Briefing Note – 26 September 2014

Ebola in West Africa

Impact on Health

Need for international assistance	Not required	Low	Moderate	Significant	Urgent
					X
Expected impact	Insignificant	Minor	Moderate	Significant	Major
					X

Crisis Overview

- As of 21 September, the estimated cumulative number of confirmed Ebola virus disease (EVD) cases reported by WHO in the three most affected countries (Guinea, Liberia, and Sierra Leone) is **6,242, including 2,909 deaths.** The 'hidden caseload', however, is unprecedentedly large, and these figures are believed to include only a fraction of all cases in this rapidly spreading epidemic
- According to a WHO projection, the aggregate caseload of EVD could exceed 20,000 by early November. Other agencies project the possibility of more than ten times as many cases, use different assumptions such as transmission to other countries, and evolution of the virus towards easier transmission between people.
- The humanitarian community is already over-whelmed with the management of the epidemic and is greatly challenged in facing all the implications of this unprecedented and complex regional crisis. The current outbreak in West Africa is by far the largest ever recorded, and already numbers more cases than all past Ebola epidemics combined. 26 million people are estimated to live in the three most-affected countries. The epidemic started in Guinea in December 2013 but was only identified in March, and spread to Liberia, Sierra Leone, Senegal and Nigeria.

Total recorded caseload and deaths per country as of 21 September

	Number of cases	Number of deaths
Liberia	3,280	1,677
Sierra Leone	1,940	597
Guinea	1,022	635
Total	**6,242**	**2,909**

Source: WHO 24/09/2014

Key Findings

Anticipated scope and scale

- Disease transmission continues, as does exponential growth in cases. The end of the epidemic is not in sight. Over 22 million people are living in areas with active EVD transmission.
- Actors in the field are not able to contain the epidemic and have extreme difficulties managing cases. The indirect consequences of the epidemic are extensive, including loss of routine health services, and a severe economic impact. The health system effects are likely to worsen as the epidemic progresses.

Humanitarian Constraints & Response Gaps

- Weak national health systems with, proportionately, the lowest numbers of health workers in the world per population. Loss of local health workers further diminishes response capacity. Lack of training or experience.
- Fear and mistrust of the national and international health system and authorities are increasing Ebola transmission. Rumours that foreign aid workers and disinfection teams are propagating the disease result in threats, attacks and security issues.
- The rainy season, as well as movement restrictions, pose difficulties for transport and access.
- Restrictive confinement policies hamper access to healthcare, food, and markets. Border closures limit arrival of humanitarian cargo and personnel.

Priorities for Humanitarian Intervention

- Countries require an urgent and massive mobilisation of international resources to address the epidemic and its implications.
- Assistance is urgently needed to address the humanitarian consequences of the epidemic, especially the disruption of all healthcare services.
- Health workers are extremely vulnerable to the epidemic as they are frequently at risk of contracting the disease. 373 health workers have reportedly developed EVD, of whom 208 have died, as of 21 September. Women constitute a large proportion of health workers and caregivers.

Ebola Outbreak

Key Developments

Global

Key Issues

- WHO announcement of a Public Health Emergency of International Concern and its Ebola Response Roadmap has not yet translated into sufficient large-scale action on the ground, and the spread of the disease is outpacing the response.
- Massive deployments of effective response units are needed. The regional coordination mechanism does not have the capacity to meet needs.
- With increased transmission over time, it becomes harder to get the disease under control (UNSC 18/09/2014). Ebola could become an endemic infection because of a highly inadequate and late global response (NEJM 23/09/2014).

Spread of the disease: As of 21 September, the cumulative number of cases reported in the three most affected countries by WHO is 6,242, including 2,909 deaths (WHO 24/09/2014). More deaths are not reported than reported, so most agencies believe that these figures are a vast underestimate. Such a massive 'hidden caseload' has not been seen in any previous Ebola outbreak (WHO 24/09/2014). People with Ebola travelling to treatment centres by public transport are increasing the difficulties for tracing and potentially spreading the disease.

Population affected: 26 million people live in areas affected by the Ebola outbreak (UNICEF 27/08/2014). Health workers are extremely vulnerable to the epidemic as they are the most exposed. 373 health workers have been reported infected by EVD, of whom 208 have died, as of 21 September (WHO 24/09/2014). Infections in health workers account for nearly 8% of total reported cases (WHO 24/09/2014). Women constitute a large proportion of health workers and caregivers and are at the frontline of the epidemic, making up between 50% and 75% of reported cases, depending of the country and the area (UN 16/09/2014). About 2.5 million children under five years live in EVD-affected areas (USAID 17/09/2014). Children affected by EVD are exposed to ostracisation and there are reports of children being abandoned' (Government 10/09/2014).

