

Briefing Note – 04 May 2017

Niger

Hepatitis E in Diffa Region



	Not required	Low	Moderate	Significant	Major
Need for international assistance			X		
Expected impact	Very low	Low	Moderate	Significant	Major

Crisis overview

Between 9 January and 25 April, a total of 164 cases of hepatitis E, including 25 deaths (CFR: 15.2%) have been reported in Diffa region, where there is a population of 673,146. The outbreak was declared by the Nigerien authorities in mid-April. All the deaths occurred among pregnant mothers. Over 76% of reported cases were among females. As of 28 April, five of the six health districts in Diffa region had been affected, with Diffa and N'Guigmi districts accounting for 96% of all cases reported.

Anticipated scope and scale

There is a risk that the outbreak will intensify. New cases are expected to continue to emerge in new health districts in the region. Diffa region is prone to rapid propagation of the disease due to the prevalent underlying factors, such as limited access to safe water, inadequate sanitation, and poor hygiene practices. The region is inhabited by vulnerable populations, such as refugees, IDPs, and returnees who are at risk of contracting the disease due to their living conditions.

The forthcoming rainy season, from June to September, is likely to increase the spread of the disease to neighbouring regions, and will further exacerbate WASH needs among affected populations.

Priorities for humanitarian intervention

- **Health:** Hepatitis E is a new disease in Niger and there is no diagnostic capacity in the country. There is an urgent need to mobilise adequate health capacities to respond to the outbreak.
- **WASH:** Adequate water supply and sanitation conditions are urgently need in Diffa region. The current outbreak has been linked to unclean water supply and lack of adequate hygiene and sanitation facilities.

Humanitarian constraints

Humanitarian access in Diffa region is limited due to Boko Haram (BH) activity, and the military counter-insurgency in the region. A curfew and restrictions on movement have been imposed on Diffa region after a state of emergency was declared in October 2015. Since May 2016, access beyond Diffa town in Diffa region is possible, but requires a military escort.

Limitations

Information on the sectoral needs of affected populations is limited.
Lack of information on national response capacity.

Crisis impact

Health: A hepatitis E outbreak was declared in mid-April in Diffa region. This is the first outbreak of the disease in the country (WHO 14/04/2017). Between 9 January and 25 April, a total of 164 cases of hepatitis E, including 25 deaths (CFR: 15.2%) have been reported in Diffa region. All the deaths occurred among pregnant mothers. Over 76% of reported cases were among females. Five of the six health districts in Diffa region have been affected, with Diffa and N'Guigmi accounting for 96% of all the cases reported (WHO 28/04/2017).

As of 28 April, over 40 of the 164 cases have been among refugees or IDPs who have fled the Boko Haram (BH) conflict near the border with Chad and Nigeria (WHO 28/04/2017). 29 new cases were reported in three health districts (N'Guimi, Diffa and Maine Soroa) from 24 to 25 April (WHO 28/04/2017).

The health system in Niger is under-resourced. More than 50% of the population does not have access to health services. The quality of available health services and their coverage are both severely limited. Public health programmes are overstretched (WHO 2015).

Hepatitis E is common in resource-limited countries with limited access to essential water, sanitation, hygiene and health services. The disease occurs both as outbreaks and as sporadic cases (WHO 2016). Investments in improved sanitation may help prevent the prevalence of Hepatitis E (WHO 2016).

WASH: The current outbreak has been linked to unclean water supply and lack of adequate hygiene and sanitation facilities for the 240,000 people who are currently displaced in Diffa (MSF 26/04/2017). Only 47% of the population in Diffa has access to safe drinking water (OCHA 19/11/2016).

Factors affecting efforts to control outbreak

Humanitarian access in the region is limited due to Boko Haram (BH) activity and ongoing military operations by the Nigerien Defense Forces and the Multinational Joint Task Force (MNJTF) along the Komadougou River. A curfew and restrictions on movement have been imposed on Diffa region after a state of emergency was declared in October 2015 (UNHCR 24/05/2016). Since May 2016, access beyond Diffa town in Diffa region is possible, but requires a military escort. (OCHA 31/03/2017).

