WEEKLY BULLETIN ON OUTBREAKS AND OTHER EMERGENCIES
Week 24: 10 – 16 June 2017
Data as reported by 17:00 16 June 2017

0 New event
40 Ongoing events
29 Outbreaks
11 Humanitarian crises

Legend
- Food insecurity
- Meningitis
- Measles
- Eruptive fever
- Monkeypox
- Floods/Cyclone
- Cholera
- Dengue Fever
- Ebola
- Hepatitis E
- Malaria

Cases
Deaths

WHO Member States with no ongoing events
Non WHO African Region

3 Grade 3 events
7 Grade 2 events
5 Grade 1 events
25 Ungraded events

Health Emergency Information and Risk Assessment
Overview

This weekly bulletin focuses on selected acute public health emergencies occurring in the WHO African region. WHO AFRO is currently monitoring 40 events: three Grade 3, seven Grade 2, five Grade 1, and 25 ungraded events.

This week’s edition covers key ongoing events in the region, including the grade 3 humanitarian crises in South Sudan, Nigeria and Ethiopia, the grade 2 outbreaks of Ebola virus disease in the Democratic Republic of Congo and cholera in Tanzania, the Grade 1 outbreak of hepatitis E in Chad, dengue haemorrhagic fever outbreak in Mauritania, and circulating vaccine-derived poliovirus in the Democratic Republic of 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 report with information on all public health events currently being monitored in the region.

Major challenges to be addressed include:

- Ensuring a functional public health surveillance system in the context of the Integrated Disease Surveillance and Response (IDSR)
- Intensifying water, sanitation, and hygiene (WASH) interventions as a premise to control the ongoing water-borne diseases outbreaks including acute watery diarrhoea, cholera, and hepatitis E.
WHO continues to monitor the Ebola virus disease (EVD) outbreak in Likati Health Zone, Bas Uele Province in the north-east of the Democratic Republic of Congo. Since our last report on 9 June 2017, no new confirmed or probable cases have been reported. Therefore there are currently a total of five confirmed and three probable cases. The last confirmed case was isolated on 17 May 2017 and tested negative for Ebola virus by PCR for the second time on 21 May 2017. Of the confirmed and probable cases, four survived and four died, resulting in a case fatality rate of 50%. The confirmed and probable cases were reported from Nambwa (four confirmed and two probable), Ngayi (one probable) and Mabongo (one confirmed).

Data modelling suggests that the risk of further cases is currently low but not negligible, and decreases with each day without new confirmed/probable cases. As of the reporting date, 95% of simulated scenarios predict no further cases in the next 30 days.

This EVD outbreak in the Democratic Republic of Congo was notified to WHO by the MoH on 11 May 2017. The cluster of cases and deaths of previously unidentified illness had been reported since late April 2017. Likati Health Zone shares borders with two provinces in the Democratic Republic of Congo and with the Central African Republic. The affected area is remote and hard to reach, with limited communication and transport infrastructure.

Public health actions
- Newly identified suspected cases continue to be admitted to treatment centres.
- Support is being provided to the four survivors on prevention against potential sexual transmission of the virus. Certificates of discharge are given to survivors.
- Hand washing stations have been distributed to churches in the area.
- A hospital hygiene committee has been established at Likati General Hospital.
- Toilets, a placenta pit and a locally made incinerator are being constructed at the Likati General Hospital.
- WHO and GOARN continue to mobilize partners to provide technical and logistical support to the country, and work closely together with UN Clusters, stakeholders and donors to ensure appropriate support for the response.
- GOARN Operational Support Team hosts weekly assessment and coordination teleconference for operational partners on current outbreaks of international concern, particularly the EVD outbreak in DRC.
- At the request of Dr Salama (Executive Director of the WHO Health Emergencies Programme) at WHO HQ convened a time-limited Ebola Inter-Agency Coordination Group with senior leadership from MSF, IFRC, UNICEF, US CDC and WFP, to provide agency updates about response actions and discuss any critical coordination issues.

Situation interpretation
The EVD outbreak in Likati Health Zone, Bas Uele Province in the north-east of the Democratic Republic of Congo is under control. The most critical needs for now include active case search to ensure no suspected case is undetected, maintenance of laboratory capacity in the field to enable rapid confirmation of results, the need for differential diagnosis of those who remain sick but have tested negative for EVD, enhancing infection prevention and control (IPC) measures and planning for strengthening of the surveillance system post-response activities.

In order to increase access to and use of quality primary healthcare services, free health service is now operational in Likati covering consultations and essential drugs provision to address the most common diseases in the health zone. An increase in utilisation has been observed, with an average of 250 patients presenting for consultations daily. The Ministry of Health in partnership with WHO is exploring modalities to ensure that the population of Likati Health Zone have access to free quality primary health services, thereby contributing to quick recovery of the health system after the outbreak. The agreed policy options need to cover a range of primary healthcare services including curative care with essential drugs, antenatal care and deliveries and, general surgery related conditions.
Event description

On 17 May 2017, the Ministry of Health of the Democratic Republic of Congo notified WHO of circulating vaccine-derived poliomyelitis virus in the country. Four cases of acute flaccid paralysis (AFP) have tested positive for vaccine-derived poliovirus type 2 (VDPV2) in Haut Lomami province (2 confirmed cases) and Maniema province (2 confirmed cases). In Haut-Lomami province, the polio cases were confirmed in Butumba and Malemba Nkulu districts. The date of onset of paralysis in the first AFP case in Butumba district was 20 February 2017, while the second AFP case from Malemba Nkulu district developed paralysis on 8 March 2017.

