (11%) were validated as suspected cases.

PUBLIC HEALTH ACTIONS

- Surveillance and response activities are currently compromised by a resurgence of insecurity in affected regions.
- As of 30 November 2019, a cumulative total of 255 441 people have been vaccinated since the start of the outbreak in August 2018
- Point of Entry/Point of Control (PoE/PoC) screening continues, with over 121 million screenings to date. A total of 97/109 (89%) PoE/PoC transmitted reports as of 30 November 2019.

Geographical distribution of confirmed Ebola virus disease cases reported from 7-27 November 2019, North Kivu, South Kivu and Ituri provinces, Democratic Republic of the Congo



- Water, sanitation and hygiene (WASH) activities continue, with IPC/WASH kits donated to 30 health facilities, with support and follow-up provided to 131 healthcare structures in Bunia, Butembo, Mutwanga, Mambasa and Mangina.
- Community awareness and mobilization messages are being updated, revised and harmonized and have been pre-tested by the commission and will subsequently be shared in coordination and sub-coordination activities.
- Response activities remain highly disrupted in the subcoordinations of Goma, Beni, Butembo, Mangina, Biakato and Mambasa following the volatile security situation.
- The general coordination participated in a mass in tribute to a collegue who died in the Biakato attack.
- Awareness raising was carried out among 30 households around the latest confirmed case in Alima, Mandima Health Zone.

SITUATION INTERPRETATION

Although the decrease in new confirmed cases is continuing, the slowing and actual stopping of response activities in the Biakato Mines area and Mangina Health Zones are of major concern, as is the shutdown of all response activities in North Kivu Province for two days for the 'ville mort'. Previous experience has shown that this will potentially have major adverse effects on surveillance, case finding and contact tracing, which could lead to a resurgence in transmission. It is critical that all areas of response remain effective, engaged and fully resourced.

Go to map of the outbreaks

Floods Congo

EVENT DESCRIPTION

Since 3 October 2019, four departments in the Republic of Congo, namely Likouala, Cuvette, Plateaux and Shanga, have experienced worsening floods following a significant rise in the water levels of the Ubangui River due to heavy rains. Several localities on the banks of the Ubangui River have been affected by the flood, which caused severe damage to public infrastructure and important loss of livelihoods.

As of 22 November 2019, an estimated 112 175 people have been affected by the floods, including 60 000 in Likouala (53%), 33 933 in Cuvette (30%), 16 100 in Plateaux (14%) and 2 142 (2%) in Shanga. Refugees constitute one-quarter (26%, n=29 183) of the affected population.

The food security of the affected population is critical, with food reserves being depleted and the loss of unharvested crops. The lack of staple foods such as bananas, tubers and fish, has become apparent in the local markets. The flood has exacerbated already existing challenges in the community such as limited access to safe drinking water and inadequate sanitation infrastructure. Almost all the water points and latrines have been flooded, resulting in compromised environmental hygiene conditions that favor the spread of waterborne and vector-borne diseases, especially in places where displaced populations are concentrated.

Most of the affected population are living in the open, without adequate shelter, which exposes them to difficult weather conditions and disease-transmission vectors, including mosquitoes, ticks, and fleas. Furthermore, the deterioration of the road network by the rains has restricted the mobility of the populations and humanitarian workers. Some health centres have been flooded, including CSI Ikpengbele and Boyele port. This has affected the population's access to medical care and to basic medical supplies.

The analysis of the evolution of the situation since the beginning of this flood shows that the floods will undeniably continue throughout the rainy season.

PUBLIC HEALTH ACTIONS

- Local authorities, in collaboration with humanitarian organizations, organized joint missions, in affected departments, to assess the extent of the damage. These missions were conducted on 23, 30 October and 4 November 2019.
- UN agencies (WFP-WHO-UNFPA) have provided 742 tons of food, non-food items, water purification kits, dignity kits, medicines, tarpaulins and other emergency items. These items arrived in Brazzaville on 22 November 2019.

Map of departments affected by the flood in Congo, as of 22 November 2019.



- In Likouala, food items were distributed to 10 000 people in need.
- The Ministry of Health is working with partners on the ground to strengthen disease surveillance for early detection of disease outbreaks.

SITUATION INTERPRETATION

According to historical records, this is the worst flooding event experienced by the Republic of Congo in 20 years. There is a critical need to provide emergency assistance to local people, indigenous people and refugees to revive their livelihoods and prevent or reduce morbidity and mortality related to malnutrition, lack of food and waterborne diseases. Beyond emergency response, there is also a need to reinforce the resilience of the affected populations by implementing multi-sectoral interventions including health sector, water and sanitation, sustainable shelter and food security. Finally, the implementation of response activities needs to take in consideration the specific needs of affected populations and ensure that implementing partners guaranty an equitable provision of services by integrating minorities such as indigenous populations and refugees.

Democratic Republic of the Congo

EVENT DESCRIPTION

The complex and protracted humanitarian crisis in the Democratic Republic of the Congo escalated in recent weeks, with a surge in armed attacks on civilians, complicated by heavy rains and flooding. Several civilians were killed in the recent spate of attacks, with many injured and thousands displaced. The attacks led to a reprisal protests by the community in Beni, denouncing the violence and criticizing the government and the United Nations Stabilization Mission, MONUSCO. On 25 November 2019, the protestors burnt down the Beni town hall and attacked one of the MONUSCO camps. Protests continued on Monday and as of 28 November at least seven deaths were confirmed. The violence and protests have brought a new dimension in the security situation.

