



## Ebola Epidemiological Update No. 61: 4 December 2015

### Ebola virus disease outbreak in West Africa (December 2013 to present)

#### Overview:

- as of 29 November 2015, a total of 28,637 clinically compatible cases of Ebola virus disease (EVD) (15,249 confirmed) have been reported associated with the West African outbreak, 11,315 of which have died
- a total of three confirmed cases were reported in November, all in Liberia. These are the first cases to be reported in the country since it was declared EVD transmission free for the second time on 3 September 2015. Investigations are ongoing into the origin of infection
- there have been no new confirmed cases reported in Guinea for four consecutive weeks
- on 7 November, Sierra Leone was declared EVD transmission free following the elapse of 42 days since the last case had a second EVD negative blood test. The country remains within a 90-day period of enhanced surveillance

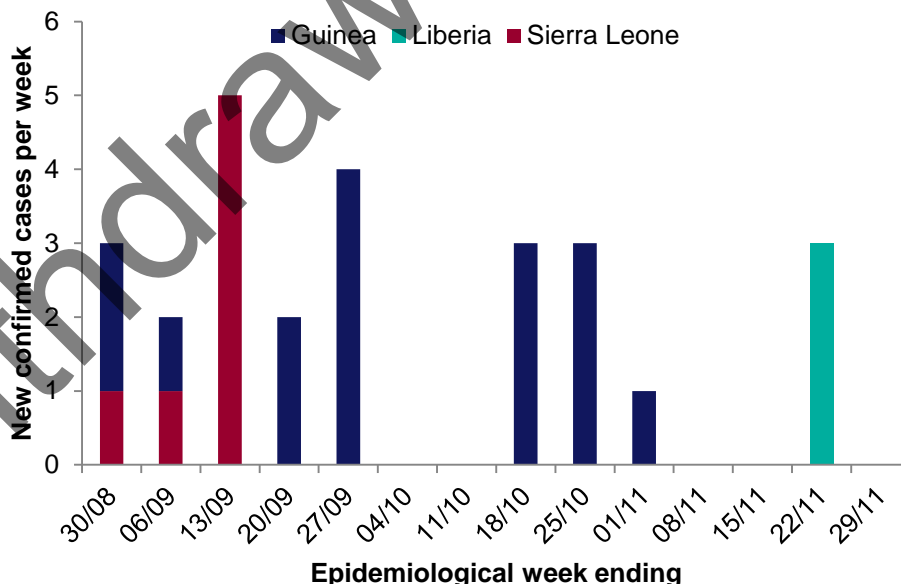
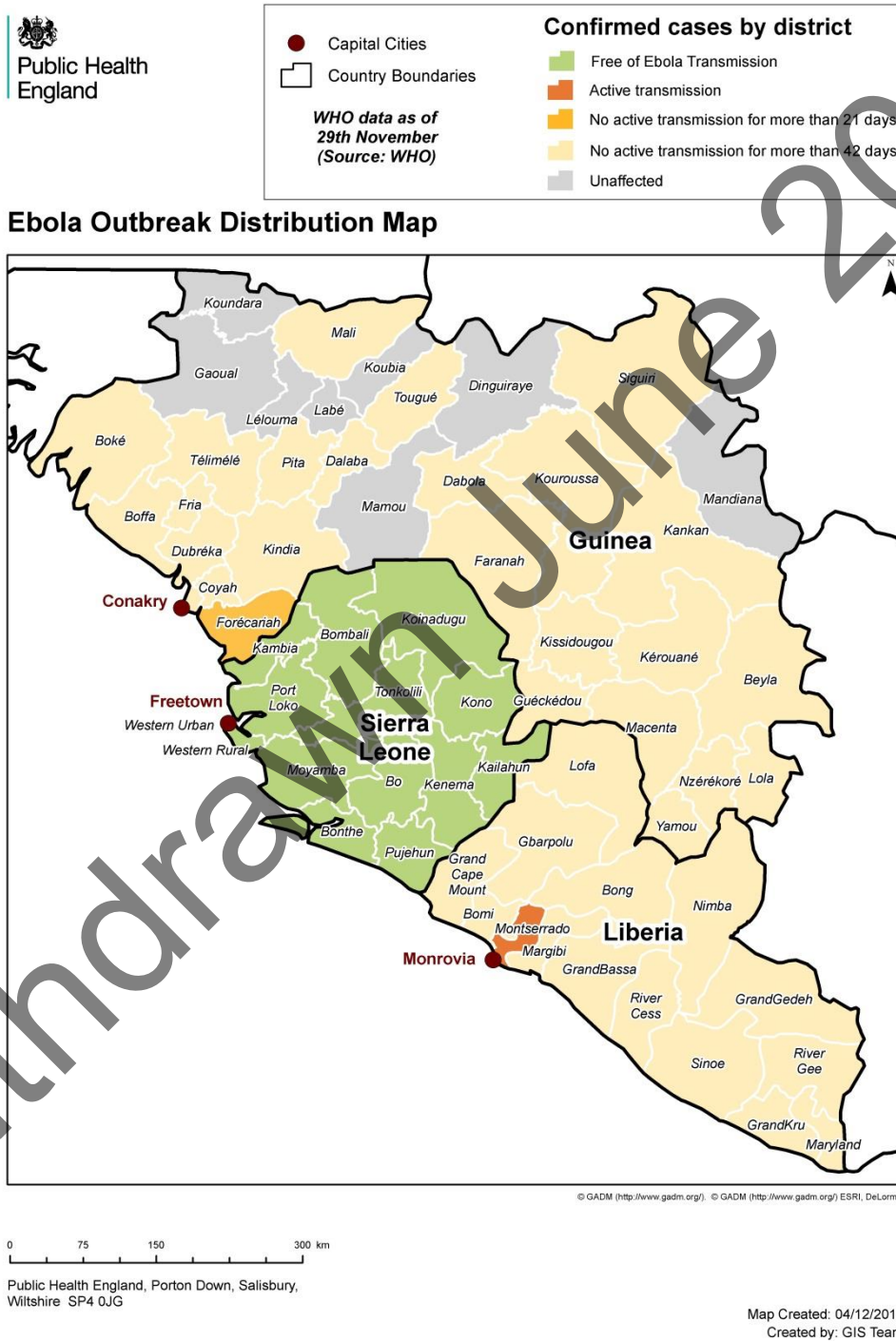


