

WEEKLY BULLETIN ON OUTBREAKS AND OTHER EMERGENCIES

Week 23: 03 – 09 June 2017
Data as reported by 17:00 09 June 2017

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New event

41

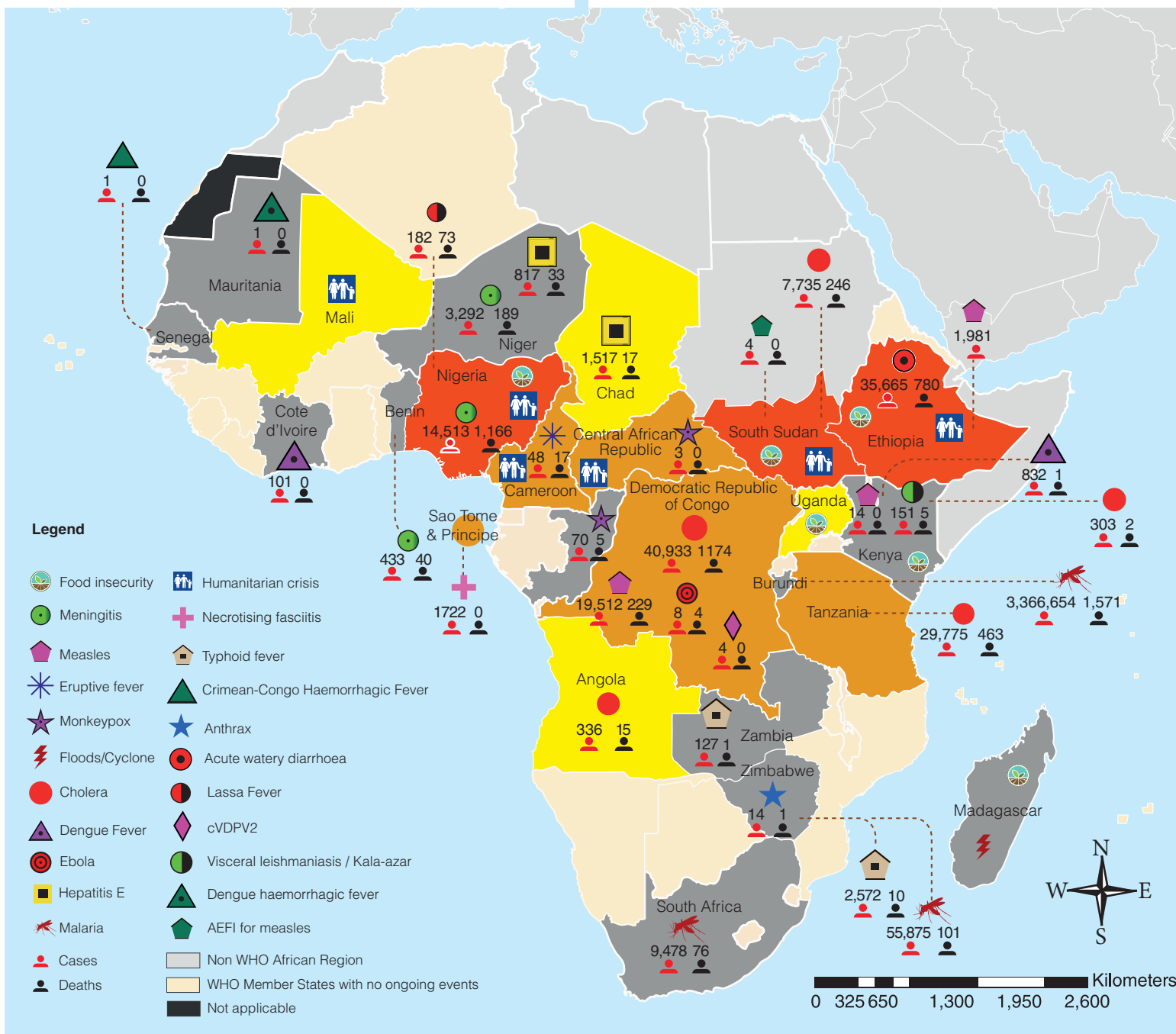
Ongoing events

32

Outbreaks

9

Humanitarian crises



4

Grade 3 events

7

Grade 2 events

4

Grade 1 events

26

Ungraded events

Overview

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- This weekly update focuses on selected acute public health emergencies occurring in the WHO African region. WHO AFRO is currently monitoring 41 events: four Grade 3, seven Grade 2, four Grade 1, and 26 ungraded events.
- This weekly update focuses on key ongoing events in the region, the Grade 3 humanitarian crises in South Sudan and Ethiopia, the Grade 2 outbreaks of Ebola virus disease in the Democratic Republic of Congo and meningitis in Nigeria, and necrotising cellulitis in Sao Tome and Principe, hepatitis E and meningitis outbreaks in Niger and the adverse event following immunization (AEFI) for measles in South Sudan.
- 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:
 - Timely communication of public health information
 - Maintaining best practice healthcare protocols during emergencies

Ongoing events

End of Lassa fever and meningitis outbreaks

Togo

On 7 June the government of Togo officially declared the end of two outbreaks in the country, meningitis and Lassa fever.

The meningitis outbreak in Togo was notified to WHO on 3 February 2017 (see weekly bulletin 14 for detailed update). To date there have been a total of 496 cases and 34 deaths (case fatality rate of 6.9%). From epidemiological week 16 (17 April 2017) to week 22 (to 04 June 2017), the district of Tone, the last district having experienced the epidemic of meningitis, reported successive attack rates below the alert threshold and therefore the outbreak was declared over on 7 June 2017.

The outbreak of Lassa fever in Togo was confirmed on 23 February 2017 (see weekly bulletin 15 for further details). A total of 9 cases were confirmed, 6 of whom died (case fatality rate 66.7%). The cases were located in Oti and Kpenjal districts. The index case had epidemiological links to a confirmed case in Benin. As of April 17 2017, the Oti district recorded the last case of Lassa fever in the country and the outbreak was declared over on 7 June 2017.

Humanitarian crisis and impact on epidemic diseases and malnutrition

Ethiopia

General situation

The south-eastern areas of Ethiopia continue to be affected by the El Niño-induced drought, causing severe and prolonged water shortage, and food insecurity resulting from crop losses, population displacement and livestock deaths. This is causing rising levels of severe acute malnutrition (SAM) and outbreaks of epidemic-prone diseases. Somali Region and other parts of the country are being affected by an outbreak of acute watery diarrhoea (AWD). The situation is further exacerbated by drought-induced internal displacement of people and their livestock, the arrival of refugees and their livestock from drought-affected border towns of Somalia and the recent surge in refugees from South Sudan due to ongoing violence. The risk of further outbreaks of AWD in the other regions and other countries is high. Internal displacement of people also remains a challenge in the country.

