

ACAPS - Ebola Needs Analysis Project

Sierra Leone Multi-sector Needs Assessment Report



Photos: [UNMEER/Martine Perret](#)

April 2015

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Acronyms

ACAPS	Assessment Capacity Project
DERC	District Ebola Response Centre
DFID	Department for International Development
CILSS	Permanent Interstate Committee for Drought Control in the Sahel
SLDHS	Sierra Leone Demographic and Health Study
ENAP	Ebola Needs Analysis Project
EVD	Ebola Virus Disease
FAO	Food and Agriculture Organisation
FEWSNET	Famine Early Warning System Network
FSL	Food Security and Livelihoods
HCWs	Healthcare Workers
HHs	Households
IFRC	International Federation of Red Cross and Red Crescent Societies
GADM	Global Administrative Areas (Boundaries without limits)
GAUL	Global Administrative Unit Layers
INGO	International Non-Governmental Organisation
IPC	Infection Prevention Control
KI (s)	Key Informant(s)
KII (s)	Key Informant Interview(s)
MoEd	Ministry of Education, Science and Technology
MoFED	Ministry of Finance and Economic Development
MoHS	Ministry of Health and Sanitation
MoIC	Ministry of Information and Communication
MoLGRD	Ministry of Local Government and Rural Development
MoSWGCA	Ministry of Social Welfare, Gender and Children's Affairs
MSF	Médecins Sans Frontières
NERC	National Ebola Response Centre
NFIs	Non-Food Items
NGO	Non-Governmental Organisation
SMAC	Social Mobilisation Action Community
UN	United Nations
UNMEER	United Nations Mission for Ebola Emergency Response
WFP	World Food Programme
WHO	World Health Organisation

Acknowledgement

We highly appreciate the support of all the people and organisations that contributed to this report from the planning to the disseminations stage. These include: The NERC and DERC staff in the districts visited. All the Key Informants (KIs) that participated in this process. The DALAN team and research associates and all the technical groups and individuals that provided feedback and made contributions to the final report. We also thank DFID for the financial support provided, not only to this initiative but to the overall ENAP project.

Executive summary

The number of new Ebola infections in Sierra Leone is declining, despite the outbreak continuing to claim lives. New cases have dropped to around 9-12 per week, according to recent WHO figures. There were over 500 cases per week at the height of the crisis around late November 2014.

The impact on the lives of the thousands of people directly affected by the disease has been devastating. It has caused substantial suffering to many others, leaving the population very vulnerable.

No recent assessment has evaluated and compared the status of populations in areas with high, medium and low exposure to Ebola. In this report, we refer to low, medium or high exposure areas based on the proportion of Ebola cases up to January 2015, compared to the 2014 population projections for those areas. Low Ebola exposure areas are districts in which the proportion of EVD cases compared to the population is between 0.01% and 0.10%. Medium Ebola exposure districts are defined as districts in which the proportion ranges from 0.11% to 0.20%. High exposure districts are districts in which the proportion of EVD cases is between 0.21% and 0.52%.

The Ebola Needs Analysis Project (ENAP) assessment was designed as a probability sample survey, conducted with 188 KIs from 59 chiefdoms and wards. The aim was to analyse the impact of the Ebola crisis from a multi-sectoral perspective.

The rationale for sampling area selection was as follows:

- Six out of 14 districts were selected to represent high, medium and low Ebola exposure areas.
- Two districts were chosen for each category.
- In each case, one was a more agriculture-dependent district and the other had a population with more varied livelihoods and a higher dependency on markets for food.

National estimate of people at risk due to serious unmet needs were calculated based on KIs responses and 2014 population projections, and calculated with a 95% confidence interval.

Key findings

Results show that the impact of the Ebola crisis is noticeable across the whole country, going beyond directly affected populations and geographical areas.

The health, food security, livelihoods and educational conditions are worse than at the same time last year, prior to the Ebola outbreak.

KIs ranked the priority needs in the following order:

1. Food security and livelihoods
2. Health
3. Education

Health and food security needs were more acute in high exposure areas, than in medium or low ones.

However, there is no significant correlation between exposure levels and livelihoods and education needs. Populations appear to have been negatively affected regardless of the number of Ebola cases in their area.

Health

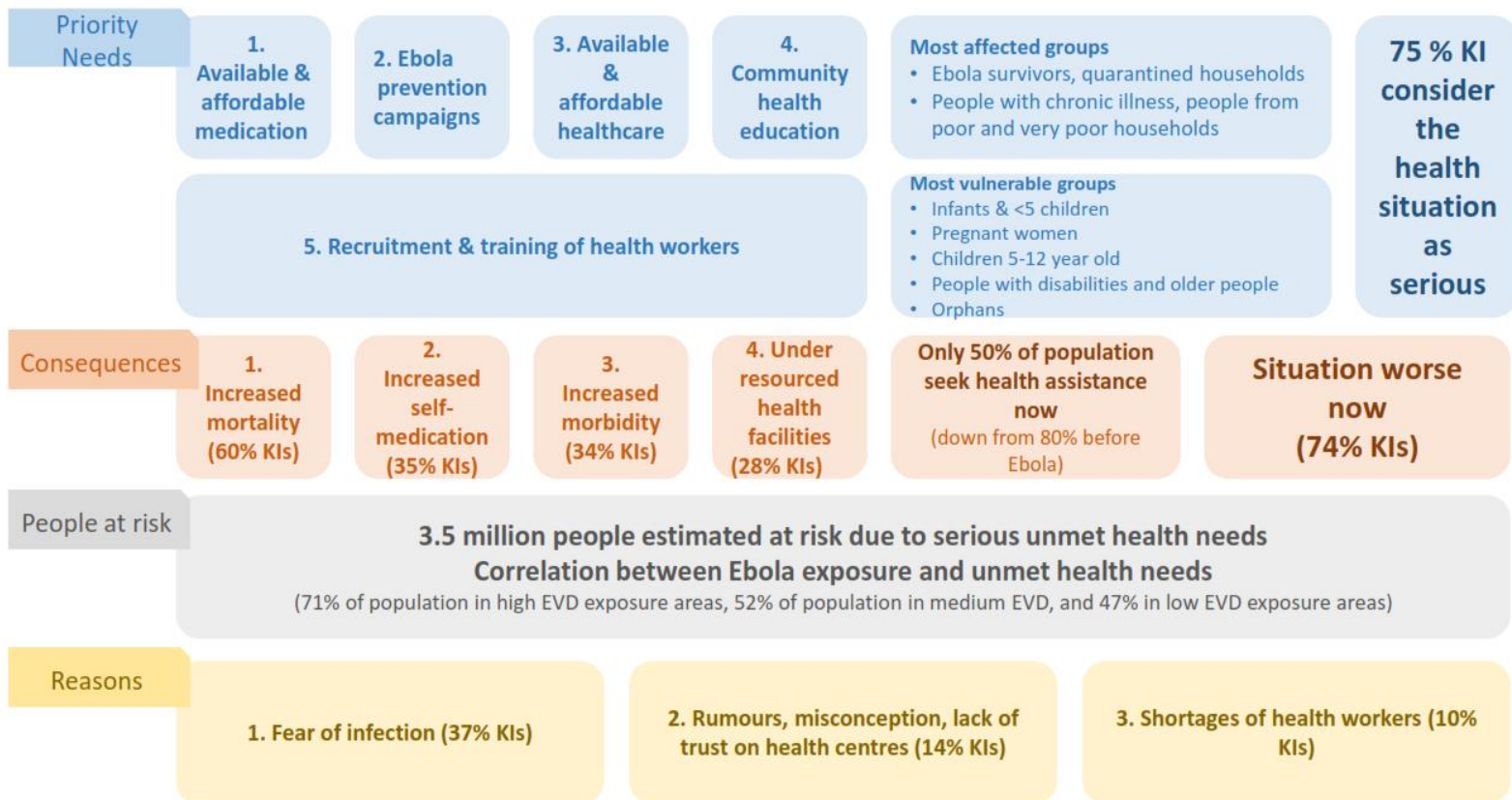
The health status of the population is worse as a result of the Ebola crisis, according to almost three quarters of KIs. Fewer people are currently seeking health care assistance when faced with a serious health problem than they did before the crisis: only 50% of the population, compared to 80% before the Ebola outbreak.

The major consequences of the Ebola crisis are considered to be higher mortality and morbidity, increased self-medication and under-resourced health facilities. The national extrapolation of people at risk as a result of serious unmet health needs is 3.5 million^[1].

^[1]Calculations with a 95% confidence interval were done using as reference the proportion of the "Serious needs" range in the severity scale and the 2014 population projections for each of the districts categories (high, medium and low). See Annex 3 for more details

In districts with higher number of Ebola cases, 71% of the population are considered at risk from unmet health needs. This figure drops in medium to low exposure districts, to 52% and 47% respectively. There is a strong correlation between high numbers of Ebola and higher levels of unmet health needs.

KEY INFORMANTS PERCEPTION – EBOLA CRISIS IMPACT ON HEALTH



Food security and livelihoods

Over 4 million people are estimated to be at risk of serious unmet food needs and over 4.1 million at risk of deteriorating livelihood conditions, according to calculations based on KIs perceptions.

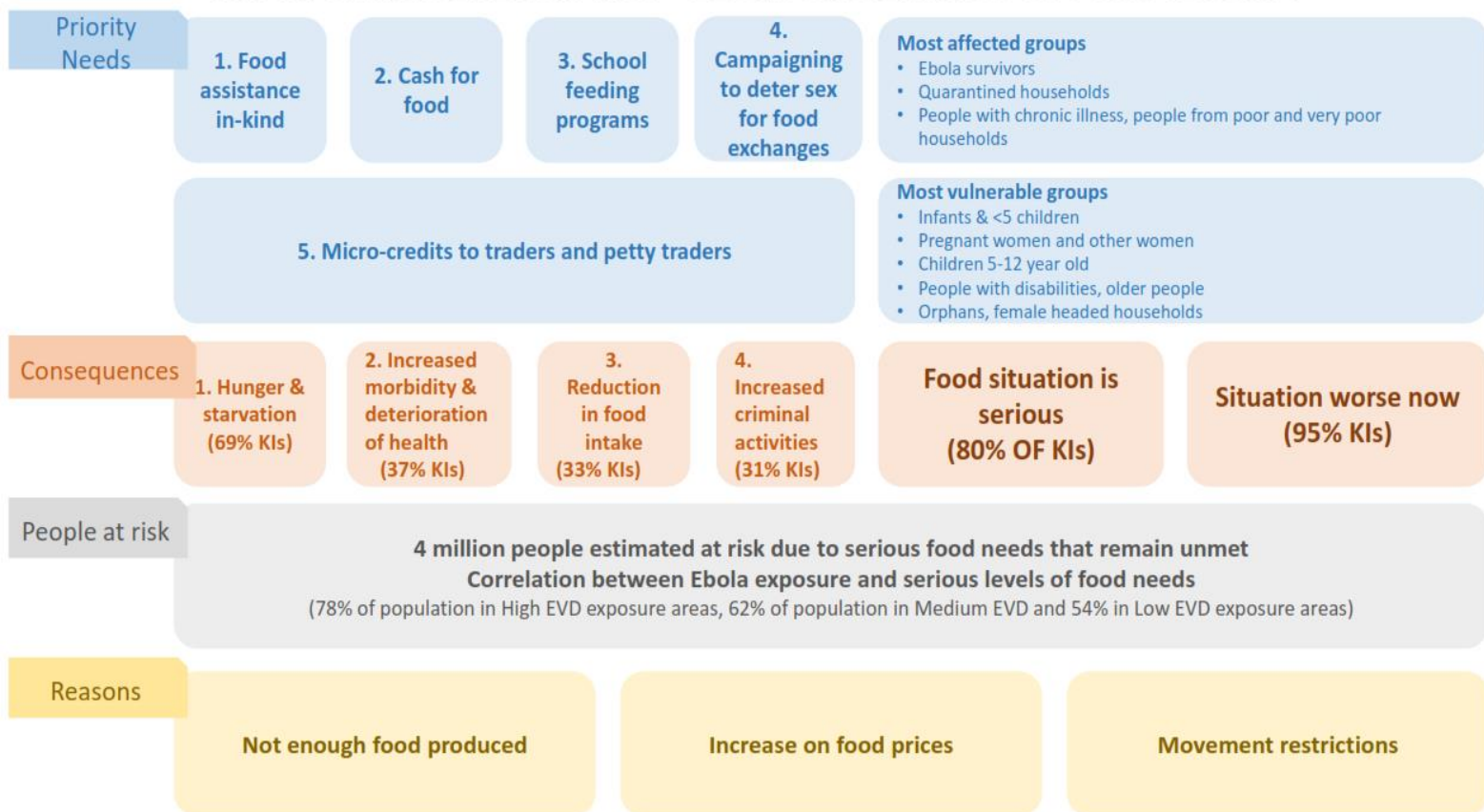
95% of KIs think that the food and livelihoods situation is worse than at the same time last year. This deterioration was attributed to:

- Lower production of food at HH level
- Price increases
- Movement restrictions on people and goods, following border closures
- National and international trade disruptions

These factors have had a negative impact on markets, trade and livelihoods and have left thousands of families with less access to food. Poverty has increased, health and living conditions have deteriorated and criminal activities seem to have increased.

There is a correlation between food needs and the level of exposure: 54% in low exposure areas, 62% in medium, and 78% in high.

KEY INFORMANTS PERCEPTION – EBOLA CRISIS IMPACT ON FOOD SECURITY



No correlation exists between the level of Ebola exposure and unmet livelihood needs. The negative impact of Ebola on livelihoods appears to cut across all districts, regardless of the number of cases.

KEY INFORMANTS PERCEPTION – EBOLA CRISIS IMPACT ON LIVELIHOODS

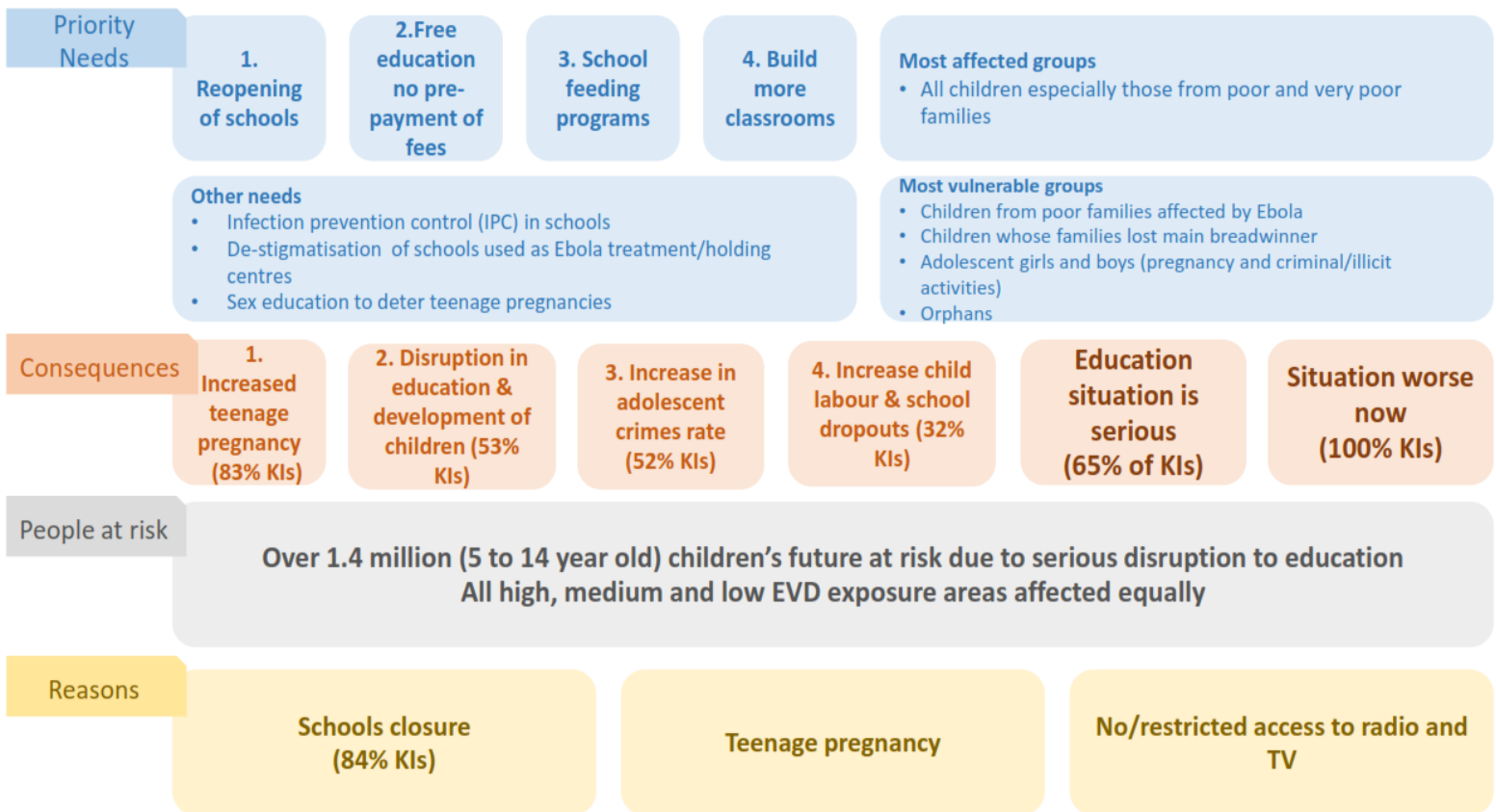


Education

All respondents indicated that the education situation is worse than at the same time last year, pre-Ebola. Over 65% of respondents said that the situation is serious and could jeopardise children’s futures.

Over 1.5 million 5–14 years olds are estimated to be in need, due to education disruption, all schools were closed from 9 September 2014 to mid-April 2015. KIs indicated that as a result, teenage pregnancies have increased, children’s development has been disrupted and higher numbers of children and adolescents have become engaged in labour and criminal or illicit activities. All these elements can lead to further school dropouts when classes resume. This should be assessed further in the future.

KEY INFORMANTS PERCEPTION – EBOLA CRISIS IMPACT ON EDUCATION



Protection

Stigma and discrimination, as a result of Ebola, is perceived to affect survivors, frontline Ebola workers, quarantined populations, Ebola orphans and families with family members who have died from Ebola or are infected with it.

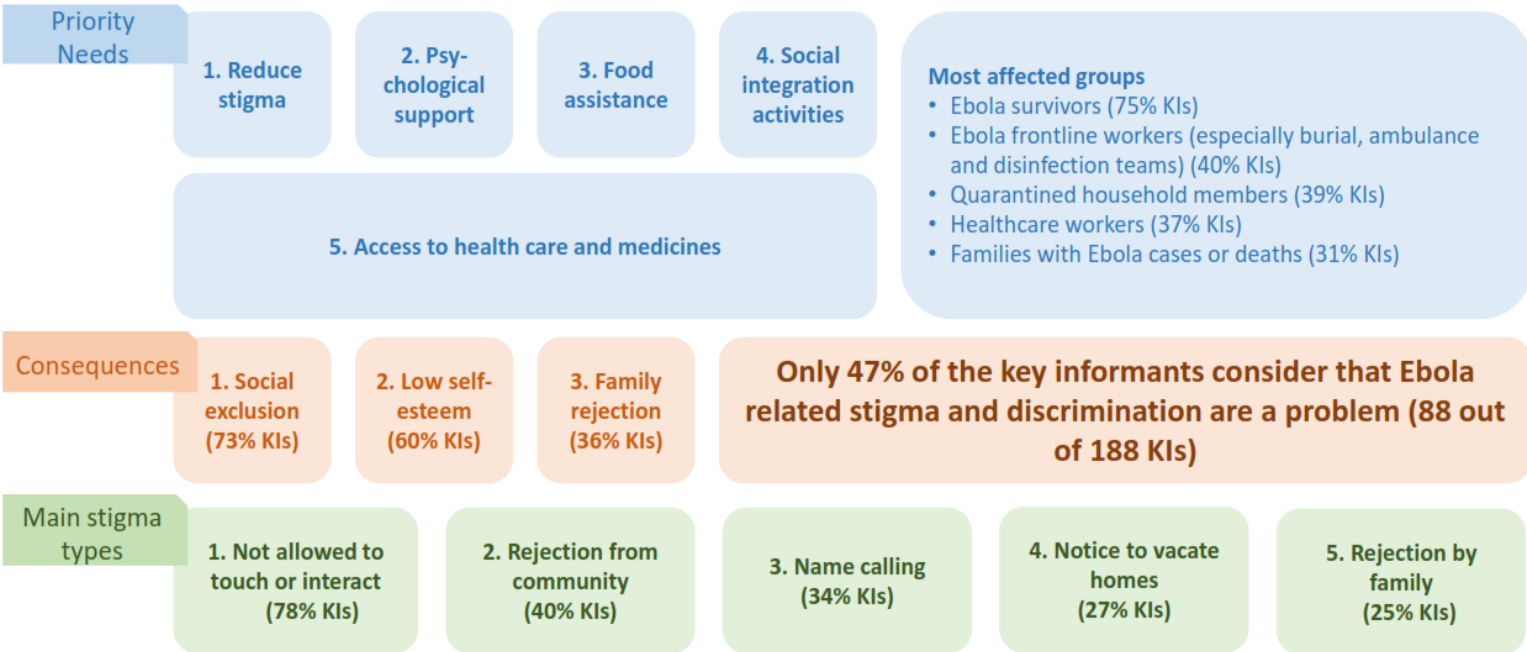
Ebola frontline workers, especially those in direct contact with the virus such as burial, disinfection and ambulance teams and healthcare workers are often seen by the community, and even their own families, as a potential source of infection.

Infants, children, and pregnant women are considered particularly vulnerable. They suffer most from the cumulative impacts of the crisis, especially health and food issues.

Adolescent boys are seen to be at high risk of being involved in illicit or criminal activities due to school closures, while teenage girls are at higher risk of falling pregnant or exchanging sex for food or commodities. Children, especially orphans and those from families that lost their main breadwinner and / or livelihoods, are thought more likely to engage in child labour and to be at higher risk of dropping out of school when classes restart.

Farmers, traders and petty traders are the livelihood groups most affected, due to movement restrictions, markets closure, supply chain disruption and decreased purchasing power. They are most in need of in-kind or financial support to recover.

KEY INFORMANTS PERCEPTION – EBOLA RELATED STIGMA AND DISCRIMINATION



Recommendations for future data collection

Proposed assessment strategy:

- Monitor levels of stigma and discrimination suffered by different groups. Identify causes of discrimination, trends, and establish resulting priority unmet needs. Identify other protection concerns that might arise as a result of Ebola, for example increases in teenage pregnancy, domestic violence, sex for food exchanges and unrest.
- Analyse the impact of schools reopening and monitor attendance levels. If attendance is lower than pre-Ebola levels, identify the main reasons for school dropouts and priority interventions
- Assess trends in the food security and livelihoods status ahead of the lean season which generally runs from June to August.
- Analyse access to and use of health care facilities. If the level of access and use remain lower than pre-Ebola, identify blockages and priority interventions. Humanitarian and governmental efforts are currently focused on restoring safe access to public health facilities and implementing infection prevention controls (IPC) for health workers and patients.
- Monitor the impact of the rainy season on already deteriorated food, livelihoods and health situations, as well as access to services and markets.