Movement restrictions: Cameroon, Cape Verde, Côte d'Ivoire, Guinea, Guinea Bissau, Kenya, and Senegal have closed national borders with EVD-affected countries (USAID 10/09/2014). The tentative of isolation of the main zone of disease transmission has made it even more difficult for agencies to bring in staff and supplies (UN 13/08/2014). Some reports indicate the halting of development programmes in affected areas (UNDP 07/08/2014). Most commercial airlines have suspended services to Guinea, Liberia, and Sierra Leone, further limiting the ability of humanitarian partners to move personnel and relief commodities (LogCluster 11/09/2014).

Geographic/Weather constraints: The weather has impacted logistics, and heavy seasonal rains are expected to continue for the next two months (LogCluster 02/09/2014). There are large number of cases both in densely-populated areas and remote villages, making the outbreak particularly difficult to control.

Response: On 18 September, the UN Security Council declared the Ebola outbreak in West Africa a "threat to international peace and security" and adopted a resolution establishing a special mission to lead the global response (UNMEER) (UNSC 18/09/2014). Médecins Sans Frontières (MSF) is the main clinical responder on the ground, with 3,000 staff working in eight Ebola Treatment Centres (ETCs). IFRC has deployed over 133 international staff to support authorities mainly in contact tracing, body management, burial and disinfection, and psychosocial support. More than 100 US Center for Disease Control (CDC) staff have been deployed in Guinea, Sierra Leone, Liberia, Nigeria, and Senegal (CDC 12/09/2014). The Logistics Cluster has established a logistics hub in Monrovia to manage and dispatch health relief commodities, and is transporting and storing medical items in Guinea, Liberia, and Sierra Leone (USAID 04/09/2014). On 16 September, US President Barack Obama announced that 3,000 personnel will be deployed to West Africa, mainly in Liberia, to contribute to the Ebola response (BBC 16/09/2014). Cuba has stated it will 165 health workers (WHO 12/09/2014). More responses are being pledged but it remains to be seen when the aid will become operational.

Expected evolution: According to a WHO projection, the aggregate caseload of EVD could exceed 20,000 by early November (WHO 28/08/2014). According to CDC's model, if the virus continues to spread at the current rate, Liberia and Sierra Leone will have reported about 550,000 Ebola cases by late January. The CDC estimates that officially reported cases are about 40% of the real burden in Liberia and Sierra Leone, indicating a possible total of 1.4 million cases in Sierra Leone and Liberia by late January. Without scale-up of intervention, cases will continue to double approximately every 20 days. However, the epidemic could be controlled, if 70% of people with Ebola can be put under treatment (CDC 23/09/2014). For more information, see page 10.

Liberia

Key Issues

- The death toll from the disease has risen fastest in Liberia.
- Access to health care is very limited as the health system has collapsed.
- Prices of basic goods, services, and transportation are increasing (OCHA 16/09/2014).
- Due to roadblocks and movement restrictions, traders have been unable to travel to buy food and farmers have not been able to harvest their crops, causing food shortages in certain communities and high levels of discontent with authorities (FAO 05/09/2014).
- Responders in Liberia indicate a deterioration of the situation in the country, and in Monrovia in particular (WHO 24/09/2014).

Spread of the disease: As of 21 September, 3,280 cases had been reported, including 1,677 fatalities since March (WHO 24/09/2014). Liberia is currently considered as the most severely affected country. The scale of the crisis remains unknown due to insufficient reporting and to numerous contact chains remaining untraced. Laboratory confirmation is limited due to transport and handling problems.

Most vulnerable populations: Liberia's Ministries of Health and of Gender and Development reported that 75% of those infected or who have died from Ebola are women (HRW 15/09/2014).

Geographical areas affected: The majority of reported cases have occurred in Montserrado, Lofa, and Margibi but all counties are affected (Government 20/09/2014). The crowded slum of West Point (Monrovia), where over 70,000 people live on a peninsula, lacks running water, sanitation, and garbage collection. Many bodies have been thrown into the two nearby rivers (WHO 24/09/2014).

Movement restrictions: Restrictions have been put in place on public and mass gatherings; on 19 August, a curfew was imposed (AFP 10/08/2014; BBC, 20/08/2014). Schools have been closed (CDC 13/08/2014). All markets in border areas are closed until further notice (AFP, 30/07/2014). All borders have been closed, except major entry points: Roberts International Airport, James Spriggs Payne Airport, Foya Crossing, Bo Waterside Crossing, and Ganta Crossing. Travel in and out of quarantined areas is also limited (CDC 13/08/2014).