In a separate and unrelated event, VDPV2 was isolated from an AFP case in Kunda district in Maniema province, with the date of onset of paralysis being 26 March 2017. Serotyping of this particular virus showed seven nucleotide changes from the Sabin 2, suggesting it is a newly emerged mutation. As part of extended and intensified disease surveillance and ongoing investigations, Sabin poliovirus type 2 was isolated from a healthy contact of the VDPV2 case in Kunda, as well as from another AFP case with onset of paralysis on 18 April 2017.

A case of a vaccine-derived poliomyelitis virus type 1 was also confirmed in Ankoro district in Tanganyika province, with onset of paralysis on 1 April 2017. The case is a 32-month-old male baby from Camp rouge in Kyofe health area who was never vaccinated against poliomyelitis. Blood samples have been collected from this case and shipped to the reference laboratory for further testing.

As of 9 June 2017, a total of four c-VDPV 2 cases and one c-VDPV 1 case with no fatalities were reported. There are no new confirmed cases reported so far.

Public health actions

- The Ministry of Health, supported by WHO and partners of the Global Polio Eradication Initiative (GPEI), has conducted a risk analysis, including an assessment of the overall population immunity levels.
- The AFP surveillance is being strengthened to include active searches for additional potential cases in the communities.
- The first round of reactive vaccination campaign using monovalent oral polio vaccine type 2 is planned from 22 – 24 June 2017 in Maniema and in Haut-Lomami. The campaign targets 789,896 people below 5 years of age in 20 health zones [513,820 people in 12 health zones in Haut-Lomami and 276,076 people in 8 health zones in Maniema]. A total of 908,400 doses of the vaccines have been secured for the first round of the campaign.
- The second round of the reactive campaign is planned for July 2017. These campaigns are targeting the affected districts as well as the neighbouring health zones.
- Routine vaccination in the affected provinces is also being strengthened, including outreach services as well as active search for children not fully vaccinated.

Situation interpretation

The Democratic Republic of Congo has not reported a case of wild poliovirus since 2011. However, the country is currently experiencing circulating vaccine-derived poliovirus. It is critical to galvanize efforts to reach every child with polio vaccines and to strengthen disease surveillance in order to bring this transmission to a speedy end. The implementation of two rounds of mass immunization campaigns should be sufficient to stop the current outbreak if the expected performance (at least 95% of the targeted people vaccinated) is reached. However, improving routine immunization coverage with the injectable polio vaccine and strengthening AFP surveillance will be vital to prevent further outbreaks or to detect and respond to them on time.

Although major efforts are being made towards the eradication of poliomyelitis in the country, there are still pockets of vulnerability. Some of the affected health zones are under-performing in both surveillance of AFP and routine immunization. Some AFP cases (38% of AFP cases in Maniema) were not properly vaccinated.

The occurrence of c-VDPV was predicted by polio SAGE and recommendations made for its management. The implementation of two mass immunization campaigns should be sufficient to stop the current outbreak. Long-term prevention strategies should include strengthening routine immunization with injectable polio vaccine and using bivalent oral polio vaccine for mass immunization. Vaccination against poliomyelitis and the implementation of hygiene measures are sufficient for the prevention of the disease.
Event description

The impact of several years of drought continues to affect communities, especially in the south-eastern part of Ethiopia where 4.3 million people are in need of health assistance. These adverse effects include severe and prolonged water shortages, food insecurity resulting from crop losses, population displacements, livestock deaths, rising levels of severe acute malnutrition (SAM), along with outbreaks of epidemic-prone diseases such as acute watery diarrhoea (AWD) and measles. The internal displacement of over 800,000 people also continues to be a challenge in the country. These situations are being complicated by waves of violence especially in the Somali region and the socio-political unrest being experienced in parts of the country.

The steady decline in the trend of AWD in Ethiopia seen in the last 6 weeks (between weeks 15 and 20 of 2017) has stalled and reversed. The last 3 weeks (between weeks 21 and 23 of 2017) have seen an increasing number of cases of the disease. In week 23 (week ending 11 June 2017), a total of 1,080 cases were reported from Amhara, Oromia and Somali; compared to the 567 cases registered in week 20 (week ending 21 May 2017). Sixty-one percent (663/1080) of the registered cases during the reporting week came from Somali region.

As of 11 June 2017, a total of 36,750 cases including 780 deaths (case fatality rate 2.1%) have been reported since the beginning of 2017. Six regions, Somali, Oromia, Amhara, Afar, SNNP, and Tigray have been affected. The Somali region remains the most affected, accounting for 90% and 96% of the cases and deaths respectively.

The measles outbreak in Ethiopia is still persistent. In week 23 (week ending 11 June 2017) 47 new suspected cases of measles have been reported. Since the beginning of 2017, a total of 2,082 suspected measles cases have been reported across the country, including 976 confirmed cases (433 laboratory confirmed cases, 490 epidemiologically-linked and 53 clinically compatible cases). Analysis of immunization status shows that 18.7% of the cases had “zero” previous measles antigen doses, while 44.4% of the cases had “unknown” immunization status. Oromia region is still the most affected, with 33% of the reported cases, followed by Amhara at 28%, Addis Ababa at 16%, and SNNPR at 10%. The distribution by age shows that children under 5 years remain the most affected age group, making up 39% of the affected population.

In week 22 (week ending 4 June 2017), a total of 1,464 new SAM cases were reported in the therapeutic feeding programme (TFP) in Oromia region. These include 1,303 cases managed at the outpatient therapeutic programmes (OTPs) and 161 cases admitted to the stabilization centres (SCs) in the affected zones. Between 1 January and 4 June 2017, a total of 30,310 SAM cases were reported in Oromia region. These include 27,095 cases managed at the OTPs and 3,215 cases admitted to the SCs in the region.

