Public Health England

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Common animal-associated infections quarterly report (England and Wales): third quarter 2019

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This quarterly report is produced by the Emerging Infections and Zoonoses team at the National Infection Service, Public Health England. The report summarises confirmed cases of zoonoses reported in England and Wales between July and September 2019 (third quarter; weeks 27-39) and includes additional information on the quarterly trends for hepatitis E, leptospirosis and Lyme disease. The rolling year total of case numbers for zoonoses covered in this report are shown Table 1.

Table 1. Animal associated infections in England and Wales: rolling four-quarter laboratory reports by specimen date, Q4 2018 – Q3 2019 (weeks 40/2018-39/2019) compared to the previous year

Disease (Organism)	Number of Reports								Total for weeks 27(2018)-26(2019)	
	weeks 40-52		weeks 01-13		weeks 14-26		weeks 27-39			
	2018	2017	2019	2018	2019	2018	2019	2018	2018/9*	2017/8
Anthrax (*Bacillus anthracis*)	0	0	0	0	0	0	0	0	0	0
Brucellosis (*Brucella spp.*)	8	0	7ϕ	0	4	0	5	4	24ϕ	4
Hepatitis E	256	213	349	273	326	255	297	210	1228	951
Leptospirosis (*Leptospira spp.*)	20	31	12	8	5	5	36	39	73	83
Lyme disease (*Borrelia burgdorferi*)										
All cases	387	362	189	135	298	298	719	821	1593	1616
Acute infections	246	246	89	66	173	190	427	632	912	1134
Pasteurellosis ◊ (*Pasteurella spp.*)	160	164	173	178	172	157	214	207	719	706
Q-fever (*Coxiella burnetii*)										
All cases	5	7	4	5	6	9	2	5	17	26
Acute infections	3	3	2	4	5	7	1	5	11	19
Toxoplasmosis† (*Toxoplasma gondii*)	90	55	75	79	50	105	48	84	263	323

***** Provisional data.

† Based on date specimen received.

ϕ Serology results, in addition to culture results, introduced in Q1 2019, accessible here: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/809141/hpr2019_zoosQ1.pdf

Note: Hydatid data not available due to inconsistencies in surveillance data provided to PHE; these are currently being addressed. Psittacosis data is not available due to a laboratory reporting issue which is being addressed.

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

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

There were 297 cases of hepatitis E in the third quarter of 2019 compared to 210 in the same quarter of 2018. Of those, 181 (61%) were male (aged 0-93 years, median age 57) and 116 (39%) were female (aged 16-88 years, median age 56). Gender was recorded for all cases. The persisting observation of the predominance of older men remains unexplained (see Table 2).

Table 2. Reference and local laboratory confirmed cases of hepatitis E infection (Q3 weeks 27-39, 2019)

Age Group	Male	Female	Total
Not recorded	0	0	0
<15	3	0	3
15-24	2	7	9
25-44	39	29	68
45-64	72	43	115
>64	65	37	102
Total	**181**	**116**	**297**

The data suggests an increasing trend this year (972 cases reported between January – September 2019) compared to the same period in 2018 (738 cases).

Leptospirosis (data from the National Leptospirosis Service)

There were 36 confirmed cases of leptospirosis reported in the third quarter of 2019, which is similar to the 39 cases reported in the third quarter of 2018.

The majority (n=33; 92%) of cases were male (aged 8-78 years) and 3 (8%) cases were female (aged 22-24 years). Cases were evenly distributed across the nine English regions and Wales, except for the North East where no cases were reported.

Sixteen (44%) of the cases reported recent travel abroad, with half (n=8) reporting travel to South East Asia (including Singapore, Indonesia, Malaysia, Thailand, Laos and Vietnam); four travelled to central and south America and three travelled to Europe (France, Greece and the Canary Islands). Of the travel related cases, four reported freshwater contact, either through swimming or fishing. Of the 20 cases that did not report travel abroad, three cases had water exposure: one case fell into stagnant canal water, one case had occupational exposure to sewage water (also exposed to rats), one case was a kayaker. Two cases had occupational exposure to animals through farm and large animal veterinary work. For the remaining 15 cases, exposures were not reported.

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

A total of 719 cases of laboratory confirmed Lyme disease were reported during the third quarter of 2019, which is lower than the 821 reported for the third quarter of 2018. Of these cases, 427 were acute (including 34 with neurological Lyme disease) and 292 were longstanding.

Of the acute cases, 242 (57%) were male (aged 3-87 years, median age 49) and 185 (43%) were female (aged 3-94 years, median age 52). Table 3 shows the age group and gender distribution, and Table 4 shows the distribution by region. The majority of cases (358, 84%) were reported from the south of England. Twenty-one of the acute cases (5%) reported foreign travel; nine of these cases reported travel to Europe, three reported travel to North America, two travelled to the Middle East and the rest of the cases did not report their destination.

Table 3. Laboratory confirmed acute cases of Lyme disease, by age and sex (Q3 weeks 27-39, 2019)

Age Group	Male	Female	Total
0-14	23	16	39
15-24	18	8	26
25-34	27	16	43
35-44	33	27	60
45-54	43	35	78
55-64	50	35	85
65-74	32	39	71
75+	15	9	24
Unknown	1	0	1
Total	**242**	**185**	**427**

Table 4. Laboratory confirmed acute cases of Lyme disease, by region (Q3 weeks 27-39, 2019)

PHE Centre	Cases
East Midlands	9
East of England	21
London	93
North East	7
North West	32
South East	133
South West	99
Wales	12
West Midlands	6
Yorkshire and Humber	15
Total	**427**

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

Other zoonotic organisms reported in Q3 2019

- One case of West Nile virus was reported in August from a patient with recent travel abroad to Eastern Europe
- There were 37 cases of *Capnocytophaga* spp. reported, of which 21 were speciated to *C. canimorsus*. The age of cases ranged between 18-92 years (median age 67 years); 21 were male and 16 were female. The cases were geographically spread across England. No cases reported recent travel abroad. Capnocytophaga bacteria are common in the oral microflora of humans, dogs and cats; they can be spread to people through a bite or after close contact with dogs or cats
- There was one report of a female case with toxogenic *Corynebacterium ulcerans* identified from a leg wound. The case reported contact with pet dogs, but the source of infection could not be confirmed in this instance
- Two cases of *Toxocara* spp. were reported in two male paediatric cases from two different regions in England
- Two cases of *Streptobacillus moniliformis* (rat bite fever) were reported in two male patients from the North East and the West Midlands
- Three cases of *Erysipelothrix rhusiopathiae* were reported, all cases were male aged >65 years
- One case of *Mycobacterium marinum* was reported in a male patient.

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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.

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