Since October 2019, heavy rains in areas along the Ugangi River, the Congo River and their main tributaries have caused major flooding in seven provinces, namely North Ubangi, South Ubangi, Mongala, Bas-Uele, Haut Uele, Maniema and Tshopo. North and South Ubangi and Mongala are among the most affected provinces. The rainy season continues into December and the situation could deteriorate with further heavy rains. These are the worst floods in 25 years. Initial estimates by local authorities, as of 10 November 2019, show that about 387 000 people are affected by the floods, including nearly 235 000 in South Ubangi, 146 000 in North Ubangi, nearly 6 000 in Mongala, 18 000 in Tshopo and Haut Uele and 7 000 people in Maniema, with 13 000 already homeless as a result of floods in September in Kindu City. The floods have caused extensive damage, the extent of which is gradually being determined, including damage and destruction of homes, basic infrastructure (water points, schools, health centres), fields, loss of property, livelihoods and food stocks. In North and South Ubangi, nearly 32 000 homes were reportedly damaged or destroyed, 632 water points and 142 schools and health centres. Affected populations have been distributed among host families, schools and other places of safety. The damage to water points and latrines in flooded areas means that there is inadequate access to safe drinking water and poor hygiene conditions, predisposing to water-borne disease.

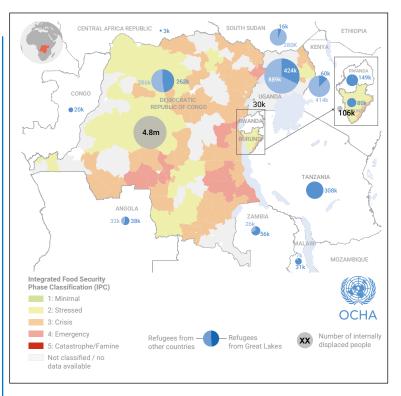
Epidemic-prone diseases continue. The main cause of illness during week 45 (week ending 10 November 2019) were malaria (324 850 suspected cases), acute respiratory infections (112 686 cases) and typhoid fever (25 399 cases). Since the start of 2019 there have been 15 480 114 cases of malaria, with 16 100 deaths (case fatality ratio 0.1%). This is an increase against 2018, when 13 400 014 cases were reported, with 14 724 deaths.

Since the start of 2019, the country's epidemiological situation has been marked by outbreaks of Ebola virus disease, measles, cholera, monkey pox, bubonic plague and rabies. Prevention and response activities in response to the various outbreaks continue to be implemented by the Ministry of Public Health with technical and financial support from WHO and other partners.

PUBLIC HEALTH ACTIONS

- A crisis meeting in response to the flooding was held on 19 November 2019, chaired by the Prime Minister and an emergency response plan for the first phase of the humanitarian response in the flood-affected provinces of North and South Ubangi and Mongala has been developed by the Ministry of Humanitarian Action and National Solidarity in collaboration with humanitarian partners. During this first three-month response phase, the assistance will include: emergency humanitarian interventions (shelter, essential household items, food, access to water, sanitation, primary health care, emergency education).
- Crisis committees have been set up in each of the affected provinces and response actions are being implemented in the field with the support of partners, including sensitization of the population on hygiene measures, distribution of insecticide-treated mosquito nets, chlorination of drinking water and free case management.
- In Ituri FAO started distributing 1 300 agricultural kits from 4-10 November 2019 in the Mokambo chiefdom with the collaboration of the COOPI team.

Humanitarian snapshot in Democratic Republic of the Congo, as of October 2019



- WHO is providing epidemiological surveillance, active research on diseases with epidemic potential in health facilities handling PDIs in Bunia (ISP and HGR sites) and technical support to the health information office.
- The Ministry of Health continues to implement prevention and response activities in cholera-affected areas, with the support of WHO and other partners, in a response plan developed jointly with PNECHOL-MD, covering September to December 2019, funded by WHO, who have also deployed experts to the field to provide households with inputs for case management, as well as laboratory facilities.
- There are weekly coordination meetings for the measles response, as well as follow up of vaccination campaigns and preparation for follow-up vaccination campaigns; partial results for the vaccination campaigns in seven provinces show that a total of 4 463 983 children aged 6 to 59 months were vaccinated out of a target of 4 424 166, a 100% coverage.
- The Round 1 response to the cVDPV2 case in Sankuru Province took place between 14-16 November 2019 and there are preparations for a single round of response to the cVDPV2 case, targeting the health zones of Moba, Pweto, Kilwa and Kashobwe from 28-30 November 2019.

SITUATION INTERPRETATION

The continuation of the humanitarian crisis in Democratic Republic of the Congo is of serious concern, even more so with the current widespread and catastrophic flooding. Displaced populations face lack of adequate sanitation and safe water, loss of livelihood and shelter and poor access to healthcare, which also affect those displaced by insecurity elsewhere in the country. The risk of outbreaks of water-borne disease is high and will stretch already overburdened health systems and partner networks, who are dealing with major outbreaks such as Ebola virus disease and measles. Local authorities and partners need to respond quickly and effectively to the situation in order to prevent further disease outbreaks and mitigate the situation for affected populations.