Public health actions

- On the 8 June 2017, the Minister of Health chaired the Federal Health Command Post meeting, attended by the WHO Representative in addition to other government officials and partners’ representatives.
- Active surveillance is being reinforced throughout the regions, especially in Somali, Oromia, SNNP and Amhara. The regional health bureaus (RHBs) are being supported in data management to maintain quality data used to provide technical guidance to the response. Active case search has been enhanced at the “holy water sites” in Amhara region.
- Case management teams continue to monitor and provide oversight on case management at the treatment centres, aiming to strengthen adherence to infection prevention and control and other case management protocols.
- Test kits and reagents have been procured to enhance water quality testing and monitoring at the treatment centres.
- The partners, in collaboration with the RHBs, continue to distribute water treatment tablets to AWD affected communities in Somali region.
- There is continued engagement of religious and community leaders, teachers and other leading figures in risk communication and health promotion.
- Implementation of the 90-day operational plan in Somali continues.
- The first phase of the measles vaccination campaign was conducted in Somali Region from 3 – 9 June 2017, covering four zones. The data for administrative coverage is being collated and computed.

Situation interpretation

The humanitarian crisis in the south-eastern part of Ethiopia remains serious. The latest risk assessment shows that the main underlying factors identified during the previous risk assessment are still present. These include population displacement, food insecurity, lack of sanitation, rising levels of malnutrition, and prolonged water shortage. Moreover, additional risk factors for transmission of AWD have been identified, which are the use of contaminated “holy water sites”, contaminated rivers and poor hygiene, and sanitation facilities at various religious gatherings. The gradual increase in the number of AWD cases seen in the country in the last 3 weeks is thus being attributed to increased religious activities at the “holy water sites”. There is, therefore, an urgent need to intensify the ongoing response interventions, targeting the hotspots. WHO requires US$ 10 million to facilitate its leadership, coordination and surveillance functions between July and December 2017.
The humanitarian crisis arising from the volatile security situation in northeast Nigeria continues to persist despite the efforts of the various actors. Protection issues and food insecurity are currently the most pronounced humanitarian needs. Security incidents in terms of attacks and returning of displaced communities are responsible for the current wave of population movements. The latest round of the Displacement Tracking Matrix (DTM) round XVI published by the International Organization for Migration (IOM) indicated a 3% increase in the number of internally displaced persons (IDPs) and a 7% increase in the number of returnees. High population movement from Cameroon has been registered in the past week, during which over 50,000 people arrived, mainly in Banki. These returnees are relying on water supplies meant for only 17,000 people. Cases of hepatitis E have been reported from Mobbar and Ngala local government areas (LGA) in the face of the suboptimal water, sanitation and hygiene (WASH) services. Health assistance is being provided to the displaced communities through a primary healthcare facility managed by UNICEF, two WHO mobile teams and MSF teams. Provision of healthcare services and distribution of relief items are being impeded by the security incidents and flooding. In the coming days, 10,000 people will be relocated from Banki to Bama and 15,000 people from Pulka to Gowza.

Food insecurity continues to represent a great concern. Recent estimates revealed that 44,000 people are in the Integrated Food Security Phase Classification (IPC) Phase 5 conditions, the biggest pocket of which is located in Chibok. The food insecurity outlook is expected to worsen in the coming months, as forecasts indicate that 8.8 million people will be between IPC Phase 3 and 5 in northern Nigeria.

Public health actions
- As of 1 June 2017, the humanitarian crisis in Nigeria has been graded as a Protracted 3 Emergency, based on the new WHO Emergency Response Framework.
- A team from UNDP and World Bank conducted a mission between 5 – 9 June 2017 to discuss current and future projects.
- A comprehensive risk assessment has been conducted in Banki aiming to respond appropriately to the needs of the population. The deployment of a rapid response team from the Federal Ministry of Health has been requested to improve health service delivery.
- Active surveillance has been strengthened in Rann to enhance detection and reporting of AWD cases. The Hard-to-Reach-Team is conducting investigations in the area, as the largest proportion of AWD cases is among displaced persons.
- WHO and UNICEF, in coordination with WFP, are developing a strategy to address micro-nutrient deficiencies, especially in children, in addition to pregnant and lactating women.
- Cross border collaboration and operations have been strengthened with the health actors in Diffa, Niger in response to the potential importation of hepatitis E.
- The construction of the Public Health Emergency Operation Centre (EOC) has been completed. Installation of the information and technology (IT) infrastructure is in process.
- The micro planning for the malaria response strategic plan is being discussed this week at field level.
- WHO continues to support 56 out of the 103 mobile teams operational in Borno State.

Situation interpretation
The continuing security incidents in northeast Nigeria continue to impact provision of humanitarian assistance to the affected population. Insufficient numbers of health sector partners, underfunding, and shortage of skilled healthcare workers are major hindrances to scale up public health actions.

The fresh wave of returnees from Cameroon is overwhelming the current humanitarian capacity in Banki. There is a need for a referral system in Banki to assist the returnees. Moreover, cross border collaboration with health partners and authorities based in northeast Cameroon has to be increased. Interventions and risk assessment need to be conducted continuously. The health sector is working on an approach to expand mental health and psychosocial support activities. WHO has a shortfall of US$ 4 million to facilitate deployment and maintenance of emergency surge teams in the most affected communities.
Event description
The security situation in South Sudan continues to worsen, leading to further population displacements, destruction of healthcare infrastructure, and restricted humanitarian access. The insecurity and conflict negatively impacted on humanitarian operations in multiple locations. In May 2017, 89 incidents affecting humanitarian access were reported in South Sudan. Of these, 31% involved operational interference, 21% were violence against aid workers, while 17% were active hostilities. Other incidents include violence against assets of humanitarian agencies (11%), bureaucratic/administrative obstructions (10%), and restricted movements (9%). Some 36 aid workers were forced to relocate during May 2017 as a result of active hostilities in Leer, Mayendit and Longochuk counties, while at least six humanitarian missions to areas outside Yei were postponed as a result of conflict.

