This weekly bulletin focuses on selected public health emergencies occurring in the WHO African region. The WHO Regional Office is currently monitoring 49 events: three Grade 3, six Grade 2, two Grade 1, and 38 ungraded events.

This weekly update focuses on key ongoing events in the region, including the grade 3 humanitarian crises in South Sudan and Nigeria, the grade 2 acute watery diarrhoea outbreak in the context of the humanitarian situation in Ethiopia, the grade 2 outbreak of Ebola virus disease in the Democratic Republic of Congo, the grade 2 meningitis outbreak in Nigeria, the grade 2 cholera outbreak in Tanzania and the ongoing impact of the cyclone in Madagascar.

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:

- The implementation of response plans for diseases with a seasonal pattern
- The establishment of formal and informal data sharing mechanisms between neighboring countries
Event description

The security situation in South Sudan continues to worsen as the rainy season approaches. The warring factions continue to fight. The consequences are deaths, injuries, displacements, relocations by humanitarian partners, and cancellation of assessments and response activities in the country. An ambush on 13 May 2017 resulted in the death of at least 3 truck drivers. Attacks in 3 different areas on 16 and 17 May 2017 (TTC and Nyongwe areas around Yei town and Kagelu town on Lasu road) and subsequent troop movements have resulted in the planned Interagency Rapid Needs Assessment to Roronyo (including Komoi IDPs), Soka and Logo being put on hold, as is the planned response mission to Wonduruba. In addition, the Inter-cluster Famine Response Missions (ICRM) are on hold following insecurity in multiple locations in Unity. An access mission is planned in Juba, with a desk review of proposed priority response locations, including protection concerns.

In Equatoria region, displacement following the 6 May 2017 clashes near Gemieza, Terekeka, has resulted in the displacement of 12,000 people. The RRC and Governor of Terekeka have requested humanitarian aid to support the IDPs currently in Muni Payam along Juba Terekeke road and Gemieza Island, which is difficult to access because of insecurity on the Juba – Bor highway. In addition, the Relief and Rehabilitation Commission (RRC) in Yei has reported that people are arriving from Uganda, DRC and areas within South Sudan. RRC is registering new arrivals.

The cholera outbreak continues to spread with increasing trends in cases and deaths. A total of 246 cases with 7 confirmed and 17 deaths (CFR 6.9%) was recorded this week compared to 266 cases, 7 confirmed and 3 deaths in the previous week. The cases were reported mainly from traditional focal points including Awerial, Duk, Kapoeta North, Kapoeta South, Yiorl East and Yiorl West. However, during the week in review, a fresh outbreak was reported in Tonj East with 82 cases and 16 deaths with lab confirmation pending. Cumulatively, a total of 8,468 cases and 270 deaths (CFR 3.2%) has now been reported as of week 19.

There were 21 suspected cases of Guinea worm reported from Tonj East County. The measles outbreak in the country also continues to grow, with reported cases from 20 counties, again including traditional focal points (Wau, Aweil South, Gogrial West, Gogrial East and Juba). A total of 27 suspected cases was reported in the week, mainly through the routine surveillance system, compared to 24 in the previous week. The cases were reported from Gogrial West, Wau, Jur River and Juba with the highest number recorded from Juba – 18 cases. Cumulative cases as of week 19 – 654 with 4 deaths (CFR 0.61%).

During week 20 (week ending 21 May 2017) timeliness and completeness of weekly reporting for routine surveillance sites were 26% and 100% and 56% respectively for IDPs. The consequences of insecurity have led to low reporting from some sites, compared to 24 in the previous week. The cases were reported from Gogrial West, Wau, Jur River and Juba with the highest number recorded from Juba – 18 cases. Cumulative cases as of week 19 – 654 with 4 deaths (CFR 0.61%).

Public health actions

- WHO has deployed 8 rapid response teams for outbreak response (particularly cholera and measles) and delivered over 16.4 metric tons of medical supplies to vulnerable populations and ensured access to emergency health and nutrition care in remote, hard-to-reach areas.
- WHO and partners delivered urgently needed supplies and services as part of the UN convoy to IDPs in Lainya, South Sudan, including 20 basic unit kits, 20 basic supplementary kits (antimalarial drugs), assorted medical drugs, emergency vaccines and Expanded Programme on Immunization (EPI) supplies, outbreak investigation kits and laboratory transport media.
- WHO’s response teams conducted a rapid health assessment to determine and assess key health needs, as well as a measles follow-up campaign to immunize 9,113 children against measles in the IDP sites in Lainya. This was in addition to routine vaccination and training vaccinators and team supervisors for the mass measles campaign.
- There are 17 humanitarian organizations operating in Aburoc, Upper Nile, providing food, water, sanitation and hygiene, health, nutrition, protection, shelter, non-food items and mine clearance. Oral cholera vaccination was carried out between 19-23 May 2017, targeting 10,000 IDPs, implemented by MSF, with WHO providing supervision and monitoring. 21,500 doses of oral cholera vaccine (OCV) has been made available by WHO. WHO, MSF and the South Sudan MoH have planned routine vaccination in Balliet using volunteer vaccinators in the four health facilities of Adong, Balliet, Gerachoi and Nagdier, which serve as static outreach bases.
- The WFP/UNICEF rapid response mechanism (RRM) team distributed 2 weeks of emergency food to 17,343 people, along with World Vision. WASH partners are supporting with hygiene promotion, sanitation, water treatment and delivery. IRC has distributed plastic sheets, soap, mosquito nets and jerry cans to 4,200 families. There are 4 partners carrying out health activities and MSF-Spain has set up a cholera isolation unit in its clinic, while WHO is providing coordination support and has issued 22,000 doses of OCV for urgent cholera vaccination of IDPs.
- IOM is conducting weekly mobile clinics in Masnaa, where fighting has led to 4,300 IDPs. WHO has donated 2 IEHK and 2 malaria modules to the state MoH to support the response and has also coordinated with camp management to get land for a nutrition partner to run a stabilisation centre in Wau.
In Bentiu/Unity, a mission to Koch for polio vaccination reached 16,810 children.
A RRT has been deployed to Rumbek North, Lakes to investigate an outbreak of acute watery diarrhoea.