Recommendations for further monitoring of needs:

- Use a simpler questionnaire. Limit or remove tiered questions, to facilitate the speed of the data collection and analysis.
- Strengthen the understanding of protection issues and ways of probing KIs, so that they are encouraged to answer these questions. Few KIs saw Ebola stigma and discrimination as problems in their chiefdoms and in many cases protection-related questions were left unanswered.
- Triangulate KI opinions with HH assessments or focus group discussions.

Evolution of the crisis

The first Ebola case is believed to have been a two-year-old boy from southeastern Guinea, who died on 6 December 2013. On 22 March 2014, Guinea informed WHO of the outbreak, with 22 cases reported. On 30 March, Liberia reported its first two Ebola cases. On 26 May, the epidemic spread to Sierra Leone. On 17 June, the virus reached Liberia's capital, Monrovia. By 23 June, with more than 350 deaths, the West African outbreak was the worst on record. On 25 July, Nigeria confirmed its first case.

Liberia declared a state of emergency on 6 August, and Sierra Leone did so the following day. On 8 August, WHO declared Ebola a public health emergency of international concern. On 13 August, Guinea declared the outbreak a "health emergency". Quarantines and curfews began to be imposed.

By 26 August 2014, over 3,000 cases had been reported in West Africa.

International action began to accelerate in mid-September, and the UN set up a special mission to lead the global response. Entire populations of the countries affected by the outbreak have suffered. The limited resources of an already under-resourced health system have been diverted towards stopping the spread of Ebola and reducing availability of treatments for other conditions, leading to an increase in mortality from other diseases.

Fear and mistrust of the national and international health system and authorities have contributed to increased Ebola exposure. Rumours that foreign aid workers and disinfection teams are propagating the disease have resulted in threats, attacks, and security issues. Schools have been closed in Liberia and Sierra Leone and in some parts of Guinea, leaving children without access to education.

As of mid-December 2014, there were 18,603 reported Ebola cases and almost 6,915 deaths in the three most affected countries, Guinea, Sierra Leone and Liberia.

Since late January 2015, Ebola activities have been scaling down in Liberia and Sierra Leone as the number of newly reported cases has been decreasing. Some Ebola treatment centres have been decommissioned and repurposed, as have other resources that were instrumental in the Ebola response.

In February, measles outbreaks were declared in Sierra Leone, Liberia and Guinea. Pre-Ebola routine vaccination campaigns had limited success and were deprioritised during the Ebola crisis, raising concerns of a bigger outbreak.

In late March, junior secondary schools reopened in Sierra Leone, after months of closure. The remaining schools reopened mid-April. The Ebola crisis has left a total of 12,023 Ebola orphans across the country, the majority of them in Port Loko with 3,410 cases, according to UNICEF.

As of 23 April, Sierra Leone reported 12,294 cumulative Ebola cases, including 3,885 deaths.

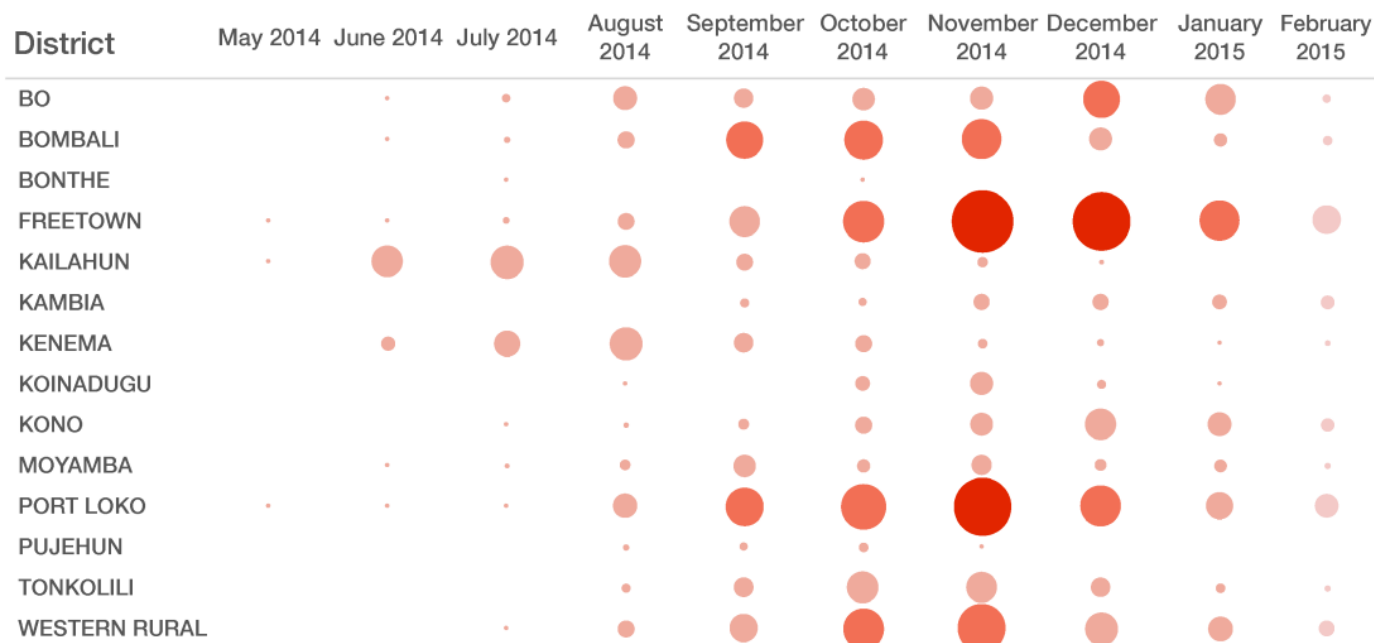
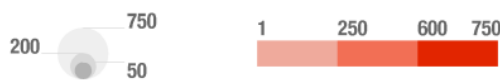
Methodology

Background to the assessment

The crisis response has primarily focused on the medical and epidemiological containment of the outbreak. Despite primarily being a health crisis, Ebola is having a significant wider humanitarian impact on the lives of affected population. If these impacts are not effectively addressed, Ebola affected countries could experience multiple crises simultaneously.

Ebola Cases per Month

by district



To better understand the crisis, ENAP carried out a DFID funded assessment between February and March 2015 in Sierra Leone. It analyses the humanitarian situation and describes priority needs, as identified by members of the community. The results provide evidence to inform humanitarian response decisions.

In this report, comparisons are made chiefly between:

- The situation before and during the Ebola crisis,
- Districts, according to their level of exposure to Ebola.

Sampling size and geographical scope

The ENAP assessment was designed employing a probability sample. As such, findings can be generalised to the entire country. Descriptive statistics were used for the district level findings. In addition, we report national estimates with a 95% confidence interval. The national estimates are based on 2014 population projections and Ebola caseload. They are expressed as populations-at-risk from having serious needs unmet, as perceived by KIs. Details of the estimation methodology are provided in [Annex 3](#).

Dalan is the ENAP implementing partner in Sierra Leone, and was responsible for the questionnaire revision, training of research associates, field data collection, database management and preliminary analysis of the results.

Six interview teams met KIs in 59 Ebola affected chiefdoms. The selection proceeded through several stages:

1. Six **districts** out of the total 14 were selected for the survey. The selection criteria were:

- **Level of exposure to Ebola** (high, medium, low) based on the proportion of the Ebola caseload in the 2014 projected population.
- **Agricultural dependency** (measured as the percentage of HHs primarily depending on agriculture). 100 percent minus this measure is a proxy for livelihood diversity and dependency on markets for food.

Districts Selection Criteria ¹

¹ Districts in grey are the selected ones. Sources for data to calculate the Ebola exposure are the Sierra Leone MOH report [UNMEER – NERC, GoSL](#) and agricultural dependency is based on the 2013 [Sierra Leone Poverty Profile](#).

DISTRICT	LOW EVD cases (0.01-0.10% pop)	MEDIUM EVD cases (0.11-0.20)	HIGH EVD cases (0.21-0.52)	Agriculture dependency as LHHs ²
WESTERN URBAN	No	No	Yes	2.6
WESTERN_RURAL	No	No	Yes	26.2
TONKOLILI	No	No	Yes	76.4
PORT LOKO	No	No	Yes	80.5
KENEMA	No	Yes	No	46.5
BO	No	Yes	No	49.4
BOMBALI	No	Yes	No	60.5
KAILAHUN	No	Yes	No	89.4
KONO	Yes	No	No	29.3
MOYAMBA	Yes	No	No	70.7
BONTHE	Yes	No	No	73.9
KAMBIA	Yes	No	No	78.4
PUJEHUN	Yes	No	No	79.3
KOINADUGU	Yes	No	No	84.2

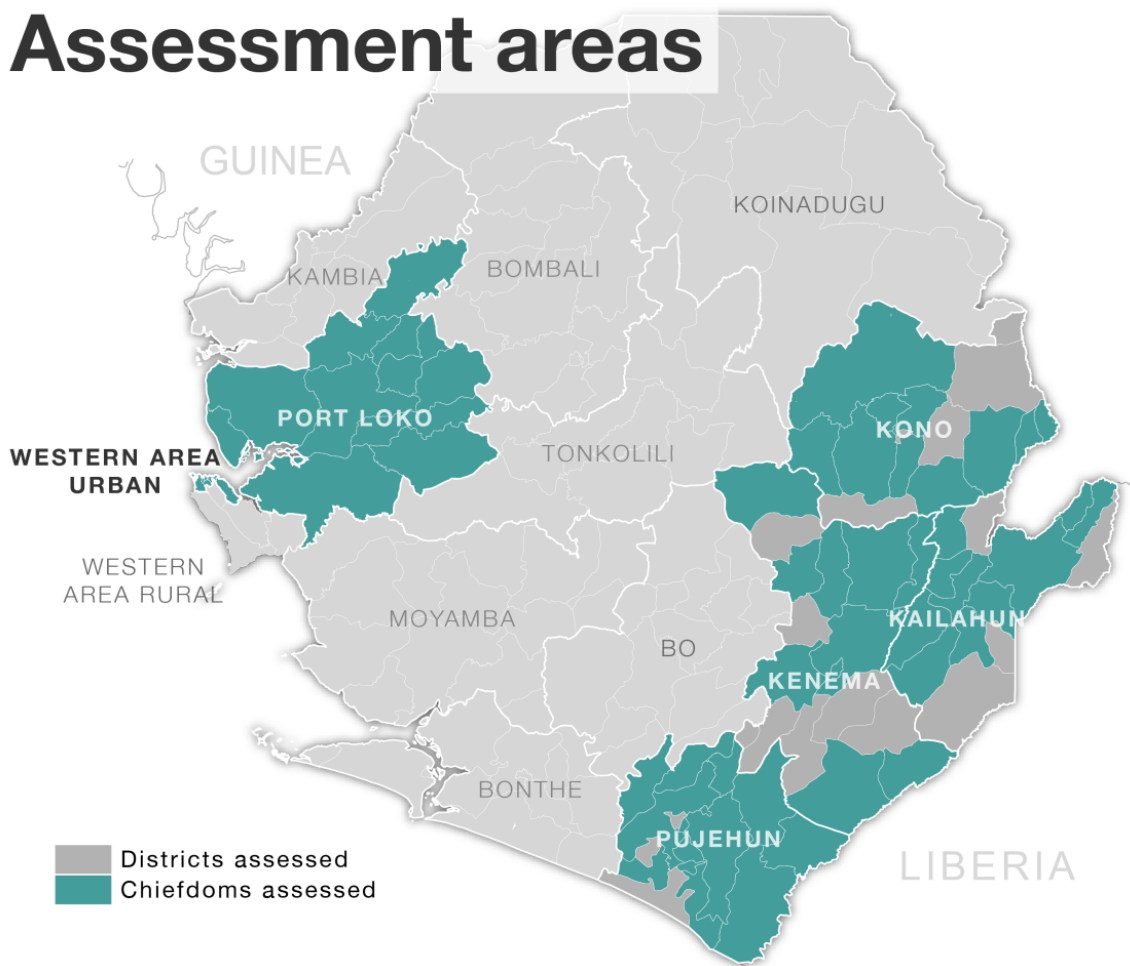
Selected districts:

- **Port Loko, Kailahun and Pujehun** represent, respectively, the high, medium, and low Ebola exposure areas categories with a higher agricultural dependency. Under this category Pujehun was selected instead of Koinadugu due to logistical constraints.
- **Western Area Urban, Kenema and Kono** (high, medium and low level exposure respectively) are less agriculturally dependent and more reliant on markets to access food.
- **Port Loko** and **Western Area Urban** were, at the time of the survey, current Ebola hotspots, districts where most of the new Ebola cases were reported.

2. Within the selected districts, chiefdoms and urban wards ("units") were selected. In order to minimise clustering of KIs within a district, its units were divided in 3–4 groups. From within each of these groups, a small number of units were selected using a random number table.

The following map shows the chiefdoms that were visited.

Assessment areas



3. Within each unit, assessment sites were selected using a mixture of purposive and convenience sampling. A balance was expressly sought between male and female KIs, those purporting to speak for the entire district (chiefly officials in district headquarters) and others with a more local brief. Logistics and safety considerations imposed the convenience element.

4. Within an assessment site, the final selection of KIs depended on social status, availability and consent to being interviewed. The teams tried to balance the district-wide composition of KIs by gender and administrative scope.

KIs in high-exposure areas were over-sampled. The previously untested assumption was that these areas held a disproportionate number of people at risk. Therefore there was a substantive interest in relatively higher precision in these estimates, as opposed to that needed in estimates for medium- and low-exposure areas.

Between 9–23 February 2015, the six teams interviewed 188 KIs in 59 chiefdoms and wards³. In addition to structured questionnaire interviews, GPS coordinates of each interview were recorded, and some photos were taken to illustrate the realities in some of the communities. NetHope and UNMEER provided the smart phones used by the field teams. KIs were asked to compare the situation in February 2015 to before the Ebola outbreak, taking February 2014 as a baseline reference month to ensure that seasonal variations were captured. This was applied to all the sectors except protection, which looked into discrimination and stigma as the result of Ebola.

The information is complemented with secondary sources. These include reports, baselines and datasets from the Government of Sierra Leone, National Ebola Response Centre (NERC), UN Mission for Ebola Emergency Response (UNMEER), Médecins Sans Frontières (MSF), World Health Organization (WHO), UN Development Programme (UNDP), World Food Program (WFP) Social Mobilization Action Community (SMAC) and NGOs and humanitarian and development organisations.

³ Administrative units in Sierra Leone.

Key informants

188 KIs gave face-to-face interviews; these were completed by the 23 February 2015. The following table provides a breakdown by district and administrative scope:

	Districts	Chiefdoms sampled	Kills at District level	Kills at Community level	Total # KIs
High	W/A Urban	8	6	36	42
	Port Loko	11	6	36	42
Medium	Kenema	10	6	20	26
	Kailahun	10	6	20	26
Low	Kono	10	6	20	26
	Pojehun	10	6	20	26
Total	6	59	36	152	188

The interview teams relied on a source-language (English) questionnaire⁴ that they administered in the local languages of the interviewees. It covered several sectors in order to capture the breadth and depth of unmet needs: health, food security, livelihoods, education and protection (Ebola related stigma and discrimination only). It pursued a mixed quantitative and qualitative perspective.

The questionnaire included only open questions to ensure enumerators paid full attention to the interview. Interviews lasted around 100 minutes, on average, and were conducted by a group of experienced research associates. They had received a tailored three-day training and spoke the different local languages of the districts they were visiting. KIs⁵ were all asked the same set of multi-sector questions.

By background, the KIs were drawn from:

- Government officials and administrative leaders (district council, paramount chiefs, community leaders);
- Ministry representatives (Ministry of Health and Sanitation, Ministry of Education, Ministry of Social Welfare, Gender and Children's Affairs, Ministry of Local Government and Rural Development,
- National Ebola Response Centre (NERC) and District Ebola Response Centre (DERC)
- Representatives of community based organisations (CBOs)
- Female leaders, youth leaders, religious representatives
- Farmers, traders, teachers,
- Ebola response workers, including quarantine officers, frontline humanitarian workers, community workers and survivors.

The sample included a mix of youths under 30 years (13.6%), young adults between 30-49 years (48.4%), and adults 50 years and above (34%). 64% of the interviewees were male and 36% were female. Over two-thirds (68%) of KIs had secondary education or higher, compared to 39% for the general population⁶. Over 60% of them were in paid employment, given the relatively high level of education among the group.

Some KIs were contacted by phone when clarification from their answers was needed, at the coding and data entry stage. The final report was written after sharing the preliminary results with sector representatives from different agencies and NGOs that are responding to the crisis.

The survey failed to translate protection concepts in a language that the KIs could readily understand. Only 47% of KIs (88 out of 188) were able to respond to this segment, as the rest considered that this problem did not exist in their communities.

⁴ [Annex 2](#)

⁵ [Annex 3: Key informant profile](#)

⁶ [Sierra Leone DHS – 2013](#)

Limitations of the survey methodology

Due to an ongoing audit on the use of Ebola funds at the time of the field data collection, potential KIs were more reluctant to provide information. Apparently many feared that this assessment was connected to the investigation. As a result, the interviewers later had to call a number of the KIs over the phone to fill data gaps or to clarify the answers provided.

The questionnaire contained a number of questions that formed complex, mutually dependent sequences. These challenged the flow of the interviews as well as data management and analysis. The recommendation for next time is to keep questions more self-contained and less enmeshed with preceding responses.

Some of the qualitative information is included in the report for its strong illustrative value, but its representative character cannot be assessed.

Timeframe

Month	Activities
February	Planning, training, field data collection (9–23 February), development of the database and data entry
March	Data entry, analysis, discussions with humanitarian organisations on preliminary key findings, report drafting
April	Preliminary findings dissemination, final report writing, statistical computation

How to read the charts

This section offers some tips as to how to read and interpret charts in an appropriate way, to fully understand the findings. In addition to maps, three main types of charts are used to visualise the findings:

1. **Heat-maps** to summarise priority or preference results, main consequences and reasons.
2. **Horizontal stacked bar charts** to summarise severity ratings.
3. **Bump charts** to summarise before and after changes; comparing February 2014 to February 2015.

“Priority” or “preferences” visuals

Heat-maps are used throughout the report to summarise multiple priority responses and their relative importance, into a form that is easier to visualise.

The questions from which the heat maps are extracted always imply a selection of the top issues, reasons, consequences or interventions. They represent **frequencies of response by issue and Ebola exposure category** (high, medium or low exposure areas). The last column provides summary statistics for all areas.

Sample heat-map

	High EVD exposure	Medium EVD exposure	Low EVD exposure	All Areas
Available and affordable drugs	Dark teal	Medium teal	Light teal	Light teal
Continue or increase Ebola prevention messages and sensitization	Dark teal	Medium teal	Light teal	Light teal
Available and affordable health services	Light teal	Medium teal	Light teal	Light teal
Promote community health education	Medium teal	White	White	Light teal
Recruit and train more health care workers	Light teal	Light teal	Light teal	Light teal

Levels of preference are presented for four or five sub-headings and frequencies of responses are colour coded in descending order, based on the summary statistic for all areas. The darker the colour, the more frequently the response was mentioned.

In the above heatmap, results can be interpreted as follows:

- Available and affordable drugs were the most preferred interventions across all visited areas.
- Available and affordable and health services were the third most frequently requested intervention, except in high exposure areas where promotion of community health education was the third most frequent response.
- In the heatmap, cells with no colour indicate that this option was not included among the top five ranked reasons in that particular district.

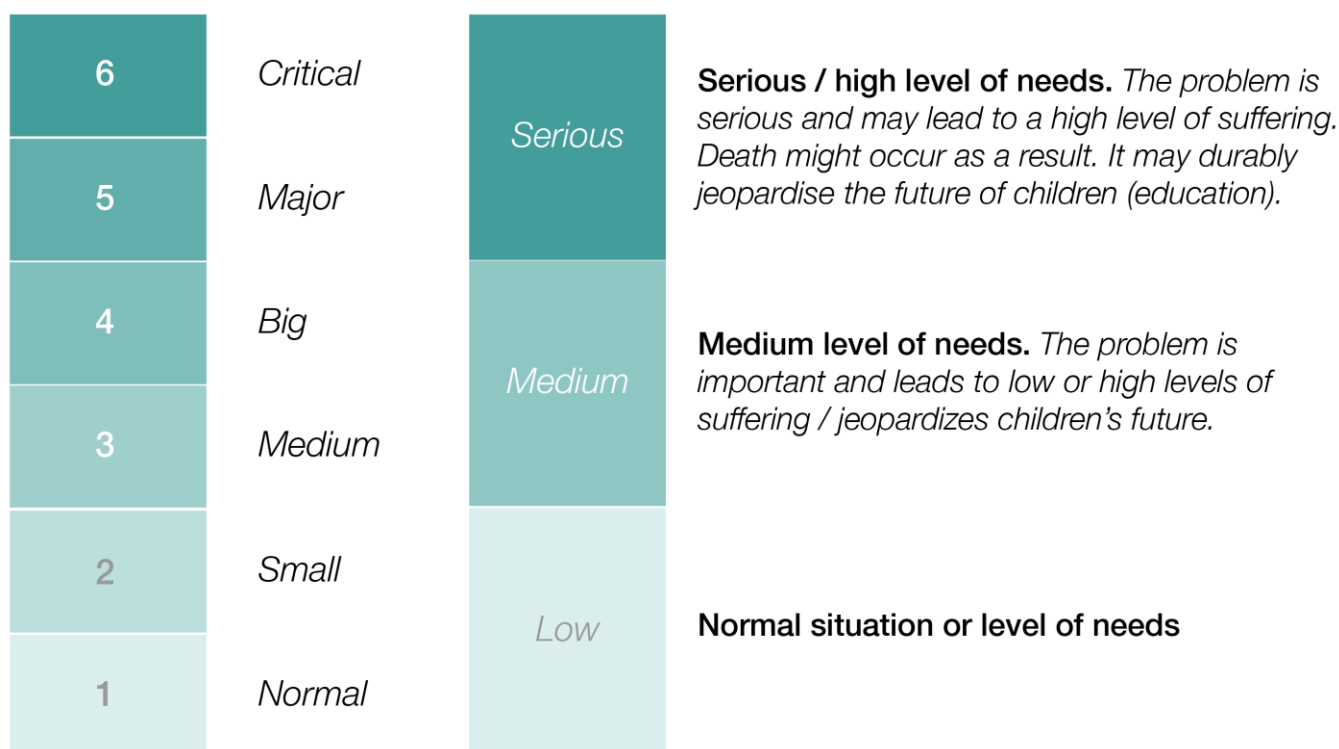
Severity visuals

A severity scale developed to measure the intensity of the problems for each of the sectors was included in the questionnaire and enumerators were trained in how to use it. This scale indicated need for life-saving assistance and was used as a proxy for determining the population groups most at risk from serious unmet needs.