Acute watery diarrhoea (AWD) situation

In 2017, more than 35,000 cases including over 750 deaths (CFR 2.2%) have been reported in the country from six regions, namely Somali, Oromia, Amhara, Afar, SNNP and Tigray. Ninety-one percent (91%) of these cases and 96% of the deaths were reported in Somali Region.

There was a gradual decline in the number of cases in the country in week 12 through week 21. In week 22 there was an increase in the number of cases in the country from Somali, Oromia and Amhara Regions. This could be attributed to the suspension of water trucking in some parts of Somali region and the increase of availability of run-off water from rainfall in the past three weeks. In Addis Ababa, there have been no reports of AWD cases since the initial report of a single case with a history of travel to the Wolayita Zone of SNNP region.

In week 22 of 2017 (29 May 2017 to 04 June 2017), a total of 1,010 cases were reported in Amhara, Oromia and Somali regions. Ninety percent (90%) of these reported cases were from the Somali region.

Measles

As of week 22, 2017 there have been 1,981 reported cases of measles across the country, including 961 confirmed cases (420 laboratory confirmations, 490 epi-linked and 51 clinically compatible cases). In the same week there were 73 new suspected cases reported across the country.

There are 54 laboratory-confirmed measles outbreaks reported in the country up to week 22, 2017 of which 3 are active in Dannot and Deghamado woredas of Somali region and Alamata town in Tigray Region. The 54 outbreaks were in Amhara (18), Addis Ababa (9), Oromia (11), SNNPR (6), Somali (5), Tigray (3) and Afar (1 outbreak). Oromia remains the most affected region with 32% of the reported cases and this is followed by Amhara (29%), Addis Ababa (15%) and SNNPR (11%).

The age distribution of cases shows that children under 5 years are the most affected age group (38% of the affected population). The phase one measles campaign was launched on 3 June 2017 in Degahabur City in Jarar Zone Somali Region as scheduled and the first phase is to be implemented in the four zones of Jarar, Nogob, Dollo and Korahay. The next phase will target the other zones. The target population for the campaign for under 5 years is 854,961 while for under 15 the target population is 1,714,151.

WHO AWD Surge Team field visit to Somali Region, Ethiopia



Malnutrition

In week 20/2017, a total of 1,433 new SAM cases were reported in the therapeutic feeding programme (TFP) in Oromia region. These include 1,241 cases managed at outpatient therapeutic programmes (OTPs) and 192 cases admitted to a stabilisation centre (SCs) in the affected zones. Most of the SAM cases were reported from East Harerghe, West Harerghe and West Arsi zones in the region. In the Afar region, there were a total 5,833 cases of SAM reported, including 5,652 cases that were managed at OTPs and 182 cases admitted to SCs. In the Amhara region, a total of 8,655 cases of SAM have been reported, of which 8,198 are managed in the OTPs and 437 managed at the SCs.

Public health actions

- WHO continues to reinforce the Regional Command Post in Somali to provide leadership for the implementation of the operational plan.
- There is continued coordination of the 90-day operational plan in Somali, with deployment of surge teams to Somali Region to scale up response activities, with surge teams planned for Amhara and SNNP regions.
- There is continued on-the-job training on infection prevention and control (IPC) at treatment centres, with case management teams continuing to monitor and strengthen adherence to IPC and other case management protocols.
- There is continued support for the Somali Regional Health Bureaus (RHBs) for community engagement with as yet unreached communities.

Gaps

- There is a continued need for safe water in treatment centres, not least for the health of the workforce in these areas.
- More partners need to be involved in case management.
- Managing the co-morbidity of SAM and AWD and other diseases continues to be a challenge because of poor capacity.
- Community-based surveillance and information management systems need to be strengthened.
- There is insufficient laboratory capacity for testing and periodic surveillance at regional level.
- WASH activities need to be strengthened.
- Social mobilisation and risk communication is poor, particularly in nomadic populations who are at high risk of contracting AWD.
- Communication is difficult, particularly with disruptions in internet connectivity.

Situation interpretation

The AWD outbreak situation in Somali region has greatly improved following the upgrading of the event and subsequent scaling up of response interventions. Access to safe water has improved and there is improved provision of other essential healthcare services. Nevertheless, there is still a need to scale up and sustain the control interventions to more populations to avoid resurgence of AWD and other diseases, especially during the ongoing rainy season.

WHO continues to work alongside the Federal Ministry of Health, RHBs and partners in the response to the outbreak of AWD in Somali and other Regions (Oromia, Amhara, Afar, SNNP). Subsequently, WHO Ethiopia country office is currently undertaking a process of reviewing the structures to help operationalize public health emergency management (PHEM).

Event description

The previously reported Ebola Virus Disease (EVD) outbreak in Likati Health Zone, Bas Uele Province in the north-east of the Democratic Republic of the Congo (DRC) was notified to WHO by the Ministry of Health 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 DRC and with the Central African Republic (CAR). The affected area is remote and hard to reach, with limited communication and transport infrastructure.

As of 9 June 2017 there are a total of five confirmed and three probable cases. Of these, four survived and four died, resulting in a case fatality rate (CFR) of 50%. The last confirmed case was isolated on 17 May 2017 and tested negative for EVD by PCR for the second time on 21 May 2017. The confirmed and probable cases were reported from Nambwa (four confirmed and two probable), Ngayi (one probable) and Mabongo (one confirmed) in Likati Health Zone. All contacts have now completed the follow up monitoring period.

Active case search is ongoing in affected communities to enhance surveillance activities and community alerts continue to be reported and investigated, none of which have fulfilled the criteria as a suspect case to date.

Modelling suggests the risk of further cases is currently low, and decreases with each day without new confirmed/probable cases. As of the reporting date, 83% of simulated scenarios predict no further cases in the next 30 days. An updated assessment of the risk of this outbreak has been undertaken with the risk determined as moderate at national level and medium at regional and global level.

