Public Health England

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News

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Ebola virus disease international epidemiological summary: Guinea and Sierra Leone still reporting increased incidence

As of 4 March 2015, the World Health Organization reported a total of 24,969 clinically compatible cases (CCC) of Ebola virus disease (EVD), including 9,807 deaths, associated with the West African outbreak (see table). Provided case totals and, particularly, deaths are known to still under-represent the true impact of the outbreak in West Africa. While the majority of cases have been reported from Guinea, Liberia and Sierra Leone, cases have also been reported from Mali, Nigeria, Senegal, Spain, the United Kingdom (UK) and the United States of America (USA).

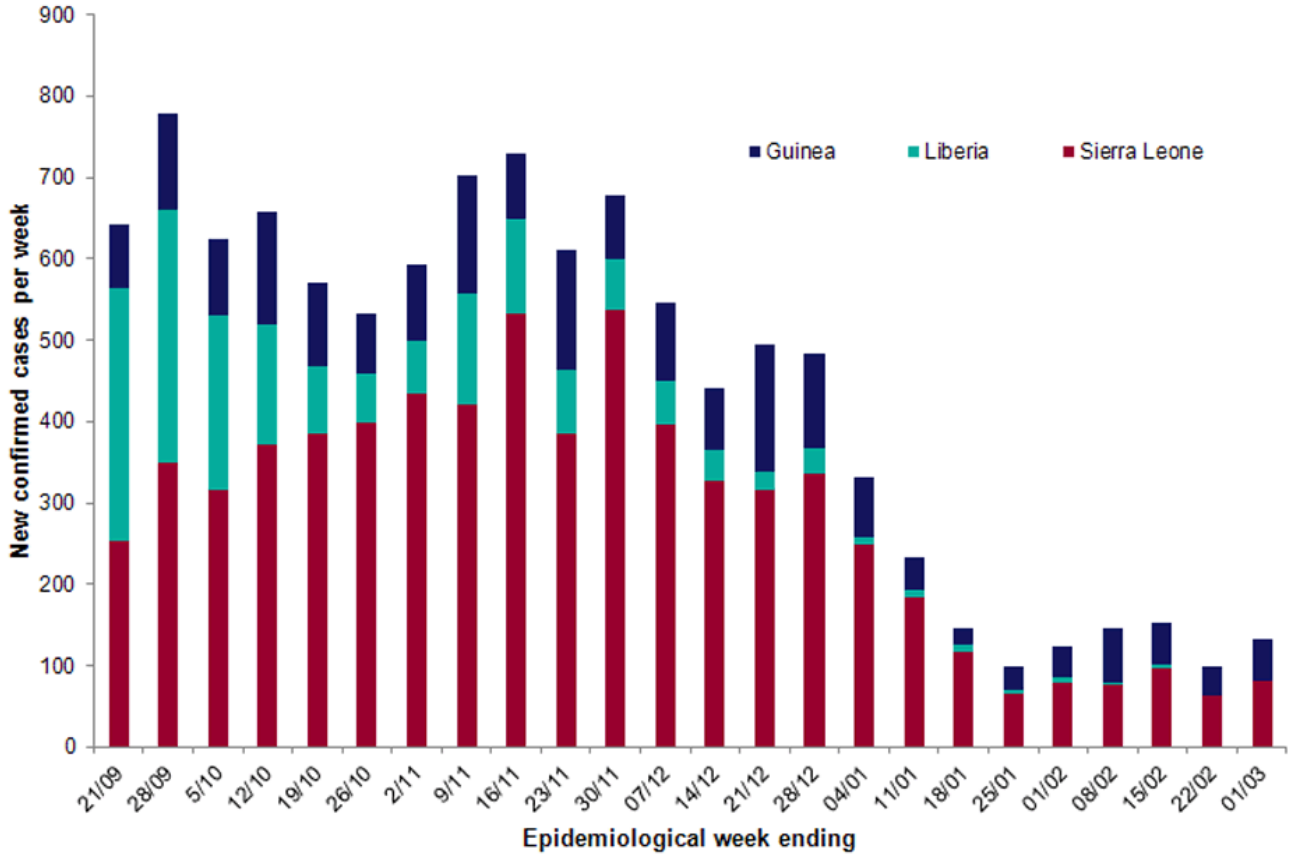
Summary of Ebola virus disease international epidemiological information as at 4 March 2015

Country	Total CCCs	Total deaths	Current status
Guinea	3219	2129	Ongoing transmission
Liberia	9249	4117	Ongoing transmission
Sierra Leone	11,466	3546	Ongoing transmission
Mali	8	6	EVD free
Nigeria	20	8	EVD free
Senegal	1	0	EVD free
Spain	1	0	EVD free
UK	1	0	Single imported case
USA	4	1	Awaiting EVD-free status
TOTAL	**23,969**	**9807**	

The latest data from West Africa on key EVD parameters (such as new confirmed cases, number of EVD deaths in the community and number of unsafe burials) show some improvement. However, as indicated throughout this outbreak such improvements are often not sustained and will require careful monitoring in the coming weeks before interpretation.

