Public Health England

Health Protection Report
weekly report

Volume 9 Number 4 Published on: **6 February 2015**

Current News

- **Ebola virus disease: international epidemiological summary (at 1 February 2015)**
- ***Hepatitis C in London* annual report**
- **Low effectiveness of seasonal flu vaccine in the 2014/15 season to date**

Infection Reports

Respiratory

- **Laboratory reports of respiratory infections made to CIDSC from PHE and NHS laboratories in England and Wales: *weeks 49-52/2014 and 1/2015* ***
- **Laboratory reports of respiratory infections made to CIDSC from PHE and NHS laboratories in England and Wales: *weeks 2-5/2015***

* *Reports published on the gov.uk website on 25 January 2015 but not previously included in HPR PDF version.*

News

Volume 9 Number 4 Published on: **6 February 2015**

Ebola virus disease: international epidemiological summary (at 1 February 2015)

As of 1 February 2015, the World Health Organization reports a total of 24,495 clinically compatible cases (CCC) of Ebola virus disease (EVD), including 8,981 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 1 February 2015

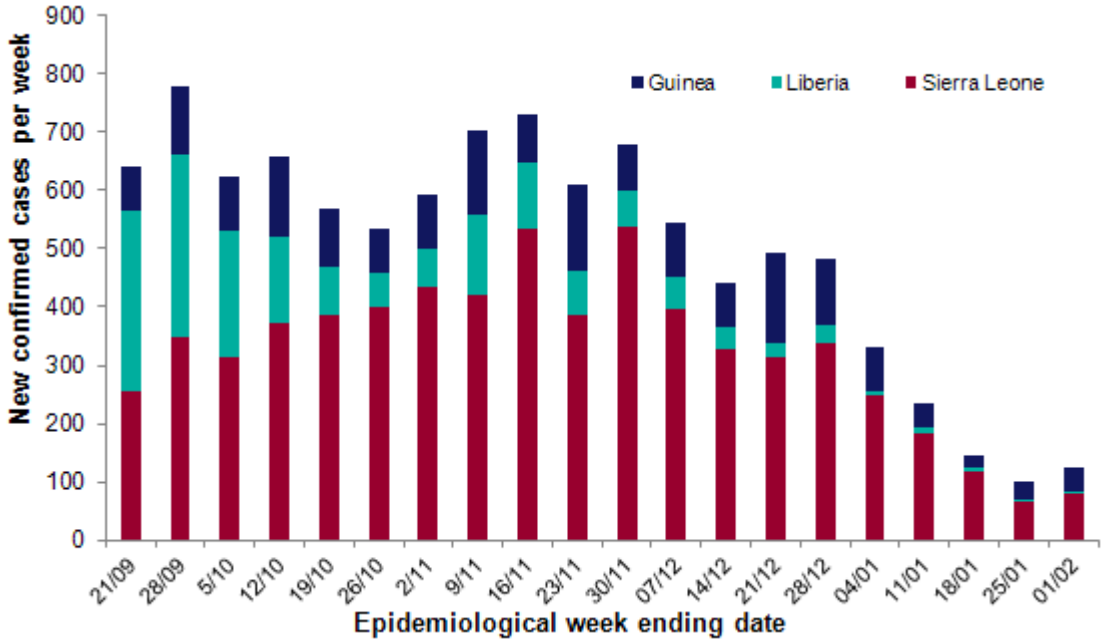
Country	Total CCCs	Total deaths	Current status
Guinea	2975	1944	Ongoing transmission
Liberia	8745	3746	Ongoing transmission
Sierra Leone	10,740	3,276	Ongoing transmission
Mali	8	6	EVD free
Nigeria	20	8	EVD free
Senegal	1	0	EVD free
Spain	1	0	EVD free
UK	1	0	Single imported case
USA	4	1	Awaiting EVD-free status
TOTAL	**22,495**	**8981**	

Current reports indicate that the epidemiological situation in Guinea, Liberia and Sierra Leone continues to improve, although for the first time this year all three countries have reported an increase in confirmed cases (see figure).