Gaps in action
- There are inadequate numbers of emergency responders, including dedicated cluster coordinators and information management personnel in new displacement sites.
- Security concerns, poor communication and transport infrastructure are hampering timely and complete reporting from existing sites.
- To date, only 20-30% of the targeted population has been reached with health services, due to funding constraints and security concerns.
- There are logistical difficulties with procurement and prepositioning of medical SAM kits for inpatient management of medically complicated cases of SAM.
- Only 15.5% of US$12.3 million required by WHO has been received.
- Security concerns limit the rapid deployment of experts in deep field locations.

Situation interpretation
The continued fighting among the warring factions, the intercommunal cattle rustling and in-fighting, the social unrest due to economic difficulties, and the political tensions in South Sudan have created a very complex situation in the country. The humanitarian consequences of this complex situation have been huge. At the same time, the humanitarian response in South Sudan has become a very risky venture, with attacks and ambushes targeting aid workers, both in their compounds and on the road, becoming common.

Opening of humanitarian corridors to the neighbouring countries to transport relief commodities to the affected populations creates a window of hope as the conflict continues. Essential health commodities will also be transported from Sudan. The current on-going mass measles vaccination campaign covering the whole country is expected to improve coverage hence reduce transmission of the disease.

As the rainy season approaches, an increased incidence of acute watery diarrhoea is expected. WHO and partners have response plans in place in spite of the challenges around human resources and access.
The humanitarian needs in North-eastern Nigeria remain huge, although there is improved access to groups of people in need. However, there are still more than 6.9 million people in need of humanitarian assistance across Borno, Yobe and Adamawa and pockets of people are still inaccessible to those offering humanitarian assistance.

An estimated 4.7 million people are in need of emergency food assistance in North eastern Nigeria, and 55,000 people are experiencing famine-like conditions in the worst affected areas. The food security outlook is expected to further deteriorate in the coming months.

There is a significant increase in the numbers of returnees from Cameroon, with more than 70,000 people expected to arrive, mainly in Banki, where there are no secondary facilities available for their management. No precise numbers are yet available, but 11 trucks carrying returnees arrived on 23 May 2017 and 10 trucks were expected on 24 May 2017. The area is water-poor, estimated by Oxfam at 2 litres per person, considerably less than the US-AID figure of 5 litres a day required. Health coverage in the area is minimal, with one WHO ‘hard-to-reach team’ (HRT), one UNICEF primary health care (PHC) clinic and sporadic coverage by an MSF mobile team from Cameroon.

The security situation remains unpredictable in the light of changing techniques such as suicide bombings and frequent incursions into urban areas. The volatility of the security situation constitutes the greatest challenge to the provision of regular health assistance and any scale up of the response.

Public health actions

- A meningitis vaccination campaign started on 19 May 2017 in Yobe. A team of two epidemiologists deployed from GOARN network partners and a microbiologist will support implementation of the campaign.
- A mission from the State Rapid Response Teams was conducted in Damasak to support training in case detection and management of hepatitis E in health facilities and at the border with Niger.
- WHO chairs the Infant and Young Child Feeding (IYCF) Technical Working Group meetings in Borno State and is a member of the community-based Management of Acute Malnutrition (CMAM) task force and information management Technical Working Group and provides technical inputs to SMART (Standardised Monitoring and Assessment of Relief and Transition) surveys and other nutrition assessments conducted in Borno.
- WHO and UNICEF are developing a strategy to improve the management and treatment of micro-nutrient deficiencies in Borno State. WHO, through hard-to-reach mobile health teams, distributes nutrition products to children aged 6–23 months and UNICEF provides a supply of micro-nutrient powder.
- WHO is coordinating with WFP to support pregnant and lactating women who are living in inpatient centres with their children who are being treated for complicated severe acute malnutrition (SAM).
- Rehabilitation of health facilities has been completed in Konduga, Chibok, Gwoza, Damboa, Kaga, Dikwa and Mobbar. Interventions will be now prioritised in Bama, Blu, A/Uba and Kala Balge.

Situation interpretation

The volatile security situation, coupled with the limited number of health partners and insufficient funds received by the health sector, inhibit the expansion of health services. The effort to reconstruct and rehabilitate health facilities needs to continue, along with the provision of health services through mobile teams.

The implementation of preparedness and response plans for malaria and diarrhoeal diseases are an urgent priority in the coming months. At the same time, given increased cross border movement of populations, surveillance for other communicable diseases has to be intensified.
Event description

The main factor aggravating the humanitarian crisis in Ethiopia, especially in the South-East, is the drought, which is leading to acute water shortages and population movements in search of water and pasture. It is also leading to food insecurity as a result of crop losses and livestock deaths and rising levels of severe acute malnutrition (SAM), along with outbreaks of epidemic-prone diseases. Refugees are also arriving from drought-affected border towns in Somalia and from South Sudan as a result of spates of violence.

Over the last 6 weeks the outbreak of acute watery diarrhoea (AWD) in Ethiopia has continued to decline from 600 cases per day in weeks 12-14 to 80 cases per day in week 20 (week ending 21 May 2017). In week 20, a total of 556 cases were reported from 6 out of 11 regions: SNNP, Amhara, Afar, Oromia, SNNP and Somali. After a gap of 8 weeks with no cases, SNNP has had 19 new cases across both week 19 and 20. Dollo, in Somali region, continues to be a priority area for interventions. From the beginning of 2017, a total of 33,631 cases and 780 deaths (CFR 2.3%) have been reported in the country. 23 woredas (districts) are currently affected, with 90% of cases from Somali region.