Forced recruitment continues to be reported in several places. Recently, 12 humanitarian workers were reportedly forcefully recruited including two health workers, one hygiene promoter and nine teachers. Meanwhile, inter-tribal clashes over border disputes, grazing land and water points have been reported in Gogrial State where 38 people were killed.

Plant cultivation during the current rainy season will not take place, as large numbers of people have been displaced from their farmland. This is a precursor for continuous food insecurity.

During week 22 (week ending 4 June 2017), completeness for routine surveillance reporting was 66% and 82% for the early warning alert and response system (EWARS) reporting from internally displaced sites (IDP) sites. A total of 27 alerts were reported, of which 41% have been verified. Two alerts were assessed and none required a response.

During the reporting week, a total of 87 new cholera cases and 0 deaths were reported. In 2017, a cumulative of 5,000 cholera cases including 169 deaths (case fatality rate of 3.3%) has been reported.

Public health actions
WHO has deployed dedicated sub-cluster coordinators in the Greater Unity and Greater Equatoria as part of the famine response. In Yambio Hub, 40 health workers including midwives, nurses, clinical officers and medical doctors were trained on emergency obstetrics care and adolescent health. The training was conducted in collaboration with WHO, State Ministry of Health, World Vision International, and other partners.

On 5 June 2017, health cluster partners involved in cholera case management and surveillance activities were oriented on the web-based platform for cholera line listing.

A cholera treatment unit has been established in Mogos, Kapoeta East and a new unit is being set up in Napotpot following the new wave of cases from Katodori Payam.

WHO continues to deploy cholera case investigation and sample collection kits to support investigation and response activities in newly affected areas.

WHO and UNICEF deployed cholera case management kits to Ayod, Tonj East, Kapoeta South, Kapoeta North, and Kapoeta East.

A total of 20 sites have been identified for the next round of either reactive or preventive oral cholera vaccines campaigns, with a target population of 2,071,864 individuals aged one year and above.

In 2017, a total of 331,894 doses of OCV have been deployed, targeting individuals aged one year and above. A schedule has been drawn up for the next round of OCV vaccinations and partners and other mechanisms of deployment are being identified, along with the respective vaccination micro-plans.

Situation interpretation
The worsening insecurity has resulted in an increase in population displacement, destruction of infrastructure and vandalizing of health facilities. This is likely to lead to increased morbidity and mortality as a result of spread of common diseases. For example, cholera is spreading in the remote areas that people have fled to and settled. The onset of the rainy season is likely to lead to increased transmission, requiring increased surveillance and response by humanitarian partners.

Food insecurity continues to be a problem, as displaced populations are unable to cultivate their traditional farms, which will lead to greater food insecurity in the coming months. This, coupled with economic hardship will mean many people, especially those in urban areas will not be able to afford to buy food, is likely to lead to further conflict and insecurity.

WHO, and other partners, continue to provide humanitarian assistance to the vulnerable populations in need.
The outbreak of hepatitis E in the south-eastern Salamat region of Chad has started showing a tendency of resurgence following an initial progressive decline. In week 23 (week ending 11 June 2017), 43 suspected cases and one death (case fatality rate of 2.3%) have been reported. This, compared to the weekly caseload of 5 cases reported in week 16 of 2017, illustrates a significant increase in trend. Am Timan North reported the highest number of cases, accounting for 62% of the total caseload, followed by Aboudeia with 33%.

As of 11 June 2017, a cumulative 1,560 suspected hepatitis E cases including 18 deaths (case fatality rate of 1.1%) have been reported since the onset of the outbreak in August 2016. Of the 18 reported deaths, 5 were pregnant women. Three districts (Am Timan, Aboudeia and Haraze) in Salamat region, out of nine, have so far been affected. The outbreak remains confined within Salamat region. Overall, 98 samples have tested positive for hepatitis E virus [33 samples at Institut Pasteur in Yaounde and 65 samples in a MSF Holland laboratory in Amsterdam].

Retrospective investigation found that the index case was detected on 1 August 2016. The epidemic was then confirmed in January 2017 and officially declared by the Ministry of Health on 14 February 2017.

Public health actions

- The Ministry of Health continues to lead weekly technical coordination meetings of the district health authorities, partners (MSF, Red Cross Chad, Am Timam City Council, UNICEF, WHO, etc.).
- MSF Holland continues to support case management at Am Timan Hospital.
- Efforts to increase access to safe water continue, with the treatment and distribution of potable water. About 5,790,870 litres of safe water were distributed during week 22. Water points continue to be chlorinated, including 63 water points in Am Timan treated with the support of Islamic Relief World (IRW). Eight boreholes have been drilled, and 5 are already functional.
- Soap, bleach, chlorine solutions (various concentrations), high-test hypochlorite and chlorimeters have been distributed.
- 85 Red Cross volunteers, under the supervision of the Red Cross, the Ministry of Health and WHO, are conducting active case search and water chlorination in Aboudeia.
- Emergency latrines have been constructed.
- Health education initiatives have been conducted in markets, youth and women’s groups have been engaged, and radio spots are being utilized.
- Technical experts have been deployed to support the response, including a WASH expert for 60 days, as well as a social mobilization and communication expert.
- WHO provided an addition US$100,000 from the Contingency Fund for Emergencies (CFE).
- A knowledge, attitudes and practices (KAP) study was jointly conducted in Am Timan by Ministry of Health and OXFAM.

