

## SUMMARY

- A cluster of three confirmed cases of Ebola virus disease (EVD) were reported from Liberia in the week to 22 November. The first-reported case was a 15-year-old boy who tested positive for EVD after admission to a health facility in the Greater Monrovia area on 19 November. He was then transferred to an Ebola treatment centre along with the 5 other members of his family. Two other members of the family – the boy's 8-year old brother and his 40-year-old father – subsequently tested positive whilst in isolation. In addition to the family, 149 contacts have been identified so far, including 10 health workers who had close contact with the 15-year-old prior to isolation. Investigations to establish the origin of infection are at an early stage. Liberia was previously declared free of Ebola transmission on 3 September 2015.
- On 7 November WHO declared that Sierra Leone had achieved objective 1 of the phase 3 framework, and the country has now entered a 90-day period of enhanced surveillance scheduled to conclude on 5 February 2016. As of 22 November it had been 6 days since the last EVD patient in Guinea received a second consecutive EVD-negative blood test. The last case in Guinea was reported on 29 October 2015.
- The recent cases in Liberia underscore the importance of robust surveillance measures to ensure the rapid detection of any reintroduction or re-emergence of EVD in currently unaffected areas. In order to achieve objective 2 of the phase 3 response framework – to manage and respond to the consequences of residual Ebola risks – Guinea, Liberia, and Sierra Leone have each put surveillance systems in place to enable health workers and members of the public to report any case of illness or death that they suspect may be related to EVD to the relevant authorities. In the week to 22 November, 29 176 such alerts were reported in Guinea, with alerts reported from all of the country's 34 prefectures. Equivalent data are not currently available for Liberia. In Sierra Leone, 1420 alerts were reported from 14 of 14 districts in the week ending 15 November (the most recent week for which data are available).
- As part of each country's EVD surveillance strategy, blood samples or oral swabs should be collected from any live or deceased individuals who have or had clinical symptoms compatible with EVD. In the week to 22 November, 9 operational laboratories in Guinea tested a total of 670 new and repeat samples from 16 of the country's 34 prefectures. 85% of all samples tested in Guinea were swabs collected from dead bodies. By contrast, 82% of the 930 new and repeat samples tested in Liberia over the same period were blood samples collected from live patients. In addition, all 15 counties in Liberia submitted samples for testing by the country's 4 operational laboratories. 1240 new samples were collected from all 14 districts in Sierra Leone and tested by 8 operational laboratories. 92% of samples in Sierra Leone were swabs collected from dead bodies.
- 793 deaths in the community were reported from Guinea in the week to 22 November through the country's alerts system. This represents approximately 35% of the 2248 community deaths expected based on estimates of the population and a crude mortality rate of 11 deaths per 1000 people per year. Equivalent data are not yet available for Liberia. In Sierra Leone, 1282 reports of community deaths were received through the alert system during the week ending 15 November (the most recent week for which data are available), representing approximately 62% of the 2075 deaths expected each week based on estimates of the population and a crude mortality rate of 17 deaths per 1000 people per year.

Figure 1: Confirmed, probable, and suspected EVD cases worldwide (data up to 22 November 2015)

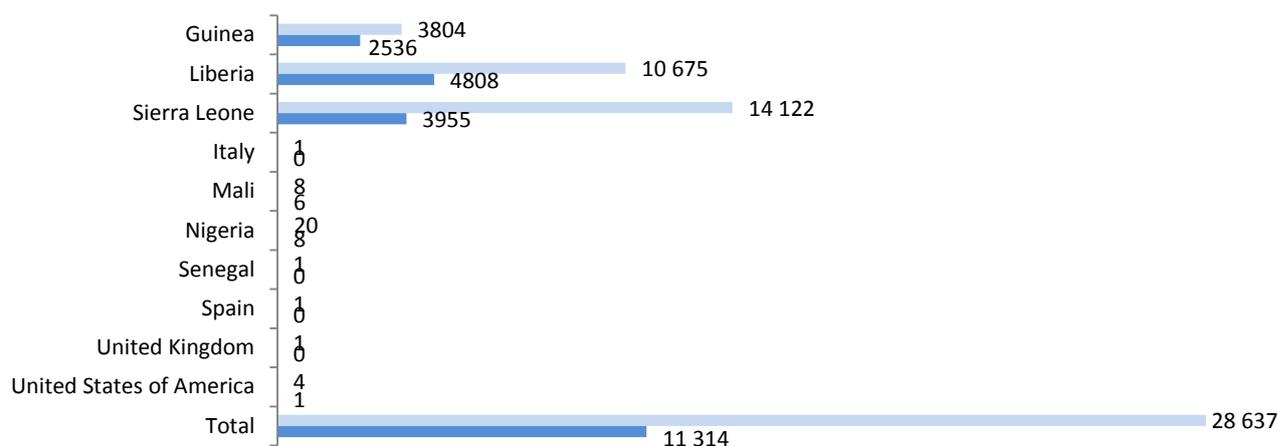


Table 1: Confirmed, probable, and suspected cases in Guinea, Liberia, and Sierra Leone

Country	Case definition	Cumulative cases	Cases in past 21 days	Cumulative deaths
Guinea	Confirmed	3351	0	2083
	Probable	453	*	453
	Suspected	0	*	‡
	<b>Total</b>	<b>3804</b>	<b>0</b>	<b>2536</b>
Liberia**	Confirmed	3151	-	‡
	Probable	1879	-	‡
	Suspected	5636	-	‡
	<b>Total</b>	<b>10 666</b>	-	<b>4806</b>
	Confirmed	9	3	2
	Probable	*	*	‡
	Suspected	‡	*	‡
	<b>Total</b>	<b>9</b>	<b>3</b>	<b>2</b>
Sierra Leone <sup>†</sup>	Confirmed	8704	0	3589
	Probable	287	*	208
	Suspected	5131	*	158
	<b>Total</b>	<b>14 122</b>	<b>0</b>	<b>3955</b>
<b>Total</b>	Confirmed	15 215	3	‡
	Probable	2619	*	‡
	Suspected	10 767	*	‡
	<b>Total</b>	<b>28 601</b>	<b>3</b>	<b>11 299</b>

Data are based on official information reported by ministries of health. These numbers are subject to change due to ongoing reclassification, retrospective investigation and availability of laboratory results. \*Not reported due to the high proportion of probable and suspected cases that are reclassified. ‡Data not available. \*\*Cases reported before 9 May 2015 are shaded blue. Due to ongoing surveillance and retrospective validation of cases and deaths, these totals may be subject to revision. †Sierra Leone was declared free of Ebola virus transmission in the human population on 7 November 2015, and has now entered a 90-day period of heightened surveillance.