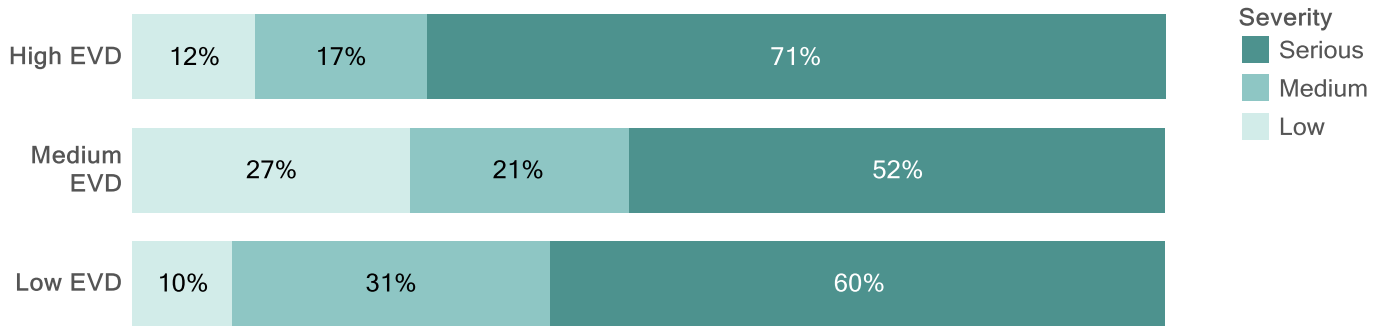
The severity scale was standardised for the health, food security, livelihoods and protection sectors. For education, it was adjusted, to reflect the fact that needs being measured were non-life threatening. KIs were asked to rank different sectors, from one (lowest level of need) to six (highest level of need). They were also asked to indicate how life-threatening the situation is in regards to health, FSL and protection. For education, they were asked how severe the impact is on education in regards to the child’s future.

The six-point scale was reduced to three during the analytical process, combining levels 1 and 2 into "**no or low level of needs**", 3 and 4 into "**medium level of needs**" and 5 and 6 into "**serious level of needs**" as detailed in the following chart.

Description of the severity scale



Throughout the report, severity scores are represented with horizontal stacked bars. They display the percentage of KIs reporting a low, medium or serious severity score in different Ebola exposure areas:

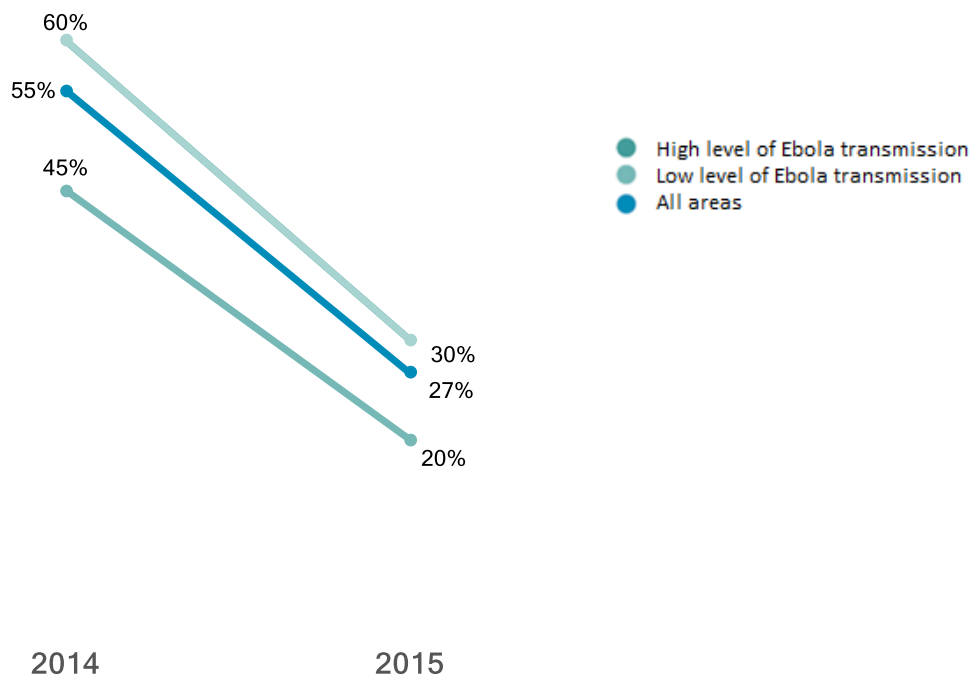


In the above graph, results should be interpreted as follows: 71% of KIs in high Ebola exposure areas reported a serious level of needs in the health sector.

Before and after visuals

Bump charts are used to visualize the differences before and during the Ebola crisis, comparing February 2014 to February 2015. KIs were asked the following question for each sector:

Out of ten HHs in your district / chiefdom / community [Select relevant], how many of them would you say were able to provide adequately for their family BEFORE the Ebola crisis? And NOW?

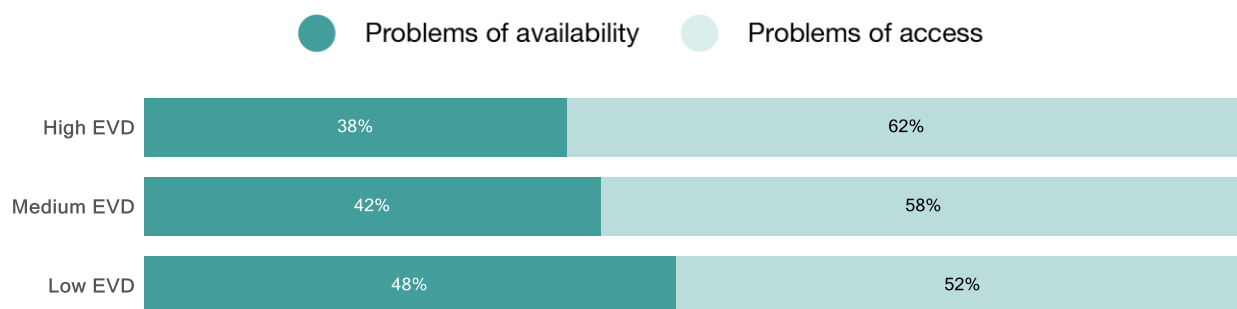


The bump chart shows the average percentage of people who were able to provide adequately one year ago and currently. For instance, in the above chart, it is estimated that in low Ebola exposure areas, 60% of people were able to provide adequately for their family one year ago, against 30% currently.

Availability versus access visuals

Stacked bars are used to visualise access versus availability issues, by Ebola exposure category. Each answer provided to the question about main reasons for the situation being worse was categorised as either an access or accessibility issue. The totals for each of them were used for the availability versus access analysis.

Access vs. Availability



The main problems mentioned by KIs were categorised as ‘access’ and ‘availability’ related obstacles. Access to basic services is defined as both physical and economic access, for instance to education, healthcare and income generating opportunities. Availability refers to whether the services are present and of sufficient quality. The categorisation supports response planning as it provides guidance on whether interventions should focus on improving the existing infrastructure, provide support to families to access the infrastructure or a combination of both.

Examples of access or availability issues are as follows:

Availability issues

Production: Lack of goods and services produced in the area (for example because of bad harvest or disruption, destruction or interruption of local production)

Trade: Lack of goods and services brought into the area through market mechanisms due to disruption of supply chain (for example transportation issues or lack of fuel)

Stock: Lack or deficiency of goods or services held by traders or in government reserves (for example lack of medicines, ambulances, reconstruction materials, spare parts or fuel)

Transfer: Lack of goods and services supplied by the government and / or aid agencies (for example lack of qualified teachers, physicians, school teachers or health centres)

Accessibility issues

Physical and logistical: Long distances, transport issues, restrictions of movement, lack of fuel, lack of road maintenance or bridges destroyed. Access denied to survivors, those released from quarantines, traders from Ebola affected communities to markets because of the community’s fear of infection.

Financial: Lack of income, resources or financial means (for example because of price inflation or loss of purchasing power)

Psychological: Fear of Ebola infection prevented people from accessing basic services (for example health facilities and markets).

Legal: Laws, by-laws, restrictive regulations and measures established by the government and local authorities to prevent the outbreak spreading.

Health

Key findings

- Over 3.5 million people are estimated to be at risk due to serious unmet health needs in Sierra Leone.
- The severity and magnitude of health problems correlates with Ebola exposure levels. High exposure districts present acute needs and a higher proportion of population at risk.
- 74% of KIs believe that the health situation is worse than a year ago.
- The main reasons for deteriorating health conditions are: fear of infection, rumours and misconceptions, a lack of trust in health facilities, and a shortage of health workers.
- Health seeking behaviour has dropped significantly. Only 50% of the population now seek healthcare assistance when facing a serious health problem, compared to 80% pre-Ebola.
- The main consequences of the reduced access to health facilities and services are: increased mortality, self-medication, morbidity and inadequate or under-resourced health services. This was reported across all districts, regardless of exposure level.
- The most affected groups identified are: Ebola survivors, quarantined HHs, people with chronic illnesses, people with disability and poor HHs.
- The most vulnerable groups are: children under 12 years' old, pregnant women, women, older people and people with disabilities.

The priority interventions across all districts are:

1. Available and affordable drugs and health services.
2. Ebola prevention campaigns.
3. Health education in communities.
4. Training and recruitment of health workers.
5. Mobile clinics.

Perspectives on health before and during the Ebola crisis

The health system in Sierra Leone is chronically underfinanced and understaffed.

In 2006, there were 0.2 physicians per 10,000 people, compared to an average of two per 10,000 in Africa and 32 per 10,000 in Europe. The number of nurses and midwives was two per 10,000 between 2002–08, compared to an average of 11 and 79, in Africa and Europe respectively (WHO, 2010; 2009). A health workforce of 23 per 10,000 people is required to achieve WHO recommendation of 80% coverage of minimal standards for maternal and child health (WHO, 2010).

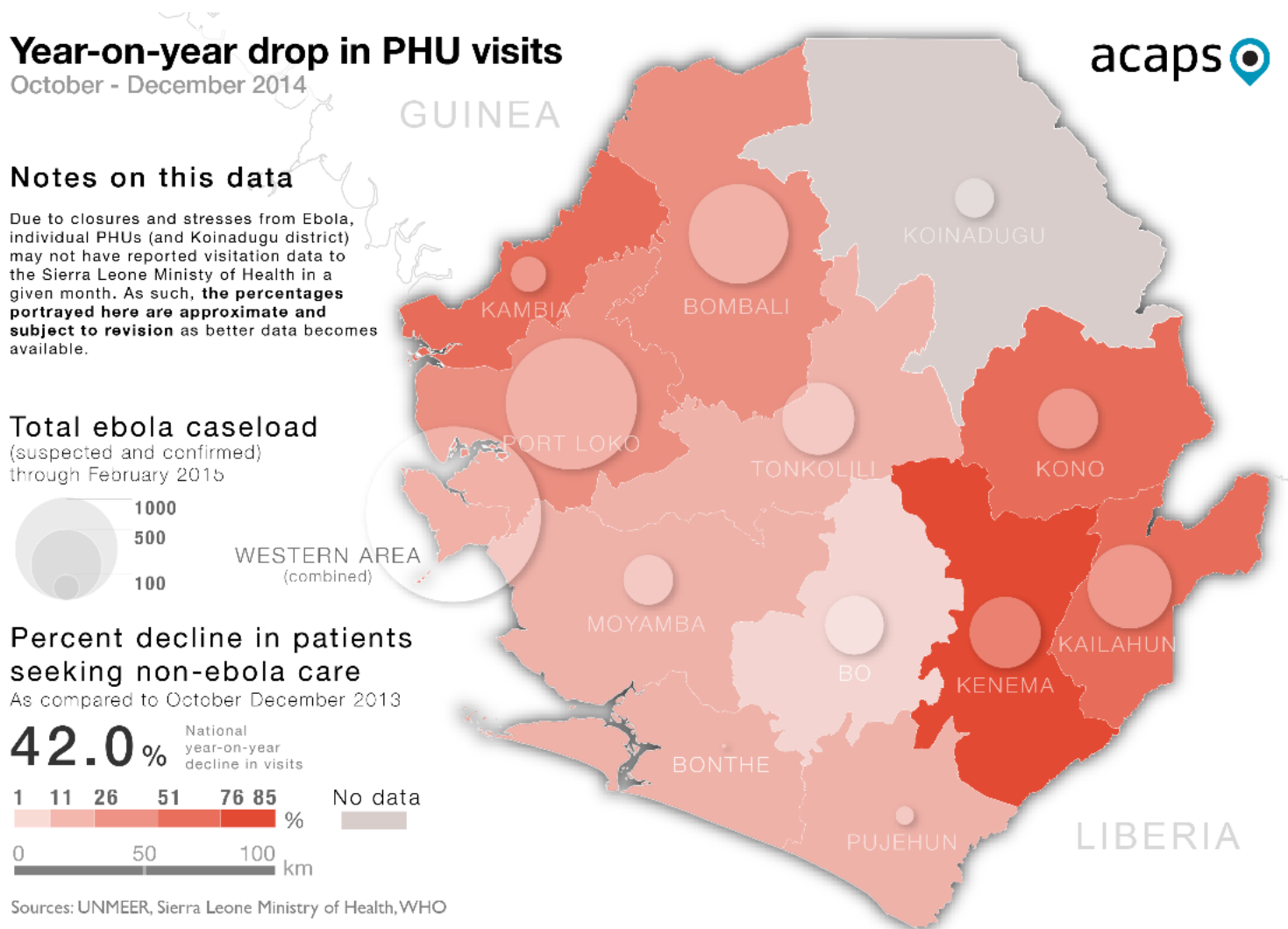
The situation has since worsened. On 18 March 2015, a reported 302 health workers were infected with Ebola and 221 had died, out of the total of about 1,100 health workers in Sierra Leone (WHO, 18/03/2015).

Between 2000 and 2009 there was an average of four hospital beds per 10,000 population, compared to an average of ten in Africa and 63 in Europe (WHO, 2010; 2009).

In 2007, the government only covered 31% of total health expenditure (WHO, 2010). A lack of money and distance to health facilities were among the main reported barriers to accessing healthcare (SLDHS, 2013).

The large number of Ebola cases has overwhelmed the weak and under-resourced health systems. Scarce resources have been diverted to the response, and health facilities have been temporarily closed or have reduced operations.

Primary Health Units shows a decline of 42% for patients seeking healthcare, based on MoH data from the period October–December 2014. The following infographic compares this to the same period in the previous year.



People are very concerned about health provision for non-Ebola diseases, according to recent surveys of citizens and frontline Ebola workers. 72% are afraid to use healthcare facilities ([Ground Truth 2015/03](#)).

According to KIs, before the Ebola crisis, eight out of ten people in need of medical assistance would seek healthcare at health facilities. This proportion decreased during the Ebola outbreak to reach five out of ten.

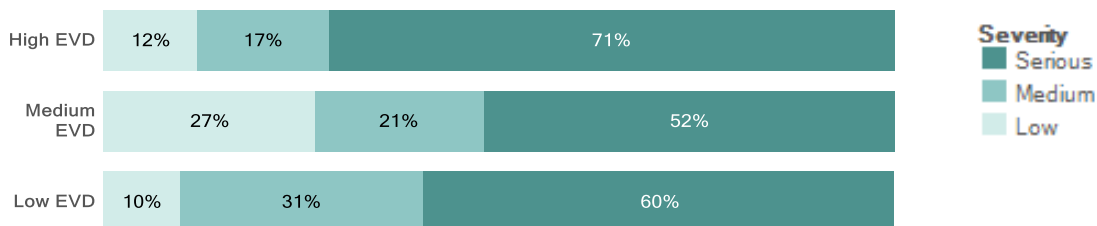
The three main reported causes for the deterioration in access to health services were:

1. People are avoiding health facilities for **fear of Ebola infection**. Nearly 40% of all KIs ranked this as the top reason influencing their decision on whether to access health facilities or not. This answer was more frequent in high and low exposure districts, than in medium exposure ones. Medium districts were the first districts in Sierra Leone to report Ebola cases, in May and June 2014. An active social mobilisation, robust response focused on these areas and lower number of cases over the year contributed to the decrease in the level of fear among the population.
2. **Rumours**, misconceptions and lack of trust in health facilities.
3. **A shortage of health workers** caused by fear of infection. This was more frequently mentioned in Pujehun, a low Ebola exposure district.

Severity of health conditions and status

Informants were asked to rank the seriousness of the current health situation. High Ebola exposure districts clearly claim higher levels of unmet healthcare needs, with over 70% of respondents indicating the situation was serious.

Severity of health problems by Ebola exposure category

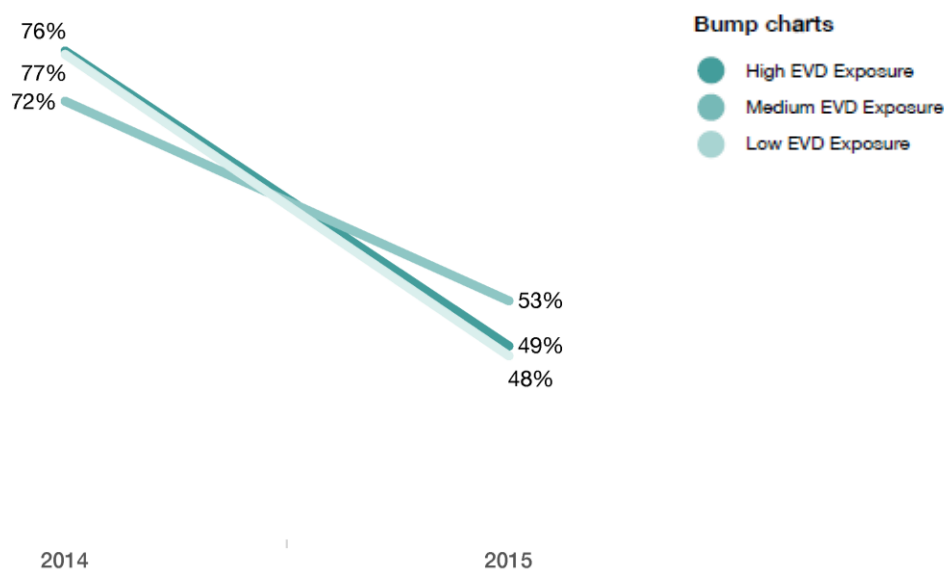


Respondents in high exposure areas and most populated districts reported more severe health access concerns than those in medium and low exposure areas.

Magnitude of the health problem

Informants estimated health-seeking behaviour before and after the Ebola crisis, to objectively gauge the effect on health service utilisation.

Average number of people seeking treatment in February 2014 compared to February 2015



In February 2014, over seven out of ten people would seek care from a health facility when facing a serious health concern. By February 2015, this figure reduced to five out of ten. Results were consistent across districts and did not correlate to exposure level. Kono, a low exposure district, presented the lowest average (four out of ten), likely because in Kono district, the outbreak peak was most recent (December 2014). The fear of Ebola infection was therefore still more present than in other districts.

Estimated number of people at risk for the health sector

The national estimate of population at risk due to serious unmet health needs is over 3.5 million people⁷.

The breakdown by level of exposure is as follows:

- High exposure districts: 1.5 million people (71% of their total population)
- Medium exposure districts: 1 million people (52% of their total population)
- Low exposure districts: 1 million people (47% of their total population)

As expected, there is a correlation between the levels of health needs that remain unmet and the level of exposure to Ebola. Districts with higher exposure indicated more acute needs.

Main consequences of the Ebola crisis on health (non-Ebola)

Main health related (non- Ebola) consequences as result of the Ebola crisis.

Consequences	High EVD Exposure	Medium EVD Exposure	Low EVD Exposure	All Areas
Increased Mortality	Highest impact	Second highest impact	Third highest impact	Fourth highest impact
Increased self-medication	Second highest impact	Third highest impact	Fourth highest impact	Fourth highest impact
Increased morbidity	Third highest impact	Highest impact	Fourth highest impact	Fourth highest impact
Inadequate/Under-Resourced Facilities	Fourth highest impact	Fourth highest impact	Second highest impact	Fourth highest impact

In priority order, the most perceived consequences on health conditions and status as result of the Ebola are:

1. **Increased mortality:** 60% of KIs believed that mortality from non-Ebola health problems has increased, due to limited availability and utilisation of health services in the communities. This perception is most frequent in high and low EVD exposure districts. It is significantly lower in medium exposure districts. One of the reason might be that both of the medium exposure districts sampled had been Ebola free for a number of weeks (the outbreak peaked in July–August 2014 in these areas), leading to a sense of renewed safety. High exposure districts had a high number of cases later in the year (peaking in November–December 2014) and remain hotspots, with a significant number of cases in the communities at the time of the survey.
2. **Increased self-medication:** The tendency to self-medicate and rely on the advice of pharmacists, instead of visiting health facilities, was cited by 35% of KIs. This answer was more frequent in high exposure districts than in low exposure districts.
3. **Increased morbidity** was mentioned by 34% of KIs. Interestingly, this was more highly perceived in medium exposure districts. For more detailed information about these consequences, ACAPS published a briefing note on Ebola impact on health systems in Sierra Leone ([ACAPS 2015/03](#)).
4. **Inadequate / under-resourced health services** were mentioned by 28% of KIs. This is linked to health workers' fear of infection. This response was more frequent in low exposure districts and is likely to be linked to the poorer pre-existing healthcare services in these districts.

The impact of the Ebola crisis on health workers is well documented: by 17 March the number of Ebola cases among health workers was 302, with 221 deaths. Casualties included some of the most prominent doctors in the country, and Ebola and Lassa fever research teams. The high levels of media coverage and slowness in implementing infection prevention control measures in health centres contributed to the fears of both patients and healthcare workers to visit

⁷ Calculations with a 95% confidence interval were done using as reference the proportion of the "Serious needs" range in the severity scale and the 2014 population projections for each of the districts categories (high, medium and low). See [Annex 3](#) for more details.