During week 20, a total of 57 measles cases were reported, with a total of 1,881 suspected measles cases in 2017. Oromia and Amhara account for the bulk of cases. Nineteen percent of measles cases had not been immunized at all, with a further 45% of unknown immunization status.

Data from Oromia, Afar, and Amhara show a total of 2,335 cases of SAM in the most recent week, with 40,219 cases in 2017. Oromia accounts for 64% of these cases. Over 90% are managed at outpatient therapeutic programmes with the remainder admitted to stabilization centres.

Public health actions

WHO continues to strengthen the response to the AWD outbreak through: the deployment of surge teams to the Somali Region to scale up response activities; case management strengthening such as on-the-job training on Infection Prevention and Control and mapping of SAM cases and IDP sites; WASH efforts such as the procurement of test kits and reagents for water quality testing and monitoring, and the distribution of water treatment chemicals to AWD-affected woredas in Somali region; and health promotion activities such as the engagement of religious and community leaders, teachers and other leading figures as well as promoting early treatment-seeking behaviour.

WHO has repurposed some of its technical staff from the Country Office in Addis Ababa as part of the surge response to scale up capacity in the Somali Region.

The WHO Country Representative to Ethiopia led a team on a high-level advocacy visit to the regions to sensitize and get buy-in into the post 90-day plan being developed by WHO to operationalise the Public Health Emergency Management process.

A measles vaccine campaign in the Somali region for all children aged 6 months to under 15 years is due to start next week, between 29 May and 4 June in the drought and AWD affected zones. A second phase will cover remaining zones. The vaccine has been distributed to all but two woredas.

Situation interpretation

Between January and May 2017, 100 woredas out of 770 nationwide have been affected by the AWD outbreak, a much wider geographical spread than for the same period of 2016, where only 23 woredas were affected. Despite the decline of AWD seen in recent weeks, Ethiopia remains at high risk of nationwide spread due to omni-present risk factors such as poor sanitation and water supply. There is also the risk of international spread due to cross-border movement between Somalia, Kenya, and South Sudan, which are also experiencing the effects of the drought. Adjacent Somalia has also been experiencing a similarly large AWD/cholera outbreak with 40,402 cases and 689 deaths in 2017, while South Sudan’s AWD/cholera epidemic has led to 7,735 cases and 246 deaths in 2017.

Four-fifths of Ethiopians rely on agriculture, which is still recovering from the El Niño-induced drought of 2015/16. The October to December 2016 rains failed in southern and southeastern Ethiopia and, despite an improvement in rainfall since late April, OCHA estimates that the number of people requiring humanitarian assistance has increased from 5.6 million to 7.78 million. This is expected to increase further in the second half of the year.

Ethiopia hosts one of the largest refugee populations in Africa, with over 780,000 refugees (source-UNHCR), and the ongoing conflict in South Sudan has led to families arriving in Ethiopia destitute. This has placed further strain on limited resources.

Despite funding requirements not being met, WHO and partner efforts are showing signs of success in reducing the AWD and measles outbreaks. However, the long term effects of drought, the large refugee population, ongoing disease outbreaks, and malnutrition continue to pose a major humanitarian challenge.
Event description

The meningitis outbreak situation in Nigeria continues to improve. In week 20 (week ending 21 May 2017) a total of 250 new cases were reported, compared to week 19 (week ending 14 May 2017) where there were 523 cases and 43 deaths (CFR 8.2%). As of 17 May 2017, a cumulative 14,500 suspected cases and 1,114 deaths (CFR 8%) were reported from 24 states. Of the reported cases, 901 (6.4%) were laboratory tested and 423 (46.9%) of the tested specimens were confirmed positive for bacterial meningitis, mainly Neisseria meningitidis serogroup C (73%) among those testing positive.

The outbreak is still largely localised to 6 most affected states [Zamfara, Sokoto, Katsina, Yobe, Kebbi, and Kano]. In the last 4 weeks (epi-weeks 16-19) 16 Local Government Areas (LGAs) have reached alert threshold and are under enhanced surveillance, while 26 LGAs have reached the epidemic threshold, with full outbreak investigation and control measures being implemented. Since the beginning of the outbreak, 34 LGAs have reached epidemic level at some time.

Public health actions

The national emergency response to this outbreak is being coordinated by the Nigeria Centre for Disease Control (NCDC), WHO and partners such as UNICEF, CDC, University of Maryland, Nigeria Field Epidemiology and Laboratory Training Program (NFELTP), eHealth Africa, Médecins Sans Frontières (MSF), and Rotary International are providing support. The following activities are being undertaken by the various response pillars:

- **Surveillance and Epidemiology:** WHO mobilized and trained 400 community informants to support surveillance activities at the community level in Sokoto and Zamfara states. In addition, experts are being deployed at the state level to strengthen surveillance and support the response. There is also daily collation, cleaning and harmonization of outbreak data to enable monitoring of trends and impact of response activities.
- **Case Management and Laboratory Diagnosis:** WHO deployed 50 health workers in 10 teams to Sokoto and Zamfara States. Case management protocols have been printed and distributed to health facilities in the most affected States. In addition, 20,000 doses of ceftriaxone were mobilized and distributed to the affected states. In order to strengthen diagnostic capacity, lumbar puncture kits, Pastorex and other laboratory reagents and supplies were distributed. In the week ending 17 May 2017, 54 new cases are being managed (CFR 8.2%) in Zamfara State and 122 cases in Sokoto State (CFR 4.2%). The team is also strengthening capacity for culture in Zamfara state. Lumbar puncture rate among new cases was 81% in Zamfara with 44 samples collected and 38% in Sokoto State with 46 samples collected.
- **Vaccine Needs Assessment and Campaign Management:** Reactive vaccination campaigns have been conducted in Zamfara, Katsina, and Sokoto States. In Yobe state, a reactive vaccination campaign is being planned for 19-23 May 2017, using trivalent meningitis ACW vaccine, with 189,280 doses of polyvalent ACW conjugate vaccine. A second phase of reactive vaccination in Zamfara is being planned for 22-26 May 2017. The total number of doses of ACW vaccine available for this phase is 666,500. WHO has deployed experts to the field ahead of the reactive meningitis campaign to monitor the process.
- **The AFRO Regional Emergency Director met with the Director of Nigeria CDC at a side meeting of the World Health Assembly. Discussions were held regarding the need to improve preparedness and surveillance for a more preventive approach to meningitis in addition to other known risks such as Yellow fever and Lassa fever.**