### PHASE 3 RESPONSE FRAMEWORK

- 28 601 confirmed, probable, and suspected cases have been reported in Guinea, Liberia, and Sierra Leone, with 11 299 deaths (table 1; figure 2) since the onset of the Ebola outbreak. The majority of these cases and deaths were reported between August and December 2014, after which case incidence began to decline as a result of the rapid scale-up of treatment, isolation, and safe burial capacity in the three countries. This rapid scale-up operation was known as phase 1 of the response, and was built on in the first half of 2015 during a period of continuous refinement to surveillance, contact tracing, and community engagement interventions. This period, termed phase 2, succeeded in driving case incidence to 5 cases or fewer per week by the end of July. This marked fall in case incidence signalled a transition to a distinct third phase of the epidemic, characterised by limited transmission across small geographical areas, combined with a low probability of high consequence incidents of re-emergence of EVD from reservoirs of viral persistence. In order to effectively interrupt remaining transmission chains and manage the residual risks posed by viral persistence, WHO, as lead agency within the Interagency Collaboration on Ebola and in coordination with national and international partners, designed the phase 3 Ebola response framework. The phase 3 response framework builds on the foundations of phase 1 and phase 2 to incorporate new developments in Ebola control, from vaccines and rapid-response teams to counselling and welfare services for survivors. The indicators below detail progress made towards attaining the two primary objectives of the phase 3 framework.

### OBJECTIVE 1: RAPIDLY INTERRUPT ALL REMAINING CHAINS OF EBOLA TRANSMISSION

- As of 7 November objective 1 of the phase 3 response framework was achieved in Sierra Leone.
- As of 22 November it had been 6 days since the last EVD patient in Guinea received a second consecutive EVD-negative blood test. High priority performance indicators for objective 1 of the phase 3 response framework in Guinea are shown in table 4.
- As of 14 November all contacts in Guinea had completed their 21-day follow-up period. The most recent case from Guinea was reported on 29 October. The last case is a child who was born in an Ebola treatment centre (ETC) in Conakry, and who was delivered by medical staff wearing full personal protective equipment (PPE). As such, no contacts are associated with this case. A second consecutive blood sample from the child tested negative for Ebola virus on 16 November.
- The *Ebola ça suffit!* ring vaccination trial is continuing in Guinea. All rings comprised of contacts and contacts of contacts associated with confirmed cases now receive immediate vaccination with the rVSV-ZEBOV Ebola vaccine. Previously, rings were randomly allocated to receive either immediate vaccination or vaccination 21 days after the confirmation of a case. On 1 September, the eligibility criteria for the trial were amended to allow the vaccination of children aged 6 years and above.
- Locations of the 7 operational ETCs in Guinea are shown in figure 6.

**Table 2: Cases and contacts by prefecture/county over the past 3 weeks**

Country	Prefecture/ County	Week		16	17	18	19	20	21	22	Week 47	Contacts under follow up*
		45	46	Nov	Nov	Nov	Nov	Nov	Nov	Nov		
Guinea	Forecariah	0	0	0	0	0	0	0	0	0	0	0
Subtotal		0	0	0	0	0	0	0	0	0	0	0
Liberia	Montserrado	0	0	0	0	0	1	2	0	0	3	149
Subtotal		0	0	0	0	0	1	2	0	0	3	149
Total		0	0	0	0	0	1	2	0	0	3	149

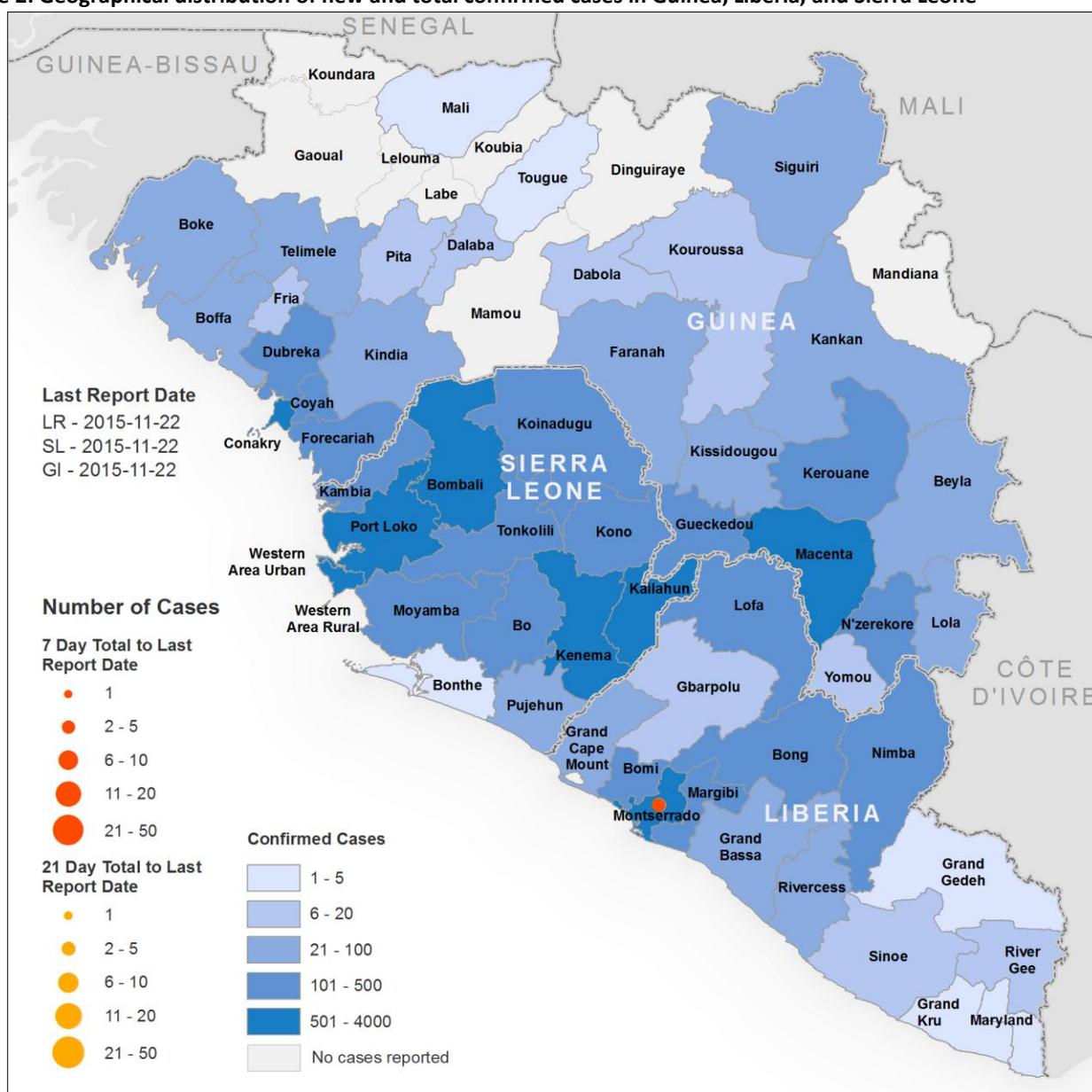
Data are based on official information reported by ministries of health. These numbers are subject to change due to ongoing reclassification, retrospective investigation, and availability of laboratory results. \*Data as of 22 November 2015.