Figure 1. Number of new confirmed cases reported per week (30 August to 29 November 2015) in affected countries in West Africa

## Countries reporting or have previously reported transmission

To date, a total of ten countries have reported EVD cases associated with this outbreak (Guinea, Liberia, Sierra Leone, Mali, Nigeria, Senegal, Spain, the UK, the US and Italy). However, the vast majority of cases (28,601 CCC, 99.9%) have been reported from Guinea, Liberia and Sierra Leone (see Table 1).



**Figure 2. Ebola outbreak distribution in affected countries in West Africa, as of 29 November 2015. Online version [available here](#)**

## Liberia

A total of three confirmed cases were reported in West Africa in November, all in Liberia. These are the **first cases to be reported in the country** since it was declared EVD transmission free for the second time on 3 September 2015.

The first case in the Liberian cluster, a 15 year old boy from Paynesville, Monrovia, was reported to have confirmed EVD infection on 19 November after his admission to a health facility within the capital. His father and eight-year-old brother were subsequently confirmed as EVD-positive a day later whilst in quarantine. The 15 year old died on 23 November. **Following treatment, his father and brother were discharged from hospital on 3 December following two negative blood tests for EVD.**

Investigations are ongoing into the source of infection for this familial cluster. The mother of the first case tested negative for active disease but **had evidence (antibodies) of a recent EVD recovery.** Blood tests from her two-month-old child also showed evidence of antibodies, presumed to have been acquired from the mother and not as a result of a recent EVD infection. Over 165 contacts remain under follow up, 34 of which are considered high risk. To date, no further cases have been diagnosed outside this family cluster.

