Public Health England

Common animal associated infections quarterly report (England and Wales): third quarter 2017

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This quarterly report, produced by the Emerging Infections and Zoonoses Section at Public Health England Centre for Infectious Disease Surveillance and Control, and the Health Protection Division of Public Health Wales, summarises confirmed cases of zoonoses reported in England and Wales between July and September 2017 (third quarter; weeks 27-39). This report includes additional information on the quarterly trends for hepatitis E, leptospirosis, and Lyme disease. Table 1 shows the overall case numbers for zoonoses covered in this report.

Table 1. Animal associated infections in England and Wales: laboratory reports by specimen date, Q1 - Q3 (weeks 01-39/2017)

Disease (Organism)	Reports for weeks 01-13		Reports for weeks 14-26		Reports for weeks 27-39		Cumulative total for weeks 01-39	
	2017*	2016	2017*	2016	2017*	2016	2017*	2016
Anthrax (*Bacillus anthracis*)	0	0	0	0	0	0	0	0
Brucellosis (*Brucella spp.*)	2	2	3	7	0	4	5	13
Hepatitis E	227	347	238	368	216	307	681	1022
Hydatid (*Echinococcus granulosus*)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Leptospirosis (*Leptospira spp.*)	9	3	13	17	40	35	62	55
Lyme borreliosis (*Borrelia burgdorferi*)								
All cases	200	133	283	170	688	584	1171	867
Acute infections	138	63	202	126	591	483	931	672
Pasteurellosis (*Pasteurella spp.*)	177	110	193	166	208	169	578	445
Psittacosis (*Chlamydophila psittaci)*	N/A	4	N/A	6	N/A	4	N/A	14
Q-fever (*Coxiella burnetii*)	3	6	2	11	6	11	11	28
Toxoplasmosis† (*Toxoplasma gondii*)	83	63	58	96	62	84	203	243

* Provisional data. † Based on date specimen received.

Hydatid data not available due to inconsistencies in surveillance data provided to PHE; these are currently being addressed. Psittacosis data for 2017 not available due to an ongoing laboratory reporting issue that is being investigated.

Hepatitis E (data from SGSS, Public Health Laboratory Birmingham and Blood Borne Virus Unit Colindale)

The hepatitis E surveillance reports reference laboratory data together with additional cases reported by local laboratories through the Second Generation Surveillance System (SGSS)[1]. The combined datasets provide a more accurate reflection of the number of HEV infected cases reported in England and Wales.

There were 216 cases of hepatitis E in the third quarter of 2017 compared to 307 in the same quarter of 2016. One hundred and twenty-three cases (57%) were male (aged 14-97 years, median 60) and 90 (42%) were female (aged 9-97 years, median 59). The gender was unknown for three cases (see table below). The persisting observation of the predominance of older men remains unexplained.

The majority of cases (n=181; 84%) had no apparent travel history. Non-travel cases were reported from all regions.

Table 2. Reference and local laboratory confirmed cases of hepatitis E infection (Q3 weeks 27-39, 2017)

Age Group	Male	Female	Unknown	Total
<15	1	2	0	3
15-24	4	3	1	8
25-44	25	20	1	46
45-64	48	23	0	71
>64	45	42	1	88
Total	**123**	**90**	**3**	**216**

The total number of cases (n=681) for weeks 01-39 shows a decrease in newly diagnosed cases. Between 2010 and 2016[2], there was an increasing trend in the number of cases of hepatitis E reported by local and reference laboratories. However, a small decrease in the number of newly diagnosed cases was observed in the last quarter of 2016 and this downward trend has so far continued through 2017. Interestingly other European countries, notably the Netherlands and the Republic of Ireland, have observed similar decreases in the numbers of acute hepatitis E cases detected through their national surveillance.

Leptospirosis (data from the National Leptospirosis Service)

There were 40 confirmed cases of leptospirosis reported in the third quarter of 2017, compared with 35 during the third quarter of 2016. Thirty-two of the cases were male (aged 10-67 years, median 36.5 years) and eight were female (aged 16-61, median 20 years). Cases were reported from the following regions: London (7 cases), North West (7 cases), East of England (6 cases), South East (6 cases), South West (4 cases), West Midlands (3 cases), Yorkshire and the Humber (3 cases), North East (2 cases), Wales (2 cases), and one case from the East Midlands.

Seven cases reported exposure to rats; all were occupationally exposed with two farm workers, three sewage workers and two with unspecified roles involving exposure to rats. One case was a farmer who reported recently cleaning out a shed infested with rats. The three sewage workers also reported water exposure.