**Table 3: Location and epidemiological status of confirmed cases reported in the 3 weeks to 22 November 2015**

Country	Prefecture/ County	Sub-prefecture/ District	Week 45	Week 46	Cases	Week 47 (16 - 22 November 2015)			Date of last confirmed case
			(2 - 8 Nov 2015)	(9 - 15 Nov 2015)		On contact list	Epi-link*	Unknown source of infection <sup>‡</sup>	
Guinea	Forecariah	Kaliah	0	0					29/10/2015
Subtotal			0	0	0	0	0	0	
Liberia	Montserrado	Greater Monrovia	0	0	3	2		1	20/11/2015
Subtotal			0	0	3	2	0	1	0
Total			0	0	3	2	0	1	0

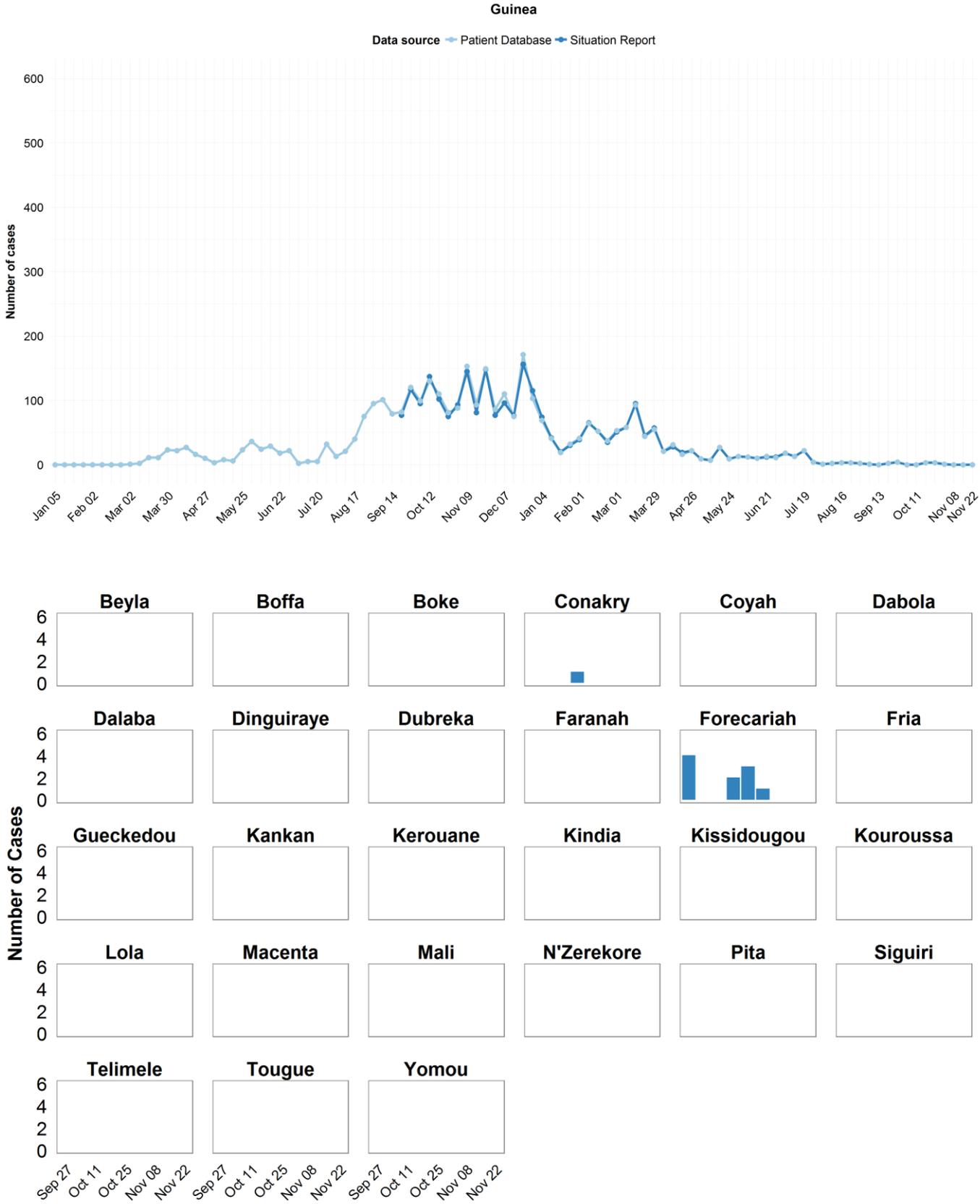
\*Epi-link refers to cases who were not registered as contacts of a previous case (possibly because they refused to cooperate or were untraceable), but who, after further epidemiological investigation, were found to have had contact with a previous case, OR refers to cases who are resident or are from a community with active transmission in the past 21 days. <sup>‡</sup>Includes cases under epidemiological investigation. <sup>§</sup>A case that is identified as a community death can also be registered as a contact, or subsequently be found to have had contact with a known case (epi-link), or have no known link to a previous case.