In the last week (to 1 March), for the first time since the week of 26 May 2014, Liberia reported no new confirmed EVD cases. In contrast, in Guinea and Sierra Leone there was an increase in confirmed cases reported in the past week, with a total of 132 new confirmed cases (51 in Guinea and 81 in Sierra Leone) (see figure). The complex nature of this outbreak means that EVD control in West Africa will require significant and sustained effort.

Number of new confirmed cases reported per week (21 September 2014 to 1 March 2015) in countries reporting persistent transmission



In Guinea, the majority of new cases in the last week were reported from the west of the country (45 confirmed cases), with 23 cases in Forécariah on the Sierra Leone border; 17 cases in Conakry the capital, and five cases in Coyah. The prefecture of Lola, which borders Côte d'Ivoire, reported one further confirmed case this week. Cross-border surveillance has been strengthened.

In Liberia, no new confirmed cases have been reported in the last week (to 1 March). The situation in Liberia appears promising however, it is important to note that even when no ongoing transmission is reported in Liberia, the porous nature of its borders with other affected countries means that the risk of further outbreaks continues until West Africa is EVD free.

Sierra Leone continues to record the majority of new cases in the West African EVD outbreak. The number of cases reported from Freetown increased in the last week (26 confirmed cases compared to 14 in the previous week). The increase in reported cases in Bombali district in northern Sierra Leone continues this week with 22 new confirmed cases.

The outbreak in Bombali is reportedly linked to the cluster of cases in the fishing community in the Aberdeen area of Freetown. A response team continues to trace and monitor over 2000 contacts associated with the Aberdeen cluster.

While there has been substantial improvement in the epidemiological situation in Sierra Leone in the last two months, the fluctuating trend in new cases in certain districts, as well as ongoing reports of community resistance and reports of significant numbers of unsafe burials, may impede control measures.

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.

MERS-CoV in the Arabian Peninsula: an update

Risk assessments for travellers relating to Middle East Respiratory Syndrome Coronavirus (MERS-CoV) have been updated by the WHO [1], ECDC [2] and PHE [3], in view of the continuing rise in confirmed cases in the Arabian Peninsula, where all index cases to date have been exposed.

The overall risk to the UK of MERS-CoV remains low, according to PHE's risk assessment [3], but the possibility of imported cases remains.

Since 2012 when the novel coronavirus was identified [4], more than 1,000 cases have been confirmed by WHO of which more than more than a third have been fatal. The vast majority of cases have been reported in the Kingdom of Saudi Arabia and the United Arab Emirates. All cases reported outside of the Middle East have been linked with travel to countries within the Arabian Peninsula, or secondary transmission from cases who have travelled to affected areas.

Although camels have been identified as a host species and the likely source of zoonotic transmission to humans, the majority of cases are now due to human-to-human transmission. In particular, large outbreaks have been observed in healthcare settings and PHE guidance re-iterates that infection control precautions need to be strictly maintained by health professionals investigating/managing suspect cases [5].

Testing is now recommended for persons with a history of travel to: any country within the Arabian Peninsula; and any country that has reported cases that cannot be conclusively linked to travel to the affected areas.

As of 22 January 2015, these criteria cover: Bahrain, Iraq, Iran, Jordan, Kingdom of Saudi Arabia, Kuwait, Oman, Qatar, United Arab Emirates and Yemen. Algorithms for the identification of cases, and related guidance, are available on the PHE MERS-CoV webpages [6].

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2. ECDC updated Rapid Risk Assessment (14 February 2015), http://www.ecdc.europa.eu/en/publications/Publications/MERS_update_14-Feb2014.pdf

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4. UK response to novel coronavirus, *HPR* **6**(39), http://webarchive.nationalarchives.gov.uk/20140714084352/http://www.hpa.org.uk/hpr/archives/2012/news3912.htm#ncov

5. PHE webpages: MERS-CoV: infection control for possible or confirmed cases, https://www.gov.uk/government/publications/merscov-infection-control-for-possible-or-confirmed-cases

6. PHE MERS-CoV webpages: https://www.gov.uk/government/collections/middle-east-respiratory-syndrome-coronavirus-mers-cov-clinical-management-and-guidance.