Response: The UN reports that there are currently 41 humanitarian partners active in Liberia and approximately USD 473 million is needed to respond to EVD (USAID 17/09/2014). The outbreak has completely outstripped the Government's and international actors' capacity to respond and control the epidemic (WHO, 08/09/2014).

Sierra Leone

Key Issues

- Number of reported cases largely inaccurate, underestimating the gravity of the situation on the ground. According to the Government, there is a "desperate need to step up the response" (New York Times 25/09/2014).
- Nationally, the situation in Sierra Leone continues to deteriorate, with high level of transmission in Freetown (WHO 24/09/2014).
- Supplies of food are running low; there is a high risk of food insecurity if the epidemic is not contained soon (FAO 18/09/2014)
- Armed forces have been mobilised to screen people for Ebola symptoms and enforce the curfew, strengthening the population's suspicion (INGO 18/09/2014).

Spread of the disease: As of 21 September, 1,940 cases had been reported, including 597 fatalities since May 2014 (WHO 24/09/2014). Nationally, the situation continues to deteriorate (WHO 24/09/2014).

Geographical areas affected: The majority of cases have occurred in Kailahun and Kenema (Government 24/09/2014).

Movement restrictions: A state of public emergency was declared on 7 August, with Kenema and Kailahun districts put under quarantine the same day, while northern districts of Port Loko and Bombali have been on 25 September (IFRC 12/08/2014; AFP 25/09/2014). More than 7,000 police and soldiers have been mobilised to enforce the quarantine and security measures (AFP, 06/09/2014). Roads between Kailahun, Freetown, and Kenema are closed to public transport, and public spaces have established vigorous scrutiny to avoid contamination and further spread of the disease (IFRC 12/08/2014). Medical clearance is needed for transportation into or out of quarantined areas (international media, 30/08/2014). Restrictions have been put in place on public and other mass gatherings (CDC 13/08/2014). In June, Sierra Leone closed its borders with Guinea and Liberia, and closed schools, cinemas, and nightclubs in border areas. On 6 September, Sierra Leone's President ordered a three-day nationwide quarantine plan starting from 19 September, to find patients who have not come forward for treatment (AFP, 06/09/2014).

Response: The UN reports that 18 humanitarian partners are active in Sierra Leone and approximately USD 220 million is needed to respond to EVD (USAID 17/09/2014). On 22 August, the Sierra Leone parliament passed a law that imposes a jail term of up to two years for anyone concealing an Ebola-infected patient (AFP, 22/08/2014).

Guinea

Key Issues

- The health system in general has not been as badly affected as in Liberia and Monrovia but the outbreak is not under control, even if the situation has stabilised (WHO 24/09/2014).
- There is a lack of logistical and HR resources to implement a strong containment plan (MSF 02/09/2014).

Spread of the disease: As of 21 September, 1,022 cases had been reported, including 635 fatalities since the start of the outbreak in December 2013. The epidemiological pattern seen in Guinea is unusual, when the outbreak looks like it is coming under control, sudden and unexpected flare-ups occur (WHO 24/09/2014).

Most vulnerable populations: Guinea's Health Ministry reported that as of 7 September, women made up 54% of Ebola cases (HRW 15/09/2014).

Geographical areas affected: Active infection areas include Conakry, Forécariah, Guéckedou, Macenta, Pita, Dubréka, Nzérékoré, Yomou, Kindia, Kérouané and Dalaba (Government 20/09/2014).

Movement restrictions: Strict controls at border points, travel restrictions, and a ban on moving bodies from one town to another until the end of the epidemic (AFP 14/08/2014). Guinea closed its borders with Liberia, Sierra Leone and Guinea-Bissau on 9 August (international media 09/08/2014).

Response: The UN reports that 34 humanitarian partners are active in Guinea and approximately USD 194 million is needed for the response to EVD (USAID 17/09/2014).

Health

Impact

Global

The devastating course of this epidemic is unlikely to be attributable just to the biologic characteristics of the virus but to a combination of factors: high population mobility, local customs, densely populated capitals, lack of trust in authorities after years of armed conflict, and dysfunctional health systems.

Health systems in the most affected countries are collapsing, creating an emergency within an emergency, mainly in Liberia and Sierra Leone. Mortality levels from other diseases and conditions are rising and could become catastrophic (NEJM 23/09/2014). The limited resources of already underresourced health systems are being diverted towards stopping the spread of EDV, preventing people from seeking treatment for other diseases.

