Public Health England

Health Protection Report
weekly report

Volume 9 Number 1 Published on: **9 January 2015**

Current News

Obituary

Infection Reports

Enteric

Volume 9 Number 1 Published on: **9 January 2015**

Ebola virus disease: international epidemiological summary (at 4 January 2015)

Up to the end of 4 January (2 January for Liberia), a total of 20,747 clinically compatible cases (CCC) of Ebola virus disease (EVD), including 8,235 deaths, have been recorded associated with the outbreak in west Africa. The case totals – and particularly the recorded deaths – are known to under-represent the true impact of the outbreak.

While the majority of cases have been reported from Guinea, Liberia and Sierra Leone, cases have also been reported from Senegal, Nigeria, Mali, Spain, the USA and the United Kingdom (see table).

The trends in national incidence continue to vary across Guinea, Liberia and Sierra Leone. In Guinea, the incidence nationally has fluctuated since September without clear evidence of either upward or downward trend. From the latest information available from Liberia (five days of data compared to seven days for Guinea and Sierra Leone), case incidence continues to decline and transmission remains at a low level restricted mainly to Montserrado county, which includes the capital Monrovia.

In Sierra Leone, while the latest figures contribute to the evidence that the increase in national incidence has slowed, there continues to be significant transmission particularly in the western districts, with over three times as many new confirmed cases reported there in the last week as in Guinea and Liberia combined.

Case fatality rates remain high across Guinea, Liberia and Sierra Leone where for cases with a definitive outcome the rate is 71%. For hospitalised patients, the case fatality rate is lower at 60% in Sierra Leone and 58% in Guinea and Liberia.

Since December 2013, six countries have reported a case, or cases, imported from a country with intense and widespread transmission: Mali and the UK (defined as currently affected countries) and Nigeria, Senegal, Spain and USA (defined as previously affected countries).

The total number of EVD CCC reported in Mali remains at eight. The last patient tested negative on 6 December, and was discharged from hospital on 11 December. All contacts of infected patients have passed the 21 day observation period. If no new cases arise, Mali will be declared EVD-free on 18 January 2015. The situation in Mali looks encouraging but given the porous nature of the Mali-Guinea border, the risk of further importation of cases is recognised.

On 29 December, the Scottish government reported a confirmed case of EVD in a healthcare worker (HCW) who had recently returned from working in an Ebola treatment unit in Sierra Leone. Following the confirmation of EVD, the patient was transferred from Glasgow to London and is currently receiving treatment in the Royal Free Hospital. Tracing of contacts of the case has now been completed (PHE). The risk to the UK public from EVD continues to be very low [1].

To date, a total of 24 EVD cases have been cared for outside of Africa. Of these, 18 repatriated cases (hospitalised in USA, Spain, UK, Germany, France, Norway, Switzerland, Italy and the Netherlands), three imported cases (diagnosed in the USA and the UK) and three incidents of local transmission (in Spain and the USA).