Go to map of the outbreaks

Summary of major issues, challenges and proposed actions

Major issues and challenges

- There have been two separate attacks on Ebola response facilities in Biakato Mines and Mangina health zones, respectively, in Democratic Republic of the Congo. During the attacks, four people died (3 in Biakato Mine and 1 in Mangina). Additionally, six people were physically wounded and five others needed psychological care. The attacks were followed by civil protests by the community in Beni, which paralyzed normal activities. Since January 2019, prior to these attacks, WHO has documented 386 attacks on health-related targets in Democratic Republic of the Congo, which caused seven deaths and 77 injuries to health care workers and patients. These security incidents only serve to facilitate unchecked propagation of Ebola infections in the community, thus prolonging the outbreak. The current disruption of response interventions is likely to result in resurgence of the outbreak.
- The Ministry of Health in Ghana has reported four new confirmed human cases of cVDPV2 during the reporting week, in addition to isolating cVDPV2 in two environmental samples. Similar cVDPV2 events occurred in Democratic Republic of the Congo, Benin and Togo. Several other countries in the region have experienced cVDPV2 events in 2019, including Angola, Central African Republic, Chad, Ethiopia, Niger, Nigeria and Zambia. The outbreaks of cVDPV2 have been expanding from conflict-affected countries to relatively stable countries. cVDPV2 is becoming a serious public health problem in the region, calling for urgent interventions by the national authorities and partners.

Proposed actions

- The national authorities and partners in Democratic Republic of the Congo should continue to implement all aspects of Ebola outbreak control activities. The Government of the Democratic Republic of the Congo, the United Nations and all global stakeholders should enhance efforts to restore peace and security in the country.
- The Ministry of Health and other national authorities in the African region, in conjunction with local and global partners, need to undertake decisive measures in response to the cVDPV2 events, with the basis of the response being improving polio vaccination coverage to at least 95% in all districts and having a functional AFP surveillance system.

All events currently being monitored by WHO AFRO

Country	Event	Grade	Date notified to WHO	Start of reporting period	End of reporting period	Total cases	Cases Confirmed	Deaths	CFR		
New Events											
Uganda	Rift valley fever	Ungraded	28-Nov-19	15-Nov-19	26-Nov-19	1	1	1	100.00%		
On 25 November 2019, a confirmed Rift Valley fever case was reported from Obongi district, Uganda. This was a 35-year-old male from South Sudan who was living in Palorinya Refugee camp in Obongi district, Uganda. The case had travel history to South Sudan between 12 and 19 November 2019 to harvest cassava. While in South Sudan he developed fever and headache on 15 November 2019 and was treated for malaria. Following further deterioration of his health, he returned back to the refugee camp in Uganda. On 20 November 2019, he developed severe headache, generalized body malaise, joint pain, feeling coldness, vomiting, passing black mucoid stool, and productive cough and was later referred to Moyo hospital where he was isolated as VHF was suspected. A sample was collected and sent to UVRI. The patient died later. A safe and dignified burial was performed on 22 November 2019. As of 24 November, a total of 19 contacts were recorded during the active case search including 10 healthcare workers. Further investigation is ongoing in Uganda.											
Ongoing Events											
Angola	Poliomyelitis (cVDPV2)	Grade 2	8-May-19	5-Apr-19	27-Nov-19	42	42	0	0.00%		
No case of cir	culating vaccine-deri	ved poliovirus t	ype 2 (cVDPV2)	was reported t	this week. There	are 42 cVDPV	2 cases from se	ven outbreaks	reported in 2019.		
Benin	Dengue fever	Ungraded	13-May-19	10-May-19	29-Nov-19	26	14	2	7.70%		
Departments.	Cumulatively, 14 cas	es from Atlantic	que Department	(4 cases), Litto	oral Department	(4 cases) and	Ouémé Departn	nent (6 cases) v	Littoral, Ouémé and Couffo vere confirmed by serology and confirmed cases (CFR 14%).		
Benin	Poliomyelitis (cVDPV2)	Grade 2	8-Aug-19	8-Aug-19	27-Nov-19	6	6	0	0.00%		
	Four cases of circulating vaccine-derived poliovirus type 2 (cVDPV2) were reported this week with one each from Atacora, Borgou, Collines, and Donga provinces. The onsets of paralysis were between 21 September and 15 October 2019. There are six cVDPV2 cases in 2019 linked to the Jigawa outbreak in Nigeria.										
Burkina Faso	Humanitarian crisis	Grade 2	1-Jan-19	1-Jan-19	24-Nov-19	-	-	-	-		
Since 2015, the security situation initially in the regions of the Sahel and later in the East of Burkina Faso has gradually deteriorated as a result of attacks by armed groups. This has resulted in mass displacement leading to a total of 486 360 internally displaced persons registered as of 8 October 2019 in all 13 regions in the country. The regions of North, Boucle du Mouhon, East and Centre are the most affected. Health services are severely affected and as of 27 September 2019, Ministry of Health figures show that 69 health facilities in six regions have closed as a result of insecurity; 28% in the Sahel Region and 12% in North Central Region. Morbidity due to epidemic-prone diseases remains high											
Burundi	Cholera	Ungraded	5-Jun-19	1-Jun-19	5-Nov-19	1 064	288	6	0.60%		
North (328 ca	ses), Bujumbura Cen	tre (144 cases) es tested, 288 (and Bujumbura 75%) were pos	a South (125 ca itive for <i>Vibrio</i> (ses) in Bujumb	ura Mairie, Isal	e (155 cases) in	Bujumbura rui	d health districts are Bujumbura ral province, Cibitoke (194 cases) s representing more than 70% of		
Burundi	Malaria	Grade 2		1-Jan-19	27-0ct-19	7 392 429		2 823	0.00%		
the epidemic	Since week 48 of 2018 (week ending 2 December 2018), there has been a progressive increase in the number of malaria cases reported across the 46 districts of Burundi, with the epidemic threshold surpassed in week 18 of 2019 (week ending 5 May 2019). In week 43 (week ending 27 October 2019), 150 083 cases including 66 deaths have been reported. There is a 54 % increase in the number of cases reported in week 43 of 2019 compared to the same period in 2018.										
Cameroon	Humanitarian crisis (Far North, North, Adamawa & East)	Protracted 2	31-Dec-13	27-Jun-17	27-Sep-19	-	-	-	-		
the beginning with spontane	Cameroon continues to face a humanitarian crisis in the Far North Region linked to the terrorist attacks by Boko Haram group, with significant population displacement. Since the beginning of September 2019, there have been 23 attacks, including pure criminal activity, with 22 deaths and 17 injuries reported. Population displacement is ongoing, with spontaneous arrival of Nigerian refugees in the Minawao Camp, Mokolo Health District. As of 13 September 2019, the camp population was 59 456, mainly Nigerian refugees, with 356 new arrivals monthly, severely straining the camp infrastructure. Recently, the Nigerian government started repatriation of refugees, with around 400 people										
Cameroon	Humanitarian crisis (NW & SW)	Grade 2	1-0ct-16	27-Jun-18	27-Sep-19	-	-	-	-		