Twenty cases reported travelling abroad. Eight cases had visited countries in South East Asia; with six reporting travel to Thailand. Four cases had travelled to countries in South and Central America. Three cases had travelled to South Asia, one case travelled to South Asia and South East Asia, two cases to Africa and one to Europe. For one case travel abroad was indicated but no region or country was specified.

Water exposure outside the UK was reported by nine cases; all had been exposed while undertaking fresh water activities, such as swimming, fishing, rafting or canoeing.

The pilot enhanced surveillance system for leptospirosis has been extended to the end of December 2017.

Lyme disease (data from the Rare and Imported Pathogens Laboratory, Porton)

An increase in laboratory confirmed Lyme disease cases has been noted in 2017 compared with the same period in 2016. It is likely that this is related to weather patterns affecting tick numbers, increased awareness in healthcare professionals and the public, and increased demand for Lyme disease testing. However PHE is keen to better understand this increase in cases and is currently investigating options to improve our knowledge of the epidemiology of Lyme disease in the UK.

A total of 688 cases of laboratory confirmed Lyme disease was reported during the third quarter of 2017, compared with 584 cases reported in the same quarter of 2016. Of the

2017 cases, 591 were acute (including 34 with neuroborreliosis) and 97 were longstanding.

Of the acute cases, 287 were male (aged 5-84 years, median 63) and 304 were female (aged 0-87 years, median 51). Age was not reported for four cases.

Forty-five (8%) of the acute cases reported foreign travel: 30 to Europe, two to Africa, five to North America, two to Asia, and one case travelled to Asia, America and Europe. Seven acute cases had an unspecified travel history.

Table 3. Laboratory confirmed acute cases of Lyme disease, by age and sex (Q3 weeks 27-39, 2017)

Age Group	Male	Female	Total
0-14	21	28	49
15-24	12	20	32
25-34	42	33	75
35-44	55	42	97
45-54	46	52	98
55-64	48	60	108
65-74	50	48	98
75+	12	18	30
N/K	1	3	4
Total	**287**	**304**	**591**

Table 4. Laboratory confirmed acute cases of Lyme disease, by region (Q3 weeks 27-39, 2017)

PHE Centre	Cases
East Midlands	8
East of England	29
London	115
North East	7
North West	39
South East	188
South West	151
Wales	9
West Midlands	22
Yorkshire and Humber	23
Total	**591**

Note: Specimens sent for Lyme borreliosis referral testing should be accompanied by a completed referral form: https://www.gov.uk/lyme-borreliosis-service

Other zoonotic organisms

Other zoonotic infections of interest diagnosed in the third quarter of 2017 were as follows:

- Eight cases of *Capnocytophaga* sp. were reported; of which six were bacteraemic with an age range of 5-90 years old. One bacteraemic case was identified as *C. ochracea* and the other five were not speciated. The cases were geographically distributed across England.
- Three cases of *Erysipelothrix rhusiopathiae* were reported. All cases were female and were reported from the London (1), the South East (1) and West Midlands (1), of which two cases had a bacteraemic infection.
- Two cases of *Corynebacterium ulcerans* were reported, one of which was toxigenic from a throat sample in a paediatric case from Yorkshire and the Humber.
- One case of *Mycobacterium marinum* was reported from a paediatric case in the North East.

References

1. Oeser *et al* (2017) Using data linkage to improve surveillance methods for acute hepatitis E infections in England and Wales 2010-2016. *Epidemiol Infect* 45(14):2886-2889. Doi: 10.1017/S0950268817002047
2. https://www.gov.uk/government/publications/hepatitis-e-symptoms-transmission-prevention-treatment/hepatitis-e-symptoms-transmission-treatment-and-prevention

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About *Health Protection Report*

Health Protection Report is a national public health bulletin for England and Wales, published by Public Health England. It is PHE's principal channel for the dissemination of laboratory data relating to pathogens and infections/communicable diseases of public health significance and of reports on outbreaks, incidents and ongoing investigations.

Public Health England, Wellington House, 133-155 Waterloo Road, London SE1 8UG
Tel: 020 7654 8000 www.gov.uk/phe
Twitter: @PHE_uk Facebook: www.facebook.com/PublicHealthEngland

Queries relating to this document should be directed to:
Emerging Infections and Zoonoses Department,
National Infection Service, PHE Colindale,
61 Colindale Avenue, London NW9 5EQ.
zoonoses@phe.gov.uk

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