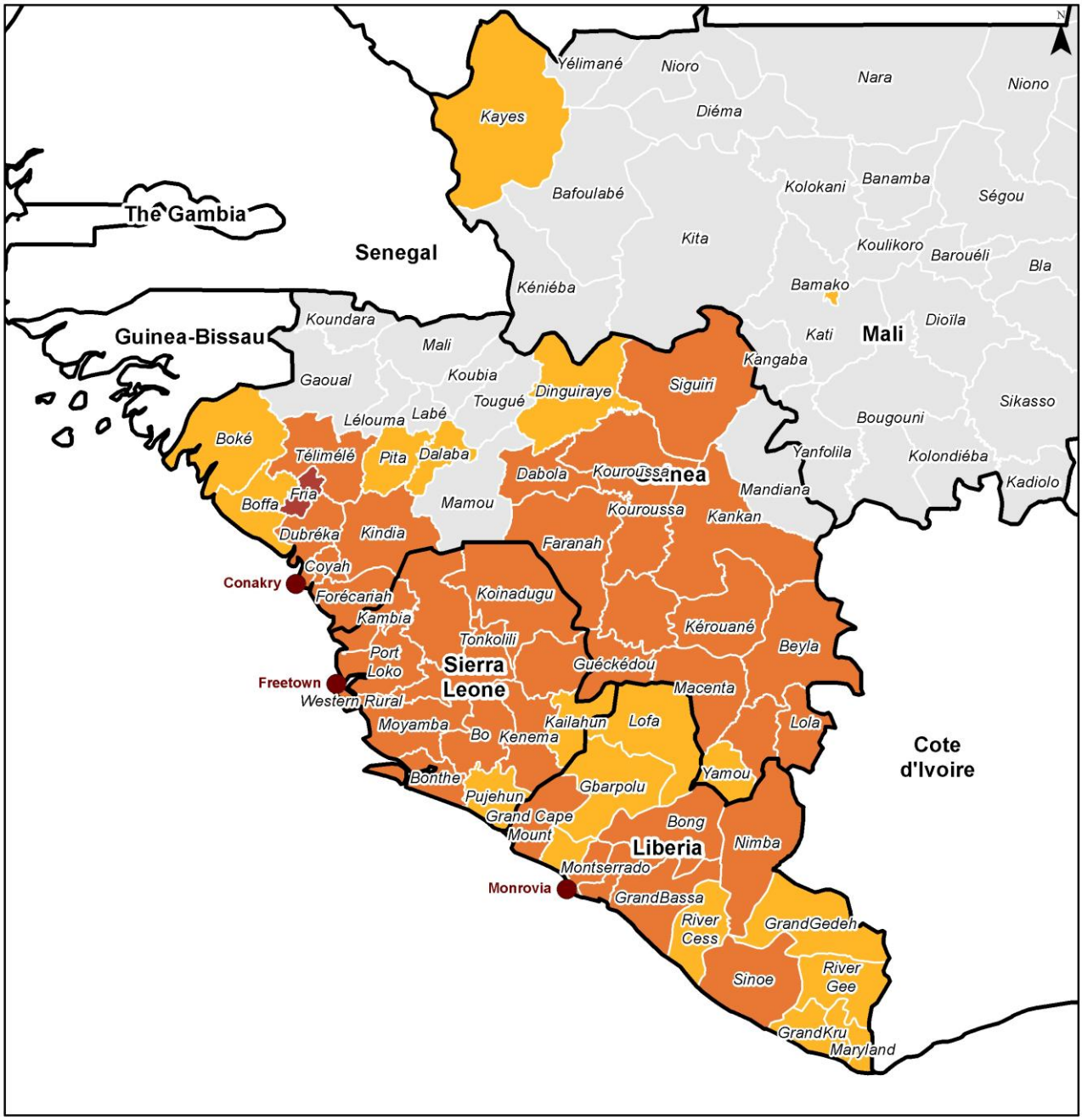
Summary of Ebola virus disease international epidemiological information as at 4 January 2014 (2 January for Liberia)

Country	Total CCCs	Total deaths	Current status
Guineau	2775	1781	Ongoing transmission
Liberia	8157	3496	Ongoing transmission
Sierra Leone	9780	2943	Ongoing transmission
Mali	8	6	Awaiting EVD-free status
Nigeria	20	8	EVD free
UK	1	0	Single imported case
Senegal	1	0	EVD free
Spain	1	0	EVD free
USA	4	1	Awaiting EVD-free status
TOTAL	**20,747**	**8235**	

Further information on the international epidemiological situation can be found in PHE's weekly Ebola Epidemiological Update at: https://www.gov.uk/government/publications/ebola-virus-disease-epidemiological-update.

See also Ebola Outbreak Distribution Map below.

Ebola Outbreak Distribution Map



Reference

1. PHE guidance. "Ebola virus disease: risk assessment of outbreak in West Africa", 8 December 2014.

UK influenza activity in the 2014/15 season: an update

The 2014/15 influenza season to date has reached overall activity levels higher than the peak seen during the previous three seasons. It has not reached the levels seen in the last notable seasons of 2008/9 and the immediate post-pandemic season of 2010/11. UK influenza activity started to rise noticeably in week 49, 2014 [1], with the Department of Health issuing an alert on the prescription of antiviral medicines by GPs according to NICE guidance on 16 December 2014 [2].

The recent data need to be interpreted cautiously due to the Christmas and New Year holidays. However, the latest data in this week's Weekly National Influenza Report [3] do show that:

- an increasing number of acute respiratory outbreaks are being reported across the UK, with most occurring in care homes
- the overall GP consultation rate has continued its gradual upward trend in adults (predominantly in the elderly) although the rate in children has started to drop
- influenza positivity has also started to drop in all age groups (with the highest positivity in those aged 65 and over, at 44.6%) except in the 45-64 years group where it remained at an elevated level (31.3%) similar to last week
- influenza hospitalisation rates have continued to rise but ICU/HDU influenza admission rates started to show signs of decreasing.

The dominant circulating influenza virus this season to date has been A(H3N2), with very low levels of influenza A(H1N1)pdm09 and influenza B viruses also circulating.