In Guinea, reported case incidence remains low nationally but has shown an increase for the second week in a row (39 compared with 30 and 20 in the previous two weeks). The geographical distribution of cases continues to vary and shift, with another newly affected area reported in week-ending 1 February (Tougué, in northern Guinea). As with last week, the western prefecture of Forécariah (bordering Sierra Leone) remains the worst affected area with 13 confirmed cases reported in the last seven days. A resurge of cases in the eastern prefecture of Lola was also noted this week as a result of an unsafe burial in January. Incidents of community resistance remain an issue and may impede progress in EVD control.

In Liberia, reported case incidence remains at a low level with five confirmed cases reported in the last week. All five confirmed cases were reported from Montserrado county, the district that includes the capital Monrovia.

Summary of Ebola virus disease international epidemiological information as at 1 February 2015



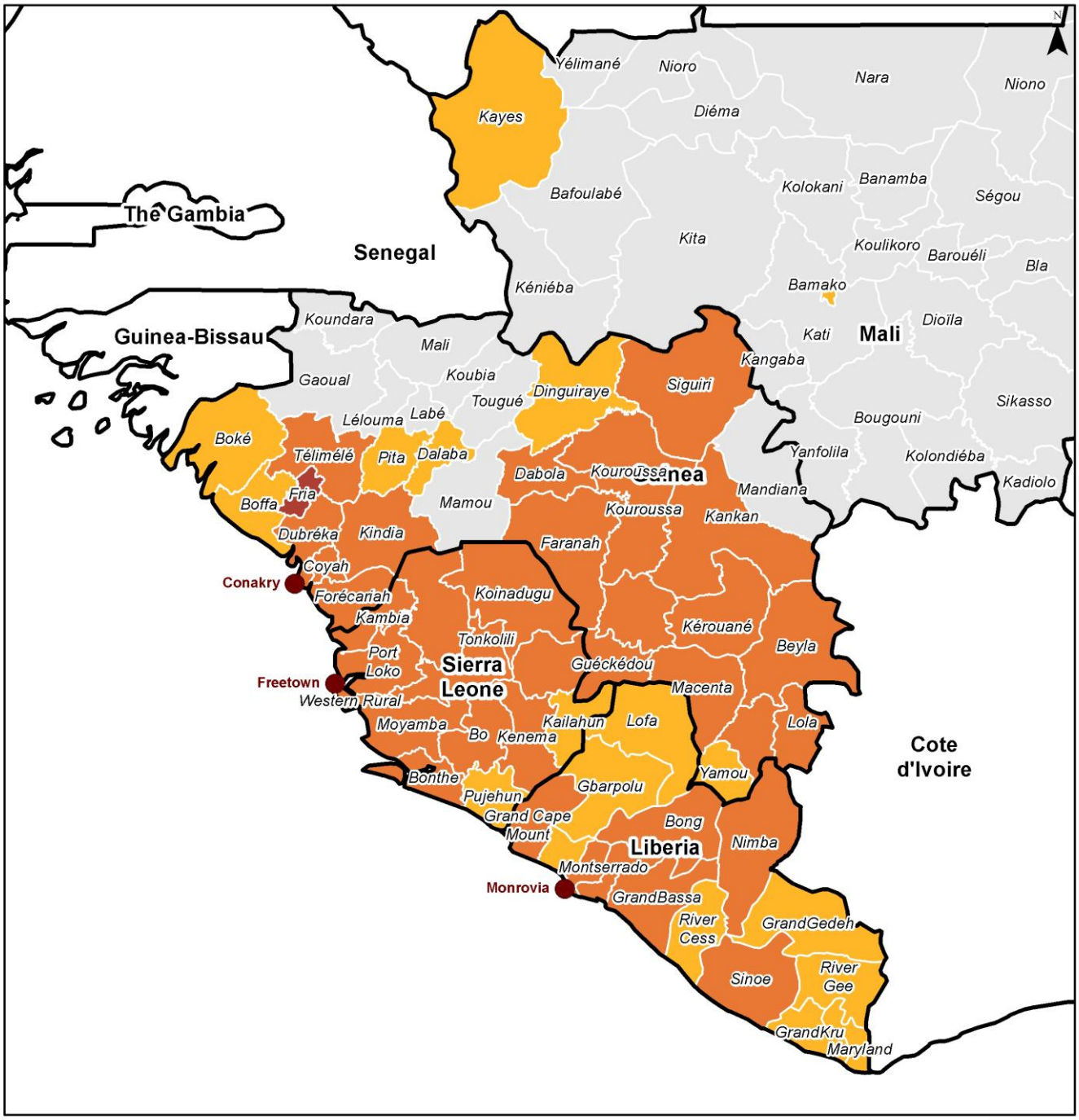
While Sierra Leone continues to report the majority of new cases in the West African EVD outbreak with 80 confirmed cases recorded in the last week (a slight increase on the previous week's total of 65), the latest figures still represent one of the lowest weekly totals of new confirmed cases reported since July 2014. Significant transmission continues however in the western districts, particularly in Freetown and Port Loko, where a combined total of 58 confirmed cases were reported in the last week. As in Guinea, community resistance to EVD control measures may hinder progress.