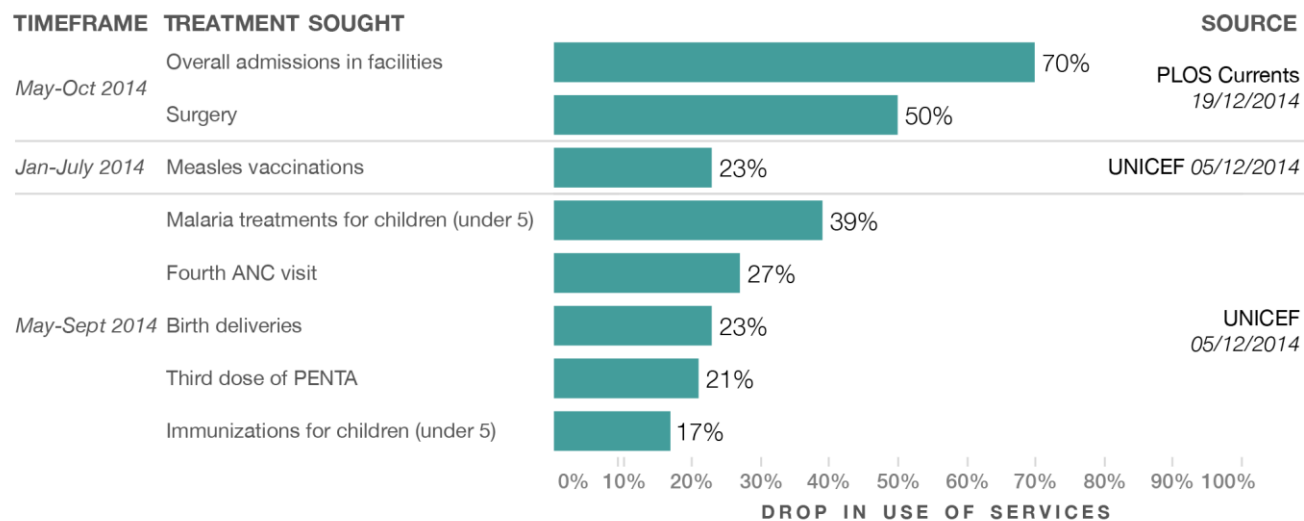
health facilities. Secondary data, and data provided by the Ministry of Health, confirm a significant drop in use of healthcare services ([ACAPS 2015/03](#)).

Drop in use of healthcare in Sierra Leone as result of the Ebola crisis

Drop in use of healthcare

Through October 2014

SIERRA LEONE



Source: ACAPS

Most affected and vulnerable groups

Respondents indicated that the groups most affected by Ebola were:

- **Ebola survivors:** After surviving Ebola they suffer a range of long term health effects, which might require health assistance and medicine.
- **People with chronic illnesses**, people with **disabilities**⁸ and people **from poor and very poor HHs** suffer from limited availability and access to health services.
- **Quarantined people**⁹ were of special concern. When they feel sick they are unable to access normal health services. They are most likely to either be taken to an Ebola centre or, when not meeting the Ebola case definition, not allowed to leave the quarantined area (house or community).

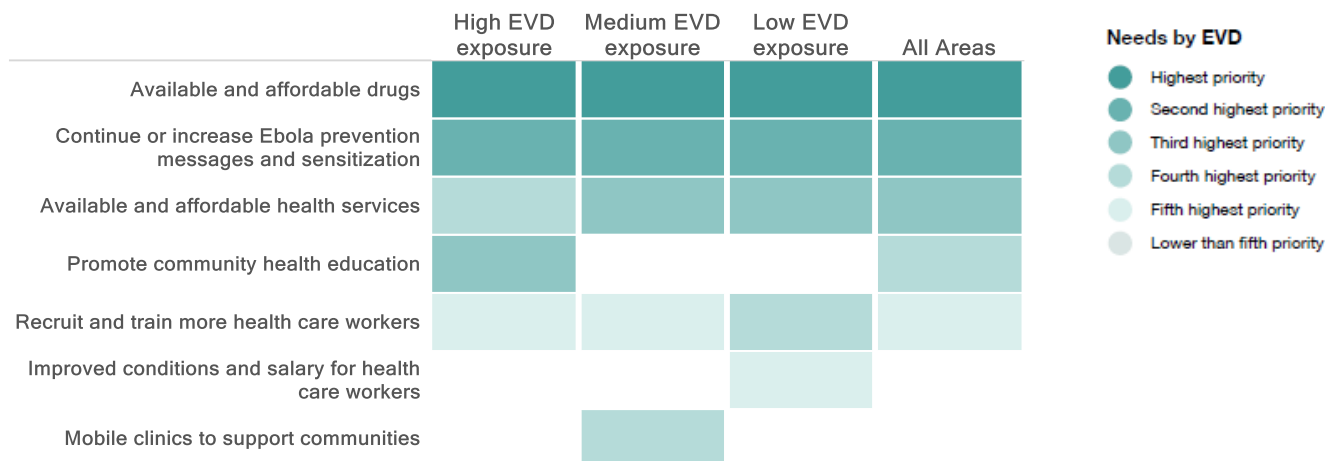
The most vulnerable groups facing increased difficulties in accessing health services, in comparison to pre Ebola levels, were **children under 12 years' old**, **women and pregnant women**, and older people and people with disabilities.

⁸ As of 2011, there are an estimated 450,000 disabled persons living in Sierra Leone. This number includes the blind, the deaf, people living with polio, individuals who are war wounded and amputees ([Borgen Project 2011](#)). According to a Handicap International assessment, 70% of respondents (116) stated that they encounter difficulty in accessing health/ rehabilitation services specific to their disabilities

⁹ This has also been confirmed by reports from MSF and other organizations who mention restrictions in access to healthcare service suffered by quarantined household members, especially in Western Area.

Priority health interventions by Ebola exposure category and vulnerable groups

Top priority interventions for the Health sector by Ebola exposure category



The priority interventions identified by KIs are closely linked to the previously identified service delivery gaps and problems:

- Available and affordable drugs** were the top priority across the three districts categories (100%), regardless of their Ebola exposure or the type of vulnerable group.
- Ebola prevention health campaigns and messages** were mentioned by 68% of respondents, enabling communities to get involved in the response and reduce the Ebola numbers to zero.
- Available and affordable health services** were stated by 40% of respondents, in all districts regardless of their Ebola exposure.

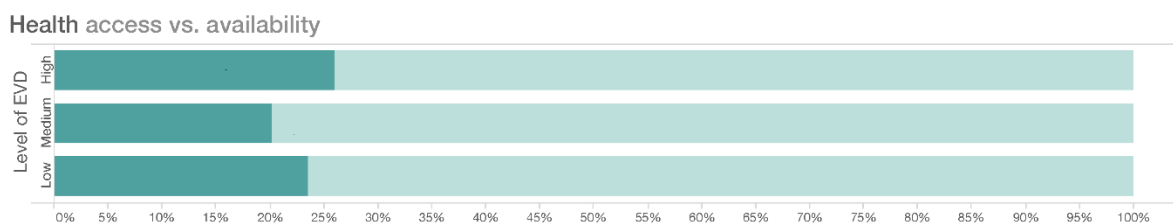
Other interventions mentioned include:

- Community health education (29% of respondents), especially for toddlers and under 5s.
- Recruitment and training of additional health workers (28%), especially to provide health care to children and women.
- Mobile clinics (25%), especially in high and medium exposure districts and for older people.
- Enhanced infection and prevention control (IPC) in health facilities, especially for pregnant and lactating women.

Access availability Issues

Access vs. Availability

● Problems of availability ● Problems of access



Access issues seem to be the main issues contributed to the worsening of the health situation of the population across all exposure areas. Most frequently mentioned reasons for reduced access include fear of infection, financial constraints, quarantines and lack of physical access.

Issues with availability of health services seem to be less prominent than those relating to access, as indicated by the lower level of overall answers (less than 25%) that were included under this category. Availability issues mentioned included limited or no operational health centres available, limited or no healthcare workers and lack of medicines in healthcare centres.

Food security

Key findings

- Over 4 million people are estimated to be at risk due to serious unmet food needs, according to calculations based on KIs perceptions.
- Results suggest a correlation between high Ebola exposure and high food needs. 78% (1.6 million people) are considered at risk from unmet food needs in high exposure areas, 63% (1.2 million people) in medium and 54% (1.2 million people) in low exposure areas.
- 93% of informants described the food situation as worse, compared to the same period last year. The already vulnerable food security status of the population deteriorated further, due to the Ebola crisis and public health emergency measures to curb the spread of the virus (movement restrictions, curfews, quarantines and border closures).
- Inadequate food production (disruption in planting and harvest cycles), movement restrictions and increased food prices are the main reasons for the deterioration of the food security status across all districts. Markets and supply chain disruptions were also mentioned.
- The main reported consequences included hunger and starvation, increased health problems and reduced food consumption. These consequences were noted in all areas but were more acute in high exposure districts.
- One third of respondents linked food shortages with increased criminal activities, especially in medium and low exposure districts.

The main priority interventions expressed by KIs, regardless of exposure, were:

1. Direct food assistance (in-kind food, cash for food and school feeding programs for children).
2. Indirect food assistance (agricultural and livelihoods inputs to enable families to restore their food production, income and purchasing power).
3. Access to credit for petty traders, restoration of market activities and informal trading and abolition of curfews and trade opening hours limitations.

Perspectives on food security before and during the Ebola crisis

Context and background

Even before Ebola, food insecurity seemed to be a major development problem across the country, undermining people's health and productivity. A 2011 comprehensive analysis of food security and vulnerability indicated that 45% of HHs (over 2.5 million people) were classified as food-insecure during the lean season from June to October (WFP CFSVA 2011).

Most livelihoods in Sierra Leone are agriculture-based and the state of food insecurity varies according to the agricultural production cycle, according to a WFP baseline study in 2010. August is the peak of the lean (hunger) season in agricultural dependent areas. In urban areas, hunger increases also in January. Most urban workers rely on commercial trade, which generally slows down in January or by the end of the month before wages are paid. Producing food does not guarantee sufficient access to it. 65% of HHs that cultivate rice do not produce enough to feed their family, and only 5.5% of rice cultivators relied on their own production for the full year (WFP 2010).

HHs relying on petty trade and food crop production have the highest incidence of food insecurity. Those relying on cash crop farming seem to fare better with regard to food variety, although many have borderline food consumption (WFP 2010).

Ebola impact

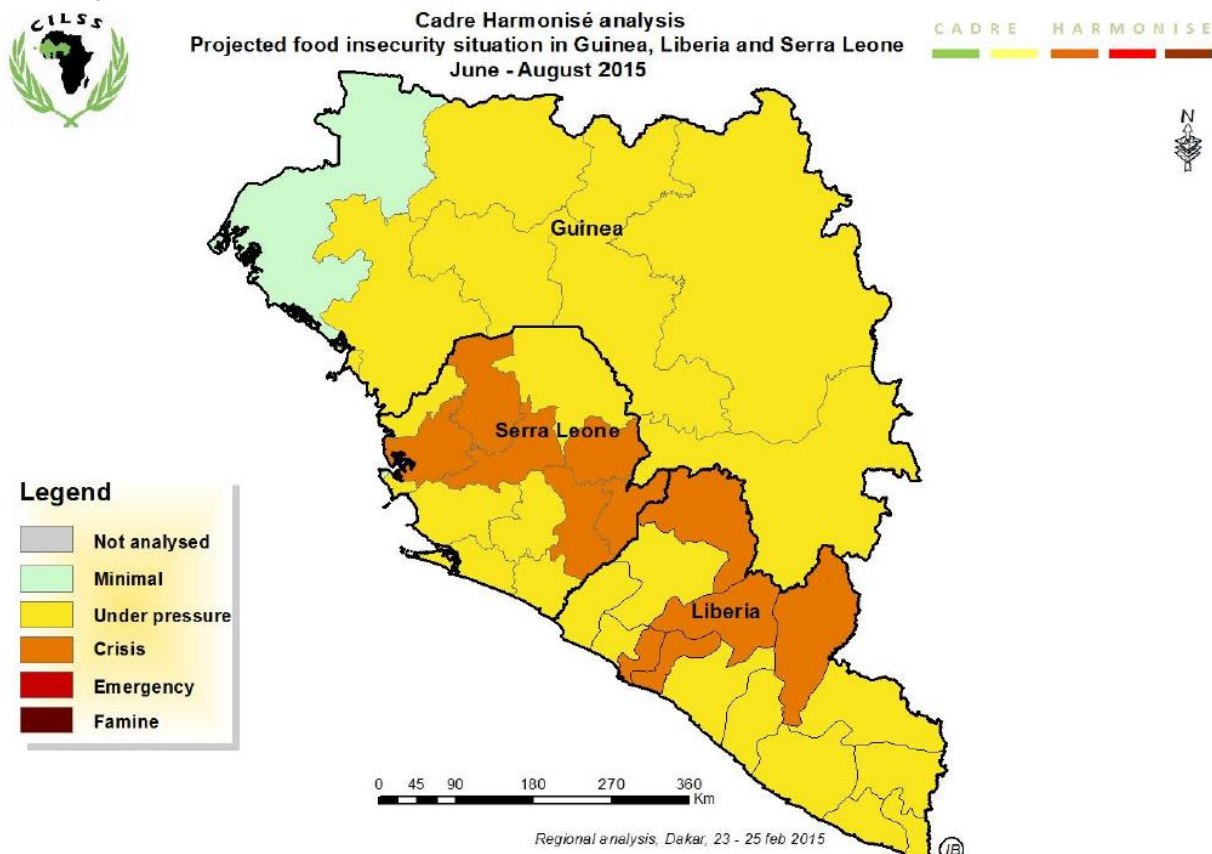
Ebola has brought an additional burden of expenditure and impacted food security for many HHs. Food security is improving, thanks to the recent harvest and lower incidences of Ebola, according to the most recent WFP survey ([mVAM, February 2015](#)). The same report indicates a modest increase in local and imported rice prices, except in Port Loko where rice prices dropped as result of new rice arriving in the market ([WFP 2015/02](#)).

Trade resumed in February when all three Ebola affected countries opened their land borders. Markets and trade were showing signs of recovery, but high staple food prices and low wages are hampering food access in Northern Sierra Leone ([WFP 2015/02](#)). On 30 March 2015, Guinea closed its borders with Sierra Leone again as part of its 45-day plan to eradicate Ebola. This unexpected closure is likely to impact recently restored supply chains.

According to Cadre Harmonise’s (CILSS) current analysis of the situation in Sierra Leone, there are almost 800,000 people in Crisis (IPC Phase 3) and 1.3 million people already under Stress (IPC Phase 2) to ensure adequate diet and essential non-food expenditure without engaging in irreversible coping strategies. Projections for the upcoming months indicate that 1.1 million people will be in food security Crisis (IPC Phase 3) and 1.7 million people under Stress (IPC Phase 2) at the peak of the lean season ([CILSS 2015/03](#)).

Food insecurity projections from June–August 2015 are shown in this regional map produced by [CILSS](#) (Cadre Harmonise):

Food insecurity outlook 2015 - CILSS



Source CILSS ([CADRE HARMONISÉ 2015/02](#))

93% of informants described the food situation as worse than in February 2014, before the Ebola crisis.

Main reasons for food insecurity as expressed by KIs

	High EVD Exposure	Medium EVD Exposure	Low EVD Exposure	All areas
No enough food produced in the area/planting and harvests disrupted or spoiled due to EVD crisis	Dark Green	Medium Green	Light Green	Medium Green
Movement of people restrictions	Medium Green	Dark Green	Light Green	Medium Green
Increased food prices	Dark Green	Medium Green	Light Green	Medium Green
No markets operational in the area	Light Green	Medium Green	Dark Green	Medium Green
Movement of good restrictions-disruption in supply chain due to by-laws, quarantines	Light Green	Medium Green	Light Green	Light Green

The three main reasons for the worsening of the food security status of the population are:

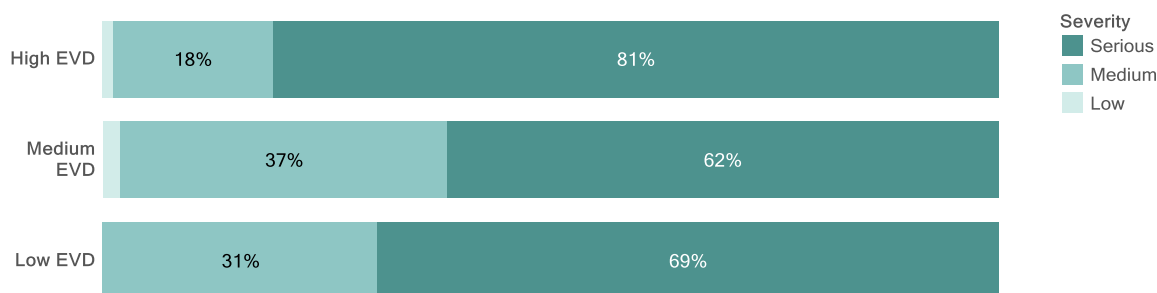
- 1. Less food availability** due to disrupted planting and harvests cycles. KIs in medium and low exposure districts reported this more frequently. This is most likely because the Ebola outbreak started in those regions (Kailahun and Kenema), and spread throughout the country later. Farmers were confirmed as one of the groups the most affected by Ebola¹⁰. The lack of labour force and trader intermediaries (due to fear of Ebola and movement restrictions), led to many crops not being harvested or collected for distribution.
- 2. Restricted movement of people:** Quarantines, curfews and bylaws at district, chiefdom and community level worsened the food security situation across the country. Medium exposure districts report this more frequently than low and high exposure districts.
- 3. Increased food prices:** HHs’ purchasing power decreased as result of the outbreak. High exposure districts reported this more often, considering it the top consequence.

Other reasons given for the worsening food security situation included the lack of / limited operational markets and disruptions to the supply chain, especially in low exposure districts.

Severity of the food security condition and status

KIs were requested to rank the seriousness of the current food security situation.

Severity of food insecurity by Ebola exposure category



High exposure districts clearly present higher levels of unmet food needs, reported by 81% of respondents.

62% of KIs indicated serious unmet food needs in medium exposure districts, and 69% in low exposure districts. All 26 of Kono’s KIs perceived food as a serious need, despite this being a low exposure district.

It is important to highlight that only two out of the 188 KIs, across all districts, considered food security to be of low concern.

¹⁰ WHO / MOH presentation to the Food Security Working Group in early January 2015.

Magnitude of the food problem

KIs were asked to compare current food consumption patterns with the situation last year. In February 2015, the overall **number of HHs having good food all year round dropped by half** compared to numbers from February 2014. Pujehun (low exposure district) reported the most significant decrease.

There was **no significant change reported in the number of HHs with enough food, but not always good food**, from before the crisis. However Kenema and Kailahun, both medium exposure, show a higher number of HHs affected by changes in food consumption.

HHs with limited food access and availability before the outbreak suffered the most severe change. The number of families without enough food to eat increased from 50% before the crisis, to over 70%. The number of families that reportedly never had enough food, not even the cheapest, increased slightly from before the crisis (3-5% increase).

Lack of food is seen as a problem across all districts especially in Port Loko (high exposure and agricultural dependent), in Kailahun¹¹ (medium exposure and agricultural dependent) and Pujehun and Kono (both low exposure with different levels of agricultural dependency).

Average number of people accessing food in February 2015 compared to February 2014, by category

Decline in Food Security



¹¹ According to a FewsNet report from January 2015, there was a 8% drop in rice production in Kailahun compared to the previous year. This area is estimated to have the most significant declines in rice productions ([FEWSNET, 2015/01](#)).

Estimated number of people at risk in the food security sector

The national estimate of population at risk due to serious unmet food security needs is over four million people¹².

The breakdown by level of exposure is as follows:

- High exposure districts: 1.6 million people (76% of their total population).
- Medium exposure districts: 1.2 million people (63% of their total population).
- Low exposure districts: 1.2 million people (54% of their total population).

High-exposure areas appear to be experiencing higher levels of unmet food security needs. There is a correlation between exposure to EVD and the level of food needs that remain unmet.

Based on KI's perceptions, the estimated population at risk of lack of food is significantly higher than results from current situation and estimated projections from CILSS. Results of the ENAP assessment are based on key informants' perceptions and reflect the fact that food is one of the most serious concerns across all respondents across all districts.

Main consequences of the Ebola crisis in relation to food security

Main consequences on food security as result of the Ebola crisis

	High EVD Exposure	Medium EVD Exposure	Low EVD Exposure	All Areas
Hunger and starvation	Dark teal	Dark teal	Dark teal	Dark teal
Increased morbidity/ deterioration of health status	Light teal	Light teal	Light teal	Light teal
Reduction on food consumption /eat less	Dark teal	Light teal	Light teal	Light teal
Increased criminal activity	Light teal	Dark teal	Light teal	Light teal

Two of the main perceived consequences, hunger and starvation and reduction of food intake, are directly related to food consumption while the other two, deterioration of health status and increased criminal activity are related to increased morbidity. A third of informants linked food shortage issues with increased criminal activity. Main consequences are:

1. **Hunger and starvation** were mentioned by 69% of the respondents as the main consequence of the Ebola crisis in relation to food consumption. Similar results were obtained across all districts.
2. **Increased morbidity** and deterioration of the health status of the population was mentioned by 37% of respondents. This consequence was most frequently reported in low exposure districts (Kono and Pujehun). KIs also reported this issue in the health section, as illness is considered to be a consequence of poor access to food in their opinion.
3. **Reduction of food consumption** was cited by 33% of informants and was more frequently mentioned in high exposure districts (WA Urban and Port Loko).

Of particular importance, increased criminal activity was also mentioned as a key consequence of increased food insecurity by one third (31%) of respondents, especially among medium exposure districts (Kailahun and Kenema).

Priority food security interventions by Ebola exposure category and vulnerable group

All districts ranked the priority interventions the same, regardless of exposure rates. The main priorities are directly related to food assistance (in-kind or cash for food):

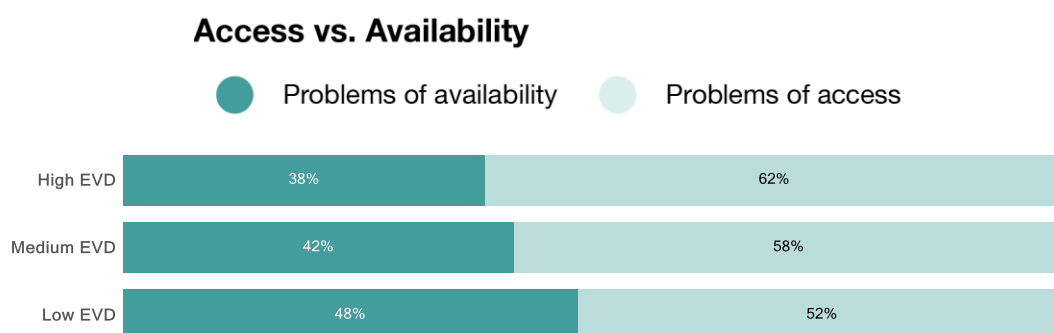
¹² Calculations with a 95% confidence interval were done using as reference the proportion of the "Serious needs" range in the severity scale and the 2014 population projections for each of the districts categories (high, medium and low).

1. **Food assistance to HHs** (in-kind) was mentioned as the priority need, and more frequently requested in high and medium exposure areas. Respondents felt this assistance to be especially needed for vulnerable groups who are most at risk of hunger and starvation such as children, the under 5s, women and older people. Food assistance to Ebola survivors and to HHs that had lost their main breadwinner was also mentioned. Ebola survivors often have special dietary needs to support their full recovery. Food support to quarantined HHs was frequently mentioned. This need is corroborated by interviews with organisations working in quarantine areas and quarantine officers. They mention food assistance as one of the basic requirements to ensure effective quarantines in the country.
2. **Financial assistance** to buy food for the family. Advantages to this approach include a positive knock on effect for local markets and labour opportunities. It was also considered to benefit adults, as they are the main breadwinners of the HH.
3. **School feeding programs for children:** This intervention was more frequently requested in medium exposure districts (food programs also appear as the third priority need under the education section).