Situation interpretation

The hepatitis E outbreak in the Salamat region continues to evolve, with resurgence in cases being observed. One of the principle drivers of the outbreak is lack of safe water, consequently, local communities resort to using water from unprotected ponds.

To address this, the Ministry of Health with support from WHO and partners, have made a concerted effort to increase access to treated water. Chlorination methods have, however, met some community resistance. Through active community engagement, problems around several water points where chlorinators had been refused have now been resolved. The overall refusal rate dropped to 5.7% in week 22 from 6% during the previous week.

With the rainy season approaching, the risk of the spread of hepatitis E as well as cholera will increase. During the rainy season, floodwaters create “wadis” (large seasonal riverbeds) which could be a source of potentially contaminated water.

WHO calls on more partners to urgently fill in the gaps experienced in the field. Technical and financial support is required, particularly in intensifying WASH interventions and in improving health promotion and community engagement. In addition, US$100,000 is needed to maintain active case-finding and chlorination activities in Am Timan and Aboudeai, and allow expansion into Haraze.
Tanzania is experiencing an ongoing outbreak of cholera since the first cases were detected in August 2015, eventually spreading to 23 out of 25 regions across the country. During week 23 (ending 11 June 2017), 60 new suspected cases were reported in the Dar es Salaam region (11 cases) and Unguja Island, Zanzibar (49 cases). While the mainland has observed a moderate decline in recent weeks, the outbreak appears to be ongoing in the Zanzibar archipelago, with three districts in Unguja Island (West District, Urban District and North A District) reporting the bulk of cases this week.

As of 11 June 2017, a cumulative of 29,831 suspected cases including 464 deaths (case fatality rate of 1.6%) have been reported. The majority of cases and deaths, 85%, [25,305 cases and 395 deaths] were reported in Tanzania mainland. By May 2017, 35 out of 148 samples collected tested positive for *Vibrio cholerae* (subtyping pending).

**Public health actions**

- The Ministry of Health and the National Cholera Taskforce continue to coordinate response interventions. The Public Health Emergency Operations Centre (PHEOC), has been established with support from WHO, UNICEF and CDC. A multi-sectoral response committee involving Ministry of Health, Education, and Local Government, Municipalities, Non-Governmental Organizations and some of the development partners under the leadership of the Second Vice-President's office has been activated.
- A Rapid Response Team has been deployed to Unguja, Zanzibar.
- Continued support is being provided to the affected districts to strengthen surveillance, laboratory investigations, and to investigate sources of new infections. Three surveillance officers in Zanzibar have been oriented on data management and analysis for daily situ-
- Advocacy for improving water, sanitation and hygiene (WASH) in the affected communities continues. Chlorine tablets (Aqua tabs) for household water treatment are being distributed to affected households in Dar es Salaam and Zanzibar. Bulk water supplies provided by vendors are being chlorinated, with ongoing monitoring of free residual chlorine levels in Temeke District. The Zanzibar Water Authority has stepped up municipal water treatment and reinforced public health regulations on hygiene and food safety practices.
- Health promotion activities are being carried out through the local radio, national television, social media, community gatherings and Madrassas.
- Treatment centres are being supported to ensure adequate stock of medicines. An Interagency Diarrhoeal Disease Kit (IDDK) has been dispatched to Zanzibar.

**Situation interpretation**

Tanzania has experienced recurrent large outbreaks of cholera over the past four decades. This ongoing outbreak represents the second largest recorded in the country after the 1997 event, which affected 40,226 cases and claimed 2,288 lives. When compared to 2015 and 2016, a significantly lower number of cases have been observed this year, which may be attributed to increased awareness of cholera prevention and control measures. However, the threat of escalation is high with the onset of the rainy season, limited access to clean and safe water, and low toilet coverage in most affected districts. The Ministry of Health, WHO and partners must continue to collaborate to address gaps, namely: to improve WASH interventions at community levels, continue advocacy for multisectoral approach and engage communities.
On 7 June 2017, the Ministry of Health of Mauritania notified WHO of a case of dengue hemorrhagic fever in Nouakchott. The case was first reported to the Directorate of Disease Control of the Ministry of Health by the Institut National de Recherche en Santé Publique (INRSP) on 2 June 2017 after confirmation of the disease in the blood sample sent by the emergency service of the national reference hospital.

The index case is a 37-year old Mauritanian national living in Angola for the past 5 years. On 29 May 2017, he presented with fever, cough and myalgia. He travelled the same day from Angola by air and arrived in Mauritania on 30 May 2017. He first sought care in the private medical centre, la Guérison, and on 31 May 2017 he was admitted to the emergency service of the national reference hospital. On 31 May 2017, he presented with hemorrhagic signs including epistaxis and haemoptysis. Severe malaria and viral hemorrhagic fever (VHF) were suspected and the patient isolated. The samples collected tested negative for malaria and were shipped to the INRSP for further analysis. The laboratory result was positive for dengue virus by ELISA and PCR techniques.

The patient reportedly had no history of contacts with animals in Angola or recent contact with ill people. He was vaccinated against Yellow fever in Luanda in 2016. So far, investigations in Angola and Mauritania have found no additional cases.