The humanitarian situation in the Northwest and Southwest (NW & SW) of Cameroon continues to deteriorate with serious protection incidents reported. Humanitarian access to persons in need continues to be a challenge with armed groups often blocking access as well as threatening humanitarian personnel. This unrest continues to affect access to basic services including healthcare, education, shelter, food security and WASH. As of 27 September 2019, the total number of internally displaced persons is estimated at 437 000 persons and the population in need of humanitarian assistance is estimated at 594 000 persons. An estimated 39 000 people have fled to the Littoral and Western

regions, and 20 291 people (of which 80% women and children) have crossed into neighbouring Nigeria.

Cameroon Cholera Ungraded 1-Mar-19 1-Mar-19 21-Nov-19 934 110 44 4.70%

The cholera outbreak in Cameroon is ongoing in the North, Far North and South West regions. In week 47 (week ending 22 November 2019), 42 cases of suspected cholera were reported in the three regions. As of 21 November 2019, 934 cases and 44 deaths were recorded (CFR 4%).

			Date notified	Start of	End of		Cases		050		
Country	Event	Grade	to WHO	reporting period	reporting period	Total cases	Confirmed	Deaths	CFR		
Cameroon	Measles	Ungraded	2-Apr-19	1-Jan-19	17-Nov-19	1 170	382	14	0%		
A measles outbreak is ongoing in Cameroon. Since the beginning of 2019, a total of 1 170 suspected cases have been reported. Of these, 382 were confirmed as IgM-positive. The outbreak is currently affecting 43 districts, namely, Kousseri, Mada, Goulfey, Makary, Kolofata, Koza, Ngaoundéré rural, Bangué, Guider, Figuil, Ngong, Mora, Maroua 3, Vélé, Pitoa, Maroua 1, Bourha, Touboro, Mogodé, Bibémi, Garoua 1, Garoua 2, Lagdo, Tcholliré, Guidiguis, Moutourwa, Mokolo, Cité verte, Djoungolo, Nkolndongo, Limbé, Garoua Boulai, Ngaoundéré Urbain, Ekondo Titi, Gazawa, Meiganga, New Bell, Deido, Bertoua, Biyem assi, Cité des palmiers, Logbaba, and Nylon district.											
Cameroon	Monkeypox	Ungraded	27-Sep-19	18-Sep-19	27-Sep-19	1	0	0	0.00%		
A case of monkeypox was confirmed in Ekondo-Titi health district in the South West region of Cameroon on the 18 of September 2019. All supportive measures for case management were put in place and community- based surveillance has been stepped up in this area.											
Cameroon	Poliomyelitis (cVDPV2)	Grade 2	23-May-19	23-May-19	27-Nov-19	-	-	-	-		
circulating vac	No case of cVDPV2 was reported in the past week. On 23 May 2019, WHO received notification through the Global Polio Laboratory Network (GPLN) of the detection of circulating vaccine-derived poliovirus type 2 (cVDPV2) from an environmental sample collected on 20 April 2019 in the Northern Province of Cameroon which borders Borno State in Nigeria and Chad. There are no associated cases of paralysis detected so far.										
Central African Republic	Humanitarian crisis	Protracted 2	11-Dec-13	11-Dec-13	12-Nov-19	-	-	-	-		
relatively calm this latest way	Civil unrest and food insecurity in most parts of the country including major cities are continuing to cause a complex humanitarian situation. The city of Birao has been relatively calm after the last clashes between the armed groups on 14 September 2019. The latest assessment according to MINUSCA reported 38 killed and 17 wounded in this latest wave of violence, bringing the total of deaths to 62 and injuries to 36 since the beginning of the violence. OCHA estimates the total of 23 000 IDPs in Birao since the beginning of the crisis.										
Central African Republic	Measles	Ungraded	15-Mar-19	11-Feb-19	14-0ct-19	1 638	98	40	2.40%		
	As of week 41 (week ending on 13 October 2019), a total of 1 638 measles cases including 98 confirmed cases and 40 deaths have been reported in five districts: Batafango, Bocaranga-Koui, Nana-Gribizi, Paoua and Vakaga. The outbreaks have been controlled in Paoua and Vakanga.										
Central African Republic	Poliomyelitis (cVDPV2)	Grade 2	24-May-19	24-May-19	27-Nov-19	16	16	0	0.00%		
No case of circ	culating vaccine-deri	ved poliovirus t	ype 2 (cVDPV2)	was reported t	this week. There	e are 16 reporte	d cases from si	x different outb	oreaks of cVDPV2 in 2019.		
Chad	Measles	Ungraded	24-May-18	1-Jan-19	17-Nov-19	25 596	203	255	1.00%		
beginning of to Bousso and N	he year, a total of 25	596 suspected ricts all exceed	cases and 255 (deaths (CFR 1.0	0%) have been	reported with A	m Timan, N'Dja	mena East, N'D	ic phase in week 46. Since the bjamena South, Bongor, Moundou, were not vaccinated, and 47%		
Chad	Poliomyelitis (cVDPV2)	Grade 2	18-Oct-19	9-Sep-19	27-Nov-19	1	1	0	0.00%		
	of circulating vaccine onset of paralysis wa								om Mandelia in Chari-Baguirmi Nigeria.		
Comoros	Measles	Ungraded	26-May-19	20-May-19	20-0ct-19	144	58	0	0.00%		
confirmed (39		d and 19 by ep	demiological lir	ık). IgM-positiv	e cases were re				these, 58 cases have been nely, Moroni (28), Mitsamiouli (6),		
Congo	Floods	Ungraded	22-Nov-19	3-0ct-19	22-Nov-19	-	-	-	-		
Detailed updat	e given above.										
Congo	Chikungunya	Grade 1	22-Jan-19	7-Jan-19	29-Sep-19	11 434	148	0	0.00%		
hotspots are t	he departments of Pl tal of 11 434 cases h	ateaux and Bou	enza, accountin	g for 64% and	14% of cases r	eported from w	eek 37 to week	39, respectively	88 and 15 cases in week 37. The y. Since the beginning of the pulated zones such as Brazzaville		
Côte d'Ivoire	Poliomyelitis (cVDPV2)	Ungraded	29-Oct-19	29-Oct-19	27-Nov-19	-	-	-	-		
September 20		olated cVDPV2	is linked to a vii						ronmental sample collected on 24 vhich has previously also been		
Democratic Republic of the Congo	Humanitarian crisis	Grade 3	20-Dec-16	17-Apr-17	18-Nov-19	-	-	-	-		
Detailed updat	e given above.										

