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Common animal associated infections quarterly report (England and Wales): fourth 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 October and December 2017 (fourth quarter; weeks 40-52). 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 – Q4 (weeks 01-52/2017)

Disease (Organism)	Number of Reports								Total for weeks 01-52	
	weeks 01-13		weeks 14-26		weeks 27-39		weeks 40-52		2017*	2016
	2017*	2016	2017*	2016	2017*	2016	2017*	2016		
Anthrax (<i>Bacillus anthracis</i>)	0	0	0	0	0	0	0	0	0	0
Brucellosis (<i>Brucella spp.</i>)	2	2	3	7	0	4	0	4	5	17
Hepatitis E	227	347	241	368	229	307	206	221	903	1243
Hydatid (<i>Echinococcus granulosus</i>)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Leptospirosis (<i>Leptospira spp.</i>)	10	3	14	17	32	35	31	17	87	72
Lyme borreliosis (<i>Borrelia burgdorferi</i>)										
All cases	200	113	283	170	692	584	359	267	1534	1134
Acute infections	138	63	202	126	592	483	243	213	1175	885
Pasteurellosis (<i>Pasteurella spp.</i>)	177	110	193	166	208	169	161	161	739	606
Psittacosis (<i>Chlamydophila psittaci</i>)	N/A	4	N/A	6	N/A	4	N/A	3	N/A	17
Q-fever (<i>Coxiella burnetii</i>)	3	6	2	11	6	11	8	5	19	33
Toxoplasmosis [†] (<i>Toxoplasma gondii</i>)	84	63	63	96	60	84	55	92	262	335

* 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 206 cases of hepatitis E in the fourth quarter of 2017 compared to 221 in the same quarter of 2016. One hundred and thirty-one cases (64%) were male (aged 13-88 years, median 53) and 75 (46%) were female (aged 10-90 years, median 58). The age was not known for one female case (see table below). The persisting observation of the predominance of older men remains unexplained.

The majority of cases (n=155; 75%) 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 (Q4 weeks 40-52, 2017)

Age Group	Male	Female	Unknown	Total
<15	0	1	0	1
15-24	5	1	0	6
25-44	36	10	0	46
45-64	50	37	0	87
>64	40	25	0	65
Unknown	0	1	0	1
Total	131	75	0	206

The total number of newly diagnoses cases of hepatitis E (n=903) in 2017 compares to 1243 cases in 2016 and continues the downward trend observed in the last two years. Previously, between 2010 and 2016², there was an increasing trend in the number of cases of hepatitis E reported by local and reference laboratories.

Leptospirosis (data from the National Leptospirosis Service)

There were 32 confirmed cases of leptospirosis reported in the fourth quarter of 2017, which is almost double the number of cases (n=17) reported during the fourth quarter of 2016. This increase is partly explained due to a cluster of cases in the North of England. The total number of cases overall in 2017 was only 20% higher at 88 cases versus 72 cases in 2016.

Twenty-eight of the cases were male (aged 12-82 years, median 50 years) and 4 were female (aged 42-69, median 51 years). Cases were reported from the following regions: London (1 case), North West (4 cases), East of England (1 case), South East (5 cases), South West (6 cases), West Midlands (3 cases), Yorkshire and the Humber (4 cases), North East (3 cases), Wales (4 cases), and 1 case from the East Midlands.

One case reported occupational exposure to rats on a farm.

Four cases reported travelling abroad. One case visited the Maldives, one case reported travel to the Caribbean and the U.S., one case travelled to Central America and one case visited Thailand.

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

The pilot enhanced surveillance system for leptospirosis ended in 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 2016. It is likely that this is related to increased awareness of the potential for Lyme disease (both in the UK and while travelling abroad) by healthcare professionals and the public, and therefore heightened requests for testing of Lyme disease. 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 359 cases of laboratory confirmed Lyme disease were reported during the fourth quarter of 2017, compared with 267 cases reported in the same quarter of 2016. Of the 2017 cases, 243 were acute (including 17 with neuroborreliosis) and 116 were longstanding.

Of the acute cases, 120 were male (aged 2-85 years, median 44) and 118 were female (aged 3-80 years, median 45). Age was not reported for five cases.

Nineteen (8%) of the acute cases reported foreign travel: 13 to Europe, 3 to North America, 1 to Asia, and 1 case travelled to the Middle East. One acute case had an unspecified travel history.

Table 3. Laboratory confirmed acute cases of Lyme disease, by age and sex (Q4 weeks 40-52, 2017)

Age Group	Male	Female	Unknown	Total
0-14	15	6	2	23
15-24	9	13	1	23
25-34	11	19	0	30
35-44	26	16	1	43
45-54	22	23	0	45
55-64	19	18	0	37
65-74	12	18	0	30
75+	6	5	1	12
N/K	0	0	0	0
Total	120	118	5	243

Table 4. Laboratory confirmed acute cases of Lyme disease, by region (Q4 weeks 40-52, 2017)

PHE Centre	Cases
East Midlands	4
East of England	15
London	69
North East	3
North West	24
South East	63
South West	38
Wales	4
West Midlands	14
Yorkshire and Humber	9
Total	243

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 fourth quarter of 2017 were as follows:

- Six cases of *Erysipelothrix rhusiopathiae* were reported. Four cases were male and two cases were female. The cases were reported from the South East (2), the North East (2) the South West (1) and Yorkshire and Humber (1), of which two cases had a bacteraemic infection.
- Four cases of bacteraemic *Capnocytophaga* sp. were reported with an age range of 41-62 years old. Two of the cases were identified as *C. canimorsus* and the remaining two were not speciated. Three of the cases were in the South of England and one case was from Wales.
- Four cases of *Mycobacterium marinum* were reported in three females and one male, with an age-range of 53-79 years, geographically spread across England.
- One case of non-toxigenic *Corynebacterium ulcerans* was reported from an adult male from the South 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.
2. <https://www.gov.uk/government/publications/hepatitis-e-symptoms-transmission-prevention-treatment/hepatitis-e-symptoms-transmission-treatment-and-prevention>

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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.

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