Public health actions
- The case-patient was managed in the national reference hospital in Nouakchott and was discharged on 5 June 2017 after recovery.
- Field investigation was performed in Mauritania and 200 close contacts were identified and listed including 10 health workers. No symptomatic cases have been reported after 14 days of follow-up. The contacts are undergoing daily follow-up in Mauritania.
- The home of the case in Mauritania was fumigated with insecticide.
- A functional information exchange mechanism was established between the Mauritania and Angola response teams.
- The Angola surveillance team has implemented field investigation in Aafat, Tarhil Carrefour Adrar, and the case’s residential area in Viana municipality.
- Active case search was undertaken in Angola but no additional cases have been found so far.
- The Viana district health officers are strengthening surveillance in the area where the case lives.

Situation interpretation
The current dengue hemorrhagic case in Mauritania was probably imported from Angola. The case-patient developed illness the same day he was travelling to Mauritania. This indicates that he was probably infected in Angola, before his journey. The index case lived in Viana, an area affected by yellow fever outbreak in Angola between December 2015 and December 2016. Based on the lessons learnt from this outbreak, the Angolan surveillance teams should improve surveillance for dengue hemorrhagic fever. This is particularly important as suspected dengue cases were reported in recent weeks in Angola, with some cases testing positive using ELISA.

The quick confirmation of the case by the INRSP in less than 12 hours in Mauritania needs to be highlighted, as well as information exchange between the two countries. The field investigation performed in Luanda is also another piece of best practice registered during the management of this outbreak. Effective contact follow-up in Mauritania and Angola were commendable.

With the effective management of the case in Mauritania, there is no major risk of new cases occurring or of a large outbreak. The focus should be on strengthening dengue fever surveillance in Angola in order to identify and rapidly manage any new cases.
Challenges

- **Ensuring functional public health surveillance system as part of IDSR**

The need for a functional public health surveillance system to rapidly identify public health events is highlighted this week through the notification of two unusual events, dengue haemorrhagic fever in Mauritania and circulating vaccine-derived poliovirus in the Democratic Republic of Congo. A delay in identifying additional cases could lead to serious and large scale outbreaks.

- **Intensifying WASH intervention during outbreak response**

A recurring theme this week is the necessity to intensify water, sanitation and hygiene (WASH) interventions. The lack of access to safe water and facilities for sanitation and hygiene increases the transmission of disease, highlighted in the outbreaks of AWD in Ethiopia, cholera in Tanzania and hepatitis E in Chad. One of the sustainable developed goals (SDGs) is to ensure availability and sustainable management of water and sanitation for all, which is a key part of both prevention and response to outbreaks of water-borne diseases.

Proposed actions

- **Integrated disease surveillance and response (IDSR) is being implemented in the majority of countries in the African region. However, timely detection of public health events has remained a challenge. In addition, there are usually delays or lack of reporting data from some countries to regional level. This limits the ability to initiate and monitor the implementation of outbreak response activities. WHO countries offices must continue to support Ministries of Health to routinely monitor IDSR performance to ensure rapid detection and response to suspected outbreaks.**

- **Intensify advocacy to prioritize WASH interventions during countries’ prevention, preparedness and response planning. Implementation of WASH activities is often hampered by poor funding and a lack of infrastructure.**