Country	Event	Grade	Date notified to WHO	Start of reporting period	End of reporting period	Total cases	Cases Confirmed	Deaths	CFR
Democratic Republic of the Congo	Cholera	Grade 3	16-Jan-15	1-Jan-19	3-Nov-19	25 001	-	445	1.80%
endemic provi	inces of North-Kivu, S	South-Kivu, Hai cluding 445 dea	ut-Lomami, Hau ths (CFR 1.8%)	ıt-Katanga and) have been noti	Tanganyika acco ified from 23 ou	ount for 94% of	cases reported	l during week 4	ealth zones in 16 provinces. The 4. Between week 1 and week 44 od in 2018 (week 1-44), there is a
Democratic Republic of the Congo	Ebola virus disease	Grade 3	31-Jul-18	11-May-18	30-Nov-19	3 313	3 195	2 203	66.60%
Detailed updat	te given above.								
Democratic Republic of the Congo	Measles	Grade 2	10-Jan-17	1-Jan-19	3-Nov-19	250 270	6 304	5 110	2.00%
During this we 2019, 250 270	eek, the case fatality i	ratio was highe Iding 5 110 dea	r in the province	es of Bas-Ūele (9.0%), Haut-Lo	mami (6.8%), I	Maniema (5.1%) and Tanganyi	our newly affected health zones. ka (4.6%). Since the beginning of 26 provinces of the country have
Democratic Republic of the Congo	Monkeypox	Ungraded	n/a	1-Jan-19	3-Nov-19	4 614	-	95	2.10%
November 20	nning of 2019, a cun 19), 104 cases and n				ding 95 deaths	(CFR 1.8%) we	re reported froi	m 16 provinces	. In week 44 (week ending 3
Democratic Republic of the Congo	Plague	Ungraded	12-Mar-19	28-Feb-19	3-Nov-19	38	-	8	21.10%
week 10 in the	e Aungba endemic he	alth zone. Two	other cases we	re reported duri	ng week 13 (Ar	u health zone) a	and 14 (Aungba	health zone). T	rst five cases were reported during The latest cluster of cases was reported in week 44.
Democratic Republic of the Congo	Poliomyelitis (cVDPV2)	Grade 2	15-Feb-18	1-Jan-18	29-Nov-19	73	73	0	0.00%
Kwilu (6), Kwa	ango (2), Haut Katang		(1), and Kasai	Oriental (1) pro	vinces. There w			ted in 2018.	9), Haut Lomami (16), Kasai (8),
Ethiopia	Chikungunya	Ungraded	25-Jul-19	27-May-19	24-Nov-19	54 480	29	0	0.00%
	cases have reported to City (51 957) and A		3).	veek ending 30	,				e reported from Dire Dawa City
Ethiopia	Cholera	Ungraded	14-May-19	12-May-19	17-Nov-19	1 960	60	21	1.10%
including 21 d		orted from eigh	t regions with C	romia (756 cas					total of 1 960 suspected cases s Ababa city (157 cases) reporting
Ethiopia	Dengue fever	Ungraded	3-Nov-19	9-Sep-19	24-Nov-19	1 147	6	0	0.00%
	37 and week 47 in 2 eek 38 when more th				onfirmed cases	of dengue fever	were reported	from Afar regio	n. The peak of the outbreak was
Ethiopia	Measles	Ungraded	14-Jan-17	1-Jan-19	17-Nov-19	9 031	59	-	-
(2 340), Amha		48) regions. Ćh	ildren aged less	than five years	are the most a	ffected account			d from Oromia (5 382), Somali es followed by age group 15-44
Ethiopia	Poliomyelitis (cVDPV2)	Ungraded	24-Jun-19	20-May-19	27-Nov-19	3	3	0	0.00%
No case of cir in neighbourir	ng Somalia.	ved poliovirus t	ype 2 (cVDPV2)) was reported t	this week. There	are three cVDI	PV2 cases repo	rted in Ethiopia	in 2019, all linked to the outbreak
Ghana	Poliomyelitis (cVDPV2)	Ungraded	9-Jul-19	8-Jul-19	27-Nov-19	9	9	0	0.00%
· ·	te given above.					,	,		
Guinea	Measles	Ungraded	9-May-18	1-Jan-19	3-Nov-19	4 690	1 091	18	0.30%
suspected cas	es including 18 deatlee localities in three h	hs (CFR 0.4%)	have been repo	rted. Of the 4 69	90 suspected ca	ises, 1 773 wer	e sampled, of w	hich 1 091 test	er 2019), a total of 4 690 ted positive for measles by ealth district and Soumpoura in

Country	Event	Grade	Date notified	Start of reporting	End of reporting	Total cases	Cases	Deaths	CFR				
,			to WHO	period	period		Confirmed						
Kenya	Cholera	Ungraded	21-Jan-19	2-Jan-19	24-Nov-19	4 747	222	37	0.80%				
of Kenya repo	In week 47 (week ending 24 November 2019), 16 new suspected cases were reported from Wajir (10 cases) and Nairobi (6 cases). Since January 2019, 12 of the 47 Counties of Kenya reported cholera cases, namely: Embu, Garissa, Kajiado, Kisumu, Machakos, Makueni, Mandera, Mombasa, Nairobi, Narok, Turkana and Wajir Counties. The outbreak remains active in three counties: Garissa, Nairobi and Wajir.												