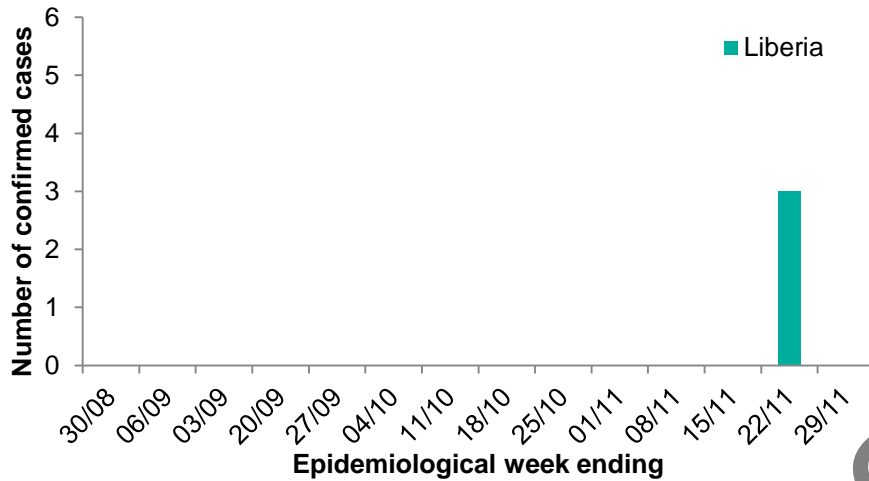
The Ebola ring vaccination trial that has been applied in Guinea and Sierra Leone was extended to Liberia following the above cluster. All contacts and contacts of contacts associated with the confirmed cases were offered (if eligible) the rVSV-ZEBOV Ebola vaccine.

## Guinea

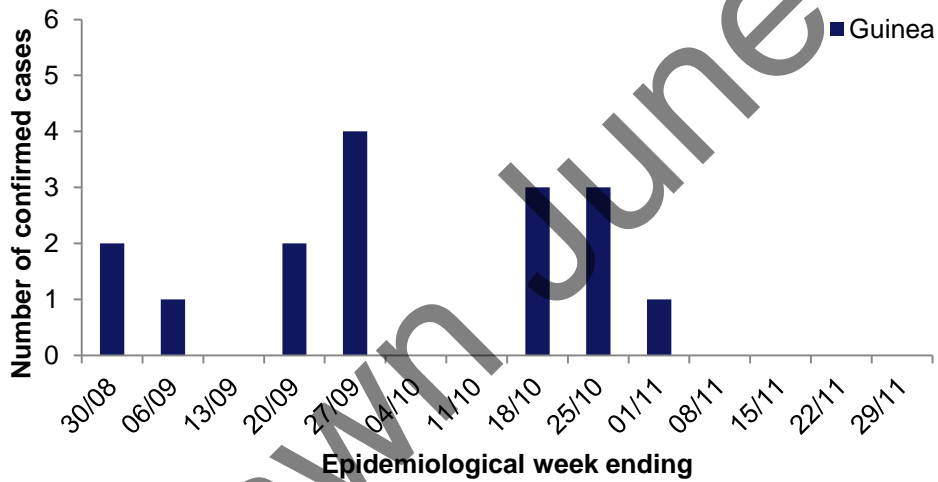
There have been no new confirmed cases reported in Guinea for four consecutive weeks. The country's last case, an infant born within an Ebola treatment unit to a confirmed EVD-positive fatal case, was discharged from hospital in Conakry on 28 November after blood samples tested negative for the second time on 16 November. As the child was delivered by medical staff wearing full personal protective equipment, there are no contacts associated with this case. All other contacts associated with recent cases completed their 21-day follow-up period on 14 November. Guinea is now within its 42-day countdown to being declared EVD-transmission free.