**Figure 2: Geographical distribution of new and total confirmed cases in Guinea, Liberia, and Sierra Leone**

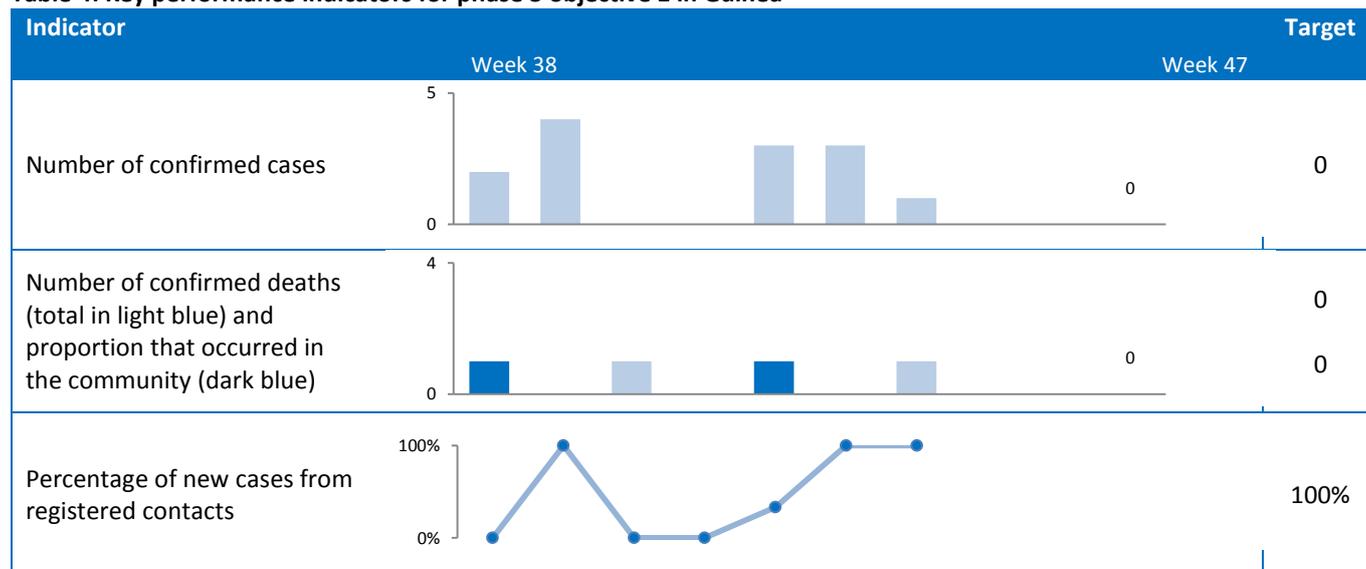


The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Figure 3: Confirmed weekly Ebola virus disease cases reported nationally and by prefecture from Guinea



**Table 4: Key performance indicators for phase 3 objective 1 in Guinea**



For definitions of key performance indicators see Annex 1. Week 38 commenced 14 September. Week 47 ended 22 November.

**OBJECTIVE 2: MANAGE AND RESPOND TO THE CONSEQUENCES OF RESIDUAL EBOLA RISKS**

- Key performance indicators for the surveillance component of objective 2 of the phase 3 response framework are shown for Guinea, Liberia, and Sierra Leone (table 5). Data for phase 3 indicators pertaining to service provision for survivors and rapid response capacity (annex 1 and annex 2) are being collected and will be included in subsequent situation reports.
- The recent cases in Liberia underscore the importance of robust surveillance measures to ensure the rapid detection of any reintroduction or re-emergence of EVD in currently unaffected areas. In order to achieve objective 2 of the phase 3 response framework – to manage and respond to the consequences of residual Ebola risks – Guinea, Liberia, and Sierra Leone have each put surveillance systems in place to enable health workers and members of the public to report any case of illness or death that they suspect may be related to EVD to the relevant authorities. In the week to 22 November, 29 176 such alerts were reported in Guinea, with alerts reported from all of the country’s 34 prefectures. Equivalent data are not currently available for Liberia. In Sierra Leone, 1420 alerts were reported from 14 of 14 districts in the week ending 15 November (the most recent week for which data are available; table 5).
- As part of each country’s EVD surveillance strategy, blood samples or oral swabs should be collected from any live or deceased individuals who have or had clinical symptoms compatible with EVD. In the week to 22 November, 9 operational laboratories in Guinea tested a total of 670 new and repeat samples from 16 of the country’s 34 prefectures (table 5). The trend in the number of samples tested each week has remained flat for the past two months. 85% of all samples tested in Guinea were swabs collected from dead bodies. By contrast, 82% of the 930 new and repeat samples tested in Liberia over the same period were blood samples collected from live patients. This is the second consecutive weekly increase in samples tested for EVD. In addition, all 15 counties in Liberia submitted samples for testing by the country’s 4 operational laboratories. 1350 new samples were collected from all 14 districts in Sierra Leone and tested by 8 operational laboratories. This is an increase compared with the previous week, and halts two consecutive weeks of declines in samples tested, but is a substantially lower weekly volume of testing than was reported during August and September. 92% of samples in Sierra Leone were swabs collected from dead bodies (table 5).
- 793 deaths in the community were reported from Guinea in the week to 22 November through the country’s alerts system. This represents approximately 35% of the 2248 community deaths expected based on estimates of the population and a crude mortality rate of 11 deaths per 1000 people per year. Equivalent data are not yet available for Liberia. In Sierra Leone, 1282 reports of community deaths were received through the alert system during the week ending 15 November (the most recent week for which data are available), representing approximately 62% of the 2075 deaths expected each week based on estimates of the population and a crude mortality rate of 17 deaths per 1000 people per year.