Kenya	Leishmaniasis	Ungraded	31-Mar-19	1-Jan-19	24-Nov-19	2 788	1 179	34	1.20%				
In week 47 (week ending 24 November 2019), no new cases were reported. Since the beginning of the outbreak, suspected and confirmed cases of leishmaniasis have been reported from Mandera, Marsabit, Wajir and Garissa counties.													
Lesotho	Measles	Ungraded	26-0ct-19	25-Oct-19	16-Nov-19	59	4	0	0.00%				
									of which are laboratory more females with a M:F ratio of				
Liberia	Lassa fever	Ungraded	23-Jan-19	1-Jan-19	24-Nov-19	79	44	14	17.70%				
2019, a total c	of 173 suspected case	es have been re	ported across tl	he country. Of s	samples tested	from 138 of the	suspected case	es at the Nation	rom 1 January - 24 November al Public Health Reference ned cases is 31.8% (14/44).				
Liberia	Measles	Ungraded	24-Sep-17	1-Jan-19	17-Nov-19	1 569	237	5	0.30%				
	eek ending on 17 No orted across the cou								peginning of 2019, 1 569 cases				
Mali	Humanitarian crisis	Protracted 1	n/a	n/a	24-Nov-19	-	-	-	-				
									ant humanitarian funding gap ty where there exists a US\$ 79.7				
Mali	Measles	Ungraded	20-Feb-18	1-Jan-19	17-Nov-19	1 164	338	0	0.00%				
As of week 46 positive.	(week ending 17 No	vember 2019),	1 164 suspecte	d cases of mea	sles have been	reported from 4	19 districts in th	e country. Of th	nese, 338 were confirmed IgM-				
Mozambique	Poliomyelitis (cVDPV2)	Grade 2	7-Dec-18	7-Dec-18	27-Nov-19	1	1	0	0.00%				
No case of cir	culating vaccine-deri	ved poliovirus t	ype 2 (cVDPV2)	outbreak has l	been reported th	nis week. There	was one case r	eported in 2018	3.				
Namibia	Hepatitis E	Grade 1	18-Dec-17	8-Sep-17	17-Nov-19	6 746	1 644	56	0.80%				
decrease in th epidemiologic occurred in pr Ohangwena, C	e number of cases re ally linked, and 844 s egnant or post-partu Imaheke, Hardap, Ka	eported in week suspected have m women. Cas ras, Otjozondju	s 45 and 46 con been reported o es have been re	npared to week countrywide. A ported from 12	s 43 and 44. As cumulative num	of 17 Novemb ber of 56 death	er 2019, a cum ns have been rej	ulative total of 1 ported nationall	n Khomas region. There was a I 644 laboratory-confirmed, 4 258 y (CFR 0.8%), of which 24 (43%) ingo, Oshana, Oshikoto, Kavango,				
Niger	Humanitarian crisis	Protracted 1	1-Feb-15	1-Feb-15	19-Sep-19	-	-	-	-				
than 150 civili bordering Bur reprisals by jil on humanitari	ans were killed follov kina Faso, Mali and N nadists after G5 Sahe	ving the upsurg ligeria, where T I operations. In	je of armed attad Tillaberi, Tahoua, Tweeks 36 and 3	cks in 2019. As Diffa and Mara 37 (week ending	of 12 Septemb adi regions are t g 14 September	er 2019, the se targets of arme 2019) Tillaberi	curity and huma d groups operat i and Maradi ha	anitarian situati ing on both sid ve been particul	eri, Maradi and Tahoua and more ons remain worrying in areas les of the border, as well as of larly badly affected, with attacks whom are under the age of 18 and				
Niger	Measles	Ungraded	10-May-19	1-Jan-19	19-Nov-19	9 969		54	0.50%				
(3 571 cases i	ncluding 8 deaths), 1 ncluding 3 deaths), D	「ahoua (1 909́ i	ncluding 25 dea	ths), Zinder (1	399 including 1	0 deaths), Nian	ney (1 271 with	1 death), Tillab	es have been reported in Maradi eri (635 including 3 deaths), k 12, the case incidence has been				
Niger	Poliomyelitis (cVDPV2)	Grade 2	8-Jul-18	8-Jul-18	27-Nov-19	11	11	1	9.10%				
	V2 was reported in the were reported in 20								gion on 3 June 2019. A total of 10				
Nigeria	Humanitarian crisis	Protracted 3	10-Oct-16	n/a	31-0ct-19	-	-	-	-				
populations in access challer	many camps in the	region.Due to s ovement of mo	hrinking human bile medical tea	itarian space he ms, ambulance	ealth partners a es, immunizatio	re facing challe n staff and med	nges in delivery lical cargo in ma	of timely and u	s characterized by overcrowded urgent life-saving assistance as cross Borno state. The cholera				