Public health actions

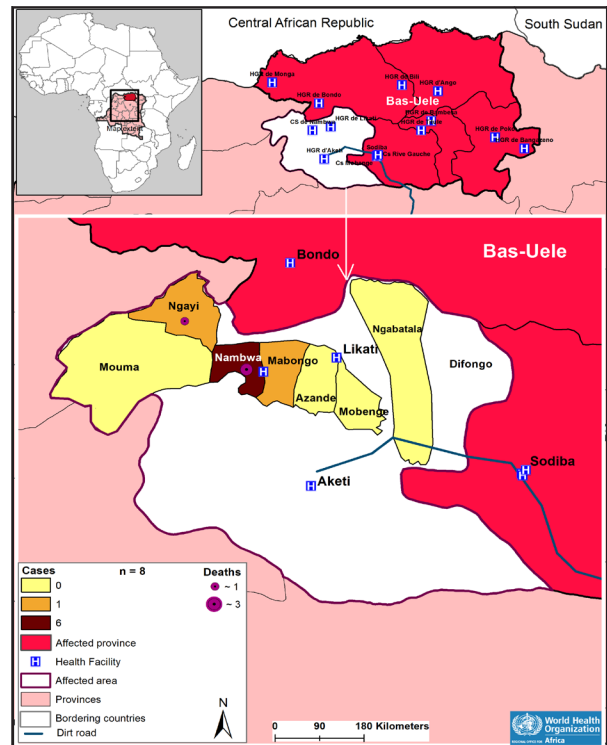
- Regular meetings of the Health Emergency Management Committee (COGUS) continue in DRC at all levels of the response (Health Zone, Provincial and National level) with Ministry of Health and partners.
- Regular coordination meetings of the WHO incident management teams in Kinshasa, Brazzaville, and Geneva continue across the 3 levels of WHO.
- An interagency rapid response team was deployed to Likati Health Zone to support the immediate investigation of the outbreak and rapidly establish key pillars of the response at the epicentre. This team is coordinated by the DRC Ministry of Health and supported by WHO, GOARN, MSF, UNICEF, ALIMA, IFRC, WFP, UNHAS and other partners. A response team remains at the epicentre of the outbreak.
- Enhanced surveillance is ongoing with active case search in communities for alert cases. In the past week, 46 alerts have been registered none of which fulfilled the case definition.
- The Institut National de Recherche Biomédicale (INRB) has enhanced capacity to test for Ebola virus and other infections through the establishment of mobile laboratories in Likati town and Buta, with support provided by INRB Kinshasa and the Centre International de Recherche Medicale (CIRMF) in Gabon to corroborate results.
- The established Ebola Treatment Centre (ETC) continues to provide care as needed.
- Support is being provided to the four survivors on prevention against potential sexual transmission of the virus.
- In order to increase access to and use of quality primary healthcare services, free healthcare is now available in Likati covering consultations and essential drugs provision to address the most common diseases in the health zone.
- A review of the Infection, Prevention and Control component of the integrated training module for healthcare providers is being undertaken, it is proposed to broaden the content.
- Social mobilisation, community engagement and risk communications activities are ongoing including house to house sensitization on the signs and symptoms of EVD aiming to cover nearly 4000 families in the affected areas and broadcasts on local radio to raise awareness and encourage early presentation.
- Contingency protocols for possible ring vaccination with rVSV-EBOV vaccine have been established; however, these may not be acted on if there is no further transmission.

Situation interpretation

The rapid response by the government with the support of partners enabled cases to be quickly isolated and prevented onward transmission. The overall risk of further cases resulting from this transmission chain appears to be low. This is supported by predictive modelling estimates. The government should be applauded for undertaking good outbreak control by focusing on good coordination, communication and transparency and the application of a package of interventions, namely case management, surveillance and contact tracing, a good laboratory service, safe burials and community engagement and social mobilisation.

There is, however, a need to maintain active case finding in communities to ensure no cases are undetected. Surge staff need to remain at the epicentre of the outbreak to support these activities. This presents an opportunity to strengthen surveillance and preparedness not only for EVD but for all epidemic-prone diseases. Additionally local health systems need to be strengthened to both quickly recover from the impact of this outbreak and to enhance the capacity to adequately respond to any future threats.

Geographical distribution of Ebola Virus Disease cases in Democratic Republic of Congo, 22 April – 9 June 2017.



Event description

Since our last update on 28 April 2017, there has continued to be a marked increase in the number of cases of hepatitis E in Diffa Region, south eastern Niger. During the first four days of week 22 (29 May to 1 June 2017), there were 58 new cases and 2 new deaths reported across 3 health districts, including Bosso (15 suspected cases), N'Guigmi (9 suspected cases) and Diffa (34 suspected cases including 5 suspected cases and 2 deaths reported from Centre Mere-Enfant de Diffa (CSME)).

Between 2 January and 1 June 2017, there have been a cumulative 817 suspected cases reported, including 33 deaths (case fatality rate, CFR: 4%). Initial cases were reported from Diffa health district, however, the outbreak has persisted across 5 health districts including Bosso, Diffa, Goudoumaria, Mainé Soroa and N'Guigmi. The majority of cases were reported in Diffa (60%), followed by N'Guigmi (19%) and Bosso (18%).

A total of 326 samples have been collected and tested at Institut Pasteur Dakar. Results were received for 174 specimens, with hepatitis E virus detected 93 (53%) specimens by PCR. One specimen also returned a positive IgM result for Rift Valley fever.

Sixty-two percent of suspected cases are female with a CFR of 6% among women and 0.3% among men. The case fatality has been disproportionately high among pregnant women, in line with current literature. Among women presenting to CSME, a maternal and child health centre, a CFR of 28% was recorded. Of the 488 suspected females recorded, 85% are aged between 15 and 49 years (of reproductive age).

Public health actions

- The Ministry of Health is coordinating the response with weekly meetings of the national epidemic management committee at both regional and national levels.
- MSF continues to support the Ministry of Health in leading case management.
- UNICEF continues to support several WASH activities.
- Water trucks have been deployed to suppose safe drinking water to refugee camps (Sayam, Kinjandi and Assaga) and villages.
- There is water point disinfection using chlorine in affected villages.
- Aquatab tablets have been distributed to households along with community education on their correct use.
- Risk communication activities have been undertaken on signs and symptoms of the disease in order to encourage early presentation to health centres.

Situation interpretation

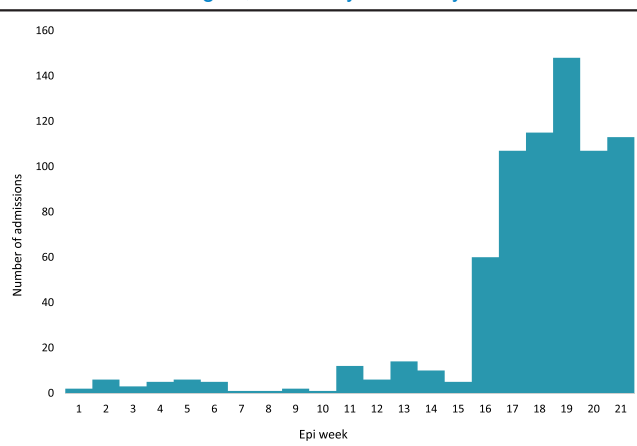
According to outbreak data the epidemic is still at a peak and has not yet demonstrated a definitive trend reversal. This highlights the large amount of work still required of Ministry of Health and partners to bring the outbreak to an end.

Diffa region is host to large numbers of refugees from Nigeria and Chad and there is significant population movement across the border. Initial reported cases included refugees, internally displaced people and other local populations at high risk of contracting hepatitis due to less than optimal sanitary conditions. While there is a confirmed, ongoing hepatitis E outbreak in neighbouring Chad, the outbreak appears to be localized to the eastern side of the country bordering Central African Republic. Although no cases have been detected on the western side of Chad bordering Niger, it is important that all countries around the affected border, including Nigeria, maintain enhanced surveillance as well as reinforce cross-border information sharing.