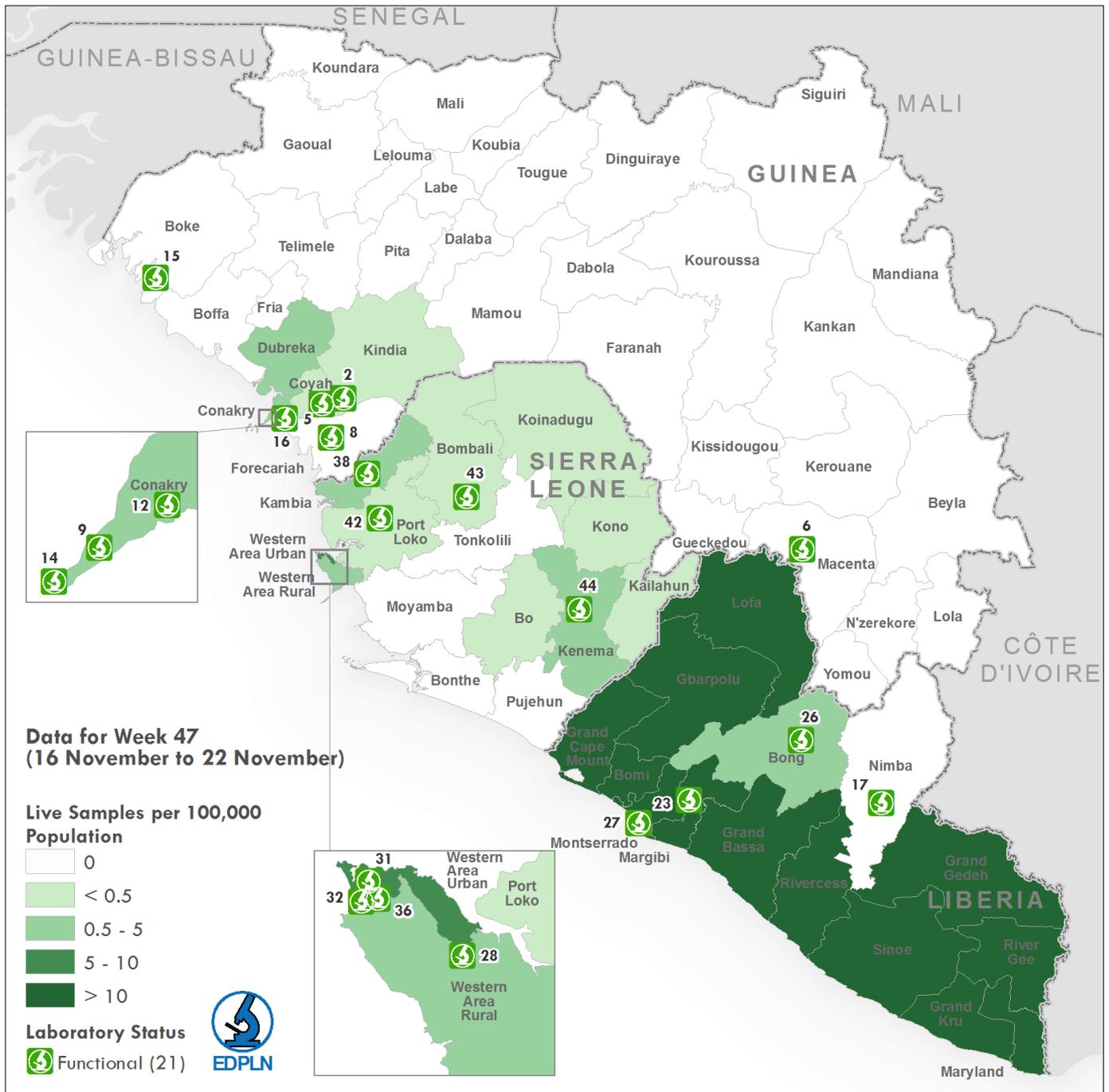
Table 5: Key surveillance indicators for phase 3 objective 2 in Guinea, Liberia, and Sierra Leone

Indicator	Week 38	Week 47	Target
<b>Guinea</b>			
Number of alerts			N/A
Number of new and repeat samples tested (those from live patients in light blue and from dead bodies in dark blue)			N/A
<b>Liberia</b>			
Number of alerts	Data not yet compiled		
Number of new and repeat samples tested (those from live patients in light blue and from dead bodies in dark blue)			N/A
<b>Sierra Leone</b>			
Number of alerts			N/A
Number of new and repeat samples tested (those from live patients in light blue and from dead bodies in dark blue)			N/A

For definitions of indicators see Annex 1. Week 38 commenced 14 September. Week 47 ended 22 November.

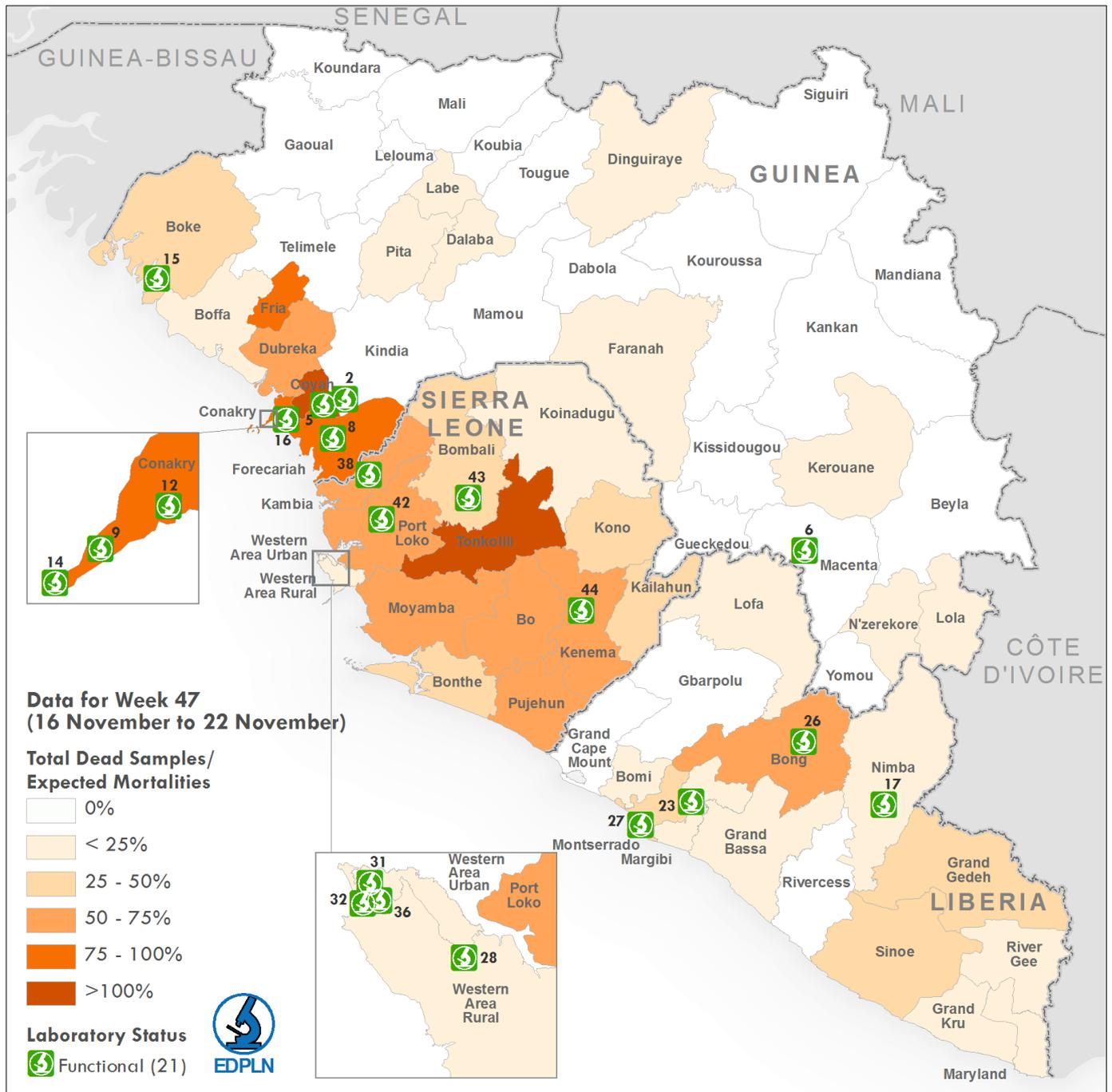
- Figures 4 and 5 show the locations of operational laboratories in each of the 3 countries, along with the geographic distribution of blood samples taken from live patients with symptoms compatible with EVD, and of oral swabs taken collected from dead bodies. In both Guinea and Sierra Leone the majority of samples tested in the week to 22 November were oral swabs collected from dead bodies (85% and 92%, respectively). By contrast, 82% of samples tested in Liberia were blood samples collected from live patients.
- Capacity to isolate and treat patients with EVD remains central to the attainment of phase 3 objective 1. Phase 3 objective 2 depends on the maintenance of core standby treatment and isolation capacity. The locations of the 18 operational Ebola treatment centres (ETCs) in Guinea, Liberia, and Sierra Leone are shown in figure 6.
- The deployment of rapid-response teams to quickly limit the transmission of Ebola virus following the detection of a new chain of transmission was and continues to be a cornerstone of the national response strategy in Sierra Leone. Between 14 and 28 November a series of simulation exercises were planned to validate national and international rapid-response capacities in the event of detection of a new case of EVD.