Disease Burden

Malaria cases have increased as the rainy season has begun. Initial symptoms are similar to some of those of Ebola, which stress already scarce services. People are unable to access treatment (WHO 2012). Even at the epicentre of the outbreak, malaria may cause up to 35 times more deaths than Ebola this year (international media 22/08/2014). Up to 100,000 people die from malaria in West Africa in an average year (international media 13/08/2014).

Availability of Services

- **Health infrastructure:** Some hospitals have been entirely taken over by Ebola patients, preventing other patients from accessing treatment (international media 13/08/2014).
- **Health personnel:** There is a major lack of medical and nursing staff. Aid workers and skilled employees are fleeing. 373 health workers have reportedly developed EVD, of whom 208 have died, as of 21 September, further weakening the health systems in the most affected countries (WHO 24/09/2014).

Liberia

The already low-capacity health system has been stretched and is unable to meet Ebola and non-Ebola medical needs (OCHA 16/09/2014). While the health system is collapsing, people are dying from common diseases (Reuters 07/08/2014). 3.37 million people are in need of assistance due to the consequences of the Ebola outbreak (OCHA 16/09/2014).

In Monrovia, the public system is functioning at 5% of previous capacity at the hospital level and 50% at the outpatient level, because of labour problems and both patients' and health workers' fear of returning to infected health facilities.

Disease Burden

- Treatable diseases, such as malaria and diarrhoea, are left untended and deaths from these diseases could outstrip those from the Ebola virus by three- or fourfold (Reuters 07/08/2014). During the peak malaria season, 3,000 under-fives a day are infected per day, with 10% in need of hospitalisation (MSF-OCP).
- **Immunisation:** The lack of health workers and the general distrust in the health system are undermining basic vaccination programmes, and measles and polio rates are likely to increase. Immunisation rates are barely at 50% at best, and are expected to drop by up to half the current coverage rate (InterPress Service 11/09/2014).
- **Maternal health**: Women in labour struggle to obtain skilled maternity care and are, in some cases, turned away from facilities that are still open, because of fear and the high risk of infection (InterPress Service 11/09/2014). According to estimations, there are 273 births a day in Monrovia, with 15% or 45 complicated deliveries per day (MSF-OCP).

Availability of Services

- **Emergency services:** With most hospital specialists and technicians absent, most emergency response cannot be carried out. UNICEF warned of an "overwhelming gap in the delivery of critical life-saving operations" (international media 15/08/2014). Some sick patients in ETCs have had two consecutive negative lab results but there is no alternative treatment site to refer them (Government 29/08/2014).
- **Health infrastructure:** According to the Epicentre assessment, 59% of public health facilities in Monrovia are open and 16% partially open (Epicentre 04/09/2014). Mid-August, all five of the main hospitals in Monrovia were closed. Some have since reopened but are barely functioning (MSF 15/08/2014). Facilities lack reliable electricity and water. Hospitals in Monrovia are not fully operational due to lack of qualified staff and proper equipment (IRIN 12/08/2014). In Barkedu town, in Lofa county, the hospital is closed down (CNN 01/09/2014). In Bong County, in the north, the two largest hospitals have closed, leaving over 330,000 people without health care (New York Times 12/09/2014).
- **Health personnel:** There are reports of health workers abandoning posts due to fear of contact with the virus (All Africa 11/07/2014). While the ratio of physicians was one for 70,000 before the epidemic, some of these doctors have fled or quit their jobs since the outbreak. Only about 50 doctors remain in Liberia, according to estimates (international media 22/08/2014). Health workers have been dramatically affected by EVD, with 182 infected, of whom 87 have died (WHO 24/09/2014). Nurses at Liberia's largest hospital went on strike early September, demanding better pay and equipment to protect them against Ebola (The Guardian 02/09/2014).
- **Medicine:** In Monrovia, most of the population appears to rely on private pharmacies to obtain medication for common illness (Epicentre 04/09/2014).
- **WASH:** According to organisations on the ground, there are growing concern about the availability of safe water for patients and health workers within hospitals and for those living inside quarantine areas (INGO 03/09/2014).
- **Body management:** The only crematorium in Liberia is overwhelmed by the dozens of bodies, many collected days after death (international media 21/08/2014).

Sierra Leone

6.34 million people are in need of assistance due to the consequences of the Ebola outbreak (OCHA 16/09/2014).

Disease Burden

- Malaria, typhus, infections and surgical emergencies continue, however the population is no longer able to find any assistance in public health facilities (EMERGENCY 20/08/2014). Some health units have stopped testing for HIV and other diseases, fearing contaminated blood samples (AFP 13/08/2014).