Situation interpretation

The meningitis outbreak situation in Nigeria has continued to improve as control measures have been scaled up considerably. The epidemic peaked in week 14 and 15 and started a steady decline from week 16. Of the 34 LGAs that were in epidemic phase, 30 have exited the epidemic threshold. The worst affected states have either completed, or are in the process of completing, reactive vaccination campaigns. The supplies of meningitis vaccines, as well as other commodities, including ceftriaxone, laboratory reagents and test kits have also increased. Deployment of national and international experts to the most affected states improved. These factors were instrumental in enhancing the effectiveness of response interventions on the ground.

With these gains and after controlling the outbreak, attention should be focused on strengthening systems and structures for prevention, preparedness and response to meningitis including other public health events. In particular (in line with meningitis preparedness), there is a need to strengthen the capacity for basic and cheaper microbiology tests at the general hospital level. Bacterial culture is the confirmatory test for meningitis. Alongside the testing capacity, systematic collection of cerebrospinal fluids from suspected meningitis cases for laboratory diagnosis needs to be addressed.

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**Geographical distribution of meningitis cases in Nigeria, 18 December 2016 - 21 May 2017.**

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**Meningitis**

<table>
<thead>
<tr>
<th>Nigeria</th>
<th>13,943 Cases</th>
<th>1,112 Deaths</th>
<th>8% CFR</th>
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Timeline of events of outbreak of Cerebrospinal Meningitis in Nigeria, December 2016 — May 2017

Dec 2016

- Case 1 reported in Zamfara State

Feb 2017

- Meningitis crosses epidemic threshold in Kebbi LGA in Sokoto State

March 2017

- Nigerian Government notifies WHO
- Over 100,000 doses of PLC vaccines imported from UK

April 2017

- Meningitis outbreak grows at level 2 by WHO
- WHO sets up regional IMS
- Receptive vaccination commences in Katsina State

May 2017

- Reactive vaccination commences in Yobe State
- 41,000 vials of ACW conjugate vaccines arrived in Yobe State for reactive campaign
- 20,000 vials of pentavalent vaccine arrive in Country from WHO
Event description

The Democratic Republic of Congo (DRC) Ministry of Health with the support of WHO and other partners continue to strengthen the response to the Ebola virus disease outbreak in Likati Health Zone, Bas Uele Province in the north-east of the Democratic Republic of Congo (DRC). Since the beginning of the outbreak on 21 April 2017, the number of confirmed cases remains at 2 and the number of deaths remains at 4 (CFR 8.8%).

Due the strengthening of surveillance, alert and suspected cases continue to be reported and screened. However, predictive modelling conducted by WHO suggests that it is unlikely that we will see a large-scale outbreak, although sporadic cases may be detected.

Contact tracing activities have been enhanced, with a cumulative 575 contacts registered as of 26 May 2017. Of these, 226 were followed-up over a 21 day observation period, leaving 349 contacts under close monitoring.

PCR was performed on 5 initial blood samples at Institut National de Recherche Biomédicale (INRB) in Kinshasa with 2 returning a positive Zaire ebolavirus result on 11 May 2017. These results were confirmed at Centre International de Recherches Medicales (CIRMF) in Gabon. An additional 14 cases have tested negative for EVD through PCR at the Likati mobile laboratory. Depending on when samples were collected relative to the period of viraemia, suspected cases may require additional serology testing or re-drawing of samples.

Public health actions

- An interagency response team is coordinated by the DRC Ministry of Health, supported by WHO, MSF, UNICEF, ALIMA, IFRC, WFP, UNHAS and other partners
- A multi-disciplinary team of 14 national experts from central level has arrived in Likati to support the response
- Based on limited available data on confirmed and probable cases, modelling suggests the risk of further cases is currently low. This will need to be confirmed in the coming days.
- Specimens continue to be collected and tested through a newly arrived INRB mobile laboratory in Likati town at the Likati Referral Hospital. Another mobile laboratory has arrived in Buta and is currently being set up.
- The first Ebola Treatment Centre (ETC) has been set up and is now admitting patients. A support protocol has been developed by MSF, ALIMA and MSP. On 18 May 2017 the first 4 patients were admitted to the ETC in Likati, with a fifth admission the following day. Negative EVD results were obtained for all 4 patients. They have since been discharged on recovery.
- The government of DRC and MSF, with the support of WHO and other partners, continue to prepare to make the rVSV EBOV experimental/investigational vaccine available. The vaccine will be offered to contacts, and contacts of contacts, of a confirmed EVD case, including healthcare workers and field laboratory workers. This will be done with informed consent only, following approval from the national regulatory authority and Ethics Review Committee of the Democratic Republic of the Congo. However if there is no further transmission the vaccine may not be required.
- An appeal for funding has been sent by WHO to mobilise $10.5 million dollars to support critical response activities
- Infection, prevention and control in the field continues to be strengthened. This includes WASH Standard Operating Procedures being adapted for field use, distribution of Personal Protective Equipment (PPE) to health facilities in the affected health areas (distribution will be extended to the entire Likati health zone and the bordering zone for ‘ring’ protection) as well as continued training of members of the Red Cross in the preparation of chlorine solutions, how to disinfect homes and how to conduct safe burials.
- Partners continue to support case management with a team from ALIMA deployed to establish an ETC in Muma and a team from MSF in Nambwa to strengthen case management and other field activities.
- Social mobilization, communication engagement and risk communications are ongoing with awareness campaigns being conducted through radio, and in churches and markets as well as planned production of risk communication materials in Lingala.
- There are currently ongoing discussions with a consortium of institutions from France, Belgium, United States and Germany who have offered to support DRC in the environmental investigation into the source of the outbreak at the human-animal interface.
- Unusually high mortality has been reported in the local pig population. An investigation of the causes underpinning this observation is being considered.
- A briefing was given at the World Health Assembly by the Democratic Republic of Congo Minister of Health representative and WHO.