According to outbreak data, on average, there seems to be a week's delay between onset of symptoms and date of admission. This highlights the need for both strengthened active case finding in the community coupled with accessible healthcare.

The overall burden of disease due to hepatitis E is greatest in parts of the world where clean drinking water is scarce, with faecal contamination of drinking water as a major route of hepatitis E virus transmission. Despite ongoing efforts during the current outbreak, the need for WASH interventions remains high. It is crucial that the Ministry of Health and international partners continue to support safe water supply and environmental sanitation efforts to help control the outbreak.

Number of hepatitis E admissions in Niger, Diffa Region, 2 January to 28 May 2017



Event description

A steady decline in new cerebrospinal meningitis case reports has been observed in Nigeria, from a peak of approximated 2,500 new cases per week in epidemiological weeks 14-15 to about 80 new cases in epidemiological week 22 of 2017. Enhanced surveillance activities continue in 12 local government areas (LGAs) with incidence rates exceeding the alert threshold, and full outbreak investigation and control measures continuing in the 12 LGAs that have that have reached the epidemic threshold.

As of 8 June 2017, 14,513 suspected cases and 1,166 deaths (overall case fatality rate, CFR: 8%) have been reported from 25 States; Zamfara, Sokoto and Katsina State being the most affected. Children aged 5–14 years accounted for 47% of reported cases. Laboratory investigations were completed for 998 cases, of which 460 (47%) were confirmed as bacterial meningitis. *Neisseria meningitidis* serogroup C remains the predominant (81%) cause of meningitis among those who tested positive.

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.

Public health actions

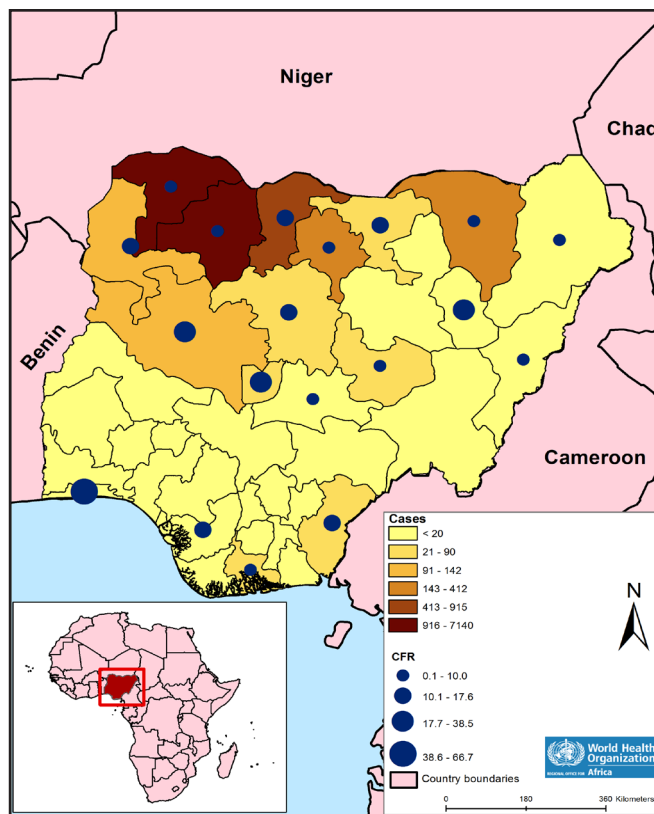
- Nigeria Centre for Disease Control (NCDC) and the state ministries of health are coordinating the national and local response to the outbreak, with support provided by WHO, UNICEF, CDC, University of Maryland, Nigeria Field Epidemiology and Laboratory Training Program (NFELTP), eHealth Africa, MSF, and Rotary International.
- WHO mobilized experts and trained 500 community informants to strengthen surveillance at community and state levels. 20,000 protocols for case management and SOPs for enhanced surveillance were printed and distributed to the worse affected states.
- WHO supported the deployment of 50 health workers in 10 teams to Sokoto and Zamfara States, has helped to strengthening case management, lower CFRs, and improve CSF sample collection rates.
- Capacity of two laboratories in Zamfara and Abuja were strengthened. Lumbar puncture kits, Pastorex and other laboratory reagents and supplies were distributed to improve sample collection and laboratory diagnoses. WHO supported the deployment of laboratory experts from MRC Gambia and Public Health England to build local capacity.
- Reactive vaccination campaigns were conducted in Zamfara, Katsina and Sokoto States reaching a total of 2,118,035 (86.7%) persons aged 1-30 years with polysaccharide AC, ACW and ACYW vaccines provided by ICG, and meningococcal C conjugate donated to WHO by the UK Government - contributing to a significant decline in the frequency of newly reported cases.
- As part of the After Action Review to prepare and improve the response to future seasonal events, work is ongoing to document lessons learnt and set recommendations, and an evaluation workshop is planned for late July 2017. As part of activities to address gaps and strengthen preparedness and response systems, the NCDC, National Primary Health Care Development Agency (NPHCDA), and other partner agencies carried out a week long capacity building session on effective risk communication on meningitis for Health Educators and Directors of Public Health in 19 northern states.

Situation interpretation

Although the event is ongoing, sustained declines in case incidence suggests the outbreak is drawing to a close. The high number of suspected cases detected during this outbreak is partly a reflection of improvements in surveillance systems, resulting from the implementation of enhanced surveillance activities, coupled with a sensitive standard case definition. Onsite support provided by NCDC has also seen moderate increases in the rates of sample collection and completion of laboratory investigations; however, there remains much room for improvement in this area.

As attention now turns to preparing for future outbreaks, it is critical to further build on the improvements made during the course of this outbreak, while strengthening the overall health systems and prevention activities to mitigate recurring high rates of morbidity and mortality from meningitis outbreaks in the region.

Geographical distribution of meningitis cases in Nigeria, as of 08 June 2017.



Event description

During May 2017, WHO and UNICEF supported the National Adverse Events Following Immunization (AEFI) Committee to conduct an independent investigation into the deaths of 15 children during a four-day integrated measles vaccination campaign in Nachodokopele Village, Kapoeta State. In addition to the recorded deaths, 32 individuals suffered similar symptoms of fever, vomiting and diarrhoea, and 35 individuals had abscesses at the site of injection.

A causality assessment, using the standard WHO causality assessment protocol, concluded that there is a high likelihood that the events were associated with an Immunization error-related reaction, which manifested as severe sepsis / toxic shock syndrome following administration of a contaminated vaccine. Several programmatic gaps may have contributed, including the use of non-qualified and non-trained personnel, poor adherence to cold chain and vaccine handling standards, and non-adherence to Immunization safety standards. The use of a single reconstitution syringe for multiple vaccine vials for the duration of the campaign likely led to severe contamination of the vaccine being reconstituted.