MRC/PHE study on effectiveness of pre-exposure prophylaxis against HIV infection

Researchers from the Medical Research Council Clinical Trials Unit and Public Health England have reported that pre-exposure prophylaxis (PrEP) is highly protective against HIV for men who have sex with men (MSM) [1].

Randomised control trials had previously demonstrated the efficacy of PrEP in preventing HIV transmission [2]. However, questions remained about its effectiveness, in particular whether high levels of regimen adherence would be observed, and whether increased risk behaviour would negate the protective effects and the costs of such an intervention.

The aim of the PROUD study (Pre-exposure Option for reducing HIV in the UK: immediate or Deferred) – the results of which were recently presented at an international conference [1] –

was to ascertain the real-world effectiveness of offering daily HIV PrEP to MSM to prevent HIV acquisition. Between November 2012 and April 2014, 545 participants were enrolled into the study in 13 participating sexual health clinics in England, of whom 276 were randomised to receiving PrEP immediately and 269 who received PrEP after a deferred period of 12 months.

The risk of HIV infection among MSM on the immediate PrEP arm of the trial was found to have been reduced by 86% compared to those on the deferred arm of the trial. In this study, self-reported adherence to the drug regimen was high, with enough tablets prescribed for participants to have taken a tablet on 86% of the days they were in the study. Participants incorporated PrEP into existing risk reduction strategies, which included condom use, and there was no difference in the number of men diagnosed with other STIs between those on PrEP and those not on PrEP.

HIV remains a major public health issue in the UK, especially among MSM. Although a large majority of MSM report using condoms [3], the HIV epidemic among MSM in the UK remains intractable and in 2013 it was estimated that there were 2,800 new infections and prevalence was 5.9% [4]. The potential role of PrEP in prevention of HIV in MSM therefore represents an important new addition to available preventive intervention possibilities.

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3. Williamson LM, Dodds JP, Mercey DE, Hart GJ, Johnson AM (2008). Sexual risk behaviour and knowledge of HIV status among community samples of gay men in the UK. *AIDS* 22(9): 1063-70.
4. PHE (2014). *HIV in the United Kingdom 2014 Report* (data to end 2013), https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/401662/2014_PHE_HIV_annual_report_draft_Final_07-01-2015.pdf.

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Infection reports

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Infection Reports

Respiratory

- **Laboratory reports of respiratory infections made to the CIDSC from PHE and NHS laboratories in England and Wales: weeks 6-9/2015**
- **Respiratory viral detections by any method (culture, direct immunofluorescence, PCR, four-fold rise in paired sera, single high serology titre, genomic, electron microscopy, other method, other method unknown), by week of report: weeks 6-9/2015**
- **Respiratory viral detections by age group: weeks 6-9/2015**
- **Laboratory reports of infections associated with atypical pneumonia, by week of report: weeks 6-9/2015**
- **Laboratory reports of Legionnaires Disease cases in England and Wales, by week of report: weeks 6-9/2015**

Infection reports / Respiratory

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Laboratory reports of respiratory infections made to the CIDSC from PHE and NHS laboratories in England and Wales: weeks 6-9/2015

Data are recorded by week of report, but include only specimens taken in the last eight weeks (i.e. recent specimens)

Table 1. Reports of influenza infection made to CIDSC, by week of report

Week	Week 6	Week 7	Week 8	Week 9	Total
Week ending	**8/2/15**	**15/2/15**	**22/2/15**	**1/3/15**	
Influenza A	**425**	**270**	**406**	**344**	**1445**
Isolation	27	6	22	18	73
DIF *	106	36	18	33	193
PCR	221	211	297	239	968
Other †	71	17	69	54	211
Influenza B	**28**	**40**	**60**	**84**	**212**
Isolation	2	0	10	6	18
DIF *	4	6	2	8	20
PCR	21	34	48	66	169
Other †	1	0	0	4	5

* DIF = Direct Immunofluorescence. † Other = "Antibody detection - single high titre" or "Method not specified".