Summary of major challenges and proposed actions
### Newly reported emergencies

<table>
<thead>
<tr>
<th>Event</th>
<th>Country</th>
<th>Grade</th>
<th>Date of notification to WHO</th>
<th>No. of cases / suspected (confirmed)</th>
<th>No. of deaths</th>
<th>CFR (suspected) / %</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cholera</td>
<td>Nigeria</td>
<td>Ungraded</td>
<td>07-Jun-17</td>
<td>1,178 (7)</td>
<td>9</td>
<td>0.8%</td>
<td>A new outbreak of cholera was reported this week in KwaZulu Natal, South Africa. 10 cases and 1 death were reported on 27 May 2017. Free access to medical treatment continues to be provided by the Ministry of Health with the support of partners.</td>
</tr>
<tr>
<td>Cholera</td>
<td>Zimbabwe</td>
<td>Ungraded</td>
<td>16-Feb-17</td>
<td>36,750</td>
<td>780</td>
<td>2.1%</td>
<td>This complex emergency includes outbreaks of AWD and measles. Detailed update above.</td>
</tr>
<tr>
<td>Cholera</td>
<td>Gambia</td>
<td>G3 extension</td>
<td>04-Jun-17</td>
<td>402,016 (253)</td>
<td>1,198</td>
<td>2.9%</td>
<td>55% new cases and 6 new deaths were reported in epicenter Bema during the week 20. Free access to medical treatment continues to be provided by the Ministry of Health with the support of partners.</td>
</tr>
<tr>
<td>Cholera</td>
<td>Tanzania</td>
<td>G2</td>
<td>04-Apr-15</td>
<td>28,831</td>
<td>464</td>
<td>1.6%</td>
<td>Detailed update above.</td>
</tr>
<tr>
<td>Nectrotising cellulitis/fascitis</td>
<td>Sao Tome &amp; Principe</td>
<td>G2 extension</td>
<td>10-Jun-17</td>
<td>1,730</td>
<td>-</td>
<td>-</td>
<td>The declining trend of the outbreak appears to have stagnated, with no cases reported for the past 5 weeks.</td>
</tr>
<tr>
<td>Ebola Virus Disease</td>
<td>Democratic Republic of Congo</td>
<td>G2 extension</td>
<td>08-Mar-16</td>
<td>8 (5)</td>
<td>4</td>
<td>50.0%</td>
<td>A full situation update has been published separately on the WHO website.</td>
</tr>
<tr>
<td>Drought/ food insecurity</td>
<td>Kenya</td>
<td>G3 extension</td>
<td>04-Jun-17</td>
<td>2,760 (108)</td>
<td>10</td>
<td>0.4%</td>
<td>The city of Harare is the epicenter of the outbreak. The main drivers of transmission are contaminated water and poor sanitation.</td>
</tr>
<tr>
<td>Drought/ food insecurity</td>
<td>Uganda</td>
<td>G3 extension</td>
<td>04-Jun-17</td>
<td>501 (175)</td>
<td>73</td>
<td>14.4%</td>
<td>Case counts include 175 confirmed and 14 probable cases.</td>
</tr>
<tr>
<td>Humanitarian crisis</td>
<td>Chad</td>
<td>G1</td>
<td>01-Sep-16</td>
<td>1,560 (98)</td>
<td>18</td>
<td>1.2%</td>
<td>Detailed update above.</td>
</tr>
<tr>
<td>Cholera</td>
<td>Angola</td>
<td>G1</td>
<td>04-Jan-17</td>
<td>428 (9)</td>
<td>24</td>
<td>5.6%</td>
<td>Since the onset of the outbreak on 13 December 2016, case incidence has declined in South Africa.</td>
</tr>
<tr>
<td>Cholera</td>
<td>Kenya</td>
<td>Ungraded</td>
<td>10-Oct-16</td>
<td>581 (109)</td>
<td>7</td>
<td>1.2%</td>
<td>Outbreaks have been reported in Gauteng, Naasiri, Mungusi, Toroka and Nakuru districts. 81 cases were confirmed.</td>
</tr>
<tr>
<td>Typhoid fever</td>
<td>Zimbabwe</td>
<td>Ungraded</td>
<td>21-Nov-16</td>
<td>2,760 (108)</td>
<td>10</td>
<td>0.4%</td>
<td>The city of Harare is the epicenter of the outbreak. The main drivers of transmission are contaminated water and poor sanitation.</td>
</tr>
<tr>
<td>Lassa fever</td>
<td>Nigeria</td>
<td>Ungraded</td>
<td>01-Dec-16</td>
<td>501 (175)</td>
<td>73</td>
<td>14.4%</td>
<td>Case counts include 175 confirmed and 14 probable cases.</td>
</tr>
<tr>
<td>Measles</td>
<td>Ethiopia</td>
<td>G1</td>
<td>14-Jan-17</td>
<td>2,082 (976)</td>
<td>-</td>
<td>-</td>
<td>Detailed update above.</td>
</tr>
<tr>
<td>Dengue</td>
<td>Kenya</td>
<td>G1</td>
<td>09-May-17</td>
<td>1,015 (582)</td>
<td>1</td>
<td>0.1%</td>
<td>The outbreak has been reported in Kwara (n=944), of which 540 are confirmed.</td>
</tr>
<tr>
<td>Cholera</td>
<td>South Sudan</td>
<td>Ungraded</td>
<td>20-Feb-17</td>
<td>5,380</td>
<td>569</td>
<td>3.4%</td>
<td>Detailed update above.</td>
</tr>
<tr>
<td>Measles</td>
<td>Democratic Republic of Congo</td>
<td>G2 extension</td>
<td>10-Jan-16</td>
<td>19,512 (105)</td>
<td>229</td>
<td>1.2%</td>
<td>The incidence of new cases has declined since the current outbreak peaked in early 2017.</td>
</tr>
<tr>
<td>Monkeypox</td>
<td>Democratic Republic of Congo</td>
<td>G2 extension</td>
<td>01-Feb-17</td>
<td>70 (7)</td>
<td>5</td>
<td>7.1%</td>
<td>Reported from four different districts in Kondre Depart- ment and one district in Cuvette depart- ment.</td>
</tr>
<tr>
<td>Eruptive fever</td>
<td>Cameroon</td>
<td>Ungraded</td>
<td>16-Feb-17</td>
<td>52 (7)</td>
<td>19</td>
<td>36.5%</td>
<td>The event was reclassified as eruptive fever following confirmation of new cases.</td>
</tr>
<tr>
<td>Food insecurity</td>
<td>Madagascar</td>
<td>G1</td>
<td>23-Feb-17</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Insufficient food security persists according to the 4 comments above.</td>
</tr>
<tr>
<td>Cyclone</td>
<td>Madagascar</td>
<td>G1</td>
<td>07-Mar-17</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>850,000 people affected. There is medical availability for mobile clinics, however some districts have run out of antimalarial drugs.</td>
</tr>
<tr>
<td>Malaria</td>
<td>Zimbabwe</td>
<td>G2</td>
<td>07-Mar-17</td>
<td>55,875</td>
<td>101</td>
<td>18.1%</td>
<td>Mucuna (n=31,111, 55%), Mucuna and East (n=6,822, 15.6%), Mavngia (n=7,062) and Muchadona (n=5,739, 10.1%) provinces account for the vast majority of cases.</td>
</tr>
<tr>
<td>Measles</td>
<td>Kenya</td>
<td>G3 extension</td>
<td>12-Mar-17</td>
<td>17 (9)</td>
<td>0</td>
<td>0.0%</td>
<td>The outbreak has been reported in Dagahaley, Dadaab and HVO refugee camps in Garissa County.</td>
</tr>
<tr>
<td>Malaria</td>
<td>Burundi</td>
<td>Ungraded</td>
<td>01-Jun-17</td>
<td>3,366,654</td>
<td>1,571</td>
<td>50.0%</td>
<td>An upward trend has been recorded during the last 9 weeks and still above the epidemic threshold. The Ministry of Health has developed an accelerated response plan.</td>
</tr>
<tr>
<td>Hepatitis E</td>
<td>Niger</td>
<td>Ungraded</td>
<td>06-Apr-17</td>
<td>894 (167)</td>
<td>33</td>
<td>3.7%</td>
<td>The outbreak is currently confined to the Plata Region, south eastern Nigeria. Of 307 samples tested to date, hepa- titis E virus was detected in 167 (54%) by PCR.</td>
</tr>
<tr>
<td>Monkeypox</td>
<td>Central African Republic</td>
<td>G2 extension</td>
<td>14-Apr-17</td>
<td>3 (1)</td>
<td>0</td>
<td>0.0%</td>
<td>The last case detected was reported in Week 20.</td>
</tr>
<tr>
<td>Anthrax</td>
<td>Zimbabwe</td>
<td>Ungraded</td>
<td>15-Apr-17</td>
<td>14</td>
<td>1</td>
<td>7.1%</td>
<td>Anthrax was isolated from hippoc carcass, which commu- nity members had consumed.</td>
</tr>
<tr>
<td>Typhoid fever</td>
<td>Zambia</td>
<td>G2</td>
<td>22-Apr-17</td>
<td>160 (12)</td>
<td>1</td>
<td>0.6%</td>
<td>The outbreak is currently confined to Busia District, Uganda.</td>
</tr>
<tr>
<td>Malaria</td>
<td>South Africa</td>
<td>Ungraded</td>
<td>03-Apr-17</td>
<td>9,478 (4,484)</td>
<td>76</td>
<td>0.8%</td>
<td>Figures shown are for 2016/17 season from September to May. There has been a high number of cases in Limpopo Province during the recent season compared to previous years.</td>
</tr>
<tr>
<td>Event</td>
<td>Country</td>
<td>Grade</td>
<td>Date of notification to WHO</td>
<td>No. of cases / suspected (confirmed)</td>
<td>No. of deaths</td>
<td>CFR (suspected) / %</td>
<td>Comments</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>--------------------------</td>
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<td>----------------------------</td>
<td>--------------------------------------</td>
<td>---------------</td>
<td>---------------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Dengue fever</td>
<td>Cote d’Ivoire</td>
<td>Ungraded</td>
<td>06-May-17</td>
<td>101 (33)</td>
<td>0</td>
<td>0.0%</td>
<td>A confirmed case of dengue fever was reported by Institut Pasteur Dakar on 28 April 2017. Between 27 and 24 May 2017, there have been 18 new cases reported.</td>
</tr>
<tr>
<td>Dengue haemorrhagic fever</td>
<td>Mauritania</td>
<td>Ungraded</td>
<td>07-Jun-17</td>
<td>1 (1)</td>
<td>0</td>
<td>0.0%</td>
<td>Single confirmed in a traveller from Angola presented with symptoms of haemorrhaging to healthcare on 31 May 2017. The case later tested positive for dengue virus infection.</td>
</tr>
<tr>
<td>Circulating vaccine-derived polio virus (cVDPV)</td>
<td>Democratic Republic of Congo</td>
<td>Ungraded</td>
<td>02-Jun-17</td>
<td>5(5)</td>
<td>0</td>
<td>0.0%</td>
<td>Detailed update given above. This includes 3 separate events: 2 unrelated clusters of cVDPV2 (2 cases each) and a single case of cVFPV1.</td>
</tr>
<tr>
<td>Crimean-Congo haemorrhagic fever (CCHF)</td>
<td>Senegal</td>
<td>Ungraded</td>
<td>06-Jun-17</td>
<td>1 (1)</td>
<td>0</td>
<td>0.0%</td>
<td>Case is an adult from Nouakchott, Mauritania, transferred by the family to Senegal for treatment. This is the third confirmed case from Mauritania in a period of less than 2 months, with no apparent links between this case and the initial two. Local investigations are ongoing.</td>
</tr>
<tr>
<td>Visceral leishmaniasis / Kala-azar</td>
<td>Kenya</td>
<td>Ungraded</td>
<td>05-May-17</td>
<td>208 (147)</td>
<td>7</td>
<td>3.4%</td>
<td>Onset of the first case was 4 January 2017 in Marsabit County. Since then, outbreaks have been detected in Marsabit and Wajir Counties. Since the start of June 2017, all newly reported cases were from Marsabit County.</td>
</tr>
</tbody>
</table>