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).

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



Capital Cities

Country Boundaries

WHO data as of 4 January (2 January for Liberia)

Transmission in last 21 days by district

- Newly Affected
- Active
- No longer active
- Unaffected

Hepatitis C in London annual report

London accounts for nearly a third of all newly diagnosed cases of hepatitis C reported in England, with 3,079 new laboratory reports of confirmed diagnoses reported in 2013, a rise of 12% since 2012. London also has the second highest rate of diagnosis per head of population, after Greater Manchester.

In terms of burden of disease resulting from chronic infection, London is among three regions of England with very high rates of hepatitis-related, end-stage liver disease (ESLD) and hepatocellular carcinoma (HCC). In 2013, nearly 2,000 people in London were admitted to hospital with a diagnosis of hepatitis C, and hepatitis C was the primary indication for just under a quarter of first liver transplants in London.

Nevertheless, there is some evidence that the trend in new infections (nationally and in London) is stable or declining in England and that the steady increase in the annual number of laboratory-confirmed new diagnoses of recent years reflects improved ascertainment (including higher levels of testing and reporting of laboratory results).

These are among the conclusions of PHE's latest annual report for London [1] that presents epidemiological data, an assessment of the burden of disease and, in particular, describes progress made in preventing infection and improving rates of testing among the main risk groups – principally people who inject drugs (PWID) in the general population and in prisons (accounting for more than 90% of laboratory -confirmed cases in England).

It is estimated that over half of all PWID in London have hepatitis C (59%). In the past 10 years, sex between men has also emerged as an important route of transmission. Individuals originating from south Asia, where the prevalence of hepatitis C is high, are also particularly at risk.

The London report includes specific recommendations for different groups of health professionals: GPs, directors of public health, local authorities and commissioners of drug treatment services, Clinical Commissioning Groups (CCGs), NHS England, PHE London Centre and Region, laboratories, providers of prison health services, providers of drug treatment services, and providers of hepatitis C treatment services.

Reference

1. PHE (January 2015). Hepatitis C in London (annual review, 2013 data) [1 MB PDF].

Low effectiveness of seasonal flu vaccine Low effectiveness of seasonal flu vaccine in the 2014/15 season to date

The 2014/15 influenza season in the UK has been characterised by early circulation of influenza A(H3N2), which particularly impacts vulnerable groups such as the elderly. This has resulted in care home outbreaks, hospitalisations and excess mortality in those over 65 years of age.

In addition, mid-season estimates of influenza vaccine effectiveness (VE) across the UK indicate that the seasonal influenza vaccine has provided low protection, during the 2014/15 season, against the dominant circulating A(H3N2) strain [1,2].

The findings on mid-season flu vaccine effectiveness in the UK are based on PHE co-ordinated research involving 1,314 patients presenting in primary care across the UK [1]. Vaccine effectiveness in preventing laboratory confirmed influenza in this group was estimated to have been 3% overall, compared with the approximately 50% vaccine effectiveness that has typically been seen in the UK in recent years.

PHE has also carried out antigenic and genetic analysis of influenza A(H3N2) viruses circulating this season and found evidence of drift compared to the A(H3N2) virus strain in the 2014/15 flu vaccine. The evidence of low vaccine effectiveness indicates that this drift has been significant, and resulted in a “mismatch” to this particular vaccine strain.