Other requested priority interventions were campaigning to deter sex for food exchanges¹³, agricultural and livelihood inputs to support families in restoring food production and income generating activities. This activity was seen as particularly important to allow HHs to purchase food and essential items in the markets.

Credit support and micro-credits for traders and petty traders were also requested. Access to credit has been restricted for many HHs and traders as a result of the crisis. This is also reported by WFP, the Red Cross and other NGOs (OXFAM, Red Cross). Many local community savings and loans groups have limited or suspended their activities. These interventions were also identified as a priority in the livelihood section of the survey. Many KIs considered that if market and petty trade activities are fully restored, this will have a beneficial impact on the HH food security.

Access and availability issues



Food insecurity is mostly driven by access issues in high (62%) and medium (58%) exposure areas.

Food access issues are more frequently reported in districts with higher populations, where livelihoods are less dependent on agriculture, HHs have more diverse income sources and rely more on functioning markets. Reported access problems include increased food prices, limited purchasing power, movement restrictions of people and goods, discrimination stigma (markets do not sell to people affected by Ebola) and lack of transport or physical access.

The districts under this category include WA Urban, Kenema and Kono and represent high, medium and low exposure districts respectively. These districts tend to indicate a higher preference for cash assistance.

The more agricultural dependent districts (Port Loko, Kailahun and Pujehun) show a higher concern for food availability problems. This is most likely due to limited agricultural outputs as some HHs were not able to complete their harvesting activities last year. Availability problems mentioned include lack of HH food supplies, no food stocks in markets, regular food assistance programmes stopped, and insufficient food production.

Availability issues are more frequently cited in low exposure areas, where HHs rely on agricultural subsistence farming and work as agricultural labour in exchange for food. Some rural HHs have resorted to coping strategies such as eating seed stocks, according to KIs, further impacting their capacity to restore their livelihoods.

¹³ This exchange of sex for food already existed before the Ebola outbreak but appears to have increased since the beginning of the crisis.

Livelihoods

Key findings

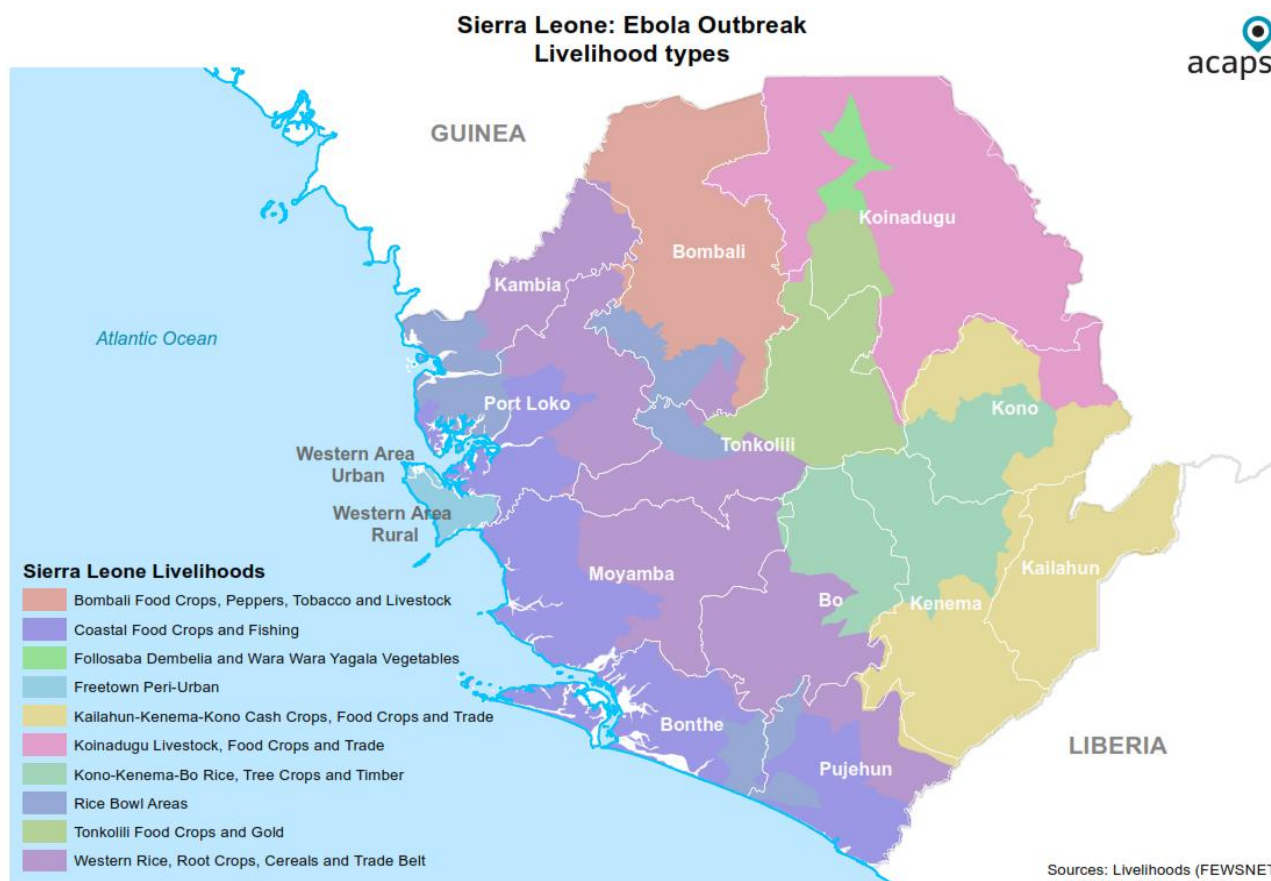
- 4.1 million people are estimated to be in need of livelihood support in Sierra Leone, according to KI perspectives.
- No correlation exists between disruption of livelihoods and Ebola exposure – the impact has been nationwide. 71% of KIs in high and low exposure districts believe the livelihoods situation is serious while the figure is 63% in medium exposure districts. HHs' ability to provide adequately for their families dropped by half regardless of EVD exposure level.
- Nearly all KIs described the livelihoods situation as worse than in February 2014.
- The main reasons for livelihood disruption are increased unemployment and loss of income opportunities, reduced agricultural work and death of HH breadwinners due to Ebola
- Agricultural dependent areas report a more severe drop than the others.
- The most vulnerable groups are children and HHs that had lost their main breadwinner and / or sources of income.

The main priority interventions expressed by KIs were:

1. Ending the Ebola outbreak (mentioned in all visited areas)
2. Access to loans and credit (preferred in low and high exposure districts)
3. Agricultural and livelihoods inputs
4. Grants to recover livelihoods (preferred in medium exposure districts)
5. Creation of job opportunities

Perspectives on livelihoods before and during the Ebola crisis

Livelihoods baseline map - Sources: ACAPS 11/2014 based on information from FEWSNET, GAUL, OCHA and GADM



Traditionally, most HHs relied on more than one income source ([WFP 2010](#)). The majority of the population is engaged in farming, including food crops, cash crops and livestock. Agriculture is the main occupation for about 52.4% households in Sierra Leone. In rural areas, this percentage rises to 78.3%, both men and women participate in farming activities ([WFP 2010](#)). Male household heads were more likely to have agriculture as their primary occupation, 55.5% versus 44.1% respectively ([World Bank, 06/2013](#)). Western Area, Kono, Kenema, and Bo districts are the only exceptions. Trade, business and fishing are the main sources of income in Western Area. Mining is an important source of income in Kenema and Port Loko districts, in addition to agriculture and petty trade.

In **urban areas**, the most important livelihoods include salaried employment (health workers, teachers and other trained professions), commercial trade activities, and petty trade. In **rural areas**, the vast majority of households are involved in food crops and cash crops.

At the national level, **women** were involved in all of the major livelihoods identified, especially in trade and commercial activities (51% and 36% respectively) ([WFP 2010](#)).

Before the Ebola crisis, on average only over 55% of all HHs in Sierra Leone were able to provide adequately for their families. Western Area Urban, Port Loko and Pujehun are the districts most likely to be able to provide for their families.

Impact of the Ebola crisis on livelihoods

The Ebola crisis has had a significant impact on the livelihoods, especially employment and income generating opportunities. Markets have been closed, transport of people and goods have been restricted through quarantine measures, agricultural and trading activities are suspended and international borders are closed.

Many HHs lost their sources of income as result of businesses reducing their activities, and mining and road works stopping, due to the outbreak. Several international companies temporarily ceased their activities. There were increased limitations to working hours due to curfews and movement restrictions. Private sector reports mention reductions in wages and working hours, especially from July to December. Informal income generating opportunities also decreased.

Wages: Wage rates dropped in February for the second month in a row, according to WFP, particularly in the south and Port Loko (19%), current Ebola hotspots. This is due to the end of the rice harvest and subsequent decline in demand for agricultural labour. Some Ebola affected areas such as Kenema have seen a rebound in palm oil prices and labour markets and a decline in negative coping strategies. This may signal an economic recovery which could bolster food security ([WFP 2015/02](#)). Wages improved notably in Kenema standing at 12,000 Sierra Leonean Leone/day ([WFP 2015/02](#)).

Prices: As wage rates fell and food prices rose, commodities became less affordable. The steepest decrease was 6% in Kambia and Port Loko. The lowest terms of trade are observed in Kailahun and Kono, where a day's wage is equivalent to ten cups of local rice, compared to 11 to 12 cups in other parts of the country ([WFP 2015/02](#)).

Long-term impact: HHs are suffering the Ebola impact more than governmental and business establishments, according to a UNDP report. Working conditions have worsened, especially for women ([UNDP 2014/12](#)).

The livelihood situation described by the KIs differs according to their main income source: market or agricultural work. During the survey, 95% of informants described the livelihoods situation as worse than in February 2014. The main reasons given for this were:

1. **Increased unemployment** and loss of income opportunities, mentioned by 36% of respondents. This is more common in high and low exposure areas, and the districts that are less agriculture dependent. Medium districts are more agricultural dependent, therefore they were less affected by this particular issue.
2. **Reduced agricultural work** accounted for 20% of all responses, especially in agriculture dependent districts (Port Loko, Kailahun and Pujehun) across all exposure ranges. Families and agricultural labour workers became increasingly scared to engage in the usual communal labour in farms due to fear of exposure. The declaration of the national public health emergency that prohibited public gatherings also had an effect on agricultural labour.
3. **Death of HH breadwinners** due to Ebola accounted for 9% of responses across all districts. Children are particularly affected. According to Street Child there are 12,023 orphans that have lost one parent and 3,241 children that have lost both ([Street Child 2015/03](#)). The loss of HH breadwinners often leads to an increase in child labour.

Other responses included movement restrictions to engage in any economically viable activities and the collapse / reduction of business and petty trade, which had a negative impact on the earning capabilities of families.

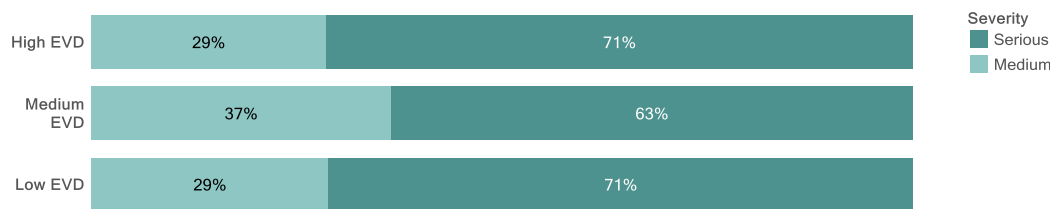
Main reasons for the deterioration of livelihood conditions when compared to before the crisis

	High EVD Exposure	Medium EVD Exposure	Low EVD Exposure	All areas
Increased number of unemployment due to EVD	Dark teal	Medium teal	Light teal	Light teal
Not enough agricultural work (agro labour) due to ebola	Dark teal	Medium teal	Light teal	Light teal
Death of household Breadwinners due to ebola	Medium teal	Medium teal	Light teal	Light teal
Restriction in movement and access	Light teal	Medium teal	Dark teal	Light teal
Closure/reduction of business due to ebola	Medium teal	Light teal	Light teal	Light teal

Severity of livelihoods conditions and status

KIs were requested to rank the seriousness of the livelihoods situation in February 2015.

Severity of livelihood problems by exposure category



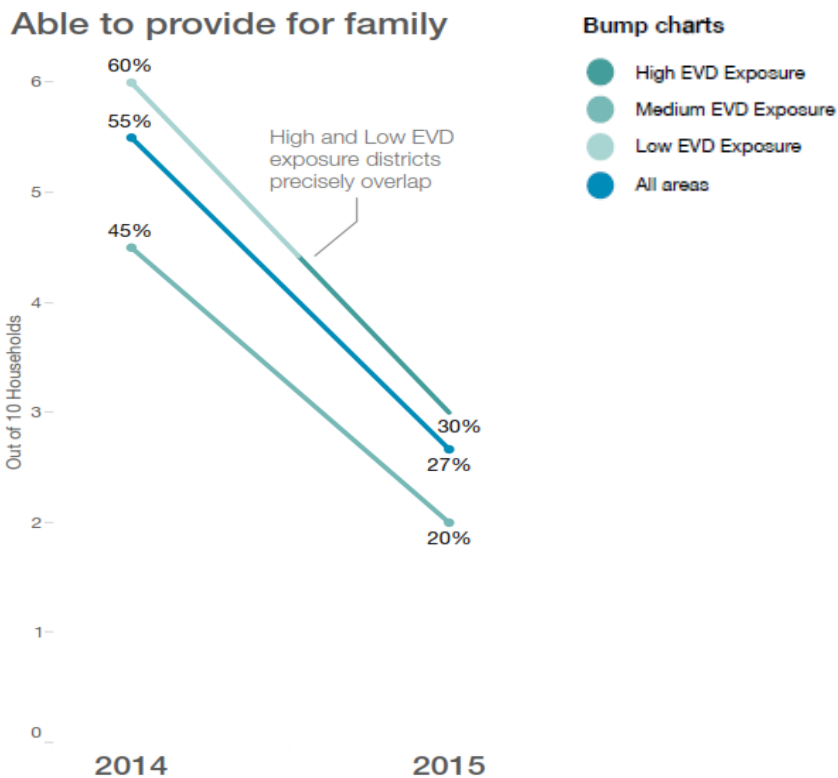
Results indicate no correlation between the level of Ebola exposure and livelihood needs. High and low exposure districts present similar results, clearly indicating that Ebola has had a nation-wide impact on livelihoods, regardless of exposure level. KIs indicated a drop of income between 25% and 30% compared to last year.

Kenema (medium exposure) ranked the severity of problems lower than in other districts. This is corroborated by recent WFP mVAM results indicating a rebound in labour markets and a decline in negative coping strategies, which might signal economic recovery in the district ([WFP 2015/02](#)).

Magnitude of the problem

Before the Ebola outbreak, HHs already faced considerable difficulty generating sufficient income. KIs were surveyed on their ability to provide adequately for their family, using February 2014 and February 2015 as reference months to capture seasonal patterns.

Average number of households able to provide to their families in February 2015 compared to February 2014



The Ebola impact on livelihoods situation has been dramatic. On average, the number of HHs able to provide adequately for their families dropped by half across all districts regardless of their Ebola status, and seemed more severe in agricultural dependent areas.

Estimated number of people at risk

The national estimate of population at risk due to serious unmet livelihood needs is over 4.1 million people¹⁴. The breakdown by level of exposure is as follows:

- High exposure districts: 1.4 million people (66% of their total population).
- Medium exposure districts: 1.2 million people (64% of their total population).
- Low exposure districts: 1.4 million people (64% of their total population).

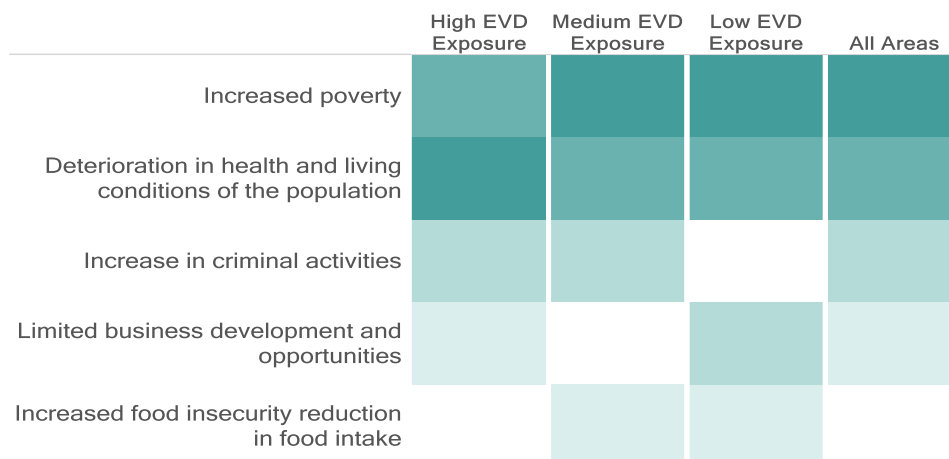
No KIs reported low levels of livelihoods needs, which highlights that this is a critical problem for all.

Main consequences of the Ebola crisis in relation to livelihoods

Increased poverty, deterioration of health and living conditions and increased in criminal activity are seen as the main consequences of the acute livelihoods problem across all areas, regardless of exposure. High exposure areas are more concerned with worsening health and living conditions, as they are the current Ebola hotspots. The main priorities in these areas are the immediate future: health and living conditions.

¹⁴ Calculations with a 95% confidence interval were done using as reference the proportion of the "Serious needs" range in the severity scale and the 2014 population projections for each of the districts categories (high, medium and low).

Main livelihood related consequences as result of the Ebola crisis



Ebola has deteriorated the livelihoods situation with the following main consequences identified by KIs:

1. **Increased poverty:** Over 32% of respondents saw this as the main consequence of the Ebola crisis.
2. **Deteriorating health and living conditions**, in comparison to pre-Ebola HH status was mentioned by 31% of respondents. This answer was more frequent in high exposure districts.
3. **Increased criminal activity** was a concern for over 10% of respondents, especially in high and medium exposure areas.

Other consequences mentioned by informants were limited business development and opportunities, especially in low and high exposure districts, independently of their agricultural dependency. Increased food insecurity was also reported by 5% of respondents. As the survey questionnaire was open, this result repeats in both the livelihoods and food security sections and was cited more in low and medium exposure areas. Western Area Urban (high) Kono and Pujehun (low) presented the higher ranking for this problem.

Some informants mentioned a number of coping strategies being used by affected HHs to deal with the gap in their income, including child labour, begging and prostitution.

Most affected and vulnerable groups

Overall, farmers were reported to be the most affected by all. Traders and petty traders are also reported to have increased poverty and deterioration in living conditions. For traders, limited business development and opportunities was more frequently cited.

Increased poverty is the main consequence for miners. According to some KIs, young males from urban areas engage in mining more often than rural youth. Rural youth prefer agricultural work, which pays double the amount of mining in some of the areas.

Other groups affected include teachers and health workers, especially those in private facilities (as no salaries were paid whilst they remain closed), and quarantined HH members, especially those that suffered extended quarantines when other new cases were discovered within their community. Quarantined communities and traders often face difficulties when the quarantine ends, as stigma remains a significant barrier in some areas.

Ebola survivors often face not only stigma and rejection, which limits their return to productive lives, but also complicated health problems. They are often unable to return to work for a few months after their recovery, because of Ebola-related health issues, such as joint pain and reduced sight. The recovery process from the secondary effects of Ebola can be taxing on a person's health and have long term consequences.

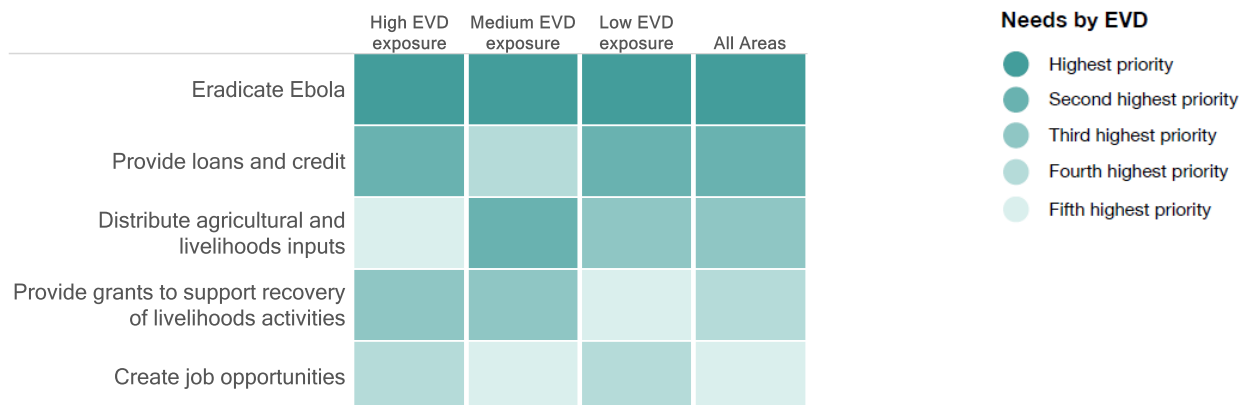
Some KIs reported a positive impact to the livelihoods of a significant number of HHs, as a result of new opportunities created by the Ebola response. This has engaged a huge number of local teams working across the country, for example

in treatment, social mobilisation and contact tracing. This might create an income gap for many HHs when these activities scale down or stop.

Children were also mentioned as a concern. Many have engaged in casual work to support the family income, while the schools were closed.

Priority livelihoods intervention by Ebola exposure category

Priority livelihood and recovery interventions



The top priority interventions identified by KIs in relation to livelihoods are:

1. **Ending the Ebola outbreak**, especially in high exposure districts. This was mentioned by 60% of KIs.
2. **Loans and credit** were mentioned by 40% of KIs, in order to enable HHs to recover their livelihoods. The districts that are more agricultural dependent (Port Loko and Kailahun), as well as low exposure districts, ranked this as a higher priority need. Access to loans and credits for small and petty traders was specifically mentioned by the responders. Medium exposure districts presented a preference for **grants** instead of loans. Access to credit has become especially difficult for healthcare workers, Ebola teams working in the frontline (burial, treatment and disinfection), and survivors and families with Ebola patients or deaths.
3. **Access to agricultural and livelihood inputs** (e.g. seeds and tools) was mentioned by 32% of respondents, including in kind support with distribution of seeds, tools and petty traders stocks. This response is more frequent in the medium and low exposure areas and among districts with higher agricultural dependency. As expected, this was less of a priority for Western Area Urban where Freetown, the capital, is located.