Country	Event	Grade	Date notified to WHO	Start of reporting period	End of reporting period	Total cases	Cases Confirmed	Deaths	CFR		
Nigeria	Cholera	Ungraded	19-Jun-19	15-May-19	26-Nov-19	836	200	4	0.50%		
Eight new cases of cholera were reported in Adamawa State from 16 to 26 November 2019 from Yola North (5), Yola South (2), and Girei (1) Local Government Areas. From 15 May to 26 November 2019, a cumulative total of 836 suspected cases with four deaths have been reported from four LGAs: Yola North (511 cases with two deaths), Girei (200 cases with one death), Yola South (124 cases with one death), and Song (1 case with zero deaths). Of 532 stool specimens collected and analysed at the state specialist hospital, 200 cultured <i>Vibrio cholerae</i> as the causative agent.											
Nigeria	Lassa fever	Ungraded	24-Mar-15	1-Jan-19	10-Nov-19	783	764	179	22.90%		
During week 45 (week ending 10 November 2019), 10 new confirmed cases with two deaths were reported from Ondo (5 cases with zero deaths), Edo (2 cases with one death), Ebonyi (1 case with zero deaths), Bauchi (1 case with zero deaths), and Abia (1 case with 1 death) states. Eighty-six Local Government Areas (LGAs) across 23 states have reported at least one confirmed case since the beginning of 2019. Nineteen (19) health care workers across 10 states have been infected since the beginning of 2019. A total of 356 contacts are currently being followed.											
Nigeria	Measles	Ungraded	25-Sep-17	1-Jan-19	30-Sep-19	55 476	2 150	275	0.50%		
Between epi weeks 35 - 39 (week ending 30 September 2019), a total of 1 544 suspected cases of measles were reported from 36 states including 3 deaths (CFR 0.2%). Katsina (309), Borno (219), Kano (309), Yobe (91), Ekiti (65), Lagos (65) and Sokoto (65) account for 59% of all the cases reported in the time period. Between epi week 1 and 39, a total of 55 476 suspected cases have been recorded from 754 LGAs in 36 states and FCT with 257 deaths (CFR 0.5%). Of the 10 236 samples tested, 2 150 were IgM positive for measles.											
Nigeria	Poliomyelitis (cVDPV2)	Grade 2	1-Jun-18	1-Jan-18	27-Nov-19	52	52	0	0.00%		
No case of circ 2018.	culating vaccine-deri	ved poliovirus t	ype 2 (cVDPV2)	was reported t	this week. There	e have been 18	cVDPV2 cases	reported in 201	9. There were 34 cVDPV2 cases in		
Nigeria	Yellow fever	Ungraded	14-Sep-17	1-Jan-19	31-0ct-19	3 620	72	150	4.10%		
positive). Of the cases) and the fever.	nese, 72 cases were RCDC National Refe	confirmed positerence Laborato	tive for yellow fe ory (NRL) in Abu	ever by RT-PCR ija (31 cases). [at two laborato During this mor	ries including t ith, two new sta	he WHO referer ites (Plateau an	nce laboratory, d Taraba) recor	sumptive positive samples (IgM Institut Pasteur Dakar (IPD), (41 ded confirmed cases of yellow		
Senegal	Dengue fever	Ungraded	17-Sep-19	15-Aug-19	13-Sep-19	1	1	0	0.00%		
A case of deno	jue fever from Kaola	ck, in the centre	e of the country,	with symptom	onset on 15 Au	igust 2019 was	confirmed by F	CR at Institut F	Pasteur Dakar on 13 September		
Sierra Leone	Lassa fever	Ungraded	22-Nov-19	30-0ct-19	1-Dec-19	5	3	3	60.00%		
									ncluding three deaths have been are currently under follow up.		
South Sudan	Humanitarian crisis	Protracted 3	15-Aug-16	n/a	30-0ct-19	-	-	-	-		
1.47 million. N disease burde Melut, Aweil S	The humanitarian situation has been largely calm but unpredictable in most of the states. The number of internally displaced people (IDPs) in South Sudan was estimated at 1.47 million. Malnutrition continues to be a problem in the country as more than 6.35 million people are reported to be severely food insecure in South Sudan. Communicable disease burden remains high with 10 counties reporting malaria cases above their epidemic thresholds and measles cases being reported from 16 counties (Abyei, Mayom, Melut, Aweil South, Aweil East, Tonj North, Juba, Wau, Aweil West, Gogrial West, Gogrial East, Renk, Tonj South, Jur River, Pibor and Yambio) and four protections of civilian (PoC) sites (Juba, Bentiu, Malakal and Wau).										
South Sudan	Hepatitis E	Ungraded	-	3-Jan-18	17-Nov-19	118	41	2	1.70%		
of 106 cases a		been recorded	from Bentiu Po0						oorted. As of reporting date, a total The last cases in Lankein were		
South Sudan	Measles	Ungraded	24-Nov-18	1-Jan-19	24-Nov-19	3 963	169	23	0.60%		
has affected 1		tection of Civili	ans Sites POCs	(Juba, Bentiu, I					have been reported. The outbreak th an average of 75 cases reported		
Togo	Poliomyelitis (cVDPV2)	Grade 2	18-Oct-19	13-Sep-19	27-Nov-19	3	3	0	0.00%		
	circulating vaccine-d vely. There are three						es province. Th	e onsets of para	alysis were on 6 and 16 October		