Figure 4: Location of laboratories and geographical distribution of samples from live patients in Guinea, Liberia, and Sierra Leone in the week to 22 November 2015



The analysis includes initial and repeat samples but excludes samples with unknown and incorrect testing weeks and samples with unknown or incorrect location information. EDPLN=Emerging and Dangerous Pathogens Laboratory Network. The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement. 2=CREMS Lab – Kindia; 5=EU Mobile Lab – Coyah; 6=IP France – Macenta; 8=K-Plan Mobile Lab – Forecariah; 9=IP Dakar – Conakry; 12=REDC Lab – Conakry; 14=K-Plan Mobile Lab – Conakry; 15=Boke Mobile Lab; 17=Tappita Lab – Nimba; 23=LIBR National Reference Lab/USAMRIID; 26=OIC-NMRC Mobile Lab Bong; 27=MOH Lab – Montserrado; 28=China-CDC Lab – Jui; 31=CPHRL/DTRA – Western Area Urban; 32=EMDF/NICD – Western Area Urban; 36=MOH/Emergency – PCMH/Freetown; 38=Nigeria Mobile Lab – Kambia; 42=PH England Mobile Lab – Port Loko; 32=PH England Mobile Lab – Makeni; 44=PH England Mobile Lab – Kenema.

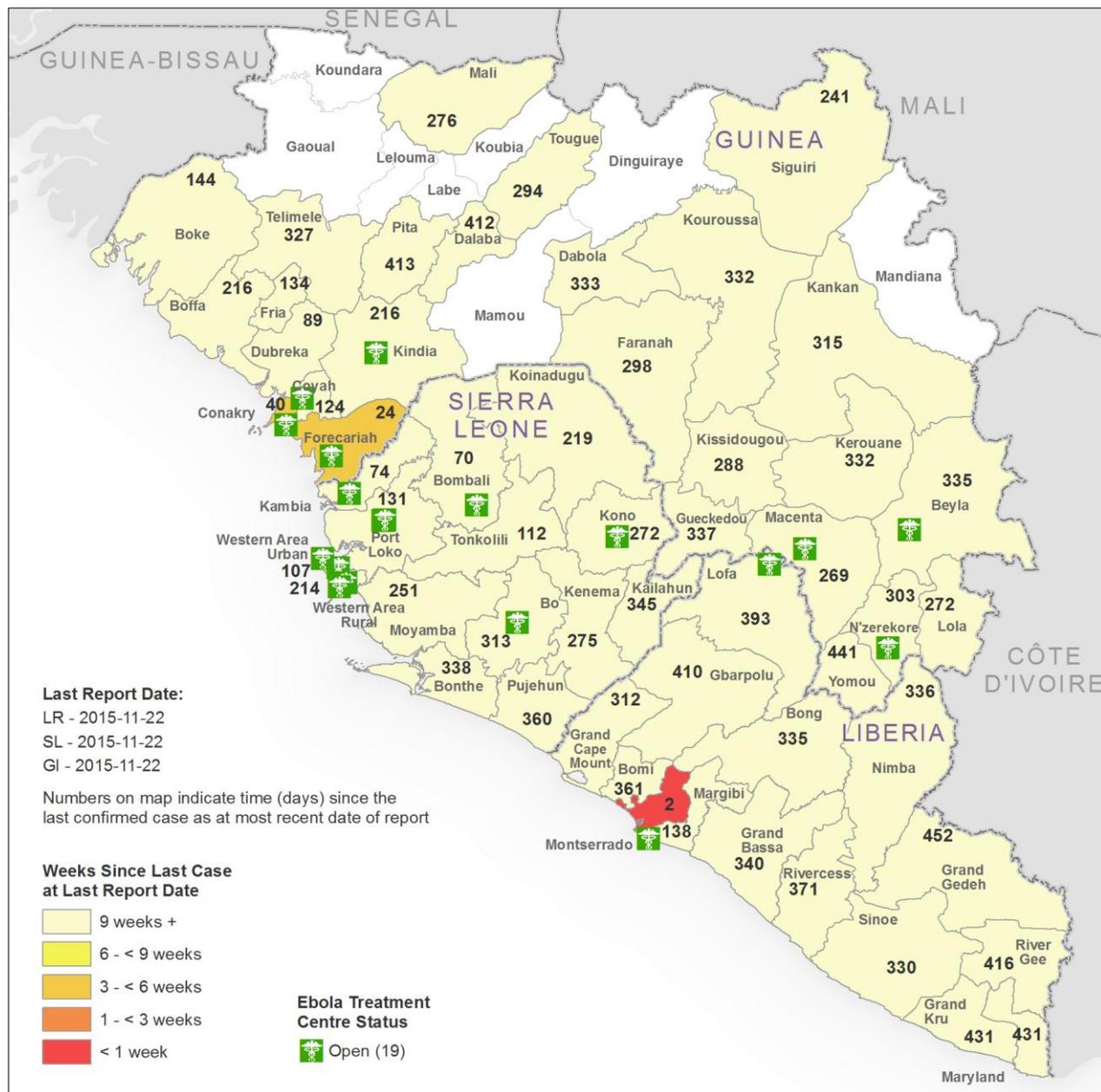
Figure 5: Location of laboratories and geographical distribution of samples from dead bodies in Guinea, Liberia, and Sierra Leone in the week to 22 November 2015