Availability of Services

- **Maternal and child health:** Women and children are not accessing basic health services and there is an increase in non-Ebola-related morbidity and mortality (UNICEF 26/08/2014).
- **Health infrastructure:** In Freetown, the paediatric hospital is closed; the Connaught hospital is operating erratically due to the absence of medical personnel (EMERGENCY 20/08/2014). Shortages of ambulances for the transfer of patients have been reported (Government 10/09/2014).
- **Health personnel:** Before the epidemic, there was just one physician for 45,000 people (international media 22/08/2014). 113 health workers have been infected, of whom

81 have died (WHO 24/09/2014). Health staff have gone on strike at Ebola treatment centres, over pay and poor working conditions at the end of August (Reuters 30/08/2014).

- More than 10,000 people are dependent on long-term treatment for HIV. When Ebola hit, the HIV treatment centres were so disrupted that many people stopped getting the medicines they need (international media 22/08/2014).

Guinea

3.86 million people are in need of assistance due to the consequences of the Ebola outbreak (OCHA 16/09/2014).

- **Health system:** Preceding the EVD outbreak, the country had a very low functioning healthcare system. Since then, 67 health workers have contracted the virus, of whom 35 have died (OCHA 16/09/2014; WHO 24/09/2014).
- While current efforts have largely focused on medical interventions to contain the EVD outbreak, more needs to be done to address the secondary effects of the outbreak (OCHA 16/09/2014).
- **Access:** Poor road conditions make many communities outside the capital inaccessible (OCHA 16/09/2014).

Aggravating Factors

Global

Fear is proving to be the most difficult barrier to overcome. The deaths have caused panic and further dysfunction within the already weak health system. Fear has driven some families to shun hospitals, perceiving health institutions as posing a danger rather than offering help (UN 27/08/2014). People are more likely to die from other diseases but they refuse to go to health centres (Reuters 20/08/2014). General distrust in the health system has hampered health workers' attempts to reach people and worsened the already critical health situation (international media 22/08/2014).

Ebola is new in West Africa and often the populations do not understand why the disease has suddenly arrived. The recent civil wars in Liberia and Sierra Leone have deeply influenced the way people rely on official information. Informal networks are perceived as more reliable than government sources (IRIN 04/09/2014). International organisations and health workers are held responsible for the outbreak. Rumours of cannibalism, organ trafficking and international workers' witchcraft are widespread (IFRC, 14/08/2014). Rumours have been triggering aggressive behaviour towards relief workers and authorities.

Population mobility: The high mobility of the population in the region, especially around Guéckédou in southern Guinea, close to the borders with Sierra Leone and Liberia, aggravates the transmission of EVD. Guéckédou is a regional trade hub for several neighbouring countries (MSF 26/06/2014).

Liberia

- It is taking too long for trained workers to deal with dead bodies, leading to increased risk of infection and tensions with communities.
- On 17 August, a quarantine centre was attacked and looted by young men armed with clubs (international media 17/08/2014).

Sierra Leone

- There are reports of affected individuals, even health workers, fleeing treatment centres (UNICEF 10/08/2014). Some staff have refused to work in isolation wards and Ebola treatment centres (UNICEF 10/08/2014).
- Overall, people are gradually becoming more aggressive and violent towards health workers, volunteers, and organisations involved in awareness and response activities. Soldiers are guarding doctors and nurses who have been targeted by angry crowds, blaming Western medicine for exacerbating the epidemic (AFP 13/08/2014). Authorities and humanitarian actors have warned about the alarming level of reluctance in Macenta (UNICEF 05/09/2014).
- The rainy season has started and flash floods have affected the eastern city of Kenema, increasing the possibility of a cholera outbreak (AFP 13/08/2014).

Guinea

- Soldiers have said they have been drafted in to guard doctors and nurses at hospitals, many of whom have been targeted by angry crowds (AFP 13/08/2014).
- The resistance in rural communities continues to radicalise in the Forest region, the epicentre of the crisis, where people appear to have more confidence in traditional medicine (UNICEF 19/09/2014).
- On 29 August, riots broke out in Guinea's second-largest city Nzérékoré over the disinfection of a market by health workers. Guinea imposed a curfew in Nzérékoré, after which more than two dozen people were wounded (international media, 30/08/2014).

- On 18 September, eight people were killed by villagers in Wome, Nzérékoré. They were part of a delegation sent to raise awareness about Ebola. At least 21 people were wounded. Officials reported that many villagers were suspicious of official attempts to combat the disease (AFP 18/09/2014; BBC 19/09/2014).