These UK findings follow publication of mid-season vaccine effectiveness estimates for the USA and Canada, where the vaccine was also shown to have provided little protection against circulating A(H3N2) viruses, which were also drifted.

PHE has stressed that the current vaccine will still protect against flu A(H1N1)pdm09 and flu B, both of which may yet circulate this season; unvaccinated members of at-risk groups are therefore still encouraged to obtain the vaccine.

Also, antiviral drugs remain an important and effective intervention to reduce the morbidity and mortality due to influenza infection in vulnerable groups, and physicians are urged to prescribe them for those at greatest risk of becoming seriously ill due to flu [2].

The PHE research paper concludes that: “The observation of low vaccine effectiveness this season highlights the vital importance of implementing other prevention and control measures, in particular the early use of influenza antivirals for post-exposure prophylaxis and treatment of vulnerable populations, such as the elderly, together with appropriate infection control measures”.

References

1. Pebody RG, Warburton F, Ellis J, Andrews N, Thompson C, von Wissmann, *et al* (Febuary 2015). "Low effectiveness of seasonal influenza vaccine in preventing laboratory-confirmed influenza in primary care in the United Kingdom: 2014/15 mid-season results". *Euro. Surveill.* 20(5), 5 February.
2. "Flu vaccine shows low effectiveness against the main circulating strain seen so far this season". PHE press release, 5 February.

Public Health England

Health Protection Report
weekly report

Infection reports

Volume 9 Number 4 Published on: **6 February 2015**

Infection Reports

Respiratory 1

- **Laboratory reports of respiratory infections made to the CIDSC from PHE and NHS laboratories in England and Wales: *weeks 49-52/2014 and 1/2015****
- **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 49-52/2014 and 1/2015****
- **Respiratory viral detections by age group: *weeks 49-52/2014 and 1/2015***
- **Laboratory reports of infections associated with atypical pneumonia, by week of report: *weeks 49-52/2014 and 1/2015****
- **Laboratory reports of Legionnaires Disease cases in England and Wales, by week of report: *weeks 49-52/2014 and 1/2015****

* * * *

Respiratory 2

- **Laboratory reports of respiratory infections made to the CIDSC from PHE and NHS laboratories in England and Wales: *weeks 2-5/2015***
- **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 2-5/2015***
- **Respiratory viral detections by age group: *weeks 2-5/2015***
- **Laboratory reports of infections associated with atypical pneumonia, by week of report: *weeks 2-5/2015***
- **Laboratory reports of Legionnaires Disease cases in England and Wales, by week of report: *weeks 2-5/2015***

* **These reports were published on the gov.uk website on 25 January 2015.**

Volume 9 Number 4 ***Reports published on 25 January 2015***

Laboratory reports of respiratory infections made to the CIDSC from PHE and NHS laboratories in England and Wales: weeks 49-52/2014 and 1/2015

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 49	Week 50	Week 51	Week 52	Week 1 (2015)	Total
Week ending	**7/12/14**	**14/12/14**	**21/12/14**	**28/12/14**	**4/1/2015**	
Influenza A	**57**	**64**	**165**	**269**	**594**	**1149**
Isolation	3	15	16	39	73	**146**
DIF *	10	7	19	66	76	**178**
PCR	42	40	125	153	425	**785**
Other †	2	2	5	11	20	**40**
Influenza B	**15**	**8**	**12**	**12**	**24**	**71**
Isolation	1	2	5	1	7	**16**
DIF *	–	–	–	–	4	**4**
PCR	14	6	5	11	13	**49**
Other †	–	–	2	–	–	**2**

* 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 49	Week 50	Week 51	Week 52	Week 1 (2015)	Total
Week ending	**7/12/14**	**14/12/14**	**21/12/14**	**28/12/14**	**4/1/2015**	
Adenovirus*	51	71	78	64	89	**353**
Coronavirus	4	7	45	35	26	**117**
Parainfluenza†	84	60	128	58	76	**406**
Rhinovirus	189	250	423	204	223	**1289**
RSV	555	687	1094	602	704	**3642**