Country	Event	Grade	Date notified to WHO	Start of reporting period	End of reporting period	Total cases	Cases Confirmed	Deaths	CFR
Uganda	Humanitarian crisis - refugee	Ungraded	20-Jul-17	n/a	31-Oct-19	-	-	-	-

Between 1 and 31 October 2019, a total of 6 623 new refugee arrivals crossed into Uganda from the Democratic Republic of the Congo (4 016), South Sudan (2 167) and Burundi (440). Uganda hosted 1 362 269 asylum seekers as of 31 October 2019, with 95% living in settlements in 11 of Uganda's 128 districts and in Kampala. The majority of refugees are from South Sudan (62.9%), the Democratic Republic of the Congo (28.5%) and Burundi (3.3%). Most are women within the age group 18 - 59 years.

Zambia	Poliomyelitis (cVDPV2)	Grade 2	17-0ct-19	16-Jul-19	27-Nov-19	1	1	0	0.00%
--------	---------------------------	---------	-----------	-----------	-----------	---	---	---	-------

No new case of cVDPV2 was reported this week. One case of circulating vaccine-derived poliovirus type 2 (cVDPV2) has been reported so far this year from Chiengi in Luapula province. The onset of paralysis was 16 July 2019.

†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.



© WHO Regional Office for Africa

This is not an official publication of the World Health Organization.

Correspondence on this publication may be directed to:
Dr Benido Impouma
Programme Area Manager, Health Information & Risk Assessment
WHO Health Emergencies Programme
WHO Regional Office for Africa
P O Box. 06 Cité du Dioué, Brazzaville, Congo

Email: afrooutbreak@who.int

Requests for permission to reproduce or translate this publication – whether for sale or for non-commercial distribution – should be sent to the same address.

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate borderlines for which there may not yet be full agreement.

All reasonable precautions have been taken by the World Health Organization to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either express or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the World Health Organization or its Regional Office for Africa be liable for damages arising from its use.

Contributors

- S. Ohene (Ghana)
- R. Nansseu (Democratic Republic of the Congo)
 G. Folefack (Democratic Republic of the Congo)
- R. Mankele (Republic of Congo).

Graphic design

A. Moussongo

Editorial Team

- B. Impouma
- C. Okot
- E. Hamblion
- B. Farham
- G. Williams
- Z. Kassamali
- P. Ndumbi
- J. Kimenyi
- E. Kibangou
- O. Ogundiran
- T. Lee

Production Team

- A. Bukhari
- T. Mlanda
- R. Ngom
- F. Moussana

Editorial Advisory Group

- Z. Yoti, Regional Emergency Director ai
- B. Impouma
- Y. Ali Ahmed
- M. Yao
- M. Djingarey

Data sources

Data and information 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.