Public health actions

- An initial fact finding mission was deployed by the Ministry of Health from 10-13 May 2017. This was followed by detailed field investigations by an independent team of investigators from the National AEFI Committee from 21-25 May 2017. Both investigations were supported by WHO and UNICEF.
- Investigators provided several recommendations to the Ministry, including: taking steps to ensure the adherence to campaign planning, preparations and implementation standards; reinforcing stronger collaboration with partners; undertaking laboratory investigation of blood samples collected from persons affected to support clinical findings; and, strengthen health services in the area to mitigate the severity of future events.
- WHO will continue to support the Ministry to ensure that all persons engaged in subsequent campaigns adhere to standards.

Geographical distribution of Adverse Events Following Immunization (AEFI) for measles cases in South Sudan, as of 01 June 2017.



Situation interpretation

Nachodokopele is a remote rural settlement of over 200,000 people lacking a health facility, school and water. Investigations into the tragic deaths and illness provide strong evidence that these were caused by an AEFI during the measles vaccination campaign, and highlight several systematic failures. This event occurs amidst the humanitarian crisis in South Sudan, which has severely strained the health systems – displacing qualified healthcare workers, impacting vaccine distribution systems, and limiting the level of supervision that can be delivered during campaigns as a result of the insecurity. This AEFI, nevertheless, has likely undermined community confidence and participation in preventative campaigns during a time when the risk of outbreaks of measles and other infectious diseases is greatest. While the Ministry should be praised for facilitating the independent investigations into this event, it is vital that steps are taken to prevent future occurrences, and that local health systems are strengthened to improve the outcome of adverse reactions to medicines and vaccines when they occur.

Event description

The humanitarian crisis in South Sudan is rapidly escalating due to new offensives and clashes since the beginning of 2017. An estimated 7.5 million people – more than one in two across the country – were already in need of humanitarian assistance at the beginning of 2017, and more than 3.7 million people have now been displaced, including more than 1.9 million who are internally displaced, and more than 1.8 million who have fled as refugees to neighbouring countries. Record numbers of people have fled to Uganda, with more than 238,000 people arriving since the beginning of 2017, bringing the total number of South Sudanese refugees in Uganda to more than 909,700.

In Central Equatoria, fighting erupted again in May 2017 in and around Yei, while clashes in Eastern Equatoria in April 2017 displaced thousands. In northern Jonglei, more than 100,000 people were displaced by a government offensive which began in February 2017 and intensified in April 2017. In Upper Nile, a government offensive on the West Bank from January to May 2017 forced more than 50,000 people to flee, with some 20,000 people sheltering in the remote location of Aburoc and thousands more crossing the border to Sudan in search of safety. In Unity, thousands of civilians continue to live in swamps and on remote islands due to fear of attack, while in Western Bahr El Ghazal, renewed clashes in April 2017 caused an influx of people into sites for internally displaced persons (IDP) in Wau town. Over 17,000 children are estimated to have been recruited by armed actors in South Sudan, and there are continued reports of forced recruitment by all parties to the conflict, particularly in Unity. Over 9,000 children inside South Sudan have been registered as unaccompanied, separated or missing, and more than 75,000 South Sudanese refugee children are unaccompanied or separated from their parents. More than one million children aged 3 to 18 years old have lost access to education and an estimated one million children are in psychosocial distress.

As a result of continued conflict, food insecurity and malnutrition have reached unprecedented levels, with localised famine declared in Leer and Mayendit counties of Unity on 20 February 2017. Projections for the lean season (May-July each year) estimate that 80,000 people are facing starvation, and a further 1.46 million are on the brink of famine. Country-wide, some 5.5 million people are now estimated to be severely food insecure, and some one million children in South Sudan are acutely malnourished. An estimated 350,000 pregnant women are malnourished and at high risk of pregnancy- and childbirth related-complications, including low birth weight and increased infant and maternal death. Livelihoods have been decimated, with livestock looted, killed and disease prone, and crops destroyed or planting delayed due to violence, displacement and unfavourable weather conditions.

Susceptibility to disease has risen after three years of conflict and crisis. South Sudan is experiencing the longest and most widespread cholera outbreak since its independence. The cholera outbreak that began in June 2016 has spread to more locations and lasted longer than outbreaks in 2014 and 2015. Some 7,735 cholera cases, including 246 deaths (case fatality rate 3.2%) have been reported in 19 counties as of 5 May 2017. Access to clean water has been compromised due to repeated displacement and damage to key infrastructure. There are also an increasing number of cases of the deadly tropical disease kala-azar, with 1,019 cases reported by 30 April 2017. In addition 641 suspected cases of measles have been reported from 20 counties since the beginning of 2017. Violence and displacement in the Greater Equatoria region has severely affected populations with a high prevalence of HIV/AIDS and disrupted access to life-saving treatment.

As of 5 June 2017, preliminary results from 7/10 states that conducted the first phase of the measles vaccination campaign showed that 1,404,072 children 6-59 months had been reached in the country. County-specific plans are being developed with the support of partners to reach the three conflict-affected states of Jonglei, Unity and Upper Nile.

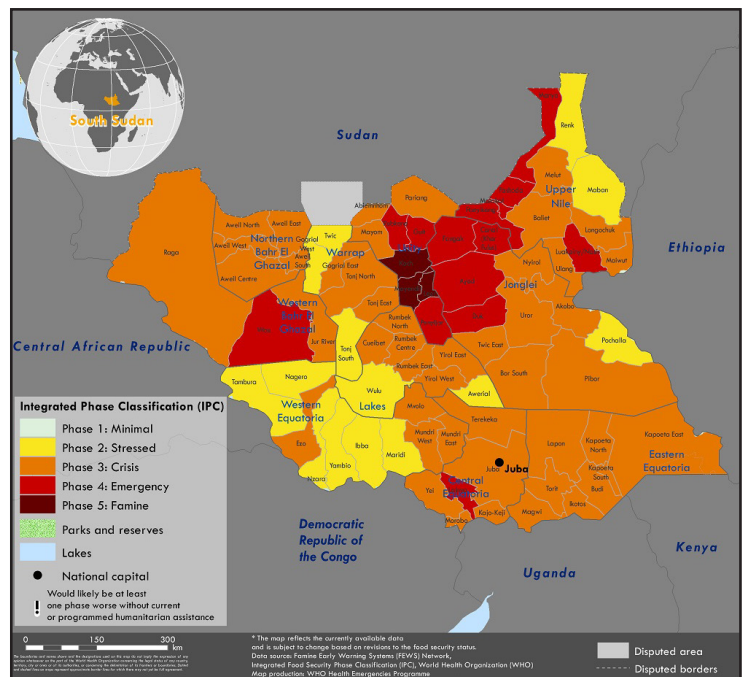
Cholera is now confirmed in Tonj East after three of six samples tested positive for *Vibrio cholerae* serotype Inaba following testing at the National Public Health Laboratory. A verification mission into the suspected cholera cases in Rumbek north suggest food poisoning rather than cholera as a cause for the cluster of cases of acute watery diarrhoea. Samples have not been obtained for testing and surveillance is ongoing. Nachodokopele, Kapoeta is a very remote rural settlement of over 200,000 people lacking a health facility, school and water. A cholera outbreak had been confirmed across the whole Kapoeta area, including the village.