## Sierra Leone

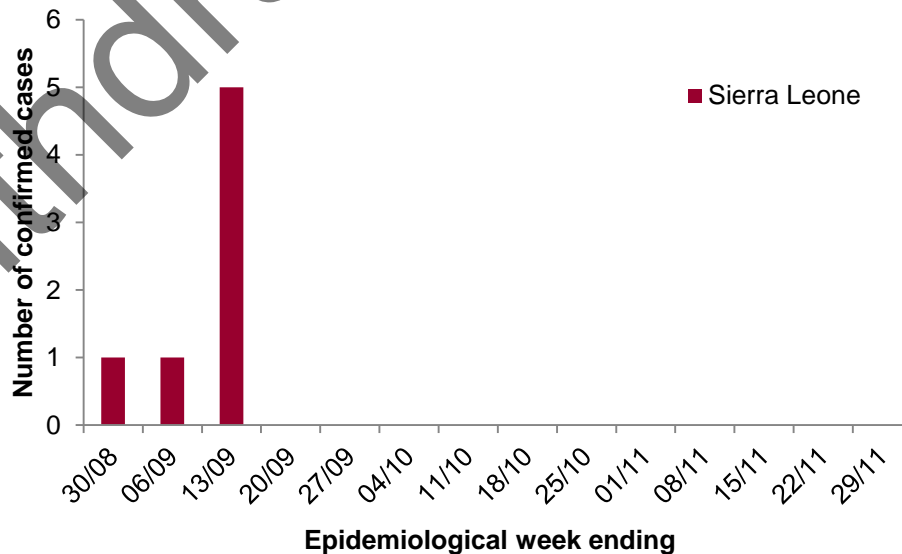
On 7 November, **Sierra Leone was declared EVD-transmission free** following the elapse of two EVD incubation periods (42 days) since the last case had a second negative blood test. The country then began a 90-day period of enhanced surveillance that will run until 5 February 2016.



**Figure 3. Number of new confirmed cases per epidemiological week in Liberia from 30 August 2015 to 29 November 2015 (14 week period)**



**Figure 4. Number of new confirmed cases per epidemiological week in Guinea from 30 August 2015 to 29 November 2015 (14 week period)**



**Figure 5. Number of new confirmed cases per epidemiological week in Sierra Leone from 30 August 2015 to 30 November 2015 (14 week period)**

**Table 1. Epidemiological information for countries reporting persistent transmission or under enhanced surveillance as of 29 November 2015**

Country	Case definition	Cumulative cases	Confirmed cases in past 21 days	Cumulative deaths <sup>‡</sup>	Latest case fatality rate (hospitalised patients)	HCW cases (deaths) <sup>‡</sup>
<b>Guinea</b>	Confirmed	3,351	<b>0</b>	2,083	^	^
	Probable	453		453	^	^
	Suspected	0		*	^	^
	<b>All</b>	<b>3,804</b>		<b>2,536</b>	<b>57%<sup>1</sup></b>	<b>196 (100)</b>
<b>Liberia<sup>∨</sup></b>	Confirmed	3,151	<b>-</b>	^	^	^
	Probable	1,879		^	^	^
	Suspected	5,636		^	^	^
	<b>All</b>	<b>10,666</b>		<b>4,806</b>	<b>49%<sup>2</sup></b>	<b>378 (192)<sup>4</sup></b>
	Confirmed	9	<b>3</b>	3	^	^
	Probable	0		0	^	^
	Suspected	^		^	^	^
	<b>All</b>	<b>9</b>		<b>3</b>	^	^
<b>Sierra Leone</b>	Confirmed	8,704	<b>0</b>	3,589	^	^
	Probable	287		208	^	^
	Suspected	5,131		158	^	^
	<b>All</b>	<b>14,122</b>		<b>3,955</b>	<b>44%<sup>3</sup></b>	<b>307 (221)<sup>5</sup></b>
<b>Total</b>		<b>28,601</b>	<b>3</b>	<b>11,300</b>	<b>Average 50%</b>	<b>881 (513)</b>

Data subject to change.

<sup>∨</sup> Liberia has recorded three separate EVD outbreaks. The first (hatched cells) was declared over on 9 May 2015 following 42 days without a case. Subsequently two localised outbreaks have been reported (data in plain cells): the first began on 29 June 2015 in Margibi County and was declared over on 3 September 2015 (six confirmed cases, two deaths), the second outbreak began on 19 November 2015 and continues with a total of three confirmed cases and one death reported to date.

<sup>‡</sup> Outcomes for many cases are unknown

<sup>^</sup> Data not available

<sup>\*</sup> Not reported due to the high proportion of probable and suspected cases that are reclassified. Latest available data

<sup>1</sup> August 2015

<sup>2</sup> December 2014

<sup>3</sup> May 2015

<sup>4</sup> Data up to 9 May 2015

<sup>5</sup> Data as of 17 February 2015

## UK situation update

A UK survivor of EVD re-hospitalised in early October due to late EVD-related complications **was discharged from the Royal Free Hospital in London on 11 November** after making a full recovery from EVD. This current situation does not alter the public health risk assessment for the UK (see below).