Situation interpretation

The current outbreak constitutes the 8th EVD outbreak in DRC. Given this longstanding experience over the past decades, national authorities have gained valuable expertise in controlling EVD outbreaks. However, as Ebola is a highly dangerous pathogen it is vital to implement and maintain functional coordination of partners, communications, resource mobilization and transparency. Accordingly, the DRC Ministry of Health continues to collaborate with WHO and other partners to scale up control interventions and facilitate national coordination meetings.
Cholera

Tanzania

29,575 Cases 463 Deaths 1.6% CFR

Since January, the number of cholera cases in Tanzania has fallen markedly. The outbreak, which started in Dar es Salaam in August 2015, spread to 112 districts in 23 out of 25 regions. It is now confined to four districts in two regions. During the past week (ending 21 May), 39 new suspected cholera cases and 5 deaths were reported from Dar es Salaam (22 cases) and Morogoro (17 cases). This represents a slight increase in cases from last week where there were 33 cases. All 5 deaths were reported from Kilombero district in Morogoro. Zanzibar, which has previously observed a much higher cumulative attack rate (293 per 100,000 population) compared to the Tanzanian mainland (attack rate of 79 per 100,000 population), has reported no cases in the past week and 6 cases and 0 deaths in the last 3 weeks.

As of 21 May the cumulative number of cholera cases reported from the Tanzanian mainland since 15 August 2015 is 25,238 including 395 deaths (CFR 1.6%). The cumulative number of cases and deaths reported from Zanzibar is 4,337 including 68 deaths (CFR 1.6%). The current total number of cases for Tanzania is 29,575 cases including 463 deaths. The CFR remains unchanged at 1.6%.

Public health actions

- Regular national cholera task force and subcommittee meetings and high level teleconferences are held between medical officers in hotspot districts, the Ministry of Health, and the President’s Office.
- WASH interventions, such as the follow up of adequate aqua tabs and medical supplies in at-risk households in Dar es Salaam and Morogoro, and bulk water chlorination in Temeke District, Dar es Salaam is ongoing.
- Community sensitization and awareness activities are being broadcast through local radio, national TV stations, and social media.
- Follow up continues with the regions to ensure prompt and accurate reporting of all suspected cholera cases and confirmation of suspected cholera cases.

Situation interpretation

This is the second largest cholera outbreak in Tanzania’s history, after that of 1997 where 40,226 people were affected, claiming 2,268 lives. Compared to 2015 and 2016, the cholera outbreak has significantly reduced in 2017, opening a window to finally bring it to an end. This can be attributed to engaged national, regional, and district leadership, implementation of cholera prevention and control measures, and an increase in community awareness and participation. However, since the start of the rainy season in May and with poor drainage in some urban areas, continued limited access to safe piped water, and low toilet coverage in most regions and districts, the threat of a surge in cases is high. Furthermore, funding for cholera prevention and control activities falls short of the optimum.

To support DRC in its continued efforts in bringing the current outbreak to an end, a target of US$ 14 million was announced to fund response activities drafted in the national response plan. The plan covers critical activities in EVD containment which may be challenging if the outbreak expands, particularly as affected areas are exceedingly difficult to reach. While the situation appears to be stabilizing, suspected cases do continue to be reported, requiring increased vigilance to be maintained. WHO calls on both national authorities and partners to rapidly fill this important financial gap.
Event description
The Tropical Cyclone Enawo, a category 4 cyclone on the Saffir-Simpson scale, landed in the Sava region of northeast Madagascar on 7 March 2017. The government declared a national disaster on 14 March and launched an appeal for international aid. On March 17, the National Bureau of Risk and Disaster Management (BNGRC) reported that some 433,985 people were affected. There have been 89 deaths, 253 injured and 5,293 displaced. Severe wind-related damage was reported in the Antalaha district (Sava region) where the cyclone landed, and widespread, but largely temporary, flooding occurred throughout the northeastern half of the country.

Considerable damage was caused to homes, crops, schools, as well as water and sanitation infrastructure. Crop losses are estimated at 65% in the Sava region (Sambava and Antalaha), 85% at Maroantsetra, and 58% in the Brickaville, Farafangana and Vangaindrano districts. Sixty-five to eighty-five percent of subsistence crops (rice), cash crops and fruit trees have been severely damaged in the northeast regions and this contributes to a high risk of food insecurity. More than 1,300 wells have been flooded, polluting water, while more than 250 water infrastructures (83 boreholes, 125 wells, 42 hand pumps) have been damaged. This destruction of safe water sources leaves a total of 168,000 people without access to water, hygiene and sanitation. One hundred and four health structures were damaged, 16 of which were totally destroyed, resulting in an interruption in the provision of health services to 250,000 people.

Data from electronic surveillance in 16 health districts in the country show an upward trend in reported cases of malaria in some health sectors in the Antalaha district. Data on some affected districts (Maroantsetra) are poor due to lack of a functional surveillance system.

Public health actions
- A meeting of health stakeholders (WHO, UNFPA, Mahena Miaraka, Red Cross) was organized in Antalaha, with a view to better coordinating the actions of each partner. The WHO Field Coordinator participated in the quarterly review of Antalaha Centres Santé de Bases (CSB) and Emergency Monitoring and Distribution and supported the development of the CSB and Health District PTA.
- All emergency medical kits have been routed to the targeted Centres Santé de Bases.
- Three mobile health teams responsible for conducting outreach activities for remote populations have been constituted with the recruitment of 3 physicians and 6 paramedics, and are ready to carry out their first operations at the beginning of June.