Integrated disease surveillance and response (IDSR): completeness for IDSR reporting at county level was 73%. Completeness for the early warning, alert and response system (EWARS) reporting from IDP sites was 79%.

Public health actions

- Bentiu PoC: Completed first round and second round of oral cholera vaccination (OCV) campaigns. The administrative coverage was 72,514 (62%) for first round and 77,603 (63%) in the second round.

Food Insecurity Crisis in South Sudan
The Integrated Food Security Phase Classification (IPC)
projection for Feb - May 2017



- Malakal Hub: WHO provided OCV vaccines to MSF, who reached 9,239 people older than one year in Abrouch IDP camp in Fashoda. This follows the cholera outbreak in the IDP camp, with 478 cases and 13 deaths (CFR 2.7%).
- Cholera case investigation and sample collection kits continue to be deployed by WHO to support the investigation and response activities in newly affected areas and locations with active cholera transmission.
- Cholera case management kits have been deployed by WHO and UNICEF to support the response in Ayod, Tonj East, Kapoeta South, Kapoeta North, and Kapoeta East.
- As part of the ongoing cholera response, cholera vaccines have been deployed in Leer, Bor PoC, Malakal Town, Bentiu PoC, Mingkaman IDP settlement, and Aburoc IDPs.
- Yambio Hub: WHO assisted with six caesarian sections at Yambio hospital as part of WHO support to improving maternal and child health outcomes.
- Northern Jonglei famine response: The InterCluster Response Mission in Buong by Health and Nutrition partners was completed on 23-27 May 2017, along with food distribution. The response targeted 20,000 beneficiaries. Health partners conducted close to 4,000 measles/polio vaccinations, provided consultations and delivered primary healthcare (PHC) supplies. Acute watery diarrhoea, malaria and acute respiratory infections were reported as the main causes of morbidity. Nearly 2,000 children were screened for malnutrition with proxy global acute malnutrition (GAM) rates of 34%.



Situation interpretation

The security situation is contributing to poor access by humanitarian agencies to the affected populations. As the rains approach, outbreaks of malaria, cholera and other communicable diseases are likely to increase. There is a major emerging need to improve the quality of care and adherence to cholera case management protocols in all the available cholera treatment facilities, but particularly in Kapoeta North and Tonj East. Cholera beds and food for patients are needed in the two locations. This will reduce nosocomial infections and improve treatment compliance.

Funding is urgently needed, particularly to scale-up the famine response, procure, preposition and deliver vital supplies, and take urgent action to avert further catastrophe in the months ahead. The 2017 Humanitarian Response Plan (HRP) which calls for USD 1.6 billion to provide humanitarian assistance and protection to some 5.8 million people – is now nearly 46% funded (\$750.6M received). However, key sectors are seriously under-funded, including Health (8.5%), WASH (11.3%), Protection (8.3%) and Education (2.4%).

Event description

This is an update to the ongoing necrotising cellulitis outbreak in Sao Tome and Principe last reported in week 17 (week ending 27 April). The declining trend of the outbreak appears to have stagnated, with on average 24 (range 17-32) new cases per week reported for the past 12 weeks. This comes after a sharp increase in cases, peaking in December 2016. Between September 2016 and 3 June 2017, there have been 1,722 cases detected and no associated deaths. Those aged 35 years and above constitute more than 50% of cases.

While all districts have been affected, exhibiting an overall attack rate of 8.9 per 1000 people, the highest attack rates remain in Caue (26.8 per 1,000) and Lemba (13.5 per 1,000). The Island of Principe remains the least affected with an attack rate of 5 per 1,000.

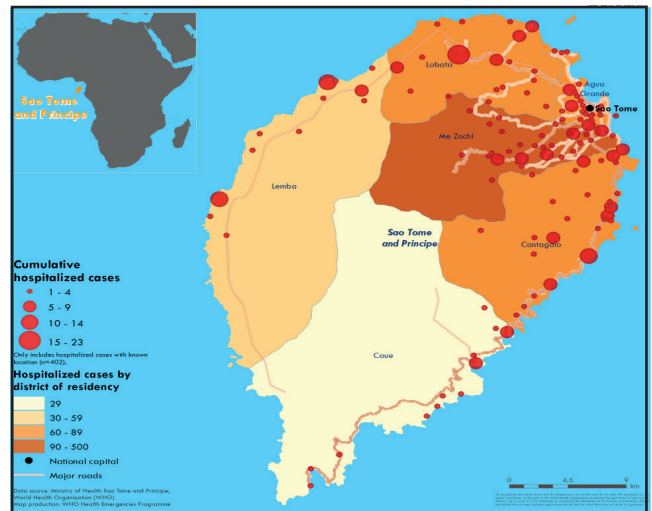
Public health actions

- The Ministry of Health continue to coordinate the response including regular coordination meetings with WHO and partners.
- A case management protocol has been developed and clinical staff have been trained.
- 28 patients have undergone surgery, including 19 skin grafts.
- 90 specimens have been collected and analysed with the support of partner laboratories.
- An analytical study has been conducted to investigate risk factors.
- Training of supervisors and clinicians on epidemiological data management, including the use of electronic data transmission technologies.
- A communication plan has been developed addressing general hygiene messages and risk factors.
- There have been 29 international experts (multidisciplinary) deployed to support the response.

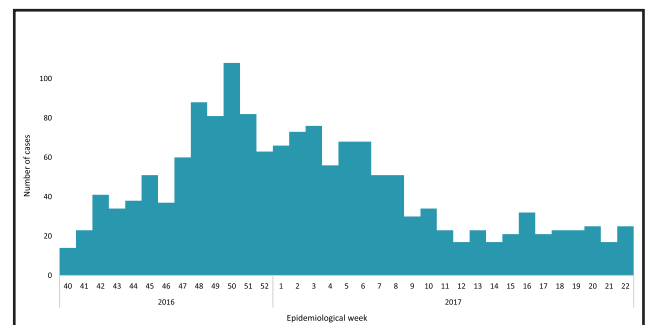
Situation interpretation

The Ministry of Health with the support of WHO and other partners has made significant progress in controlling the outbreak. Enhanced surveillance systems, and improved clinical and surgical management of patients have seen a reversal in the trend and a large reduction in the incidence of necrotizing cellulitis cases. The detection of polymicrobial infections, suggest a combination of *Staphylococcus aureus* and *Streptococcus pyogenes*, with other secondary-associated bacteria with genetic diversity. Preliminary analysis of the case-control data indicates that having an injury in the previous two weeks before hospitalization was a risk factor for necrotizing cellulitis, while having had a consultation at a health unit two weeks before admission as well as suffering from a recurring health problem were protective factors. This highlights the need to issue strong risk communications messaging around wound care and the importance of good access to healthcare facilities. Despite the progress, the number of new cases continues to be higher than the background rate estimated to be below 20 cases per month. In addition, the mode of transmission has not been established and laboratory capacity remains low. Continued research and support to the country in terms of technical and financial assistance is required.