Table 2. Respiratory viral detections by any method (culture, direct immunofluorescence, PCR, four-fold rise in paired sera, single high serology titre, genomic, electron microscopy, other method, other method unknown), by week of report

Week	Week 6	Week 7	Week 8	Week 9	Total
Week ending	**8/2/15**	**15/2/15**	**22/2/15**	**1/3/15**	
Adenovirus*	75	102	99	86	**362**
Coronavirus	25	68	61	42	**196**
Parainfluenza†	40	83	99	69	**291**
Rhinovirus	177	279	143	158	**757**
RSV	161	157	191	106	**615**

* Respiratory samples only. † Includes parainfluenza types 1, 2, 3, 4 and untyped.

Table 3. Respiratory viral detections by age group: weeks 6-9/2015

Age group (years)	<1 year	1-4 years	5-14 years	15-44 years	45-64 years	≥65 years	Un-known	Total
Adenovirus *	68	125	33	93	30	12	1	**362**
Coronavirus	50	46	9	36	22	31	2	**196**
Influenza A	66	82	91	343	297	649		**1528**
Influenza B	4	8	20	88	67	60	1	**248**
Parainfluenza †	83	77	21	19	34	57	–	**291**
Respiratory syncytial virus	297	44	14	33	74	100	5	**567**
Rhinovirus	320	159	56	84	106	76	4	**805**

* Respiratory samples only.
† Includes parainfluenza types 1, 2, 3, 4 and untyped.

Table 4 Laboratory reports of infections associated with atypical pneumonia, by week of report

Week	Week 6	Week 7	Week 8	Week 9	Total
Week ending	**8/2/15**	**15/2/15**	**22/2/15**	**1/3/15**	
Coxiella burnettii	–	–	–	–	**–**
Respiratory *Chlamydia* sp.*	2	1	1	–	**4**
Mycoplasma pneumoniae	23	25	16	3	**67**
Legionella sp.	8	5	5	–	**18**

* Includes *Chlamydia psittaci*, *Chlamydia pneumoniae*, and Chlamydia sp detected from blood, serum, and respiratory specimens.

Table 5 Reports of Legionnaires Disease cases in England and Wales, by week of report

Week	Week 6	Week 7	Week 8	Week 9	Total
Week ending	**8/2/15**	**15/2/15**	**22/2/15**	**1/3/15**	
Nosocomial	–	–	–	–	**0**
Community	6	2	2 (1*)	–	**10**
Travel Abroad	1	2	3	–	**6**
Travel UK	1	1	–	–	**2**
Total	**8**	**5**	**5**	**–**	**18**
Male	7	2	2	–	**11**
Female	1	3	3	–	**7**

* Non-pneumonic case.

Seventeen cases were reported with pneumonia and one case had non-pneumonic infection. Eleven males aged 45-85 years and seven females aged 48-84 years. Ten cases had community-acquired infection. Three deaths were reported in an 84 year-old female and two males aged 76 and 85 years.

Eight cases were reported with travel association:

China/Thailand (1), Egypt/United Kingdom (1), Mauritius/United Kingdom (1), South Africa (1), Spain (1), United Arab Emirates/United Kingdom (1) and United Kingdom (2).

Table 6. Reports of Legionnaires Disease cases in England and Wales, by PHE Centre: weeks 6-9/2015

Region/Country	Nosocomial	Community	Travel Abroad	Travel UK	Total
North of England					
North East	–	–	–	–	**0**
Cheshire & Merseyside	–	1	–	–	**1**
Greater Manchester	–	–	–	–	**0**
Cumbria & Lancashire	–	–	1	–	**1**
Yorkshire & the Humber	–	–	1	–	**1**
South of England					
Devon, Cornwall & Somerset	–	–	–	–	**0**
Avon, Gloucestershire & Wiltshire	–	1(1*)	–	–	**1**
Wessex	–	–	1	–	**1**
Thames Valley	–	1	–	1	**2**
Sussex, Surrey & Kent	–	–	1	–	**1**
Midlands & East of England					
East Midlands	–	–	–	–	**0**
South Midlands & Hertfordshire	–	3	1	1	**5**
Anglia & Essex	–	–	–	–	**0**
West Midlands	–	1	–	–	**1**
London Integrated Region					
London	–	3	1	–	**4**
Public Health Wales					
Mid & West Wales	–	–	–	–	**0**
North Wales	–	–	–	–	**0**
South East Wales	–	–	–	–	**0**
Miscellaneous					
Other	–	–	–	–	**0**
Not known	–	–	–	–	**0**
Total	0	**10**	**6**	**2**	**18**

* Non-pneumonic case.