Situation interpretation
The main constraints to the supply of health services in the affected areas are access difficulties in certain localities due to poor roads or floods. Although all the health facilities that had suspended their activities due to cyclone damage have resumed service thanks to the emergency interventions of the WHO Health Cluster partners, the need for repair or even reconstruction remains to enable their full operationalization. Monitoring by the WHO Nutrition Cluster has not shown any clear threats of malnutrition so far. The main health needs include: free access to basic healthcare for affected persons; protection against diseases with epidemic potential (malaria, water-borne diseases), reconstruction of damaged sanitary facilities, strengthening integrated disease surveillance, provision of emergency medical kits. Of the US$2.8 million requested a gap of US$1.8 million remains. The African Development Bank has pledged US$1 million to the health and education sectors and the European Union will also provide finance. The Government of India has promised support for drugs and equipment needs. Continued support of partners is required to assist Madagascar through this recovery and restoration period.
Summary of major challenges and proposed actions

Challenges

- The need to fully fund and effectively implement appropriate response plans for diseases that occur on a seasonal basis is seen in a number of countries this week. For example for malaria and diarrhoeal diseases in Nigeria as well as acute watery diarrhoea and other diarrhoeal diseases in South Sudan. These are essential to be able to identify an outbreak early and mitigate their impact.

- The movement of populations across international borders can lead to the spread of disease. This is highlighted this week in the EVD situation in the Democratic Republic of Congo close to the border with the Central African Republic as well as the movement of populations between South Sudan, Somalia and Ethiopia and between Cameroon and Nigeria. The importance of cross border surveillance and international sharing of information is key to being able to rapidly detect persons exhibiting symptoms of an infectious disease.

Proposed actions

- WHO country offices should support ministries of health to develop and implement disease specific response plans. WHO Regional office can support country offices by developing templates for response plans including appropriate costings and budgets. The funding and effective implementation of these response plans should be a priority.

- The need for cross border collaboration has been highlighted in past issues of this weekly bulletin. WHO should support ministries of health to develop relationships with counterparts in neighbouring countries to enhance the sharing of information. For example through formal data sharing agreements and communications as well as sharing of weekly IDSR data and outbreak situation reports.
### All events currently being monitored by WHO AFRO