Information Gaps and Needs

- Information on needs and response in the humanitarian sector as in all other sectors.
- Specific data regarding the in-crisis situation of the health system in the three countries including:
  - availability of medical staff, supplies, equipment, infrastructure, and body management structures and personnel in the three countries, both at national and sub-national level;
  - response capacity of the NGOs in the field;
  - access to health centres; and
  - functioning health centres in the three countries
- Data and information on impact on population: people with disabilities or chronic diseases, and on maternal, child, and mental health.
- Morbidity and mortality statistics in the three countries beyond Ebola.
- **Guinea:** data and information on management of health services
- **Liberia:** data and information on maternal health
- **Sierra Leone:** data and information on emergency services, immunization and health personnel

Lessons Learned

Severe Acute Respiratory Syndrome (SARS) in China, 2002–2003

- The SARS epidemic exposed weaknesses in China's public health infrastructure, including inadequate state funding, lack of effective surveillance systems, and severe shortages in facilities and medical staff prepared for an epidemic infectious disease outbreak (NCBI 2003).
- The Chinese Government established a case reporting structure, strengthened its emergency response system, and provided funding for the prevention and control of SARS (NCBI 2003).
- At first, the response was slow and the Government did not seem to recognise the severity of the crisis, aggravating the situation. The SARS experience increased the recognition and understanding of government officials and the public about the importance of infectious disease control and prevention in general (NCBI 2003).

Middle East Respiratory Syndrome (MERS) in Saudi Arabia, 2012

- The authorities set up a special structure to contain the spread of the disease. The Government has taken steps to ensure the reliability of information and timeliness of reporting by developing an electronic system to improve mechanisms for reporting new cases to the Ministry of Health (IRIN 28/08/2014).
- Transparency and coordination, both at the global and national level, were the key to contain the epidemic (IRIN 28/08/2014).

Past EVD outbreak in DRC, 2003

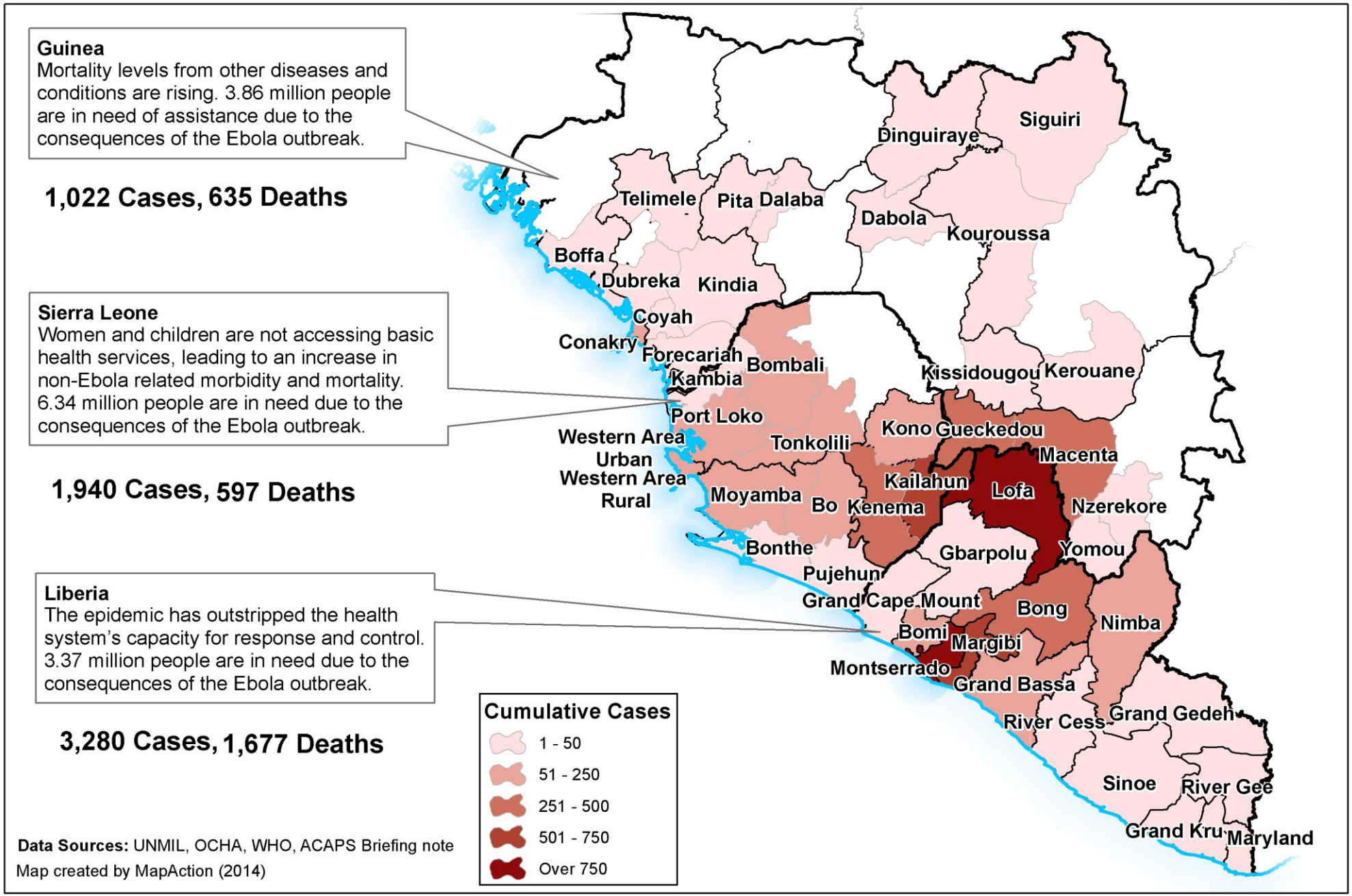
- Humanitarian actors have to take into account the stigmatisation of frontline health workers. Rejection of health workers can hamper the mobilisation and the containment of the outbreak. Some Red Cross volunteers who helped in the 2003 outbreak in DRC were still regarded as witchdoctors three years later (France24 02/09/2014).