Geographical distribution of hospitalized cases of necrotizing fasciitis, Sao Tomé and Príncipe



Number of Necrotising Cellulitis cases in Sao Tome and Principe, September 2016 - June 2017



Event description

There have been sporadic cases of meningitis in Niger since the start of 2017. However, during epi-week 7 (week ending 19 February 2017) Niamey IV health district, Niamey Region, crossed the alert threshold of 3 cases per 100,000. By 19 March 2017 there were seven districts on alert.

On 26 March 2017 Niamey II health district crossed the epidemic threshold of 10 cases per 100,000 people, with an infection rate of 11.7 cases per 100,000. An outbreak was officially declared by health authorities on 29 March 2017. By 31 May 2017, 2,796 samples of cerebro-spinal fluid (CSF) had been tested at Centre de Recherche Médicale et Sanitaire (CERMES) in Niamey. Of these 1,607 were positive: 66.9% were *Neisseria meningitidis* serogroup C, 17.2% *N. meningitidis* serogroup X, 10.3% *N. meningitidis* sp. and 5.6% classified as 'other'.

The regions most affected are Niamey, Maradi, Dosso, Tahoua and Tillabéri, accounting for more than 98% of cases. However, cases were reported from all over the country.

Since epi-week 15, the number of cases has fallen gradually and by 4 June 2017 there were only 4 suspected cases and no districts in epidemic or alert status. By 8 June 2017 there had been a total of 3,303 suspected cases, with 197 deaths (CFR 6%). However, surveillance is continuing.

Public health actions

- Epidemiological surveillance, including calculation of weekly infection rates, was carried out by sub-districts (surveillance zones from 30,000 to 100,000 inhabitants) to detect localized epidemics.
- Free treatment with ceftriaxone was provided in all health centres according to the WHO protocol.
- Nurses were trained in and authorised to carry out lumbar puncture for diagnosis of suspected cases.
- A mass vaccination campaign was carried out in mid-April 2017 in Niamey II health district and neighbouring health districts that had crossed the epidemic threshold – 98% vaccine coverage was achieved. Another mass vaccination campaign was carried out in May 2017 in the Madarounfa health district, Maradi Region, with 87% vaccine coverage.
- Niger has developed a structured national multi-sectoral and multidisciplinary epidemic management committee, which decides on strategies to prevent and respond to meningitis and other public health emergencies.
- Weekly teleconferences are organised by the WHO Inter-country Support Team for West Africa, enhancing information sharing among West African countries and cross-border surveillance.
- There have been public awareness campaigns around the early use of health facilities and mass vaccination campaigns.

Gaps

There is a global shortage of meningitis vaccines covering the correct serotypes and within Niger there were insufficient doses of vaccine to cover the vaccination of the identified target population of people aged from 2 to 20 years. However, two vaccine requests were approved by the International Coordinating Group on Vaccine Provision (ICG) for 486,725 doses of bivalent A/C vaccine.

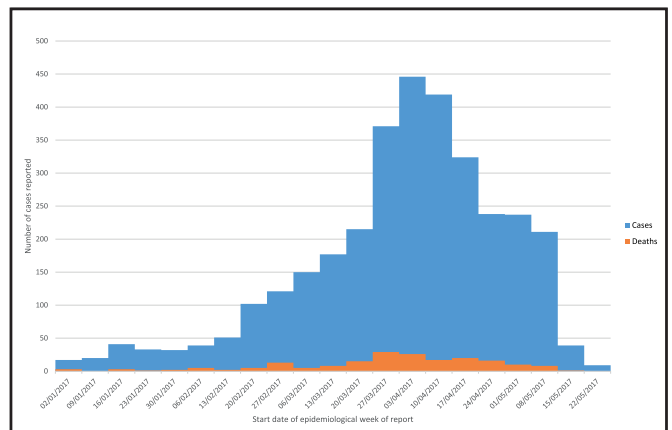
Situation interpretation

Meningococcal meningitis outbreaks remain a major public health burden in the 26 countries of the African 'meningitis belt'. Although there are several different bacteria that can cause meningitis, *Neisseria meningitidis* is the one with the greatest epidemic potential – six of the 12 described serotypes can cause outbreaks (A, B, C, W, X and Y).

The MenAfriVac project was started in 2010 in Niger. Before this mass vaccination campaign, serogroup A was the leading cause of meningitis in the African meningitis belt, but declined substantially as a result of mass vaccination and in this outbreak *N. meningitidis* serogroup C is the predominant aetiologic agent.

The seasonal nature of meningitis outbreaks is well known in Niger. As in previous outbreaks in 2015 and 2016, this outbreak shows a significant decrease in cases from epi-weeks 20 to 23, signifying the end of the 2017 epidemic meningitis season in Niger. This highlights the need to undertake appropriate preparedness activities prior to the start of the meningitis 'season' in order to reduce the morbidity and mortality from this disease.

Number of Meningitis cases in Niger, 2017 epi week 1- 2017 epi week 21



Summary of major challenges and proposed actions

Challenges

➤ **Timely communication of public health information**

During emergencies, communication of up-to-date information is critical for informing risk assessments and response efforts; both in-country and for the international public health community. Substantial gains have been made in the African region on regularly producing and sharing epidemiological information during emergencies; however, monitoring systems are continuously challenged by the sheer number, wide scope and magnitude of events.

➤ **Maintaining best practice healthcare protocols during emergencies**

This week's report of an adverse event following immunization (AEFI) with measles vaccine highlights the challenge of, yet critical need to maintain adherence to best practice protocols when delivering healthcare services and intervention during emergencies. With healthcare systems severely compromised by humanitarian crises, it is easy for systematic failures to occur and can result in tragic outcomes such as the avoidable deaths observed in South Sudan.

Proposed actions

- While the WHO AFRO weekly bulletin on outbreaks and other emergencies is testament to the gains made on communicating public health information in the region, WHO countries offices must continue to support Ministries of Health to strengthen surveillance and reporting. WHO regional level and headquarters should similarly work to streamline information management systems to ease the burden of emergency monitoring and reporting at all levels.
- During the delivery of healthcare interventions, it is vital that standard protocols are followed, and that adequate resources and qualified staff are made available to adhere to best practices. WHO and partners should continue to support the Ministries of Health to strengthen health systems.