## UK public health risk assessment

**The risk of EVD being imported into the UK is considered to be very low.** As the epidemiological situation in West Africa continues to stabilise, the risk to the UK population continues to decrease. While the risk of further EVD cases being imported into the UK is currently considered to be very low, the risk of transmission occurring within the community in the UK is, and is expected to remain, negligible due to the range of robust measures that have been put in place. There is a diminishing likelihood that further cases will occur in the UK.

Withdrawn June 2018

## Selection of scientific publications in the last month:

Ajelli and colleagues, [The 2014 Ebola virus disease outbreak in Pujehun, Sierra Leone: epidemiology and impact of interventions](#), BMC medicine

Brainard and colleagues, [Risk factors for transmission of Ebola or Marburg virus disease: a systematic review and meta-analysis](#), International Journal of Epidemiology

Chancellor and colleagues, [Uveitis and systemic inflammatory markers in convalescent phase of Ebola virus disease](#), EID

Elston and colleagues, [Impact of the Ebola outbreak on health systems and population health in Sierra Leone](#), Journal of Public Health

De le Vega and colleagues, [Ebola virus Evolution: past and present](#), PLOS Pathogens

Elston and colleagues, [Impact of the Ebola outbreak on health systems and population health in Sierra Leone](#), Journal of Public Health

Faye and colleagues, [Development and deployment of a rapid recombinase polymerase amplification Ebola virus detection assay in Guinea in 2015](#), Eurosurveillance

Faye and colleagues, [Use of viremia to evaluate the baseline case fatality ratio of Ebola Virus Disease and inform treatment studies: A retrospective cohort study](#), PLOS Medicine

Fischer and colleagues, [Ebola virus persistence in semen ex vivo](#), EID

Greiner and colleagues, [Addressing contact tracing challenges – critical to halting Ebola virus disease transmission](#), International Journal of Infectious Diseases

Janvier and colleagues, [Ebola virus RNA stability in human blood and urine in West Africa's environmental conditions](#), EID

Janvier and colleagues, [Monitoring of prognostic laboratory markers in Ebola virus disease](#), Journal of Infectious Diseases

Lanini and colleagues, [Blood kinetics of Ebola virus in survivors and nonsurvivors](#), Journal of Clinical Investigation

Moon and colleagues, [Will Ebola change the game? Ten essential reforms before the next pandemic. The report of the Harvard LSHTM Independent Panel on the global response to Ebola](#), The Lancet

Nyenswah and colleagues, [Ebola and its control in Liberia, 2014-2015](#), EID

Quaglio and colleagues, [Ebola: lessons learned and future challenges for Europe](#), Lancet ID

Rhein and colleagues, [Interferon- \$\gamma\$  inhibits Ebola virus infection](#), PLOS Pathogens

Rico and colleagues, [Epidemiology of epidemic Ebola virus disease in Conakry and surrounding prefectures, Guinea 2014-2015](#), EID

Rosello and colleagues, [Ebola virus disease in the Democratic Republic of Congo, 1976-2014](#), eLife

Van den Bergh and colleagues, [Feasibility of Xpert Ebola Assay in Medecins Sans Frontieres Ebola Program, Guinea](#), EID

Wolfel and colleagues, [Mobile diagnostics in outbreak response, not only for Ebola: a blueprint for a robust field laboratory](#), Eurosurveillance

Yang and colleagues, [Transmission network of the 2014-2015 Ebola epidemic in Sierra Leone](#), Journal of the Royal Society Interface

Withdrawn June 2018



## Links to further epidemiological information and guidance

### Public Health England

[PHE Risk Assessment](#) (20 November 2015)

[PHE West Africa Ebola outbreak distribution map](#) (4 December 2015)

[PHE Ebola virus disease activity summary](#)

[PHE health protection collection – Ebola virus disease: clinical management and guidance](#)

### National Travel Health Network and Centre

[NaTHNaC Ebola page](#)

### World Health Organisation

[WHO Ebola response roadmap situation report](#) (2 December 2015)

[WHO Ebola data and statistics](#) (Updated multiple times per week)

[Interagency Collaboration on Ebola Situation Report](#) (updated fortnightly)

### European Centre for Disease Prevention and Control

[ECDC Risk Assessment, 13th update](#) (13 October 2015)

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