The BH conflict has constrained access to healthcare. The ban on traveling by motorcycle, the most common means of transport in the area, and the curfew at night have further complicated the medical referral systems (MSF 28/04/2017). BH attacked and looted the health center of Boudoum on 19 March (UNICEF 31/03/2017).

Vulnerable groups affected

Since 2014, the BH insurgency has triggered large-scale displacement in northeast Nigeria and continues to threaten citizens on and around Lake Chad, including Diffa region. At least 46% of displacements in Diffa region are due to BH-related attacks (OCHA 08/12/2016).

As of 31 March, over 242,000 IDPs, refugees, and returnees are hosted in Diffa region (OCHA 31/03/2017). These people are particularly vulnerable due to the consequences of the conflict between BH and the militaries of the wider region, including the MNJTF (ECHO 20/04/2017).

Aggravating factors

Boko Haram (BH) Attacks

BH attacks on civilians, and clashes between BH and the Niger Defense Forces are ongoing in Diffa region since 2015, and are likely to hinder the response to the hepatitis E outbreak. The Niger defence ministry reports that on 9 April, clashes between BH and Nigerien Defense Forces resulted in 57 BH deaths, after BH attacked Gueskerou village in the southeast of Diffa region. 15 soldiers and two civilians were wounded (Reuters 10/04/2017).

From January to March, over 14 attacks by BH on civilians were reported in Diffa (OCHA 31/03/2017). (OCHA 31/03/2017). 455 civilians have been killed, wounded, or kidnapped by BH attacks in Diffa since 2015 (MSF 28/04/2017).

Meningitis Outbreak

A meningitis C outbreak was declared in Niger in March. As of 24 April, over 2,100 cases of meningitis, including 120 deaths, were recorded in Niger (OCHA 24/04/2017). As of 21 April, the districts of Niamey 2 and Madarounfa (in the southern Maradi region) have reached the epidemic level. Nine other districts have reached the alert threshold for meningitis, with more than five cases per 100,000 inhabitants per week. In addition, 25 districts have reported meningitis cases below the alert threshold. The disease is likely to spread geographically to other districts (WHO 21/04/2017). A vaccination campaign is

ongoing, and is likely to stretch capacity in response to the Hepatitis E outbreak in Diffa region (OCHA 24/04/2017).

Vulnerability of the population in Diffa region

The population of Diffa region is particularly vulnerable to the disease. Over 330,000 people are in need of WASH assistance, and 231,000 people are in need of health assistance in the region (OCHA 19/11/2016). Health services in Diffa region lack medicine and personnel, and are strained with the arrival of new IDPs (OCHA 09/12/2016). The affected populations in Diffa region have limited access to safe water, and adequate sanitation conditions, favouring propagation of the disease (WHO 14/04/2017).

Food insecurity and malnutrition in Diffa region

Crisis food insecurity (IPC Phase 3) is expected to continue in the Diffa region until September, due to the persistence of the BH crisis and its effects on the local economy. Humanitarian access constraints and seasonal declines in household food stocks result in poor food consumption among poor households (FEWS NET 28/04/2017).

Over 71,000 people require nutritional support in Diffa region (OCHA 10/01/2017). 12,000 children in Diffa were reported as suffering from severe acute malnutrition (SAM) in December 2016, compared to 14,338 children in June 2016 (OCHA 20/12/2016).

Rainy season

The rainy season is approaching in Niger, and is expected to peak between June and September (AFP 15/08/2016). Flooding is likely to further aggravate WASH needs, leading to the spread of the outbreak to new health districts and neighbouring provinces. The rainy season is also likely to increase vulnerability to other waterborne diseases.

Population density

There are approximately 29.3 people per square km in Niger (INS-Niger 2012). In highly populated rural areas, this presents a risk that the disease might spread.