<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><strong>OUTBREAK</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cholera</td>
<td>DRC</td>
<td>2</td>
<td>1 Jan 2015</td>
<td>39,553</td>
<td>1448</td>
<td>3.7</td>
<td>Thirty-nine new cases reported in epi week 20 and 5 deaths were reported from Mainland Tanzania. “The cumulative number represents both mainland and Zanzibar.</td>
<td>12/05/2017</td>
</tr>
<tr>
<td>Cholera</td>
<td>Tanzania</td>
<td>2</td>
<td>04 April 2015</td>
<td>29,575</td>
<td>462</td>
<td>1.6</td>
<td></td>
<td>21/05/2017</td>
</tr>
<tr>
<td>Necrotising cellulitis / fasciitis</td>
<td>Sao Tome &amp; Principe</td>
<td>2</td>
<td>10 Jan 2017</td>
<td>1680</td>
<td>0</td>
<td>0</td>
<td>Twenty-eight patients have benefited from reconstructive surgery (skin grafting).</td>
<td>24/05/2017</td>
</tr>
<tr>
<td>Meningitis</td>
<td>Nigeria</td>
<td>2</td>
<td>20 Feb 2017</td>
<td>13,943</td>
<td>1112</td>
<td>8</td>
<td>Neisseria meningitides serogroup C remains the predominant (72.7%) cause of meningitis among those who tested positive. The first test ever of PCR diagnosis of bacterial meningitis was successfully carried out at the National Reference Laboratory in Abuja</td>
<td>14/05/2017</td>
</tr>
<tr>
<td>AWD</td>
<td>Ethiopia</td>
<td>3</td>
<td>Beginning 2017</td>
<td>33,631</td>
<td>780</td>
<td>2.3</td>
<td></td>
<td>20/12/2017</td>
</tr>
<tr>
<td>Hepatitis E</td>
<td>Chad</td>
<td>1</td>
<td>1 Sept 2016</td>
<td>1452 (98)</td>
<td>17</td>
<td>1.2</td>
<td>The outbreak was officially declared by the Minister of Health. A joint urgent response plan has been finalized amongst partners and MoH</td>
<td>21/05/2017</td>
</tr>
<tr>
<td>Cholera</td>
<td>Angola</td>
<td>1</td>
<td>4 Jan 2017</td>
<td>336</td>
<td>15</td>
<td>4.5</td>
<td></td>
<td>9/04/2017</td>
</tr>
<tr>
<td>Hepatitis E</td>
<td>Niger</td>
<td>-</td>
<td>12 April 2017</td>
<td>687</td>
<td>30</td>
<td>4.4</td>
<td>The MoH and partners continue to intensify WASH activities. CERMES has requested support to reinforce laboratory capacity.</td>
<td>24/05/2017</td>
</tr>
<tr>
<td>Cholera</td>
<td>Kenya</td>
<td>-</td>
<td>10 Oct 2016</td>
<td>303 (36)</td>
<td>5</td>
<td>1.7</td>
<td></td>
<td>18/05/2017</td>
</tr>
<tr>
<td>Dengue fever</td>
<td>Burkina Faso</td>
<td>-</td>
<td>29 Oct 2016</td>
<td>2743</td>
<td>21</td>
<td>0.8</td>
<td></td>
<td>12/04/2017</td>
</tr>
<tr>
<td>Typhoid fever</td>
<td>Zimbabwe</td>
<td>-</td>
<td>21 Nov 2016</td>
<td>2572 (95)</td>
<td>10</td>
<td>0.4</td>
<td></td>
<td>20/03/2017</td>
</tr>
<tr>
<td>Lassa fever</td>
<td>Nigeria</td>
<td>-</td>
<td>Dec 2016</td>
<td>490 (189)</td>
<td>104</td>
<td>21</td>
<td>16 states have been affected so far. The outbreak is currently active in 10 states.</td>
<td>17/04/2017</td>
</tr>
<tr>
<td>Dengue fever</td>
<td>Cabo Verde</td>
<td>-</td>
<td>4 Jan 2017</td>
<td>124 (30)</td>
<td>0</td>
<td>0</td>
<td>Investigations by the deployed entomologist and virologist from IPD determined the recent circulation of the virus and the presence of Aedes aegypti as the vector.</td>
<td>16/04/2017</td>
</tr>
<tr>
<td>Cholera</td>
<td>South Sudan</td>
<td>-</td>
<td>Beginning 2017</td>
<td>7735</td>
<td>246</td>
<td>3.2</td>
<td>Currently, 9 (47%) out of 19 countries ever affected (since June 2016) have reported cholera cases in the past 4 reporting periods (weeks) and are considered to have active transmission.</td>
<td>05/05/2017</td>
</tr>
<tr>
<td>Measles</td>
<td>South Sudan</td>
<td>-</td>
<td>Beginning 2017</td>
<td>590</td>
<td>4</td>
<td>0.7</td>
<td>Since the beginning of 2017, measles outbreaks have been reported up to week 19, out of which 3 of them are currently active.</td>
<td>05/05/2017</td>
</tr>
<tr>
<td>Measles</td>
<td>Ethiopia</td>
<td>-</td>
<td>Beginning 2017</td>
<td>1824 (820)</td>
<td></td>
<td></td>
<td>A total of 50-laboratory confirmed measles outbreaks have been reported up to week 19, out of which 3 of them are currently active.</td>
<td>14/05/2017</td>
</tr>
<tr>
<td>Meningitis</td>
<td>Niger</td>
<td>-</td>
<td>19 Feb 2017</td>
<td>3231 (1063)</td>
<td>187</td>
<td>5.8</td>
<td>Particular emphasis is placed on the continuation of free and adequate case management. There is also significant number of serogroup NmX (18%) not preventable by vaccination.</td>
<td>19/05/2017</td>
</tr>
<tr>
<td>Monkeypox</td>
<td>Congo</td>
<td>-</td>
<td>1 Feb 2017</td>
<td>70 (7)</td>
<td>5</td>
<td>7.1</td>
<td>Reported from four different districts in Likouala Department and one district in Cuvette department.</td>
<td>23/04/2017</td>
</tr>
<tr>
<td>Meningitis</td>
<td>Togo</td>
<td>-</td>
<td>03 Feb 2017</td>
<td>489 (104)</td>
<td>34</td>
<td>7.0</td>
<td>Seven districts are in the alert threshold and one district is in epidemic threshold.</td>
<td>12/05/2017</td>
</tr>
<tr>
<td>Meningitis</td>
<td>Benin</td>
<td>-</td>
<td>433 (13)</td>
<td>40</td>
<td>9.2</td>
<td>Six districts are in the alert threshold and one district is in epidemic threshold.</td>
<td>12/05/2017</td>
<td></td>
</tr>
<tr>
<td>Monkeypox</td>
<td>Central African Republic</td>
<td>-</td>
<td>09 Feb 2017</td>
<td>47 (5)</td>
<td>0</td>
<td>0</td>
<td></td>
<td>19/04/2017</td>
</tr>
<tr>
<td>Measles</td>
<td>Guinea</td>
<td>-</td>
<td>08 Feb 2017</td>
<td>5780 (3951)</td>
<td>19</td>
<td>0.3</td>
<td></td>
<td>26/04/2017</td>
</tr>
<tr>
<td>Cholera</td>
<td>Mozambique</td>
<td>-</td>
<td>16 Feb 2017</td>
<td>1400</td>
<td>3</td>
<td>0.2</td>
<td></td>
<td>13/03/2017</td>
</tr>
<tr>
<td>Meningitis</td>
<td>Niger</td>
<td>-</td>
<td>19 Feb 2017</td>
<td>3231 (1063)</td>
<td>187</td>
<td>5.8</td>
<td>Particular emphasis is placed on the continuation of free and adequate case management. There is also significant number of serogroup NmX (18%) not preventable by vaccination.</td>
<td>19/05/2017</td>
</tr>
<tr>
<td>Leishmaniasis</td>
<td>Cameroon</td>
<td>-</td>
<td>20 Feb 2017</td>
<td>48</td>
<td>17</td>
<td>35</td>
<td>Deployment of an expert to train people in managing cases and perform active screening in process</td>
<td>30/03/2017</td>
</tr>
<tr>
<td>Lassa fever</td>
<td>Togo</td>
<td>-</td>
<td>24 Feb 2017</td>
<td>12 (7)</td>
<td>4</td>
<td>33</td>
<td></td>
<td>19/03/2017</td>
</tr>
<tr>
<td>Meningitis</td>
<td>Cameroon</td>
<td>-</td>
<td>9 Mar 2017</td>
<td>633(32)</td>
<td>40</td>
<td>6.3</td>
<td>There are 14 districts in alert and 1 in epidemic</td>
<td>02/06/2017</td>
</tr>
<tr>
<td>Lassa fever</td>
<td>Sierra Leone</td>
<td>-</td>
<td>90 (7)</td>
<td>6</td>
<td>6.7</td>
<td></td>
<td></td>
<td>10/04/2017</td>
</tr>
<tr>
<td>Anthrax</td>
<td>Tanzania</td>
<td>-</td>
<td>11 Mar 2017</td>
<td>1</td>
<td>0</td>
<td>-</td>
<td>An upward trend has been recorded during the last two weeks and is still above the epidemic threshold. The Ministry of Health has developed an accelerated response plan</td>
<td>15/05/2017</td>
</tr>
<tr>
<td>Malaria</td>
<td>Burundi</td>
<td>-</td>
<td>13 Mar 2017</td>
<td>3,046,070</td>
<td>1402</td>
<td>0.05</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>Cholera</td>
<td>Malawi</td>
<td>-</td>
<td>15 Mar 2017</td>
<td>18</td>
<td>0</td>
<td>0</td>
<td>Presence of the H1N1 influenza virus has been confirmed in 23/29 samples tested at IPD, Dakar.</td>
<td>19/03/2017</td>
</tr>
<tr>
<td>Influenza like illness (H1N1)</td>
<td>Senegal</td>
<td>-</td>
<td>28 Mar 2017</td>
<td>118</td>
<td>3</td>
<td>2.5</td>
<td>New confirmed case reported in Mbaki district bordering Likouala province in Congo where an outbreak is ongoing. Previous 5 confirmed cases in February 2017 in Mboumbou province.</td>
<td>19/04/2017</td>
</tr>
<tr>
<td>Monkeypox</td>
<td>Central African Republic</td>
<td>-</td>
<td>15 April 2017</td>
<td>1 (1)</td>
<td>0</td>
<td>0</td>
<td>Detailed update above</td>
<td>25/04/2017</td>
</tr>
<tr>
<td>Anthrax</td>
<td>Zimbabwe</td>
<td>-</td>
<td>15 April 2017</td>
<td>14</td>
<td>1</td>
<td>7.1</td>
<td>All cases ate meat from same cow. 37 additional persons being followed up. In-depth investigation ongoing</td>
<td>22/04/2017</td>
</tr>
<tr>
<td>Monkeypox</td>
<td>Sierra Leone</td>
<td>-</td>
<td>17 April 2017</td>
<td>1 (1)</td>
<td>0</td>
<td>0</td>
<td>On 23rd April 2017, the single confirmed case of Monkeypox was discharged from Pujehun Government Hospital where he had been admitted since 25th March 2017. Outbreak response activities with heightened surveillance will continue for another 42 days from the date of discharge to prevent and promptly detect new cases.</td>
<td>23/04/2017</td>
</tr>
</tbody>
</table>
### Meningococcal Disease