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

Table 3. Respiratory viral detections by age group: weeks 49-52/2014 and 1/2015

Age group (years)	<1 year	1-4 years	5-14 years	15-44 years	45-64 years	≥65 years	Un-known	Total
Adenovirus *	80	106	61	43	36	22	5	**353**
Coronavirus	53	33	9	5	6	11	–	**117**
Influenza A	107	110	473	356	180	714	8	**1948**
Influenza B	3	6	11	19	5	8	6	**58**
Parainfluenza †	134	88	26	49	36	46	27	**406**
Respiratory syncytial virus	2557	522	125	163	76	179	22	**3644**
Rhinovirus	542	237	145	136	98	117	14	**1289**

* 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 49	Week 50	Week 51	Week 52	Week 1 (2015)	Total
Week ending	**7/12/14**	**14/12/14**	**21/12/14**	**28/12/14**	**4/1/2015**	
Coxiella burnettii	1	–	1	–	–	**2**
Respiratory *Chlamydia* sp.*	1	1	5	1	3	**11**
Mycoplasma pneumoniae	12	23	17	7	17	**76**
Legionella sp.	4	3	4	6	–	**17**

* 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 49	Week 50	Week 51	Week 52	Week 1 (2015)	Total
Week ending	**7/12/14**	**14/12/14**	**21/12/14**	**28/12/14**	**4/1/2015**	
Nosocomial	–	–	–	–	–	**0**
Community	–	2	3	4	-	**9**
Travel Abroad	3	1	1	2	–	**7**
Travel UK	1	–	–	–	–	**1**
Total	4	3	4	6	0	**17**
Male	2	2	3	4	–	**11**
Female	2	1	1	2	–	**6**

* Cases with onset of symptoms in 2015.

Seventeen cases were reported with pneumonia. Eleven males aged 43-88 years and six females aged 50-74 years. Nine cases had community-acquired infection.

Eight cases were reported with travel association: Egypt (1), Egypt/Turkey (1), Indonesia/Malaysia (1), Myanmar (Burma) (1), Pakistan (1), Thailand (1), United Arab Emirates (1) and United Kingdom (1).

Table 6. Reports of Legionnaires Disease cases in England and Wales, by PHE Centre: weeks 49-52/2014 and 1/2015

Region/Country	Nosocomial	Community	Travel Abroad	Travel UK	Total
North of England					
North East	–	–	–	1	**1**
Cheshire & Merseyside	–	–	1	–	**1**
Greater Manchester	–	–	–	–	**0**
Cumbria & Lancashire	–	–	–	–	**0**
Yorkshire & the Humber	–	–	1	–	**1**
South of England					
Devon, Cornwall & Somerset	–	–	–	–	**0**
Avon, Gloucestershire & Wiltshire	–	2	–	–	**2**
Wessex	–	–	1	–	**1**
Thames Valley	–	2	–	–	**2**
Sussex, Surrey & Kent	–	1	–	–	**1**
Midlands & East of England					
East Midlands	–	–	1	–	**1**
South Midlands & Hertfordshire	–	–	–	–	**0**
Anglia & Essex	–	–	1	–	**1**
West Midlands	–	2	1	–	**3**
London Integrated Region					
London	–	–	1	–	**1**
Public Health Wales					
Mid & West Wales	–	–	–	–	**0**
North Wales	–	–	–	–	**0**
South East Wales	–	2	–	–	**2**
Miscellaneous					
Other	–	–	–	–	**0**
Not known	–	–	–	–	**0**
Total	0	**9**	**7**	**1**	**17**

Infection reports / Respiratory 2

Volume 9 Number 4 Published on: 6 February 2015

Laboratory reports of respiratory infections made to the CIDSC from PHE and NHS laboratories in England and Wales: weeks 2-5/2015

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 2	Week 3	Week 4	Week 5	Total
Week ending	**11/1/15**	**18/1/15**	**25/1/15**	**1/2/15**	
Influenza A	**847**	**581**	**507**	**606**	**2541**
Isolation	96	53	45	44	**238**
DIF *	1	1	–	–	**2**
PCR	666	396	362	430	**1854**
Other †	84	131	100	132	**447**
Influenza B	**25**	**17**	**19**	**21**	**82**
Isolation	2	1	2	–	**5**
DIF *	–	–	–	–	**0**
PCR	21	10	13	20	**64**
Other †	2	6	4	1	**13**