The emergence of influenza A(H3N2) drift variants has been described in 2014 from the US [4] and elsewhere. In the UK this winter, five out of 24 (20.8%) antigenically characterised A(H3N2) viruses to date have showed reduced reactivity in antigenic tests with antiserum raised to the H3N2 vaccine strain (A/Texas/50/2012). It is not known at this stage whether the drift variant will become the dominant strain, nor to what extent such a drift will result in reduced effectiveness of the 2014/15 vaccine.

So far this season, 26/27 influenza isolates have been tested and shown to be oseltamivir and zanamivir sensitive (eight A(H1N1)pdm09, 10 A(H3N2) and eight B), the remaining one however (a child with influenza A(H3N2) infection) has been found to have an amino acid substitution in the neuraminidase gene known to cause resistance to oseltamivir and reduced susceptibility to zanamivir, and this child had received oseltamivir treatment.

Flu vaccine uptake data this season up to week 1, 2015, has reached 71.7% in those aged 65 and over; 48.9% in the <65 at risk group; 48.2% in the frontline health workers; 43.1% in pregnant women; 37.2% in all two-year-olds; 39.8% in all three-year-olds; and 31.5% in all four-year-olds.

Existing vaccine provides the best available protection from flu and getting vaccinated remains the best way to protect those at risk from flu. Eligible patients should continue to be encouraged to get the vaccine for free as they are at much greater risk of becoming seriously unwell if they catch flu.

PHE will continue to monitor the epidemiological and virological situation closely. Influenza vaccine and antivirals for appropriate target groups remain key interventions to reduce the health impact of influenza..

References

1. PHE. Weekly National Influenza Report (week 50 report, data to week 49/2014), 11 December 2014.

2. DH. Influenza season 2014/15 – use of antiviral medicines, CMO/CPO letter, 16 December 2014.

3. PHE. Weekly National Influenza Report (week 2 report, data to week 1/2015), 8 January 2015.

4. CDC. Health Advisory regarding the potential for circulation of drifted Influenza A(H3N2) viruses, 3 December 2014.

Obituary

Volume 9 Number 1 Published on: **9 January 2015**

PHLS discoverer of parvovirus B19 remembered

In the years 1963 to 1976 during which Yvonne Cossart – who died in Australia on 16 December, aged 80 – worked for the then Public Health Laboratory Service (now PHE Colindale) she had a transformative effect on its virological services. In particular, following the discovery of 'Australia' antigen – the surface antigen of hepatitis B virus (HBsAg) – in 1965, she helped to introduce hepatitis testing into the Service's laboratories, then almost 40 in number. Yvonne set up assays for HBsAg and for antibody to the virus core antigen and, together with Sheila Polakoff, she used HBsAg screening to remove the risk of hepatitis B infection from renal dialysis. She oversaw the use of specific immunoglobulin to protect infants and health care workers from that infection.

In the course of directing national quality control of hepatitis B testing, Cossart was the principal discoverer, in 1975, of B19, the first discovered human parvovirus [1].

The following year family loyalty and the offer of an academic post, soon to be the chair of Infectious Diseases at the University of Sydney, drew her back to Australia; but she remained in frequent contact with the younger scientists at Colindale for whom her enthusiasm and intellectual generosity had been inspirational.

During her time in England Cossart kept the PHLS at the forefront of medical virological services in England and Wales. Her appointment to the Order of Australia in 1998 recognised the high esteem in which she was held there.

Reference

1. Cossart YE, Field AM, Cant B, Widdows D (1975). Parvovirus-like particles in human sera. *Lancet* 305(7898); 72-73.

Public Health England

Health Protection Report
weekly report

Volume 9 Number 1 Published on: **9 January 2015**

Infection Reports

Enteric

Enteric

- General outbreaks of foodborne illness in humans, England and Wales: weeks 49-52/2014
- Common gastrointestinal infections, England and Wales: laboratory reports: weeks 49-52/2014
- Less common gastrointestinal infections, England and Wales: laboratory reports: weeks 40-52/2014
- Salmonella infections (faecal specimens), England and Wales: reports to the CIDSC, Colindale (salmonella data set), November 2014
- Hospital norovirus outbreaks (England and Wales, weeks 49-52/2014) and seasonal comparisons of recent years' norovirus laboratory reports

General outbreaks of foodborne illness in humans, England and Wales: weeks 49-52/2014

No outbreaks were reported during weeks 49 to 52 of 2014.