EVD outbreak, 2013–2014

- Classic "outbreak control" efforts are no longer sufficient for an epidemic of this size, it requires a large-scale, coordinated humanitarian, social, public health, and medical response, combining classic public health measures with safe and effective interventions which include behavioural changes and when possible, vaccination (NEJM 23/09/2014).
- When certain conditions are met -such as changes in the interactions between humans and their environment, dysfunctional and under resourced health systems, national and international indifference, lack of effective timely response, high population mobility, local customs that can exacerbate morbidity and mortality, spread in densely populated urban centres, and a lack of trust in authorities- what might once have been a limited outbreak can become a massive, nearly uncontrollable epidemic (NEJM 23/09/2014).

West Africa: Ebola Outbreak (Update 21st September)

MapAction



Data Sources: UNMIL, OCHA, WHO, ACAPS Briefing note

Map created by MapAction (2014)

Key Characteristics: Guinea, Liberia, Sierra Leone

General Indicators

Key Indicators	Guinea	Liberia	Sierra Leone
Total population	11.45 million (WB 2012)	4.19 million (WB 2012)	5.98 million (WB 2012)
Outbreak start date	February 2014	29 March 2014	26 May 2014
Case fatality rate (CFR) as of 26 August	430/647 (66.4%)	694/1378 (50.4%)	422/1026 (41.1%)
Age distribution of population	42.9% under the age of 14 (HEWS 25/09/2012)	43.49% under the age of 14 (HEWS 25/09/2012)	43% under the age of 14 (HEWS 25/09/2012).
Nutrition levels	35.8% of under-5s underweight, 16.3% stunting, 5.6% wasting (WHO 2012)	20.4% of under-5s underweight, 39.4% stunting and 7.8% wasting (WHO 2007)	21.1% of under-5s underweight, 44.9% stunting, 7.6% wasting (WHO 2010)