All events currently being monitored by WHO AFRO

Event	Country	Grade	Date of notification to WHO	No. of cases / suspected (confirmed)	No. of deaths	CFR (suspected) / %	Comments	Date of last sitrep
Humanitarian crisis	Nigeria	3	-	-	-	-	Detailed update given above	15-Apr-17
Humanitarian crisis	South Sudan	3	-	-	-	-	Detailed update given above	30-Apr-17
Humanitarian crisis	Ethiopia	3	-	-	-	-	Detailed update given above	14-May-17
Acute Watery Diarrhoea (AWD)	Ethiopia	3	Beginning 2017	35,665	780	2.2	Detailed update given above	04-Jun-17
Humanitarian crisis	Cameroon	2	-	-	-	-		
Humanitarian crisis	Central African Republic	2	-	-	-	-		
Cholera	DRC	2	01-Jan-15	40,933	1,174	2.9	551 new cases and 6 new deaths were reported in epi week 20. Free access to medical treatment continues to be provided by the Ministry of Health with the support of partners.	27-May-17
Cholera	Tanzania	2	04-Apr-15	29,775	463	1.6	A total of 74 new suspected cases and no new deaths were reported in epi week 22, including 21 cases on the Tanzania mainland and 53 cases on Zanzibar.	05-Jun-17
Necrotising cellulitis/ fasciitis	Sao Tome & Principe	2	10-Jan-17	1,722	0	0	Detailed update given above	07-Jun-17
Meningitis	Nigeria	2	20-Feb-17	14,513 (463)	1,166	8.0	Detailed update given above	09-Jun-17
Ebola Virus Disease	DRC	2	11-May-17	8 (5)	4	50	Detailed update given above	09-Jun-17
Humanitarian crisis	Mali	1	-	-	-	-		
Drought/ food insecurity	Kenya and Uganda	1	-	-	-	-		
Hepatitis E	Chad	1	01-Sep-16	1,517 (98)	17	1.1	73 cases have been hospitalised. Outbreak response, active case finding and WASH activities continue with the support of WHO.	04-Jun-17
Cholera	Angola	1	04-Jan-17	336	15	4.5	Cases are predominantly located in Cabinda.	09-Apr-17
Cholera	Kenya	-	10-Oct-16	303 (140)	2	0.7	Outbreaks have been reported in Garissa, Nairobi, Murang'a, Turkana and Nakuru counties. 61 cases were confirmed by culture, and 140 by RDT.	05-Jun-17
Typhoid fever	Zimbabwe	-	21-Nov-16	2,572 (95)	10	0.4	The city of Harare is the epicentre of the outbreak. The main drivers of transmission are contaminated water and poor sanitation.	20-Mar-17
Lassa fever	Nigeria	-	01-Dec-16	182 (168)	73	40.1	Case counts include confirmed (n=182) and probable cases (n=14) only. Suspected cases not reported. Incidence of new cases has continued to decline since the outbreak peaked in week 9 of 2017. Eight states are currently reporting active outbreaks.	02-Jun-17
Measles	Ethiopia	-	Beginning 2017	1,981 (961)			Detailed update given above	04-Jun-17
Dengue	Kenya	-	Beginning 2017	832	1	0.1	The outbreak has been reported in Mombasa (n=795) and Wajir (n=67, of which 37 confirmed) counties.	05-Jun-17
Cholera	South Sudan	-	Beginning 2017	7,735	246	3.2	Detailed update given above	05-May-17
Measles	DRC	-	10-Jan-17	19,512	229	1.2	The incidence of new cases has declined since the current outbreak peaked in early 2017.	23-May-17
Monkeypox	Congo	-	01-Feb-17	70 (7)	5	7.1	Reported from four different districts in Likouala Department and one district in Cuvette department	23-Apr-17
Meningitis	Niger	-	19-Feb-17	3,292 (1,063)	189	5.7	Overall downward trend continues. 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.	03-Jun-17
Eruptive fever	Cameroon	-	20-Feb-17	48	17	35	The event was reclassified as eruptive fever following negative results for Leishmaniasis.	30-Mar-17
Food insecurity	Madagascar	-	23-Feb-17	-	-	-	Insufficient food security persists according to the SMART nutritional study.	10-May-17
Cyclone	Madagascar	-	07-Mar-17	-	-	-	850,000 people affected. There is medication available for mobile clinics, however some districts have run out of antimalarial drugs.	22-May-17
Malaria	Zimbabwe	-	07-Mar-17	55,875	101	0.2	Manicaland (n=31,111, 55%), Mashonaland East (n=8,822, 15.6%), Masvingo (n=8,062) and Mashonaland Central (n=5,739, 10.1%) provinces account for the vast majority of cases.	01-Mar-17
Measles	Kenya	-	12-Mar-17	14 (8)	0	0	The outbreak has been reported in Dagahaley, Dadaab and IFO refugee camps in Garissa County. Date of onset of index case was 21 March, 2017. The last case reported had an onset in the first week of May 2017.	05-Jun-17
Malaria	Burundi	-	13-Mar-17	3,366,654	1,571	0.05	An upward trend has been recorded during the last 5 weeks and still above the epidemic threshold. The Ministry of Health has developed an accelerated response plan. UNICEF has donated 4,194,500 doses of antimalarial medication.	29-May-17
Hepatitis E	Niger	-	12-Apr-17	847 (93)	33	3.9	Detailed update given above	07-Jun-17
Monkeypox	Central African Republic	-	15-Apr-17	3 (1)	0	0	The last case detected was reported in Week 20.	01-Jun-17
Anthrax	Zimbabwe	-	15-Apr-17	14	1	7.1	Anthrax was isolated from hippo carcass, which community members had consumed.	25-Apr-17
Typhoid fever	Zambia	-	22-Apr-17	127	1	0.8	The outbreak is currently confirmed to Muchinga province.	20-May-17
Malaria	South Africa	-	03-Apr-17	9,478	76	0.8	Figures shown are for 2016/17 season from September to May. There have been a high number of cases in the recent season compared to previous years.	06-Jun-17
Dengue fever	Cote d'Ivoire	-	06-May-17	101 (33)	0	0	A confirmed case of dengue fever was reported by Institute Pasteur Dakar on 28 April 2017. Between 27 and 24 May 2017, there have been 18 new cases reported.	29-May-17
Adverse Event Following Immunisation (AEFI) for measles	South Sudan	-	02-Jun-17	47	15	32	Detailed update given above	03-Jun-17
Dengue haemorrhagic fever	Mauritania	-	02-Jun-17	1 (1)	0	0	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.	02-Jun-17
Circulating vaccine-derived polio virus type 2 (cVDPV2)	DRC	-	02-Jun-17	4	0	0	Two separate cVDPV2 cluster have been confirmed, each consisting of two acute flaccid paralysis (AFP) cases. A risk analysis is being undertaken including assessing population immunity levels and strengthening active surveillance for AFP.	10-Jun-17
Crimean-Congo haemorrhagic fever (CCHF)	Senegal	-	06-Jun-17	1 (1)	0	0	Single confirmed case in a traveller from Mauritania.	07-Jun-17
Visceral leishmaniasis / Kala-azar	Kenya	-	07-Jun-17	151 (111)	5	3.3	The outbreak has been reported in Marsabit (n=52) and Wajir (n=99) counties respectively. Details in above report.	05-Jun-17

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

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