Common gastrointestinal infections, England and Wales: laboratory reports: weeks 49-52/2014

Laboratory reports	Number of reports received				Total reports	Cumulative total	
	49/14	50/14	51/14	52/14	49-52/14	01-52/14	01-53/13
Campylobacter	932	802	723	315	2772	58722	58742
***E. coli* O157 ***	10	7	3	5	25	891	770
Salmonella †	107	80	18	5	210	6672	7255
Shigella sonnei	18	17	8	3	46	1088	986
Rotavirus	24	31	18	11	84	4315	14943
Norovirus	158	232	189	85	664	5734	6922
Cryptosporidium	79	56	44	18	197	3587	3481
Giardia	71	57	46	23	197	3779	3584

*Vero cytotoxin–producing isolates: data from CIDSC's Laboratory of Gastrointestinal Pathogens (LGP), PHE Colindale.
† Data from CIDSC-LGP.

Note: A new laboratory reporting system (SGSS) was commissioned on 1 December 2014; as a result, direct comparisons between the above data and those generated by the previous system (LabBase2) may not be valid.

Less common gastrointestinal infections, England and Wales: laboratory reports: weeks 40-52/2014

Laboratory reports	Total reports 40-52/2014	Cumulative total to 52/2014	Cumulative total to 53/2013
Astrovirus	72	249	339
Sapovirus	184	292	271
Shigella boydii	15	58	96
Shigella dysenteriae	8	29	52
Shigella flexneri	201	711	656
Plesiomonas	20	48	44
Vibrio spp.	13	66	58
Yersinia spp	5	38	31
Entamoeba histolytica	10	44	51
Blastocystis hominis	39	180	189
Dientamoeba fragilis	3	39	48

Salmonella infections (faecal specimens) England and Wales, reports to Public Health England (salmonella data set): November 2014

Details of 745 serotypes of salmonella infections recorded in November are given in the table below.

In December 2014, 546 salmonella infections were recorded.

Organism	Cases: November 2014
S. Enteritidis PT4	6
S. Enteritidis (other PTs)	189
S. Typhimurium	144
S. Virchow	19
Others (typed)	384
Total salmonella (provisional data)	**745**

Suspected and laboratory-confirmed reported norovirus outbreaks in hospitals, with regional breakdown: outbreaks occurring in weeks 49-52/2014

The hospital norovirus outbreak reporting scheme (HNORS) recorded 92 outbreaks occurring between weeks 49 and 52 2014, 88 of which (96%) led to ward/bay closures or restriction to admissions. Sixty-nine outbreaks (75%) were recorded as laboratory confirmed due to norovirus. From week 1 (January 2014) to week 52 (week beginning 22 December, 2014) 676 outbreaks have been reported. Ninety-three per cent (448) of reported outbreaks resulted in ward/bay closures or restrictions to admissions and 66% (448) were laboratory confirmed as due to norovirus.

Suspected and laboratory-confirmed reported norovirus outbreaks in hospitals, with regional breakdown: outbreaks occurring in weeks 49-52/2014

Region/PHE Centre	Outbreaks between weeks 49-52/2014			Total outbreaks 1-52/2014		
	Outbreaks	Ward/bay closure	Lab-confirmed	Outbreaks	Ward closure	Lab-confirmed
Avon, Gloucestershire and Wiltshire	16	15	11	83	81	52
Bedfordshire, Hertfordshire and Northamptonshire	–	–	–	–	–	–
Cheshire and Merseyside	–	–	–	3	2	2
Cumbria and Lancashire	1	1	–	23	23	12
Devon, Cornwall and Somerset	20	19	18	85	82	54
Greater Manchester	3	3	2	20	18	7
Hampshire, Isle of Wight and Dorset	13	13	13	41	41	30
Lincolnshire, Leicestershire, Nottinghamshire and Derbyshire	3	3	1	49	47	38
London	–	–	–	7	7	5
Norfolk, Suffolk, Cambridgeshire and Essex	–	–	–	–	–	–
North east	10	10	8	85	74	56
Sussex, Surrey and Kent	–	–	–	24	24	17
Thames Valley	–	–	–	17	14	6
West Midlands	20	18	11	115	111	64
Yorkshire and the Humber	6	6	5	124	105	105
Total	92	88	69	676	629	448

Seasonal comparison of laboratory reports of norovirus (England and Wales)

In the current season to date † (from week 27, 2014, to week 52, 2014), there were 2596 laboratory reports of norovirus. This is 1 per cent lower than the average number of laboratory reports for the same period in the seasons between 2009/2010 and 2013/2014 (2614)*.