27% of KIs, especially in medium and high exposure districts, also cited **grants to support recovery** of livelihood activities. 25% of KIs, especially in high and low exposure districts, cited the **creation of job opportunities**. Another expressed need was the lifting of business hours restrictions, especially relevant for those in low Ebola exposed areas. Business and trade hours and markets restrictions affected all country but were seen more unnecessary in areas that have been declared Ebola free or did not have cases for months.

Education

Key findings

- According to our estimates, over 1.5 million 5–14 year olds, representing the entire population between 5-14 years, had their access to education disrupted as result of school closures.
- 100% of KIs believe that children’s educational status is worse than before the crisis. Schools remained closed at the time of the survey as since the beginning of the outbreak, all classes were suspended throughout the country.
- Over 65% of KIs ranked the education situation as serious. It is a severe concern across all districts, regardless of their exposure levels, causing major disruption in learning and jeopardising children's education and futures.
- School closures were the main reason cited for the lack of access to education. Additional reasons included teenage pregnancy, restricted access to radio and TV educational programs, lack of alternative educational activities and the inability of families to provide home schooling.
- The main consequences of the interruption of learning were increased teenage pregnancy (83%), disruption in the education and development of children (53%) and an increased crime rate among adolescents (52%)
- The most affected groups identified by KIs included Ebola orphans, teenage girls, children from poor and Ebola affected families, and children from families who had lost their income sources.

The main priority interventions across all districts, regardless of exposure, include:

1. Reopening of schools
2. Free education without pre-payment of fees in advance
3. School feeding programs
4. Implementation of Ebola infection prevention control measures in schools
5. Building new classrooms to avoid congestion and exposure risks
6. Disinfection and de-stigmatisation of schools used as Ebola treatment or holding centres
7. Financial assistance to enable families to cover school expenses (uniform, materials, fees etc.).

Perspectives on education before and during the Ebola crisis

Education in Sierra Leone is compulsory for children aged 5–14 years old. Obtaining an additional year of education is highly relevant to a person’s income: it could mean a 23% increase in some industries (World Bank, 09/12/2014).

Shortages of schools and teachers were already major constraints in meeting the legal educational requirement before the Ebola crisis. Overall, 35.5% of women and 51.5% of men are literate. The majority of Sierra Leoneans have no formal education; only 3% of women and 5% of men have more than secondary education. Urban residents, and those living in the Western Region have the highest levels of education (Sierra Leone Demographic and Health Survey (SLDHS), 2013).

Eight out ten children were enrolled in primary school before the Ebola outbreak, according to KIs. However, Sierra Leone’s education system came to a standstill in June 2014, causing major disruption in learning and jeopardising children's education and futures. Schools remained closed at the time of the survey, consequently, all respondents reported that the educational situation has worsened since the outbreak. Ebola also impacted educational staff: a report dated 15 January indicates that 79 teachers died from the disease ([Meida 2015/01](#)).

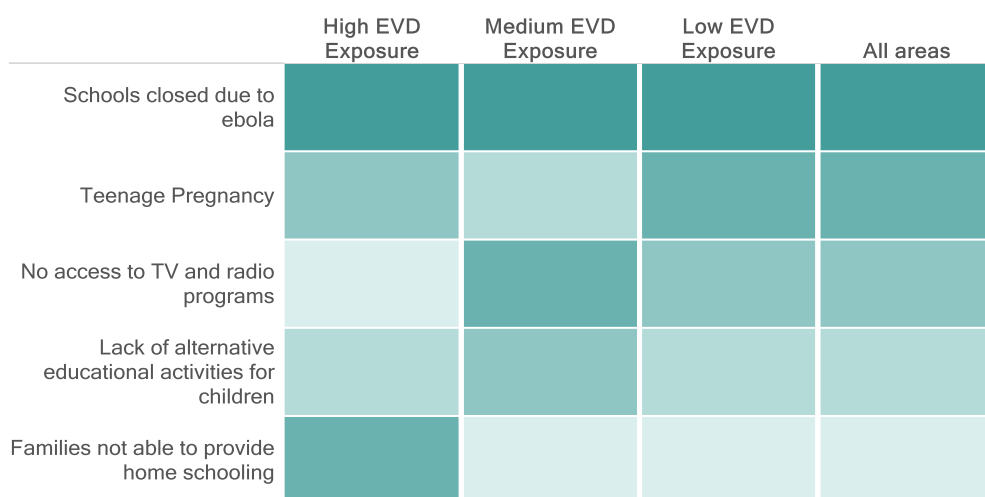
To mitigate the impact of school closures, the Ministry of Education, Science and Technology, with support from partners, organised one-hour daily lessons for children via radio and TV. The results presented in this section were

collected before the reopening of schools, in **March 2015**. Future monitoring is needed to monitor school’s enrolment levels and drop out figures now that schools have been reopened.

The main reasons reported for the deterioration of the educational status of children are:

1. **School closures**, reported by 84% of respondents. This was the most frequent response, regardless of exposure level.
2. **Teenage pregnancy** was the second most cited reason. KIs in low and medium exposure areas mentioned this reason more often than in high exposure areas. It is unclear why, more researches would be needed to understand these differences.
3. **Restricted access to radio and TV**, limiting engagement with the daily educational broadcasts.

Main reasons for the deterioration of the education situation when compared to before Ebola

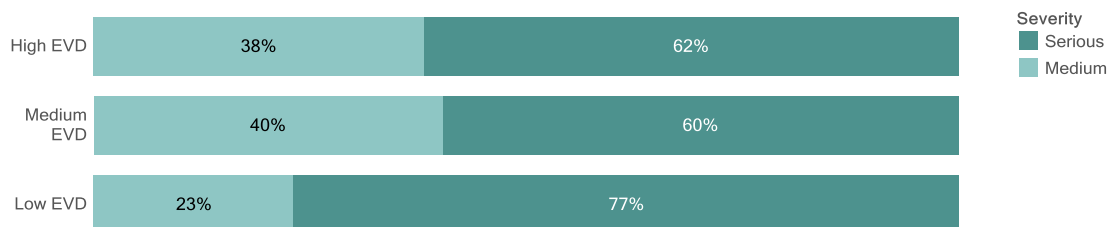


Other reasons for the disruption of educational activities included the lack of alternative educational activities for children and the inability of families to provide home schooling, especially in high exposure districts.

Perspectives on education before and during the Ebola crisis

KIs were asked to rank the seriousness of the current education situation. 123 out of 188 ranked unmet education needs as serious. Education needs affect high and medium exposure districts equally, however the impact seems greater in low exposure districts.

Severity of education problems by Ebola exposure category



Estimated number of children affected

With schools closed all over the country and a lack of effective alternatives, all children of school age can be considered in need. Over 1.5 million children aged 5–14 years (0.8 million boys and 0.6 million girls) had no access to education at the time of the survey, the entire population between 5 and 14 year old. This number is higher if advanced secondary education is included. According to UNICEF, an estimated 1.8 million children are out of school due to the crisis ([UNICEF 2015/02/04](#)).

Age group	Boys	Girls	Total
5 to 9 years old	442,927	377,097	820,024
10 to 14 years old	431,472	276,667	708,139
Total	874,399	653,764	1,528,163

Source: Sierra Leone Statistics Office, population projections for 2014.

Main consequences of the Ebola crisis in relation to education

The main consequences perceived by KIs in relation to school closures include:

1. **Knowledge loss**, reversal in literacy and interruption of the development of children was the main consequence, except in low exposure districts where increased teenage pregnancy was more frequently cited.
2. **Increased risk of teenage pregnancy**: 83% of respondents reported increased teenage pregnancy as a major consequence of school closures, especially from low and medium exposure districts (Kenema, Kailahun, Kono, and Pujehun). According to a UNDP assessment report published in December, respondents expect a 97% increase in teenage pregnancy (UNDP 2014/12). More assessments are needed to understand why low and medium exposure districts are highlighting this issue more than high exposure districts.
3. **Increased crime rate among adolescents** was reported by 52% of respondents, with a higher prevalence in districts with medium Ebola exposure.

KIs thought that children who had been engaged in income generating activities whilst schools were closed would be less inclined to return when they reopen.

Main education related consequences as result of the Ebola crisis

	High EVD Exposure	Medium EVD Exposure	Low EVD Exposure	All Areas
Knowledge loss and reversal in literacy capacity				
Increased Teenage Pregnancy				
Increased Crime Rate among adolescents				
Children involved in child labour will not return to school				

Most affected and vulnerable groups

KIs considered the following groups more likely to engage in child labour even if the schools reopen: children from the poorest families or who have lost one or both parents to Ebola, children from families that lost their main breadwinners, children from female-headed HHs and children from HHs whose livelihoods have been severely impacted.

Children whose parents are not empowered to provide home schooling are more prone to knowledge loss. They are also at increased risk of being involved with crime or sex activities, as a source of revenue.

Priority education interventions by Ebola exposure category

The priority interventions expressed by KIs are:

1. **Reopening of schools:** This is priority number one across all districts.
2. **Free education** without the current pre-payment of fees and additional charges, comes second across all districts regardless of exposure level. Despite education being free in name, respondents report that government subsidies are often paid late. Schools require families to pay fees in advance, which are rarely reimbursed. Schools also require extra payments to cover different expenditures.
3. **School feeding programmes** are the third most required intervention, especially in low exposure districts. More researches would be needed to establish the reason behind this difference.
4. **Ebola infection prevention control (IPC)** in schools, especially in high exposure districts.

Main priority interventions in the education sector

	High EVD exposure	Medium EVD exposure	Low EVD exposure	All Areas
Schools should reopen	Dark teal	Dark teal	Dark teal	Dark teal
Free education with no pre-payment required for fees	Dark teal	Dark teal	Dark teal	Dark teal
School feeding programs	Medium teal	Medium teal	Medium teal	Medium teal
Implement preventive measures	Light teal	Light teal	Light teal	Light teal
Build more classrooms to avoid congestion and touch in schools	None	None	Light teal	Light teal
Schools disinfection	Medium teal	Light teal	None	None

Priority interventions were consistent across all exposure levels, reopening of schools is priority number one across all districts, and free educations comes in second.

KIs in low exposure districts requested the building of more classrooms to avoid congestion and decrease the risk of infection and touch. Disinfection of schools used as Ebola treatment or holding centres was requested in high exposure districts. Some respondents indicated that this was because these schools can be heavily stigmatised and additional social mobilisation activities are recommended to restore trust in the safety of these buildings.

Some KIs considered sexual education as an important need, reinforcing the concern about teenage pregnancy as one of the main consequences of school closures.

Protection: Stigma and discrimination

The assessment aimed to gather perspectives on discrimination and stigma during the Ebola outbreak, therefore there is no pre-Ebola comparison in this section. Data was gathered to determine the groups experiencing discrimination and the perceived reasons for their marginalisation, to better understand the types of stigmatisation they suffer.

The results presented in this section are based only on the answers provided by respondents who indicated the existence of this problem in their chiefdoms – this amounted to just 88 respondents out of 188 mainly in high exposure districts. Respondents from Kono, a low exposure district, which had cases at the time of the survey, also mentioned the issue of protection. The rest of the districts assessed, medium districts (Kenema and Kailahun) and Pujehun did not raise discrimination and stigma as an issue in their chiefdoms. The limited sampling size means results presented in this section are merely descriptive and cannot be generalised beyond the population surveyed.

Key findings

- 47% of respondents considered stigma and discrimination as result of Ebola to be a problem in their areas, 50% mentioned that no problem existed and 3% had no opinion on this issue. Fear of infection is the main reason for this issue.
- High exposure districts and Kono (low exposure) presented a higher number of responses and ranked protection issues as more serious.
- The most affected and vulnerable groups being discriminated and stigmatised are Ebola survivors, members of burial teams, members of quarantined HHs, healthcare workers and families with Ebola cases or deaths, especially orphans.
- The main types of stigma and discrimination suffered are not being allowed to touch or interact with others (78% of KIs), rejection from the community (40%) and name-calling (34%). Additionally, informants mentioned vacating homes (27%) and rejection by family (25%), especially affecting burial teams, survivors and health workers.
- Consequences of stigma include social exclusion, low self-esteem and family exclusion.

Priority interventions identified by KI are:

1. Social awareness campaigns to reduce fear and stigma.
2. Psychological support.
3. Social integration activities.
4. Access to healthcare and medicines.

Perspectives on discrimination and stigma

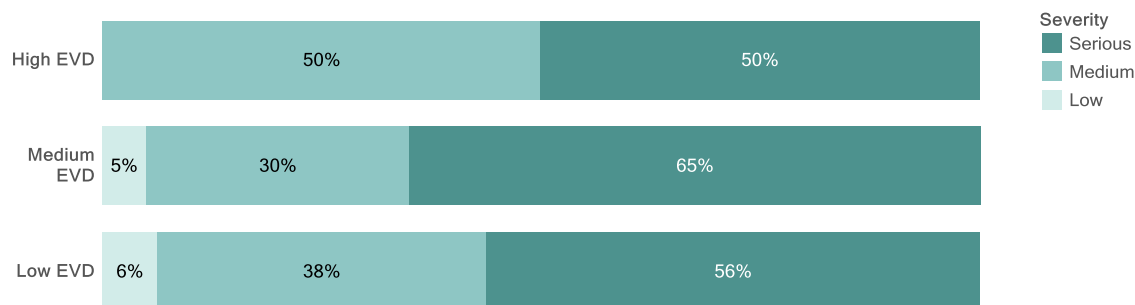
47% of respondents indicated that Ebola-related stigma and discrimination exist in their communities, 50% did not rate it as a problem and 3% did not express an opinion. The majority of KIs that did not perceive discrimination and stigma as a problem are from districts in low and medium exposure. In Pujehun district (low), perceptions of this problem were especially low (92% of KIs). This might be explained by the low number of cases in the district and by the fact it was Ebola-free for a number of months.

Fear of Ebola infection was cited as the main reason for discrimination by all groups. It is important to note that most KIs expressed sensitivity towards the feelings of the people at risk of stigma and discrimination.

Severity of the stigma and discrimination problem

Stigma and discrimination remain a serious concern in the high exposure districts WA Urban and Port Loko, which remain the Ebola hotspots, and in Kono district, where the outbreak peak was most recent. KIs in Pujehun showed the lowest level of concern. This can be explained by the fact that Pujehun had not reported any Ebola cases since November and had only 31 confirmed Ebola cases and 24 deaths.

Seriousness of stigma / discrimination problem as result of Ebola



A Street Child report indicates that stigma is highest in the north of the country, which experienced cases later in the crisis, particularly in districts where contagion is still high, such as Port Loko. Orphans whose parents were the first to contract Ebola in a community have been particularly stigmatised ([Street Child 2015/03](#)).

No adequate data is available to calculate the magnitude of Ebola-related discrimination. The number of Ebola teams (treatment, burial, and disinfection and ambulance) is constantly changing, and it is impossible to tell as yet how many of them have suffered stigma and discrimination.

Most affected and vulnerable groups

KIs identified several groups exposed to prejudice, stigma and discrimination in the communities where they live and work. The most affected, according to the perception of the KIs, are:

1. **Ebola survivors** are perceived to suffer the highest levels of stigma¹⁵ and discrimination by over three quarters of key informants (75%) consulted, regardless of their district exposure levels.
2. **Burial teams**, are also seen as the number two most vulnerable group to these problems across all districts according to 40% of KIs.
3. **Quarantined households** are the third group (39% of KIs). According to recent Ground Truth reports on quarantines, some degree of social discrimination or exclusion as result of having been quarantined is being reported by almost three quarters of respondents that are in or just out of quarantine ([Ground Truth 2015/03/24](#)).
4. **Healthcare workers (HCWs)** are considered to be highly stigmatized (33% of KIs). This can be as result of the high number of cases of Ebola among HCWs (302 cases and 221 deaths according to WHO), some of them were the most prominent Ebola doctors and researchers in country and their deaths had a great media exposure.
5. **Families and relatives of those directly affected by Ebola** are also subjected to rejection and discrimination from the community as perceived by 31% of KIs.

According to a Ministry of Social Welfare, Oxfam and UN Women report, stigmatisation and discrimination have resulted in abuse and mistreatment of women in particular. Many female survivors reported being afraid of experiencing gender-based violence as a result of Ebola ([Ministry of Social Welfare, Oxfam, UN Women, 2015/02/07](#)).

People living with disabilities, older people, and children were also identified as groups in need of support and protection.

Ebola orphans were mentioned as a vulnerable group by some KIs. According to a Street Child Orphan report in February 2015, there were over 12,000 orphans in Sierra Leone due to Ebola ([Street Children 02/2015](#)).

¹⁵ According to a Ministry of Social Welfare, Oxfam, UN Women report, Stigmatisation and discrimination have resulted in abuse and mistreatment of especially women. Many female survivors reported being afraid of experiencing gender-based violence as a result of EVD ([Ministry of Social Welfare, Oxfam, UN Women \(2015/02/07\)](#)).

Port Loko District registered the highest number of orphans, with a total of 3,410 identified and 2,459 taken care by their extended families or other. 43% of orphans identified live in urban settings, where they have greater exposure to commercial sex work, drug use and crime. Rural orphans (57% of those identified) are often less able to receive regular psychosocial support and monitoring because of the difficulties in reaching their remote locations. ([Street Child 2015/03](#)).

Petty traders were also mentioned, as they have suffered from the quarantine and movement restrictions imposed to contain the outbreak.

Main consequences of the Ebola crisis in relation to protection

The three main consequences mentioned in relation to stigma are **social exclusion** (for 73% of the KIs), **family exclusion** and **low self-esteem** (for 60% of KIs).

Type of stigma faced by affected groups

	Survivors	Households quarantined due to Ebola	Healthcare workers	Ebola burial team members	People that has/had family members affected by Ebola
Not allowed to touch or interact with others	Dark teal	Dark teal	Dark teal	Dark teal	Dark teal
Being called names	Medium teal	Medium teal	Medium teal	Medium teal	Medium teal
Rejection from community	Light teal	Light teal	Light teal	Light teal	Light teal
Notice to vacate their homes	Light teal	Light teal	Light teal	Light teal	Light teal
Movement restrictions	Light teal	Light teal	Light teal	Light teal	Light teal

The main types of discrimination mentioned by KIs are:

1. **Not being allowed to touch or interact with others** was mentioned by 78% of respondents. This answer was more frequent in high exposure areas and Kono (low exposure, but more recently affected by the outbreak than other low-exposure districts).
2. **Rejection from the community:** 40% of KIs indicate this outcome, especially in high exposure districts and in Kenema (medium exposure).
3. **Name-calling** was cited by 34% of respondents, more frequently in Port Loko (high exposure) and Kono (low but recent outbreak).

Other forms of stigma mentioned were notice to vacate homes and rejection by family. Name calling, rejection from communities and notice to vacate homes are especially common for survivors, HHs quarantined due to Ebola, burial teams and health workers. In general, Ebola survivors are the group perceived to be suffering the most from stigma and discrimination.

Priority protection interventions by exposure category and affected groups

Priority protection interventions as expressed by KIs

	High EVD exposure	Medium EVD exposure	Low EVD exposure	All Areas
Social awareness campaigns to reduce fear and stigma	Dark teal	Dark teal	Dark teal	Dark teal
Psychological support	Dark teal	Dark teal	Dark teal	Dark teal
Food assistance	Light teal	Light teal	Light teal	Light teal
Social integration activities	Light teal	Light teal	Light teal	Light teal
Support to access healthcare and medicines for survivors	Light teal	Light teal	Light teal	Light teal
Access to credit	Light teal	Light teal	Light teal	Light teal

KIs were asked to identify and rank priority interventions in relation to stigma and discrimination but were not probed on the reasons for their answers.

1. **Social awareness campaigns** to reduce stigma and fear, especially in medium and low exposure districts and in areas with Ebola survivors, health workers engaged in the response and Ebola burial teams. One of the reasons could be that in high exposure districts more actors have been focusing on active social awareness programs.
2. **Psychological support** for all groups affected by protection issues, especially for families affected by Ebola, quarantined homes and Ebola burial team members.
3. **Food assistance**, especially in high and low exposure districts. It might be linked to the high prevalence of food insecurity prior to the crisis in Port Loko and Pujehun, it was around 80% in 2011 ([WFP, 2011](#)).

Other preferred interventions were related to the reintegration of survivors, Ebola workers and orphans into society, better access to health care and medicine for survivors (especially in high exposure districts) and better access to credit.

Other protection issues identified in previous sections include:

- **Increase in teenage pregnancy:** 83% of key informants, especially from low and medium exposure districts consider this the top consequence from the schools closure.
- **Increase in crime rate among adolescent,** is seen by 52% of key informants as the consequences from lack of classes, and this view is more acute in medium exposure areas.
- **Increase in child labour** and likely **increase in schools dropouts** when schools reopen in a few weeks, was considered by 32% KIs as another worrying consequence as it is feared that many children engaged in work to support their families livelihoods will not return to school.
- **Exchanging sex for food:** Campaigns to deter this behaviour is seen as the fourth most pressing priority need in relation to food across all districts.

Prioritisation of needs across sectors

Summary

At the end of each interview, KIs were asked the following questions:

- Compare the situation in their own chiefdom with the situation in neighbouring chiefdoms and communities.
- Compare the health, food, livelihoods, and education sectors and rank the top three priority needs.
- Identify and prioritise vulnerable groups needing protection.
- Identify the groups most impacted by the cumulative effect of Ebola, across the sectors examined in the interview.

Comparison with neighbouring communities or chiefdoms

A substantial number of informants (79%) reported that the situation in their areas of residence was either similar or better compared to neighbouring communities or chiefdoms.

The exception was Port Loko district where over half of KIs considered that their present circumstances were worse than those in neighbouring districts and communities. This is likely because Port Loko is a high exposure and agriculture-dependent district, which was an Ebola hotspot at the time of the data collection.

Ranking of needs

77% of the respondents ranked three priorities while 23% only ranked two. The top priority sectors were food security and livelihoods (that received similar high ranking), followed by health and education. This ranking, provided by KI at the end of each interview, correlates with the results of the severity scoring under each section and the estimated number of population at risk for each section.

Analysis by exposure level reveals significant differences between high and low exposure area for healthcare, but not for education or livelihoods. The need for healthcare is perceived to be higher in high exposure areas than in low exposure areas. Since the Ebola toll is higher in the high exposure districts, the burden on the health facilities is perceived as higher than in low exposure districts. The fear of infection is higher and prevent people for accessing healthcare.

Affected vulnerable groups

As mentioned previously, the groups most directly affected by the negative consequences of Ebola are survivors, orphans, health workers, burial teams, ambulance teams, disinfection teams, quarantined HHs and families with Ebola cases. Women, older people, disabled people, young people and traders are considered the most vulnerable to the cumulative effects of Ebola across the sectors.