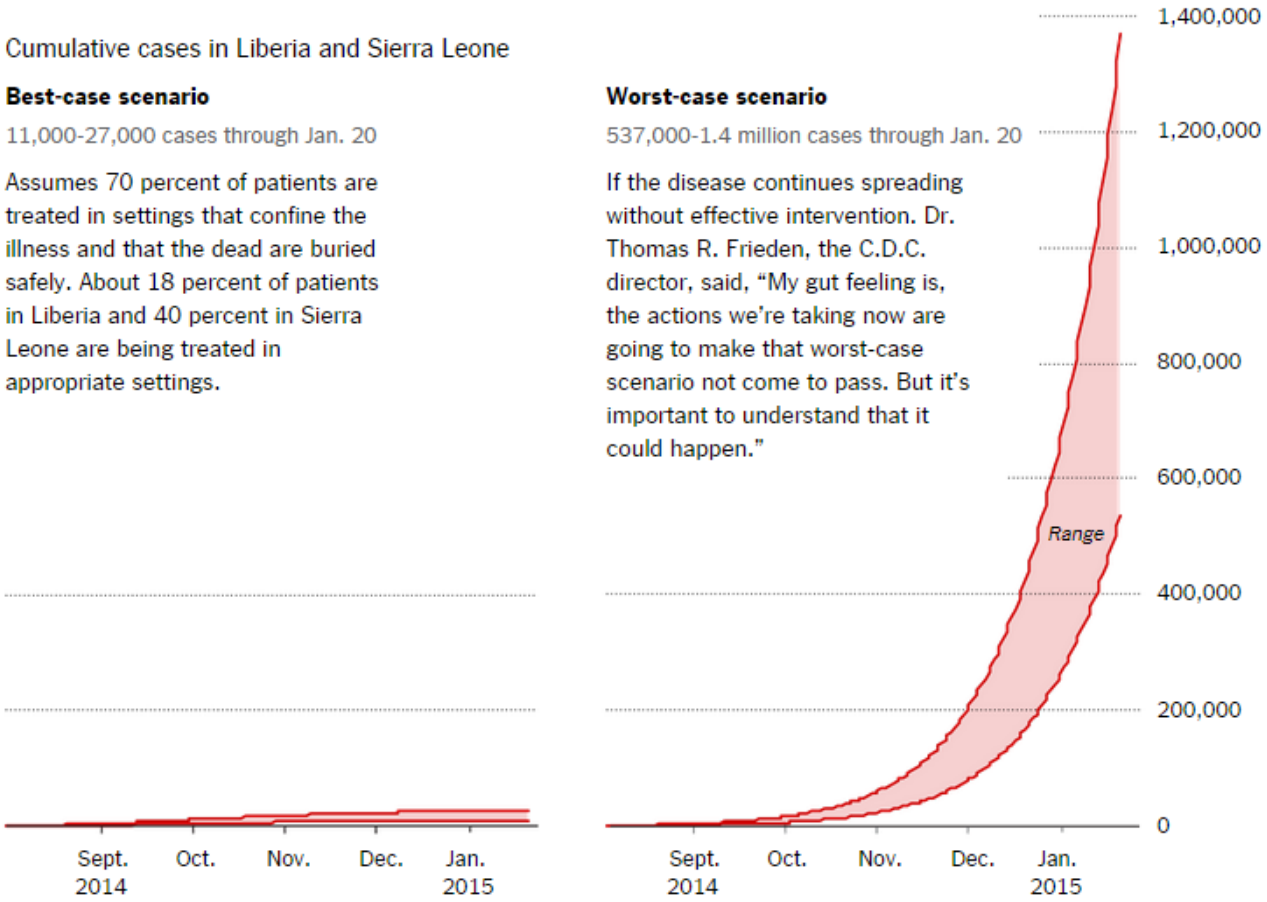
Health Indicators: Pre-crisis Situation

Key Indicators	Guinea	Liberia	Sierra Leone
Infant mortality rate (%)	65 (UNDP 2014)	56 (UNDP 2014)	117 (UNDP 2014)
U5MR	101 (World Bank 2012)	75 (UNDP 2014)	182 (UNDP 2014)
2014 HDI rank	179 (0.392) (UNDP 2014)	175 (0.412) (UNDP 2014)	183 (0.374) (UNDP 2014)
People below the poverty line (%)	58% (UNFDA 2010)	64% (UNFDA 2008)	70% (UNFDA 2012)
Health expenditure, total (% of GDP)	6% (World Bank 2012)	16% (World Bank 2012)	15% (World Bank 2012)
Maternal mortality rate (per 100,000 live births)	980 (UNICEF 2012)	990 (UNICEF 2012)	1,100 (WB 2013)
Immunisation, measles (% of children aged 12–23 months)	58 (World Bank 2012)	80 (World Bank 2012)	80 (World Bank 2012)
Incidence of malaria (per 100,000 population)	38,333 (WHO 2012)	27,793 (WHO 2012)	19,027 (WHO 2012)
Average births attended by skilled health personnel	45 (WHO 2006)	61 (WHO 2006)	61 (WHO 2006)
Physicians per 10,000 population	1 (World Bank 2010)	0.1 (WHO 2006)	0.2 (WHO 2006)
Nurses and midwives per 10,000 population	0 (World Bank 2010)	2.7 (WHO 2006)	1.7 (WHO 2006)
Main causes of death in children under 5 (%)	Malaria: 27 Acute respiratory infections: 13 (WHO 2012)	Malaria: 21 Acute respiratory infections: 14 (WHO 2012)	Acute respiratory infections: 17 Diarrhoea: 14 Malaria: 14 (WHO 2012)

Expected Evolution: How Big Can the Outbreak Become?

The Centers for Disease Control and Prevention said Tuesday that in a worst-case scenario, cases could reach 1.4 million in four months. The centers' model is based on data from August and includes cases in Liberia and Sierra Leone, but not Guinea (where counts have been unreliable).

Estimates are in line with those made by other groups like the World Health Organization, though the C.D.C. has projected further into the future and offered ranges that account for underreporting of cases.



Source: New York Times, CDC 22/09/2014