**Country:** Liberia  
**Date of notification to WHO:** 25 April 2017  
**No. of cases / suspected (confirmed):** 31 / 13  
**No. of deaths:** 42  
**CFR (suspected) / %:**  
**Comments:** US CDC and National Reference Laboratory confirmed 13 cases positive for Neisseria meningitides serotype C by PCR. Samples have been sent to a laboratory in Vienna for toxicology and chemical testing.  
**Date of last sitrep:** 18/05/2017

### Dengue Fever

**Country:** Côte d’Ivoire  
**Date of notification to WHO:** -  
**No. of cases / suspected (confirmed):** 50 (12) / 0  
**No. of deaths:** 0  
**CFR (suspected) / %:**  
**Comments:** A confirmed case of dengue fever was reported by Institut Pasteur Dakar on April 28, 2017. Fifty suspected cases from Abidjan and no deaths reported in week 18.  
**Date of last sitrep:** 10/05/2017

### CCHF

**Country:** Senegal  
**Date of notification to WHO:** 06 May 2017  
**No. of cases / suspected (confirmed):** 2 (2)  
**No. of deaths:**  
**CFR (suspected) / %:**  
**Comments:** Cases arrived in Senegal from Mauritania on 29 April 2017.  
**Date of last sitrep:** 10/05/2017

### Ebola Virus Disease

**Country:** DRC  
**Date of notification to WHO:** 11 May 2017  
**No. of cases / suspected (confirmed):** 45 / 4  
**No. of deaths:**  
**CFR (suspected) / %:** 8%  
**Comments:** WHO informed on 09 May.  
**Date of last sitrep:** 26/05/2017

### Malaria

**Country:** South Africa  
**Date of notification to WHO:** -  
**No. of cases / suspected (confirmed):** 4484 / -  
**No. of deaths:**  
**CFR (suspected) / %:**  
**Comments:** Limpopo Province reported an upsurge in number of reported cases on outbreak start date on week 14 April 2017.  
**Date of last sitrep:** 10/05/2017

### Dengue

**Country:** Kenya  
**Date of notification to WHO:** -  
**No. of cases / suspected (confirmed):** 153 / -  
**No. of deaths:**  
**CFR (suspected) / %:**  
**Comments:** Dengue fever cases reported in April.  
**Date of last sitrep:** 12/05/2017

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### 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>Humanitarian crisis</td>
<td>South Sudan</td>
<td>3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Currently insecurity is restricting the delivery of humanitarian assistance in most parts of the conflict affected states</td>
<td>30/04/2017</td>
</tr>
<tr>
<td>Humanitarian crisis</td>
<td>Nigeria</td>
<td>3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Detailed update given above</td>
<td>15/04/2017</td>
</tr>
<tr>
<td>Humanitarian crisis</td>
<td>Ethiopia</td>
<td>3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Ethiopia continues to experience drought, acute water shortages, population displacement(IDPs) and food insecurity resulting to rising malnutrition and increasing spread of AWD</td>
<td>14/05/2017</td>
</tr>
<tr>
<td>Humanitarian crisis</td>
<td>Cameroon</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>10/05/2017</td>
</tr>
<tr>
<td>Humanitarian crisis</td>
<td>Central African Republic</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>10/05/2017</td>
</tr>
<tr>
<td>Food insecurity</td>
<td>South Sudan, Kenya, Uganda, Ethiopia, NE Nigeria</td>
<td>-</td>
<td>23 Feb 2017</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>OCHA and IGAD estimate up to 22.9 million people are food insecure in the Horn of Africa.</td>
<td>10/05/2017</td>
</tr>
<tr>
<td>Floods</td>
<td>Zimbabwe</td>
<td>-</td>
<td>02 Mar 2017</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>06/04/17</td>
</tr>
<tr>
<td>Cyclone</td>
<td>Madagascar</td>
<td>-</td>
<td>07 Mar 2017</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>11/04/2017</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.