Contextual information

Cause and symptoms

Hepatitis E is a liver disease caused by infection with a virus known as hepatitis E virus (HEV). Every year, there are an estimated 20 million HEV infections worldwide, leading to an estimated 3.3 million symptomatic cases of hepatitis E, and 56 600 hepatitis E-related deaths (WHO 07/2016). Hepatitis E is usually self-limiting but some cases may develop into fulminant hepatitis (acute liver failure). The virus is transmitted via the faecal-oral route, principally via contaminated water. (WHO 07/2016).

Pregnant women are particularly at risk. Jaundice, which causes a yellowing of the skin and eyes, is one of the most common symptoms of hepatitis E (MSF 26/04/2017).

During HEV outbreaks, the overall case-fatality rate is about 1%. However, for pregnant women, hepatitis E can be a serious illness with mortality reaching 10%–30% in their third trimester of pregnancy (CDC 18/12/2015).

Treatment

There is no specific treatment capable of altering the course of acute hepatitis E. Hospitalisation is required for people with fulminant hepatitis, and should also be considered for symptomatic pregnant women (WHO 07/2016).

Response capacity

National response capacity

Surveillance, prevention and control of disease is the responsibility of the Niger Health Ministry's Department of Public Health (Government 2016). On 24 April, a multidisciplinary national response team was deployed to Diffa region to support the implementation of control interventions (WHO 28/04/2017).

International response capacity

Médecins Sans Frontières (MSF) is supporting health care facilities in Diffa with medicines and other supplies to provide clinical care to patients (WHO 28/04/2017). Since early April, MSF teams have been working in coordination with the Ministry of Health to contain the outbreak. MSF teams have been training health staff and providing resources and extra staff in health centres and hospitals (MSF 26/04/2017). MSF teams are carrying out WASH activities in the Kitchendi, Garin Wazan, and Toumour areas of Diffa region.

Current WASH activities in Diffa region are reportedly insufficient to meet the needs of affected people (MSF 28/04/2017).

Information gaps and needs

- Hepatitis E is a new disease in Niger, and there is no diagnostic capacity in the country. This means that it is hard to predict the extent to which it will impact local areas and populations (WHO 14/04/2017).
- Information on the sectoral needs of the affected population is limited.