The analysis includes initial and repeat samples but excludes samples with unknown and incorrect testing weeks and samples with unknown or incorrect location information. EDPLN=Emerging and Dangerous Pathogens Laboratory Network. The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement. 2=CREMS Lab – Kindia; 5=EU Mobile Lab – Coyah; 6=IP France – Macenta; 8=K-Plan Mobile Lab – Forecariah; 9=IP Dakar – Conakry; 12=REDC Lab – Conakry; 14=K-Plan Mobile Lab – Conakry; 15=Boke Mobile Lab; 17=Tappita Lab – Nimba; 23=LIBR National Reference Lab/USAMRIID; 26=OIC-NMRC Mobile Lab Bong; 27=MOH Lab – Montserrado; 28=China-CDC Lab – Jui; 31=CPHRL/DTRA – Western Area Urban; 32=EMDF/NICD – Western Area Urban; 36=MOH/Emergency – PCMH/Freetown; 38=Nigeria Mobile Lab – Kambia; 42=PH England Mobile Lab – Port Loko; 32=PH England Mobile Lab – Makeni; 44=PH England Mobile Lab – Kenema.

- The unprecedented scale of the EVD outbreak in Guinea, Liberia, and Sierra Leone means there are estimated to be several thousands of survivors throughout the three countries. Survivors have contributed enormously to many aspects of response, but they face many challenges. In addition to the stigmatization they frequently experience when they return to their own communities, survivors also face myriad health issues, from joint pains and headaches to problems with vision and poor mental health. Although there is a vibrant self-organised survivor-support community, survivors require specialized medical support as well as access to routine health care services such as ante-natal care and vaccinations and screening. With guidance from WHO and other partners, ministries of health in the three most-affected countries have plans in place to deliver a comprehensive package of services to ensure the welfare of survivors and mitigate risks posed by viral persistence.

Figure 6: Location of Ebola treatment centres and time since last confirmed case in Guinea, Liberia, and Sierra Leone



The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement. Ebola treatment centre data as of 30 October, 5 November, and 5 October for Guinea, Liberia, and Sierra Leone, respectively.

## PREVIOUSLY AFFECTED COUNTRIES

- Seven countries (Italy, Mali, Nigeria, Senegal, Spain, the United Kingdom, and the United States of America) have previously reported a case or cases imported from a country with widespread and intense transmission.

## PREPAREDNESS OF COUNTRIES TO RAPIDLY DETECT AND RESPOND TO AN EBOLA EXPOSURE

- The introduction of an EVD case into unaffected countries remains a risk as long as cases exist in any country. With adequate preparation, however, such an introduction can be contained through a timely and effective response.
- WHO's preparedness activities aim to ensure all countries are ready to effectively and safely detect, investigate, and report potential EVD cases, and to mount an effective response. WHO provides this support through country support visits by preparedness-strengthening teams (PSTs) to help identify and prioritize gaps and needs, direct technical assistance, and provide technical guidance and tools.

### Priority countries in Africa

- The initial focus of support by WHO and partners is on highest priority countries – Côte d'Ivoire, Guinea-Bissau, Mali, and Senegal—followed by high priority countries—Benin, Burkina Faso, Cameroon, Central African Republic, Democratic Republic of the Congo, Ethiopia, Gambia, Ghana, Mauritania, Niger, Nigeria, South Sudan, and Togo. The criteria used to prioritize countries include the geographical proximity to affected countries, the magnitude of trade and migration links, and the relative strength of their health systems.
- Since October 2014, technical support has been provided Benin, Burkina Faso, Cameroon, Central African Republic, Côte d'Ivoire, Ethiopia, Gambia, Ghana, Guinea-Bissau, Mali, Mauritania, Niger, Senegal, South Sudan, and Togo through team missions and targeted technical support. Technical working group meetings, field visits, high-level table-top exercises, and field simulations have helped to identify key areas for improvement. Each country has a tailored plan to strengthen operational readiness.
- From October 2014 to November 2015, WHO has undertaken over 290 field deployments to priority countries to assist with the implementation of national plans.
- WHO provides personal protective equipment (PPE) modules containing minimum stocks to cover staff protection and other equipment needs to support 10 patient-beds for 10 days for all staff with essential functions. PPE modules have been delivered or are in the process of being delivered to all countries on the African continent. In addition, all countries have received a PPE training module.
- Contingency stockpiles of PPE are in place in the United Nations Humanitarian Response Depots (UNHRD) in Accra and Dubai, and are available to any country in the event that they experience a shortage.

### Ongoing follow-up support to priority countries

- Following initial PST assessment missions to the priority countries in 2014, a second phase of preparedness-strengthening activities have provided support on a country-by-country basis. Planned activities are highlighted below.
- In Guinea Bissau, a meeting was held on 18 November in Catio, Tombali, with partners and regional health authorities to finalise the regional contingency plan for responding to epidemic prone diseases such as measles, meningitis, cholera, and EVD among others.
- From 23 November 2015, WHO in collaboration with the Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET) is implementing a surveillance-strengthening project in six priority countries: Benin, Gambia, Guinea-Bissau, Mauritania, Niger, Tanzania, and Togo.
- In Senegal, a 10-day training workshop on stock management, emergency preparedness, and response for 21 national logisticians is in progress until 25 November.
- In Gambia, an assessment of disaster risk management capacity is ongoing from 23 to 27 November. An evaluation of the rapid response training conducted in August 2015 is also being undertaken.

## EVD preparedness officers

- Dedicated EVD preparedness officers have been deployed to support the implementation of country preparedness plans, coordinate partners, provide a focal point for inter-agency collaboration, offer specific technical support in their respective areas of expertise, and develop capacity of national WHO staff. Preparedness officers are currently deployed to Benin, Burkina Faso, Cameroon, Central African Republic, Côte d'Ivoire, Ethiopia, Gambia, Guinea-Bissau, Mauritania, Niger, Senegal, and Togo.

## Training, exercises, and simulations

- Priority countries that have achieved a minimum of 50% implementation of preparedness checklist activities are encouraged to undertake a series of drills on elements of an EVD response and a functional exercise to test the coordination of the Ebola operations centre.
- With support from WHO, national and regional rapid-response team training is taking place in Mauritania from 22 to 27 November.
- In Togo, rapid response training for national and regional teams is scheduled to begin on 30 November to 5 December.
- In Sierra Leone, WHO is currently providing technical assistance in the development and facilitation of an exercise work plan for a series of simulation exercises and trainings to test national and international rapid response capacities in case of a re-emergence of EVD. A simulation exercise on incident management is scheduled from 23 to 30 November, and will include inter-agency coordination.