Recently closed emergencies

<table>
<thead>
<tr>
<th>Event</th>
<th>Country</th>
<th>Grade</th>
<th>Date of notification to WHO</th>
<th>No. of cases / suspected (confirmed)</th>
<th>No. of deaths</th>
<th>CFR (suspected) / %</th>
<th>Comments</th>
<th>Date of last sitrep</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meningitis</td>
<td>Niger</td>
<td>Ungraded</td>
<td>19-Feb-17</td>
<td>3,292 (1,063)</td>
<td>189</td>
<td>5.7%</td>
<td>Overall downtrend continues.</td>
<td>03-Jun-17</td>
</tr>
<tr>
<td>Meningitis</td>
<td>Nigeria</td>
<td>Revised from G2 to ungraded</td>
<td>20-Feb-17</td>
<td>14,513 (463)</td>
<td>1,166</td>
<td>8.0%</td>
<td>On 6 June 2017, a third risk assessment of the event by WHO concluded the risk is now low at national, regional and global levels, and recommended a revision to the emergency grading.</td>
<td>08-Jun-17</td>
</tr>
<tr>
<td>Adverse Event Following Immunisation (AEFI) for measles</td>
<td>South Sudan</td>
<td>Ungraded</td>
<td>02-Jun-17</td>
<td>47</td>
<td>15</td>
<td>31.9%</td>
<td>See last week’s bulletin for full details. This appears to be isolated event, with no additional reports of adverse reactions received to date.</td>
<td>03-Jun-17</td>
</tr>
</tbody>
</table>

Data is 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.