Lessons learned

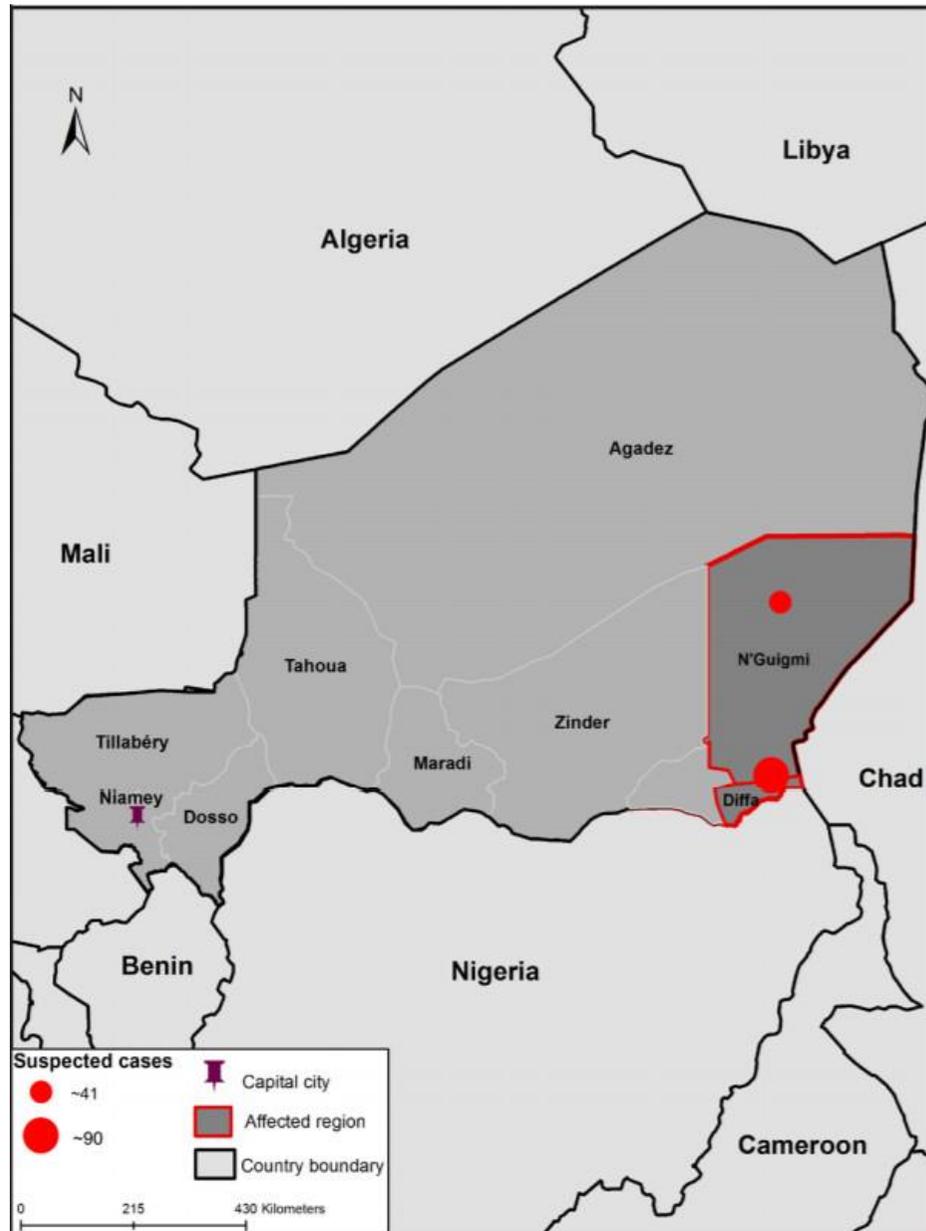
- Prevention is the most effective approach against the disease. At the population level, transmission of HEV and hepatitis E disease can be reduced by maintaining quality standards for public water supplies and establishing proper disposal systems for human faeces (WHO 07/2016).
- The outbreaks usually follow periods of faecal contamination of drinking water supplies. As previously observed, there is a risk of outbreaks in areas of conflict and refugee/IDP camps, where sanitation and safe water supply pose special challenges (WHO 2016).
- The ingestion of raw or uncooked shellfish may be the source of sporadic cases in endemic areas (WHO 2016).

Key characteristics

Key indicators	Niger	Diffa
Total population	18,638,600 (2016 est.)	673,146 (2016)
% population in rural areas	81.3% (2015)	85%
Gender and age distribution of population	0-14 years: 49.31% (male 4,635,901/female 4,554,010) 15-24 years: 18.85% (male 1,734,887/female 1,777,896) 25-54 years: 25.94% (male 2,414,668/female 2,419,725) 55-64 years: 3.27% (male 316,655/female 293,570) 65 years and over: 2.64% (male 250,314/female 240,974) (2016 est.)	Male: 344,567 Female: 328,579
State capital	Niamey	Diffa
WASH figures	Improved drinking water 44.2% Improved sanitation 47.4%	Improved drinking water 47.8% Improved sanitation 42.7%
Lighting and cooking	Cooking fuel Firewood: 84.6% Charcoal: 2.8%	Cooking fuel Firewood: 89.9% Charcoal: 5%
Health figures	Life expectancy at birth: 55.5 (2016 est.) Maternal mortality rate: 553 deaths/100,000 live births (2015 est.) Infant mortality rate: 82.8 deaths/1,000 live births (2016 est.)	Life expectancy at birth: 58.6 (2010) Maternal mortality rate: 553 deaths/100,000 live births (2015 est.) Infant mortality rate: 63 deaths/1,000 live births (2006 est.)
Food security levels		
Nutrition levels	SAM 2.7% (2014) GAM 14.8% (2014)	17.1% GAM (2016)
Literacy rates	19.1%	37% (2008)

Sources: Government of Niger (2016); CIA World Factbook, Knoema;

Map of regions affected by hepatitis E



Source: WHO 28/04/2017