Annexes

1. Key informant profile
2. Survey Questionnaire
3. Survey estimation of critical needs and priorities

Annex 1: Key informant profile

Key informants reached and gender

A sample of 188 KIs were surveyed. Thirty six informants were surveyed at district level and 152 informants at chiefdom and community levels. The sample distribution by administrative level (district, chiefdom and community) is consistent with the assessment design.

To ensure a balance of KIs by category and by gender, the survey design pre-defined 14 categories of informants to be reached. The design placed equal emphasis on the recruitment of male and female informants. All thirteen target KI categories were represented in the survey sample. An additional category, Ebola community workers, were surveyed because of their availability and relevance to the assessment objectives. Community and local authority leaders emerged as the predominant KI category (15%). The analysis by gender shows that one in every three KIs surveyed was female (36%). Although, the survey did not achieve a complete gender balance, the number of females in the sample is large enough to facilitate comparative analysis.

Distribution of KIs by category, administrative level and gender distribution

Type of KIs reached

Community/Local Authorities	28 (14.8%)
Trade and Business	26 (13.8%)
Religious Leaders	16 (8.5%)
Youth Leaders	16 (8.5%)
Health workers	15 (7.9%)
Female Leaders	14 (7.4%)
Farmers	13 (6.9%)
Teachers	12 (6.4%)
Community Based Organizations (CBOs)	10 (5.3%)
Ministries, Departments and Agencies (MDA)	10 (5.3%)
DERC representatives	7 (3.7%)
Administrative leaders	6 (3.2%)
EVD Community Workers	6 (3.2%)
Non-Governmental Organizations NGOs	5 (2.7%)
Ebola survivors	3 (1.9%)
Student	1

Total
N=188

KI by administrative levels and gender

Administrative Level

District	36 (19%)
Chiefdom	41 (22%)
Community	111 (59%)

Gender

Male	120 (64%)
Female	68 (36%)

Age, education and occupation

The distribution of KIs by age, educational status and by occupation is shown in the table below. The sample had a good mix of youths under 30 years (13.6%), young adults between 30-49 years (48.4%), as well as adults 50 years and above (34%).

Sierra Leone has a three-tiered educational system. Primary education is the first six years of schooling, with secondary being an additional seven years. Post-secondary schooling is the last stage of education following which students have the opportunity to enter university or technical vocational institutions.

KIs recruited for this survey have achieved a higher educational level compared to the general population. Over two thirds (68%) of KIs have attained up to secondary education or higher, compared to 39% for the general population, 15–49 years¹⁶. As expected, over 60% are in waged employment, given the relatively high level of education among the group.

Distribution of KIs by age, education and occupation

Age Group	
Under 30 years	26 (14%)
30-39 years	48 (26%)
40-49 years	43 (23%)
50-59 years	33 (18%)
60+	30 (16%)
Not known	8 (04%)
Total	n=188
Educational Level	
No schooling	30 (16%)
Primary school	15 (8%)
Secondary school	56 (30%)
Technical/ vocational	12 (6%)
University	61 (32%)
Quranic studies	14 (07%)
Total	n=188
Main Occupation	
Trader, business	36 (19%)
Farmer	31 (17%)
Health care worker	24 (13%)
Social servant	28 (15%)
Teacher	24 (13%)
Local Administrator	22 (12%)
Religious Leaders	9 (05%)
Other waged employment	7 (04%)
Industrial and manufacturing industry	3 (02%)
Fishing	1(0.5%)
Others	3 (02%)
Total	n=188

¹⁶ Sierra Leone DHS – 2013

Marital status, religion and ethnicity

The distribution by marital status suggests that most respondents are in stable union, with over 80% of respondents reported as married. The distributions by religion and by ethnicity are consistent with the expected pattern in Sierra Leone.

About two thirds of informants surveyed (61%) practice the Muslim faith.

Respondents surveyed in the south and eastern districts of Pujehun, Kenema, and Kailahun districts more likely belong to the Mende ethnic group, while those surveyed in the Port Loko district located in the north more likely belong to the Temne ethnic group. Kono is the dominant ethnic group in Kono district, while KIs surveyed in Western urban belong to a mix of ethnic groups, a feature which is characteristic of cities.

Distribution of KIs by marital status and ethnicity

Marital Status	
Single	17 (09%)
Married	157 (83%)
Widowed	14 (08%)
Total	n=188

Religion	
Christian	74 (39%)
Muslim	114 (61%)
Total	n=188

Ethnicity	
Mende	85 (45.2%)
Temne	52 (27.6%)
Kono	19 (10.1%)
Limba	11 (5.6%)
Krio	3 (1.6%)
Fula	1 (0.5%)
Loko	1 (0.5%)
Others	13 (6.9%)
Not stated	3 (1.6%)
Total	n=188

Annex 2: Questionnaire

OFFICE USE ONLY

Questionnaire ID: _____

Date: ___/___/___ Time started: ___:___ Time ended: ___:___

Enumerator ID: _____ Name: _____

Mobile number 1: _____ Mobile number 2: _____

District: _____ Chiefdom/ward: _____

Subsection: _____ Locality name: _____

Context: Rural Urban

GPS Coordinates: [Lat: _____ Long: _____]

Level of information KI provides: District Chiefdom CommunityEbola cases in the community/district in the last 30 days: Yes No Don't know

Are there any Ebola team's workers in the community (health workers, ambulance, disinfection team, etc.)

 Yes No Don't knowQuarantined community Yes NoQuarantined households Yes No

If yes, in which months?

Introduction

Good morning/afternoon. My name is..... I am part of a team from DALAN ENAP. This organization monitors needs that have arisen as a result of the Ebola viral disease in your district/community. We would be really grateful if you could spare some time to answer a few questions. The questionnaire covers the following areas: health, food, livelihoods, education and issues of stigmatization. This survey will help a lot in decision making for the work Government of Sierra Leone and other humanitarian organizations do to bring a better response to this crisis.

I would like to inform you that this initiative does not come with any promises for remuneration or any benefits whether now or in the future. The purpose of our research is to have a better understanding of the main needs and challenges faced by the population across the country.

The information you provide will be treated with the total confidentiality. We will aggregate the information collected from all people interviewed and no individual's name or contacts will be reflected in the final report. It is within your rights to choose whether or not to take part or, at any point, to withdraw, but it will really be helpful if you could spare time to talk to us. This interview will take about 90 minutes.

We will ask you about the situation around in your district/chiefdom/community [select relevant]. There are no 'right' or 'wrong' answers to the questions presented but honest and sincere answers are required. If you're interested in the findings from this survey please note that it will be shared with your District DERC in March. You or any member of your community could access it from their office. Thanks a lot!

KEY INFORMANT PERSONAL DETAILS

Name: _____

Main occupation: _____

Other role in community _____

Mobile number 1: _____ Mobile Number 2: _____

Age: _____ Male Female

Ethnicity: _____ Religion: _____ Marital Status: _____

Educational level: (Highest level attained)

 Never been to school Primary school Secondary school University Technical vocational school Quranic Studies Other _____**Consent to participate in this survey:** Yes No KI Signature

HEALTH

I would now like to hear from you how people in this district/chiefdom/community [select relevant] deal with sickness and health related problems. First, how they used to do so before the Ebola crisis. Then, later, how they are managing now. We refer to non-Ebola health problems only at this time.

A.1 First before the Ebola crisis, did any people in your district/chiefdom/community [Select relevant] go to the health centre or hospital for advice and treatment when feeling sick (having a serious health concern)?
Yes [go to the question A.2] No [go to A.3]

A.2 Before the Ebola outbreak, let's say there are 10 sick persons in the community needing treatment- *some old, some young, some male, and some female, from different families*. If this happened in your district/chiefdom/community [Select relevant], how many of the ten will seek care immediately from a health facility? _____

Let's talk about NOW.

A.3A What can you tell me about the health condition of the district/chiefdom/community [select relevant] now in comparison to the conditions before the Ebola outbreak?
 Worse [go to A.3B] Similar Better DON'T KNOW [go to A.4A for all these answer

A.3B If WORSE, what are the main reasons in your opinion?
 A. _____
 B. _____
 C. _____
 D. _____

A. 3C You mentioned [Interviewer: read out responses recorded]. Among these reasons,
 Which is the most important reason? [note letter from A.3B above] _____
 Which is the second most important? [note letter from A.3B above] _____
 Which one is the third more important? [note letter from A.3B above] _____

A.4A Now (say, in the past two weeks) are people in your district/chiefdom/community [Select relevant] going to the health services for advice and treatment when feeling sick (having a serious health concern)??
Yes [go toA.5] I don't know [go to A.5]
No [go to A.4B]

A.4B If NO, what are the main reasons in your opinion?
 A. _____
 B. _____
 C. _____
 D. _____

A.4C You mentioned [Interviewer: read out responses recorded].Among these reasons,
 Which is the most important? [note letter from A.4B above] _____
 Which is the second most important? [note letter from A.4B above] _____
 Which one is the third more important? [note letter from A.4B above] _____

2015

A. 5 Ok, let's think about the situation NOW, imagine there are 10 sick persons in the district/chiefdom/community [Select relevant] needing treatment- some old, some young, some male, and some female, from different families. If this happened in your community, how many of the ten will seek care immediately from a health facility? _____

A.6 As things are at the moment, what are the major consequences resulting from this health situation for the people in this district/chiefdom/community [Select relevant]?

- A. _____
- B. _____
- C. _____
- D. _____

A.7 1) "You said A [read A.6A]. What kind of people primarily are exposed to A?"

2)"You said B [read A.6B] What kind of people primarily exposed to B?"

3) "You said C [read A.6C] What kind of people primarily exposed to C?"

A.8 Thinking about these health issues you mentioned, how would you rank the seriousness of the health problems in your district/chiefdom/community [Select relevant]? (*Severity scale: 1 normal situation or no problem to 6 life threatening*)

Description/anchor			select only one (1 to 6)
6	Critical	The problem is serious and can lead to death	
5	Major	The problem is serious and leads to intense suffering of people in the community	
4	Big	The problem is serious	
3	Medium	The problem exist but not too serious	
2	Small	Slight problem	
1	Normal	OK no problem, situation normal	

A.9 Now let's move to talk about needs, you mentioned [type #1 of people A.7A]. For these, what are the priority needs?"

- A. _____
- B. _____
- C. _____

You also mentioned [type #2 of people A.7B]. What are the priority needs for them in your opinion?

- A. _____
- B. _____

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C. _____

You also mentioned [type #3 of people A.7C]. For this group what are the priority needs?"

A. _____

B. _____

C. _____

A.10 What else can you tell me about the HEALTH in your district/chiefdom/ community [select relevant]?

B FOOD SECURITY

I would now like to hear from you about the food situation of the people in this district/chiefdom/community [select relevant]. First, how they used to manage before the Ebola crisis. Then, later, how they are managing now.

B.1 BEFORE the Ebola crisis, out of 10 households in your district/chiefdom/community [Select relevant and please write the number of households for each category and nota that the total must equal 10]

- A How many families had good food (all year around)?
- B How many families always ate enough but not always good food?
- C How many families sometimes did not have enough food?
- D How many families never had enough food, not even the cheapest food?

Total must equal 10

Let's talk about now.

B.2 NOW, after the Ebola outbreak, out of 10 people in your community

- A How many families always had good food (all year around)?
- B How many families always ate enough but not always good food?
- C How many families sometimes did not have enough food?
- D How many families never had enough food, not even the cheapest food?

Total must equal 10

B.3A How is the food situation/conditions of the population in your district/chiefdom NOW in comparison to the conditions in February last year? Is it:

- Worse [go to B.3B] Similar Better Do not known [go to B.3D after any of this answers]

B.3B If WORSE, what are the main reasons in your opinion?

A. _____
 B. _____
 C. _____
 D. _____

B. 3C You mentioned [read out reasons noted above]:

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Which of those is the most important reason? [note letter from B.3B above] _____
 Which one is the second most important reason? [note letter from B.3B above] _____
 Which one is the third more important reason? [note letter from B.3B above] _____
 Which one is the fourth more important reason? [note letter from B.3B above] _____

B. 3D If BETTER OR SIMILAR, what are the main reasons in your opinion?

- A. _____
- B. _____
- C. _____
- D. _____

B.4 As things are at the moment, what are the major consequences resulting from this food situation for the people in this community?

- A. _____
- B. _____
- C. _____
- D. _____

B.5 1) For consequence A [see B.4A] What kind of people are primarily exposed to this problem?

2) For consequence B [see B.4B]. What kind of people are primarily exposed to this problem?

3) For consequence B [see B.4C]. What kind of people are primarily exposed to this problem?

4) For consequence B [see B.4D]. What kind of people are primarily exposed to this problem?

B.6 How serious is this problem of food NOW in your district/chiefdom/community [Select relevant] (*severity scale: 1 normal situation or no problem to 6 life threatening*)

select only one
(1 to 6)

Description/anchor			select only one (1 to 6)
6	Critical	The problem is serious and can lead to death	
5	Major	The problem is serious and leads to intense suffering of people in the community	
4	Big	The problem is serious	
3	Medium	The problem exist but not too serious	
2	Small	Slight problem	
1	Normal	OK no problem, situation normal	

B.7 Now let's move to talk about NEEDS, you mentioned [type #1 of people, see B. 5.1]. for these, what are their priority needs in your opinion?

- A. _____
- B. _____
- C. _____

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And for [type #2 of people, see B. 5.2], what are the priority needs for them?

- A. _____
- B. _____
- C. _____

And for [type #3 of people, see B. 5.3], what are the priority needs for them?

- A. _____
- B. _____
- C. _____

And for [type #4 of people, see B. 5. 4], what are the priority needs for them?

- A. _____
- B. _____
- C. _____

B.8 What else can you tell me about me about FOOD SECURITY concerns in your district/chiefdom/community [Select relevant]?

C LIVELIHOODS

I would now like to hear from you about people's livelihood in this district/chiefdom/community [select relevant]. First, how they used to manage before the Ebola crisis. Then, later, how they are managing now.

C.1 "First, before the crisis, how did most people make a living?"

- A. _____
- B. _____
- C. _____
- D. _____

C.2 Out of 10 households in your district/chiefdom/community [Select relevant], how many of them would you say were able to provide adequately for their family BEFORE the Ebola crisis? _____

Let us now talk about what is happening now.

C.3A In comparison to the conditions before the Ebola outbreak, how difficult is it for most people to make a living now? Is it?

- Worse [go to C.3Bb] Similar Better Don't know [go to C.3D]

C.3B If WORSE, what are the main reasons in your opinion?

- A. _____
- B. _____
- C. _____
- D. _____

C. 3C You mentioned [Interviewer: read out responses recorded]. Among these reasons, Which is the most important reason? [note letter from C.3B above] _____

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Which is the second most important? [note letter from C.3B above] _____
 Which one is the third more important? [note letter from C.3B above] _____
 Which one is the four more important? [note letter from C.3B above] _____

C.3D If SIMILAR or BETTER, what are the main reasons?

- A. _____
- B. _____
- C. _____
- D. _____

C.4 Now let's say there are 10 households in your district/chiefdom/community [Select relevant], how many of them are able to provide adequately for their family NOW? _____

C.5 You said earlier that before Ebola, these were the most important ways for people here to make a living [INTERVIEWER: READ OUT TYPES OF LIVELIHOODS NOTED EARLIER in C1], which of these livelihoods are affected the most as a result of Ebola in your district/chiefdom/community [Select relevant].

- A. _____
- B. _____
- C. _____
- D. _____

C.6 In the livelihood conditions we have now, what are the major consequences for the people in this district/chiefdom/community [Select relevant]?

- A. _____
- B. _____
- C. _____
- D. _____

C.7 1) For consequence A [see C.6A] What kind of people are primarily exposed to this problem?

2) For consequence B [see C.6B]. What kind of people are primarily exposed to this problem?

3) For consequence C [see C.6C]. What kind of people are primarily exposed to this problem?

4) For consequence D [see C.6D]. What kind of people are primarily exposed to this problem?

C.8 How would you rank the seriousness of current livelihoods conditions (*Ranking scale severity: 1 normal situation, no problem to 6 life threatening*)

select only one
(1 to 6)

Description/anchor		
6	Critical	The problem is serious and can lead to death
5	Major	The problem is serious and leads to intense suffering of people in the community
4	Big	The problem is serious
3	Medium	The problem exist but not too serious

2015

2	Small	Slight problem	
1	Normal	OK no problem, situation normal	

C.9 Now let's move to talk about needs, in your opinion to help people make a living what should be done with the greatest urgency?

- A. _____
- B. _____
- C. _____
- D. _____

C10 What else can you tell me about the situation of livelihoods in your district/chiefdom/community [Select relevant]?

D EDUCATION

I would now like to hear from you how people in this district/chiefdom/community [select relevant] deal with schooling of children, first how this was before the Ebola crisis. Then, later, what is happening now.

D.1 First before the Ebola crisis, did any children of primary school age in your district/chiefdom/community [Select relevant] go to school?

- Yes [go to D.2] No [go to D.3]

D.2 You said children did go to primary school. In your experience, for every ten children of that age, how many would go to school BEFORE the Ebola outbreak? _____

Let us now talk about what is happening now.

D.3A How is the education situation/conditions of the children in your district/ chiefdom/community [Select relevant] NOW in comparison to the conditions last February 2014? Is it

- Worse [go to D.3B] Similar Better Don't know [go to D.4]

D.3B If WORSE, what are the main reasons in your opinion?

- A. _____
- B. _____
- C. _____
- D. _____

D. 3C You mentioned [Interviewer: read out responses recorded in D.3B]. Among these reasons,

- Which is the most important reason? [note letter from C.3B above] _____
- Which is the second most important? [note letter from C.3B above] _____
- Which one is the third more important? [note letter from C.3B above] _____
- Which one is the fourth more important? [note letter from C.3B above] _____

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D.4a NOW, are there any primary school children in your district/chiefdom/ community [Select relevant] going to school? Yes [Go to D.5] No [Go to D.4B]

D.4b If NO, what are the main reasons?

- A. _____
- B. _____
- C. _____
- D. _____

D. 4C You mentioned [Interviewer: read out responses recorded]. Among these reasons,
 Which is the most important reason? [note letter from D.3B above] _____
 Which is the second most important? [note letter from D.3B above] _____
 Which one is the third more important? [note letter from D.3B above] _____
 Which one is the fourth more important? [note letter from D.3B above] _____

D.5 What is your impression NOW. Out of ten children of primary school age, how many are going to school NOW?" _____

D.6 In this primary education conditions that we have now, what are the major consequences for the children of primary school age in this district/chiefdom/ community [Select relevant]?

- A. _____
- B. _____
- C. _____
- D. _____

D.7 "You said A. What kind of children primarily are exposed to A?"

"You said B. What kind of children primarily are exposed to B?"

"You said C. What kind of children primarily are exposed to C?"

D.8 How would you rank the seriousness of this educational problem in your district/chiefdom/community [Select relevant]? (*Ranking scale severity: 1 normal situation or no problem to 6 life threatening*)

select only one
(1 to 6)

Description/anchor		
6	Critical	The problem is serious and can have a negative long term impact on children's development, jeopardizing their future
5	Major	The problem is serious and can lead to temporal intense disruption of children's educational development
4	Big	The problem is serious
3	Medium	The problem exist but not too serious
2	Small	Slight problem
1	Normal	OK no problem, situation normal

D.9 Now let's move to talk about needs: in your opinion, to improve children's schooling, what should be done with the greatest urgency?

- A. _____

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- B. _____
- C. _____
- D. _____

D10 What else can you tell me about the status of education in your community/chiefdom/district?

E PROTECTION: DISCRIMINATION AND STIGMA

Let's talk about the actual situation now, and what are the main problems faced by some of the people or groups of people in your district/chiefdom/community [select relevant] as a result of being identified with Ebola or Ebola related activities (Ebola infected, quarantined households, health workers, burial teams, ambulance crew, etc.)

E.1 Are people or groups in your district/chiefdom/community [Select relevant] being discriminated against or stigmatized as a result of Ebola?

- Yes [go to E.2] No [go to FINAL SECTION F] I don't know [go to E.10]

E.2 Which groups are being stigmatized/discriminated against at the moment?

- A. _____
- B. _____
- C. _____
- D. _____

E.3 What types of discrimination or stigmatization do they suffer?

- A. _____
- B. _____
- C. _____
- D. _____

E.4 And what are the main reasons for this in your opinion?

- A. _____
- B. _____
- C. _____
- D. _____

E.5 1) You said A[see E.3.A]. What kind of people/group are primarily exposed to A?

2) You said B[see E.3.D].What kind of people/group are primarily exposed to B?

3) You said C[see E.3.C].. What kind of people/group primarily are exposed to C?

4) You said C[see E.3.D]. What kind of people/group primarily are exposed to D?

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E.6 In these conditions, what are the major consequences for the EVD affected people and their families?

- A. _____
- B. _____
- C. _____
- D. _____

E.7 And for health workers and Ebola teams members in this district/chiefdom?

- A. _____
- B. _____
- C. _____
- D. _____

E.8 How would you rank the seriousness of this problem in your district/chiefdom/ community [\[Select relevant\]](#) ? *(Ranking scale severity: 1 normal situation or no problem to 6 life threatening)*

select only one
(1 to 6)

Description/anchor			
6	Critical	The problem is serious and can lead to death	
5	Major	The problem is serious and leads to intense suffering of people in the community	
4	Big	The problem is serious	
3	Medium	The problem exist but not too serious	
2	Small	Slight problem	
1	Normal	OK no problem, situation normal	

E.9 You mentioned [\[type #1 of people, see E.2.A\]](#). For these, what are the priority needs?

- A. _____
- B. _____
- C. _____

You also mentioned [\[type #2 of people, see E.2.B\]](#). For them, what are the priority needs?

- A. _____
- B. _____
- C. _____

You also mentioned [\[type #3 of people, see E.2.C\]](#). For them, what are the priority needs?"

- A. _____
- B. _____
- C. _____

You also mentioned [\[type #4of people, see E.2.D\]](#). For them, what are the priority needs?"

- A. _____
- B. _____
- C. _____

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E.10 What else can you tell me about the situation in your community in relation to protection issues?

F SUMMARY OVERVIEW ACROSS SECTORS

F.1 Based on our discussion, how would you say is the situation in your district/chiefdom/community [\[Select relevant\]](#) around you? Is it? Worse Similar Better Don't know

F.2 We talked about needs for Healthcare, food, livelihoods, and schools. Among those four, which is the biggest need? PLEASE PROBE TO GET MORE SPECIFIC INFORMATION

- A. Which the biggest need? _____
- B. Second biggest need _____
- C. Third more important need _____

F.3A Apart from stigma and discrimination against Ebola survivors, their relatives, Ebola teams and health workers what other protection concerns exist at the district/chiefdom/community [\[Select relevant\]](#) level? [\[If no answer, repeat the questions with a neutral\]](#) Can you think of anything else? Anybody who needs special protection? [\[If nothing comes, well, then nothing is to be noted\].](#)

- A. _____
- B. _____
- C. _____

F.3b Of these concerns mentioned [\[See F.3A\]](#) which are the most important in your opinion

- A. Most important _____
- B. Second most important _____
- C. Third more important _____

F.4 Considering all the sectors we have talked about (*health, food, livelihoods, education, and stigma*) in your opinion which are the categories of people that have suffered the most since the beginning of the epidemic (rank top three):

- A. Most impacted _____
- B. Second most impacted _____
- C. Third more impacted _____

F. 5 Is there anything else that you wanted to mention in relation with the impact of Ebola in your district/chiefdom/community [\[Select relevant\]](#) that we have not discussed?