## Surveillance and preparedness indicators

- Indicators based on surveillance data, case management capacity, laboratory testing, and equipment stocks continue to be collected on a weekly basis from the four countries that share a border with affected countries: Côte d'Ivoire, Guinea-Bissau, Mali, and Senegal.
- An interactive preparedness dashboard based on the WHO EVD checklist<sup>1</sup> is available online.

---

<sup>1</sup> See: <http://who.int/csr/resources/publications/ebola/ebola-preparedness-checklist/en/>

## ANNEX 1: EBOLA RESPONSE PHASE 3 KEY PERFORMANCE INDICATORS

Indicator	Target	Numerator	Denominator
<b>OBJECTIVE 1: Interrupt all chains of transmission</b>			
Number of confirmed cases	0	# of new confirmed cases	N/A
Number of confirmed deaths and proportion that occurred in the community	0	# of total new confirmed deaths # of new community deaths with positive EVD swab results	N/A
Percentage of new cases from registered contacts	100%	# of new confirmed cases registered as a contact	# of new confirmed cases
<b>OBJECTIVE 2: Prevent/Survivors</b>			
Number and percentage of registered survivors compared to estimated number of survivors	100%	# of registered survivors	# of survivors estimated
Percentage of registered survivors accessing basic service package	100%	# of registered survivors accessing basic service package	# of registered survivors
Number of male survivors' semen tested and the percentage positive	N/A	# of male survivors' semen tested positive for EVD	# of male survivors' semen tested for EVD
<b>OBJECTIVE 2: Detect/Surveillance</b>			
Number of alerts	N/A	# of alerts	N/A
Number of samples tested (samples from live and dead suspects)	N/A	# of samples tested for EVD (samples from live and dead suspects)	N/A
<b>OBJECTIVE 2: Respond/Rapid response teams</b>			
Number of functional national and/or sub-national rapid response teams	3 per country	# of national rapid response teams appropriately staffed, equipped, and budgeted	N/A
Time between confirmation of an event and deployment of rapid response team		# of days between confirmation of an event and deployment of the team	N/A

## ANNEX 2: ALL EBOLA RESPONSE PHASE 3 KEY PERFORMANCE INDICATORS

Indicator	Numerator	Denominator
<b>OBJECTIVE 1: Interrupt all chains of transmission</b>		
Number of confirmed cases	# of new confirmed cases	N/A
Number of confirmed deaths and proportion that occurred in the community	# of total new confirmed deaths and # of new community deaths with positive EVD swab results	N/A
Percentage of new cases from registered contacts	# of new confirmed cases registered as a contact	# of new confirmed cases
Number of newly infected health workers	# of newly infected health workers	N/A
Time in days between symptom onset and case isolation	Time between symptom onset and hospitalization of confirmed, probable, or suspected cases (geometric mean # of days)	N/A
Case fatality percentage	# of deaths among hospitalized confirmed cases	# of hospitalized confirmed cases with a definitive survival outcome recorded
<b>OBJECTIVE 2: Prevent/Survivors</b>		
Essentials services for survivors agreed	Essentials services for survivors agreed (yes/no)	N/A
Agency-specific responsibilities for survivors agreed under overall ECM/RC coordination	Agency-specific responsibilities for survivors agreed (yes/no)	N/A
Number and percentage of registered survivors compared to estimated number of survivors	# of registered survivors	# of survivors estimated
Percentage of registered survivors accessing basic service package	# of registered survivors accessing basic service package	# of registered survivors
Number of laboratories with capacity for testing semen for EVD	# of laboratories with capacity for testing semen for EVD	N/A
Logistics capacity and procedures in place to ship samples to appropriate laboratory	Logistics in place to ship samples to appropriate laboratory (yes/no)	# of registered survivors
Number of male survivors' semen tested and the percentage positive	# of male survivors' semen tested positive for EVD	# of male survivors' semen tested for EVD
<b>OBJECTIVE 2: Detect/Surveillance</b>		
Number of alerts	# of alerts	N/A
Percentage of prefectures/ counties/ districts reporting alerts	# of prefectures/ counties/ districts reporting alerts	Total # of prefectures/ counties/ districts
Percentage of live alerts tested for EVD	# of live alerts tested for EVD	# of reported live patients meeting criteria for EVD testing
Percentage of expected community deaths that were reported	# of reported community deaths ( <i>Sierra Leone: # of reported burial alerts</i> )	# of expected community deaths (= crude mortality * population)
Percentage of reported community deaths that were swabbed and those which were EVD positive	# of community deaths that were swabbed for EVD ( <i>Liberia and Sierra Leone: # of EVD swabs</i> ) # of new community deaths with positive EVD swab results	# of reported community deaths ( <i>Sierra Leone: # of reported burial alerts</i> )
Number of samples tested (samples from live and dead suspects)	# of samples tested for EVD (samples from live and dead suspects)	N/A
Percentage of prefectures/ counties/ districts providing samples for EVD testing	# of prefectures/ counties/ districts providing samples for EVD testing	Total # of prefectures/ counties/ districts
Number of unsafe burials	# of burials that were reported to be unsafe	N/A
Number of prefectures/ counties/ districts with at least one security incident or other form of refusal to cooperate	# of prefectures/ counties/ districts with at least one security incident or other form of refusal to cooperate in the past week	N/A
<b>OBJECTIVE 2: Respond/Rapid response teams</b>		
Number of functional national and/or sub-national rapid response teams	# of national and/or sub-national rapid response teams appropriately staffed, equipped, and budgeted	N/A
Time between confirmation of an event and deployment of rapid response team	# of days between confirmation of an event and deployment of the team	N/A
Number of generations of cases and secondary cases after identification of a new index case	# of generations of cases and secondary cases after identification of a new index case	N/A
Number and percentage of prefectures/ counties/ districts with isolation capacity or referral plan of suspect cases	# of prefectures/ counties/ districts with isolation capacity or referral plan of suspect cases	Total # of prefectures/ counties/ districts
Number of national simulations exercises conducted	# of national simulations exercises conducted	N/A
Number of functional international rapid response support teams on stand-by	# of international rapid response support teams on stand-by which are appropriately staffed trained, equipped, and budgeted	N/A
Time between request for international response and deployment of international rapid response support team(s)	# of days between request for international response and deployment of international rapid response support team(s)	N/A
Number of international simulation exercises conducted	# of international simulation exercises conducted	N/A