† The norovirus season runs from July to June (week 27 in year one to week 26 in year two) in order to capture the winter peak in one season.

Notes:

The number of laboratory reports in the most recent weeks will increase as further reports are received.

On 1 December 2014 a new laboratory reporting system was commissioned; as a result, direct comparisons between the earlier report (based on LabBase2) and the new system (SGSS) may not be valid.

Figure 1. Current weekly norovirus laboratory reports compared to weekly average 2006/2010.

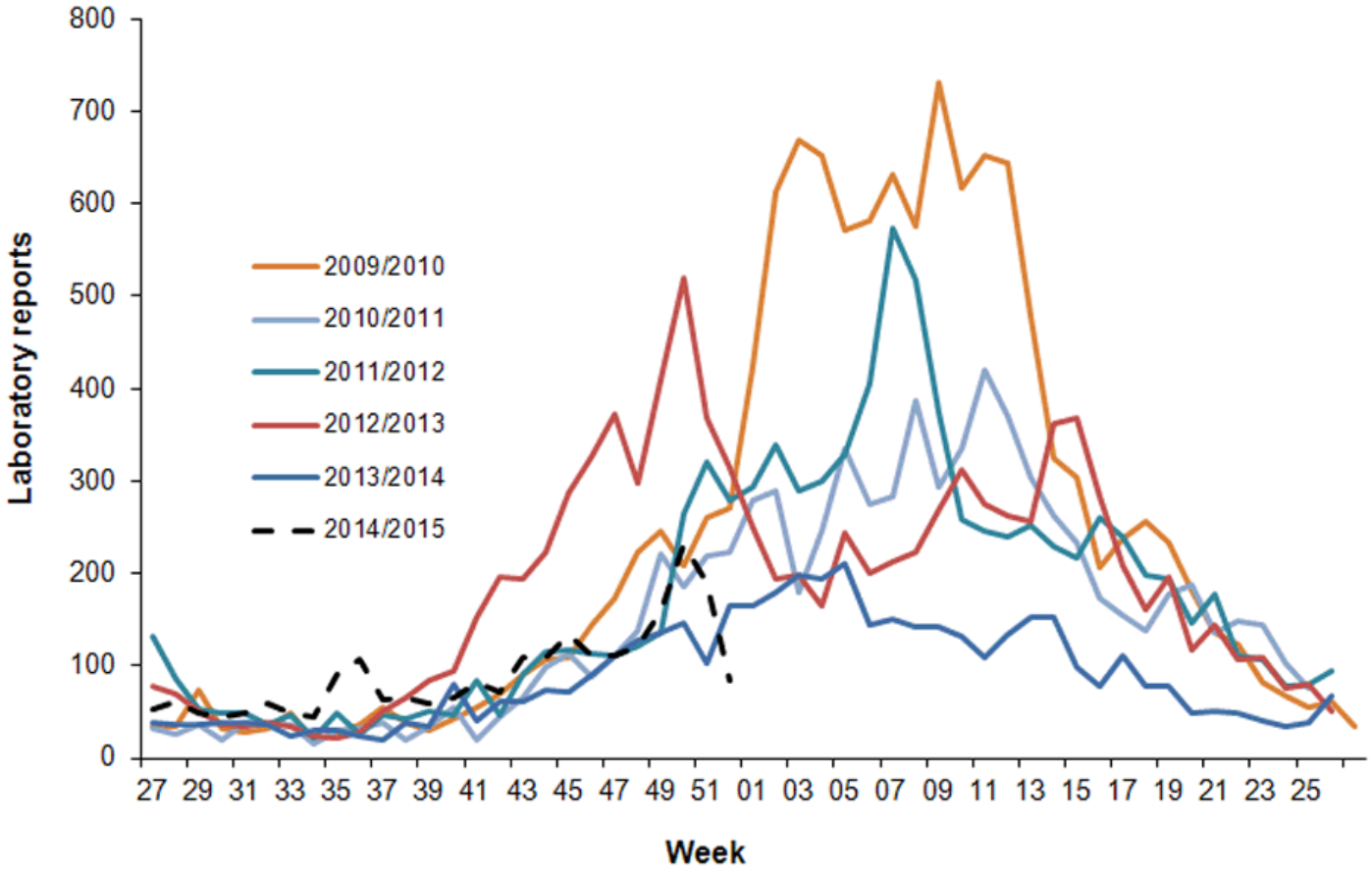


Figure 2. Norovirus laboratory reports in the current season, compared to previous years (England and Wales, to week 52)