* 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 2	Week 3	Week 4	Week 5	Total
Week ending	**11/1/15**	**18/1/15**	**25/1/15**	**1/2/15**	
Adenovirus*	71	64	108	119	**362**
Coronavirus	42	23	45	96	**206**
Parainfluenza†	91	61	50	94	**296**
Rhinovirus	205	138	201	298	**842**
RSV	627	392	459	317	**1795**

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

Table 3. Respiratory viral detections by age group: weeks 2-5/2015

Age group (years)	<1 year	1-4 years	5-14 years	15-44 years	45-64 years	≥65 years	Un-known	Total
Adenovirus *	92	93	25	85	46	21	–	**362**
Coronavirus	64	39	10	28	23	41	1	**206**
Influenza A	142	134	122	611	578	1304	4	**2895**
Influenza B	3	1	8	21	27	29	–	**89**
Parainfluenza †	63	57	14	20	48	92	2	**296**
Respiratory syncytial virus	1036	182	37	94	151	288	8	**1796**
Rhinovirus	308	136	50	103	103	141	1	**842**

* 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 2	Week 3	Week 4	Week 5	Total
Week ending	**11/1/15**	**18/1/15**	**25/1/15**	**1/2/15**	
Coxiella burnettii	–	–	–	–	**0**
Respiratory *Chlamydia* sp.*	1	2	–	–	**3**
Mycoplasma pneumoniae	26	18	22	6	**72**
Legionella sp.	5	5	5	–	**15**

* 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 2	Week 3	Week 4	Week 5	Total
Week ending	**11/1/15**	**18/1/15**	**25/1/15**	**1/2/15**	
Nosocomial	1	–	–	–	**1**
Community	3 (1*)	4 (1*)	2 (2*)	–	**9**
Travel Abroad	1	1 (1*)	2 (1*)	–	**4**
Travel UK	–	–	1 (1*)	–	**1**
Total	**5**	**5**	**5**	**–**	**15**
Male	4	4	3	–	**11**
Female	1	1	2	–	**4**

* Cases with onset of symptoms in 2015.

Fifteen cases were reported with pneumonia. Eleven males aged 43 to 91 years and four females aged 54 to 67 years. Nine cases had community-acquired infection and one case was reported to be associated with hospital infection. Three deaths were reported in a 63-year-old female and two males aged 72 and 76 years.

Five cases were reported with travel association: Canada (1), China (1), Thailand (1), Turkey (1) and United Kingdom (1).

Table 6. Reports of Legionnaires Disease cases in England and Wales, by PHE Centre: weeks 2-5/2015

Region/Country	Nosocomial	Community	Travel Abroad	Travel UK	Total
North of England					
North East	–	–	–	–	**0**
Cheshire & Merseyside	–	–	–	–	**0**
Greater Manchester	–	–	1 (1*)	–	**1**
Cumbria & Lancashire	–	–	1	–	**1**
Yorkshire & the Humber	–	–	–	–	**0**
South of England					
Devon, Cornwall & Somerset	–	–	1	–	**1**
Avon, Gloucestershire & Wiltshire	–	–	–	–	**0**
Wessex	–	–	–	–	**0**
Thames Valley	–	–	–	–	**0**
Sussex, Surrey & Kent	–	1 (1*)	–	–	**1**
Midlands & East of England					
East Midlands	–	–	–	1 (1*)	**1**
South Midlands & Hertfordshire	–	–	–	–	**0**
Anglia & Essex	–	2 (2*)	–	–	**2**
West Midlands	–	–	1 (1*)	–	**1**
London Integrated Region					
London	1	2 (2*)	–	–	**3**
Public Health Wales					
Mid & West Wales	–	1	–	–	**1**
North Wales	–	–	–	–	**0**
South East Wales	–	3	–	–	**3**
Miscellaneous					
Other	–	–	–	–	**0**
Not known	–	–	–	–	**0**
Total	–	**1**	**9**	**4**	**15**

* Cases with onset of symptoms in 2015.