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We highly appreciate your time and participation in this survey. If we were to need further clarification during the data entry process we would get in touch with you if you have provided consent and contact details at the beginning of this interview. Additionally, if you have consented you might be contacted again in future monitoring surveys. Many thanks!

Consent to participate in future surveys: Yes No

KI Signature _____

KII CHECKLIST

- | | |
|---|--|
| This interview was fully completed | <input type="checkbox"/> |
| This interview was partially completed and replaced | <input type="checkbox"/> |
| This interview was not completed, and was replaced | <input type="checkbox"/> |
| This interview was not completed or replaced | <input type="checkbox"/> |
| This interview has been fully coded | <input type="checkbox"/> |
| This interview has not been fully coded | <input type="checkbox"/> |
| Code sheet attached to interview | <input type="checkbox"/> YES
<input type="checkbox"/> Missing |

If code sheet is not attached please explain why

Quality issues with this interview (provide details)

Field notes: Logistics, challenges, recommendations for the next visit, etc.

Observations during the field trip to this community

Annex 3: Survey estimation of critical needs

The ENAP has been designed as a probability sample survey. Areas (districts, chiefdoms / urban wards) were selected with known probability. Within the sample areas, roving survey workers selected key informants (KI). The probabilities for individuals to be selected as KIs are not known, but individuals were chosen on the premise that they were knowledgeable of the local conditions.

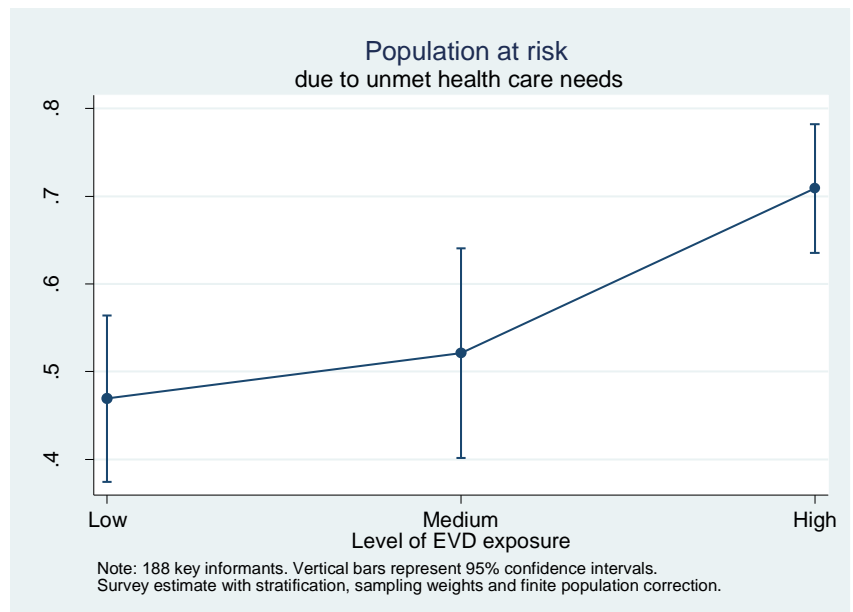
Under these assumptions, survey findings can be generalized to the entire country. This has two benefits. First, although the survey users know that the ENAP collected data in six of the 14 districts only, there is a legitimate interest to know national magnitudes. Second, the method of generalizing - survey estimation - produces not only the likely magnitudes, but also measures of uncertainty. Knowing the limits within which findings apply is essential. It prevents analysts and users from making conclusions (e.g. about differences among areas) that are suggested by the sample data, but in fact are not statistically significant, or are biased because they are not properly sample-weighted.

This note presents a small number of countrywide estimates of the seriousness of unmet needs. The major interest is in observing differences among areas of high, medium and low exposure to the Ebola Viral Disease (EVD) epidemic. Exposure was estimated at the district level. The combined district populations by these three levels are fairly similar; the population projected for 2014 is 2,127,378 in the four high-exposure, 1,953,890 in the four medium-exposure, and 2,267,082 in the six low-exposure districts. The projected national population is 6,348,350.

For illustration, one of the results is visualized on the following page. The graph shows the proportions, by levels of exposure, of the population estimated at risk due to serious unmet health care needs. The three dots connected by ascending lines indicate that just under half of the population is at risk in low-exposure areas, slightly more than half in medium-exposure areas and over 70 percent in high-exposure area. Equally important, vertical bars reflect the uncertainty of these estimates. For example, with 95 percent confidence, the correct proportion for the low-exposure areas is between 37 and 57 percent. This is a wide margin of uncertainty. The confidence intervals for the two other areas are wider (medium level) and narrower (high level), but all three are wider than the +/- 5 percent precision that survey designers often demand.

However, the uncertainty does not prevent the conclusion that high-exposure areas are experiencing higher levels of unmet health care needs. The difference between these areas and medium (and perforce low) exposure areas is statistically significant. This may sound trivial - common sense leads us to expect a significant difference. But the same tests also reveal that the difference between low and medium-exposure areas is insignificantly small, a conclusion that we would not be able to draw on the basis of the raw averages.

The strength of survey estimation is further demonstrated when we calculate the



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number of persons at risk due to unmet health care needs. This can be done by multiplying the estimated proportions with the populations living in low, medium, and high-exposure areas.

The direct result is 3,589,771 persons at risk, or 56.5 percent of the national population. This precision is spurious. The true figure, with high certainty, is between 2,999,679 and 4,179,864, the bounds of the 95 percent confidence interval. In the end, what the ENAP can tell its users is that, based on the opinion of a controlled sample of key informants, an estimated 3.6 million persons are at risk due to unmet health care needs, with a low estimate of 3.0 million, and a high of 4.2 million.

These as well as most of the estimates presented further below use information gathered from 188 key informants in 62 chiefdoms / urban wards in six districts. The 14 districts of the country had been divided ("stratified") into six groups, defined by three levels of EVD exposure and two levels of livelihood dependence on agriculture. From each stratum, one district was sampled. The protection sector obtained unmet needs data from far fewer key informants (88 of 188).

The rest of this note proceeds as follows. We provide proportions for persons in need, by sector, level of need and level of EVD exposure. For persons in serious need, a convenient overview gives both proportions and absolute numbers. This is followed by estimates of sectoral priorities, measured in a Borda count format. The measures are available for health care, food, livelihoods, and education. Finally we detail the survey estimation set-up and, for some variables, compute design effects.

At risk due to unmet needs

Measurement

The seriousness of unmet needs was measured in five sectors: health care, food security, livelihoods, education, and protection. The measurements relied on an identical scale. In the language of the interviews, unmet needs were elicited as "problems":

Description/anchor			select only one (1 to 6)
6	Critical	The problem is serious and can lead to death/jeopardize durably children education's future	
5	Major	The problem is serious and leads to intense suffering of people in the community/jeopardize temporarily children's education future	
4	Big	The problem is serious	
3	Medium	The problem exist but not too serious	
2	Small	Slight problem	
1	Normal	OK no problem, situation normal	

In retrospect, the instrument was not appropriate for the education sector. Unmet educational needs are not life-threatening in the short term. We will present results for four sectors. But as we shall see, key informants had difficulty rating protection needs; only a minority did so.

For simplicity, we reduce the six-level scale to three levels. We combine levels 1 and 2 in "low needs", 3 and 4 in "medium needs" as well as 5 and 6 in "serious needs". Later, for quicker comparison, we put the proportions of persons in serious needs in one table for three of the four sectors. The missing values in the protection scale disqualify it from this comparison.

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Proportions, by sector, levels of need and Ebola exposure

Health care

Level of health care needs	Level of EVD exposure			Total
	Low	Medium	High	
Low	0.125 [0.049,0.284]	0.269 [0.171,0.397]	0.119 [0.077,0.179]	0.168 [0.117,0.234]
Medium	0.405 [0.309,0.509]	0.210 [0.146,0.291]	0.172 [0.122,0.237]	0.267 [0.214,0.328]
Serious	0.469 [0.375,0.566]	0.521 [0.400,0.640]	0.709 [0.629,0.778]	0.565 [0.503,0.625]
Total	1.000	1.000	1.000	1.000

Key: column proportions
[95% confidence intervals for column proportions]

Pearson:
Uncorrected chi2(4) = 16.4085
Design-based F(2.91, 162.94) = 5.3497 P = 0.0017

High-exposure areas clearly claim higher levels of unmet health care needs.

Food security

Level of food needs	Level of EVD exposure			Total
	Low	Medium	High	
Low	0.000	0.019 [0.004,0.089]	0.015 [0.005,0.043]	0.011 [0.004,0.029]
Medium	0.464 [0.308,0.627]	0.363 [0.242,0.504]	0.208 [0.163,0.262]	0.347 [0.267,0.436]
Serious	0.536 [0.373,0.692]	0.618 [0.469,0.748]	0.777 [0.722,0.824]	0.642 [0.552,0.723]
Total	1.000	1.000	1.000	1.000

Key: column proportions
[95% confidence intervals for column proportions]

Pearson:
Uncorrected chi2(4) = 10.3681
Design-based F(2.89, 161.79) = 3.4249 P = 0.0200

There is a steady increase in persons with serious food needs, from an estimated 54 percent in areas of low EVD exposure, to 62 percent in medium exposure areas, and finally to 78 percent in high-exposure areas.

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Livelihoods

Level of livelihood needs	Level of EVD exposure			Total
	Low	Medium	High	
Medium	0.357 [0.222,0.519]	0.362 [0.248,0.493]	0.302 [0.225,0.392]	0.340 [0.270,0.417]
Serious	0.643 [0.481,0.778]	0.638 [0.507,0.752]	0.698 [0.608,0.775]	0.660 [0.583,0.730]
Total	1.000	1.000	1.000	1.000

Key: column proportions
[95% confidence intervals for column proportions]

Pearson:
Uncorrected chi2(2) = 0.6122
Design-based F(1.82, 101.80) = 0.2909 P = 0.7272

There is no correlation between unmet livelihood needs and EVD exposure. None of the key informants reported low levels of livelihood needs.

Protection

Only 88 out of the 188 key informants provided a protection need rating. With so many missing values, confidence intervals and test statistics cannot be produced.

Level of protection needs	Level of EVD exposure			Total
	Low	Medium	High	
Low	0.170	0.051	0.000	0.042
Medium	0.332	0.295	0.487	0.403
Serious	0.498	0.654	0.513	0.554
Total	1.000	1.000	1.000	1.000

Key: column proportions

Pearson:
Uncorrected chi2(4) = 9.8154
Design-based F(., .) = . P = .

Note: missing test statistics because of stratum with single sampling unit.

The proportions do not suggest a correlation between these needs and the exposure level.

Proportions and absolute numbers for persons in serious need

Estimates with confidence levels are available for proportions and absolute numbers of the population at risk due to serious unmet health, food and livelihood needs. Protection needs have too many missing values in order to provide useful estimates. "Serious needs" combines levels 5 and 6 on the scale on which key informants rated the seriousness of problems.

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Entire country

Proportions

Survey: Mean estimation

	Mean	Linearized Std. Err.	[95% Conf. Interval]	
Health care	.5654652	.030601	.504164	.6267664
Food security	.6421419	.0429225	.5561577	.7281261
CriticalLiveli	.6601387	.0369995	.5860198	.7342576

Absolute numbers

	Total	Linearized Std. Err.	[95% Conf. Interval]	
Health care	3589771	294569	2999679	4179864
Food security	4076542	257574.3	3560558	4592525
Livelihoods	4190792	302300	3585212	4796371

Sector differences

Persons with critical health needs are significantly fewer than those with critical food or livelihood needs, as statistical tests confirm.

By areas of different levels of Ebola exposure

Proportions

High: exposure = High
 Medium: exposure = Medium
 Low: exposure = Low

Over	Mean	Linearized Std. Err.	[95% Conf. Interval]	
Health care				
High	.7088953	.0375075	.6337586	.7840319
Medium	.5209786	.0610583	.398664	.6432931
Low	.4692147	.04842	.3722178	.5662115
Food security				
High	.7771811	.0254541	.7261904	.8281718
Medium	.6181811	.0716318	.4746853	.7616769
Low	.5360749	.0823701	.3710678	.7010819
Livelihoods				
High	.6981144	.0418223	.6143342	.7818945
Medium	.6384605	.0623951	.5134681	.763453
Low	.6431866	.0763737	.4901917	.7961815

2015

Absolute numbers

High: exposure = High
 Medium: exposure = Medium
 Low: exposure = Low

Over	Total	Linearized Std. Err.	[95% Conf. Interval]	
Health care				
High	1508088	110613.3	1286503	1729673
Medium	1017935	137667.2	742154.2	1293715
Low	1063748	235761.1	591461.9	1536034
Food security				
High	1653358	118737.5	1415498	1891218
Medium	1207858	94798.23	1017954	1397762
Low	1215326	207988.5	798674.7	1631977
Livelihoods				
High	1485153	126388.7	1231966	1738340
Medium	1247482	191936.4	862986.9	1631976
Low	1458157	196396.6	1064727	1851586

Differences across exposure levels

There are significant differences between low/medium vs. high levels of EVD exposure in the proportions of persons in serious health care and food needs. Claims to serious livelihood needs are insensitive to levels of exposure.

Inter-sectoral priorities

Key informants were asked to rate the needs in four areas: food, livelihoods, health care and education by priority, in other words: to *rank* them. Three priorities were allowed - first, second and third. 77 percent of the interviewees exercised three choices, 23 percent only two. The rankings were transformed into Borda scores (Wikipedia 2011). An area of need would be scored 3 if it was the person's first priority, 2 for second priority, 1 for third, and 0 if the area was not prioritized. Borda scores are assumed to be interval-level in a voting model; adding or averaging them produces a Borda count for each area.

Plausibly, the interviewees found it easy to distinguish among food, health care and education as well-defined sectors. The distinction between food and livelihood may be less clear; these two areas competed for the same priority votes¹⁷. For the analysis we combined them, imputing the score of the combined food/livelihood area from the maximum of the two Borda scores. In this three-sector model, the nationwide mean Borda counts for the three sectors are as follows. A higher count means higher priority.

Entire country

	Mean	Linearized Std. Err.	[95% Conf. Interval]	
Food / livelihoods	2.03123	.0531496	1.924758	2.137701
Health care	1.951396	.0793103	1.792519	2.110274
Education	1.519457	.1200525	1.278963	1.759951

¹⁷ This is an instance of the "irrelevant alternatives" problem that often plagues the Borda count (See, among many who discuss this problem, e.g. Endriss 2013).

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It is obvious that education is of lower priority. The difference between food/livelihood and health care is statistically not significant. Of greater interest, therefore, are differences by exposure levels.

By exposure level

High: exposure = High
 Medium: exposure = Medium
 Low: exposure = Low

Over	Mean	Linearized Std. Err.	[95% Conf. Interval]	

Food / livelihoods				
High	2.008315	.055383	1.897369	2.11926
Medium	2.134965	.0739674	1.98679	2.283139
Low	1.963328	.1163758	1.7302	2.196457

Health care				
High	2.056152	.0644165	1.927111	2.185194
Medium	2.074826	.1366745	1.801034	2.348618
Low	1.746718	.1590619	1.428079	2.065358

Education				
High	1.319628	.0888649	1.14161	1.497646
Medium	1.57902	.1267302	1.325149	1.832892
Low	1.655636	.2810096	1.092706	2.218566

At first glance, there seems to be a trade-off in priorities between health care and education along the exposure levels. However, the differences between high and low-exposure areas are significant for health care, but not for education (and certainly not for food/livelihoods).

In other words, populations in high-exposure areas have a higher need for health care than those in low-exposure areas. This seems trivial, but is usefully confirmed by key informant opinion. The reverse relationship for education seems equally unsurprising, but in fact it fails to attain statistical significance. The priority of education is equally low, regardless of the exposure level.

Survey estimation

Set-up

We treat the ENAP as a probability sample survey. Estimation takes into consideration the usual survey data characterizations, i.e. probability weights, clustering and stratification. We use the statistical package STATA version 12 and its svy suite of survey estimation commands (Stata Corporation 2011). The following tables reproduce STATA syntax output.

The STATA `svyset` command used was:

```
. svyset psu [pw = PopPerKI], fpc(fpc) strata( SixStrata)
      pweight: PopPerKI
      VCE: linearized
Single unit: missing
Strata 1: SixStrata
  SU 1: psu
  FPC 1: fpc
```

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where

variable name	storage type	display format	value label	variable label
psu	long	%11.0g	psu	Chiefdom or ward [i10a PCodes (encoded)]
PopPerKI	double	%10.0f		Population represented by each KI (based on the six strata)
fpc	float	%9.0g		Chiefdoms or urban wards in stratum (for w/A Urban set to 10)
SixStrata	byte	%10.0g		Stratum (6 strata)

Only the first sampling stage is modelled. Chiefdoms and urban wards are the primary sampling unit.

The sample was a stratified multi-stage sample. Districts were stratified by three levels of EVD exposure and two levels of livelihood dependency on agriculture (six strata). In the first stage, one district was selected from each stratum. In the second and following stages, chiefdoms (wards in urban areas), localities and key informants were selected. Because the documentation on these stages is not complete, and because only one district per stratum was selected, we set the chiefdom as the primary survey unit (PSU). 188 observations (key informant interviews) are distributed over 62 PSU.

[Sidebar]: Purposive and convenience sampling elements

The following adjustments were made in the actual sampling and sample realization. The information is qualitative; complete lists of the concerned units, together with their 2014 projected populations, are not available:

1. In the stratum defined by low EVD exposure and high agricultural dependency, the randomly sampled district was replaced with one logistically more convenient.
2. Within the selected districts, chiefdoms and urban wards ("units") were selected. In order to minimize clustering of key informants within a district, its units were divided in 3 - 4 groups of contiguous units. From within each of these groups, a small number of units were selected using a random number table.
3. Within each selected unit, assessment sites were selected in a mixture of purposive and convenience sampling. On purpose, a balance was sought between male and female key informants, as well as between those purporting to speak for the entire district (chiefly officials in district headquarters) and others with a more local brief. Logistics and safety considerations imposed the convenience element.
4. Within an assessment site, the final selection of key informants depended on social status, availability and agreement to be interviewed, as well as efforts by the teams to balance the district-wide composition of key informants by gender and administrative scope.

It is therefore obvious that our modelling of the survey set-up simplified. Instead of on EVD exposure X agricultural dependency, the ENAP stratified on exposure X dependency X contiguous areas within districts (point 2). This spatial grouping within the selected districts, with subsequent selection of units in each group, is an attempt at spatially balanced sampling. It counteracts the tendency to form clusters on convenience grounds. Also it may be more efficient (in the sense of improving precision) than simple random samples of units within undivided districts (Stevens and Olsen 2004).

In this light, it would have been appropriate to define districts as primary sampling units, and chiefdoms / wards as the secondary, both with their own finite population corrections. However, this finer stratification might have produced singleton units, frustrating the calculation of confidence intervals.

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We believe that the simplified set-up is appropriate, also because the adjustments described in 3. and 4. could not possibly be translated into exact selection probabilities.

Key informants in high-exposure PSU were over-sampled, in order to get more precise estimates for such areas. All in all, 84 interviews were conducted in high exposure districts, 52 in medium and again 52 in low-exposures districts.

Stratum	#Units included	#Units omitted	#Obs with complete data	#Obs with missing data	#Obs per included Unit			
					min	mean	max	
1	10	0	42	0	1	4.2	6	
2	11	0	42	0	3	3.8	10	
3	11	0	26	0	2	2.4	4	
4	10	0	26	0	2	2.6	8	
5	10	0	26	0	2	2.6	7	
6	10	0	26	0	1	2.6	10	
6	62	0	188	0	1	3.0	10	
			----- 188 -----					

We applied a Finite Population Correction (FPC). It is based on the *total* number of chiefdoms/urban wards in each stratum (not only the visited ones). Officially, the Western Area Urban District - the city of Freetown - is composed of 8 wards; the data show 10 different ward codes. Artificially, for the FPC, we set the number of wards to 10.

Survey weights were computed as the number of persons represented by each interviewed key informant (stratum population by the number of KI in the stratum; since every stratum contained only one sampled district, the denominator is the number of KI in this district). The next table gives population, sample size, sampling weight and FPC-relevant units, by stratum. For information, the populations of the sample districts are given too although they do not influence estimation.

Table: ENAP sample strata

Stratum	EVD exposure	Livelihood dependency on agriculture	Sample district	Stratum population	Sample district population	Key informants interviewed	Sampling weights (stratum population per KI)	Chiefdoms / urban wards in total (FPC variable)
1	High	Low	W/A Urban	1,304,507	1,040,888	42	31,060	14
2	High	High	Portloko	822,871	654,142	42	19,592	22
3	Medium	Low	Kenema	959,187	494,139	26	36,892	33
4	Medium	High	Kailahun	994,703	341,690	26	38,258	28
5	Low	Low	Kono	557,978	557,978	26	21,461	15
6	Low	High	Pujehun	1,709,104	278,119	26	65,735	56
total			6	6,348,350	3,366,956	188	33,768	168

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Design effects

The survey economies realized by clustering, stratification and finite population correction can be exemplified through the design effects reported for some of the estimates above. The design effect (DEFF) is the ratio of the variance of a parameter in the actual complex (clustered, stratified) design compared to what it would be under a true simple random sample. For the serious need proportions by EVD exposure levels, we obtain these DEFF (the DEFT are the square roots of the DEFF):

High: exposure = High
 Medium: exposure = Medium
 Low: exposure = Low

Over	Mean	Linearized Std. Err.	DEFF	DEFT

Health care				
High	.7088953	.0375075	.427213	.653605
Medium	.5209786	.0610583	.859823	.927252
Low	.4692147	.04842	.628665	.792872

Food				
High	.7771811	.0254541	.234466	.48421
Medium	.6181811	.0716318	1.25122	1.11856
Low	.5360749	.0823701	1.82191	1.34976

Livelihoods				
High	.6981144	.0418223	.520098	.721168
Medium	.6384605	.0623951	.970746	.98525
Low	.6431866	.0763737	1.69735	1.3028

The sample design was efficient for the combinations where the DEFF is smaller than one. This is the case by a large margin for the over-sampled high-exposure districts. The extra allocations there should have been smaller, with the savings given to low-exposure districts while ensuring that each PSU had more than one interviewed KI. The imbalance is likely caused by the fact that the two strata with low EVD exposure contain no fewer than 71 of the 168 chiefdoms / urban wards in total. This large number reduced the effect of the finite population correction, i.e. allowed standard errors to be larger.

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