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# **Common animal associated infections quarterly report (England and Wales): first quarter 2019**

Health Protection Report

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# Common animal-associated infections (England and Wales): first quarter 2019

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 January and March 2019 (first quarter; weeks 1-13) and includes additional information on the quarterly trends for brucellosis, 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, Q2 2018 – Q1 2019 (weeks 14/2018-13/2019) compared to the previous year**

Disease (Organism)	Number of Reports								Total for weeks 14(2018)-13(2019)	
	weeks 14-26		weeks 27-39		weeks 40-52		weeks 01-13		2018/9*	2017/8
	2018	2017	2018	2017	2018	2017	2019	2018		
Anthrax ( <i>Bacillus anthracis</i> )	0	0	0	0	0	0	0	0	0	0
Brucellosis ( <i>Brucella spp.</i> )	0	3	4	0	8	0	7 <sup>‡</sup>	0	19	3
Hepatitis E	255	241	210	229	256	213	354	273	1075	956
Leptospirosis ( <i>Leptospira spp.</i> )	5	14	39	32	20	31	12	8	76	85
Lyme disease ( <i>Borrelia burgdorferi</i> )										
All cases	298	293	821	724	387	362	189	135	1695	1514
Acute infections	190	209	632	621	246	246	89	66	1157	1142
Pasteurellosis <sup>‡</sup> ( <i>Pasteurella spp.</i> )	157 <sup>‡</sup>	193	207	208	160	164	173	178	697	743
Q-fever ( <i>Coxiella burnetii</i> )										
All cases	9	2	5	6	5	7	4	5	23	20
Acute infections	7	0	5	6	3	3	2	4	17	13
Toxoplasmosis <sup>†</sup> ( <i>Toxoplasma gondii</i> )	105	63	84	60	90	55	75	79	348	257

Provisional data.

<sup>†</sup> Based on date specimen received.

<sup>‡</sup> *P. Dagmatis* and *P. Stomatidis* added into the query from 2018 onwards (five *P. Dagmatis* and two *P. stomatidis* cases in Q1 2019).

<sup>‡</sup> Addition of serology results, in addition to culture results, introduced in Q1 2019

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.

## **Brucellosis (data from SGSS submitted by the Brucella Reference Unit, Liverpool and the Animal and Plant Health Agency)**

Brucellosis is a rare disease in the UK as it is a non-endemic country. Typically, most patients will have been exposed to infection in a Mediterranean or Middle Eastern country, but the range of countries with risk is changing. A detailed travel history is vital.

Culture confirmation for brucellosis is carried out at the OIE/FAO Reference Laboratory for Brucellosis at the Animal and Plant Health Agency (APHA) and the Brucella Reference Unit (BRU) in Liverpool provides a serology and molecular diagnostic service. As not all patients with brucellosis necessarily have a positive culture result and to enhance brucellosis surveillance, reports from the first quarter of 2019 onwards will combine laboratory confirmed cases diagnosed by serology and molecular methods by BRU and cases confirmed by culture from APHA. Prior to this, only culture positive results from APHA were reported. Serology positive cases will be reported either according to the established CDC criteria for presumptive/definitive brucellosis with appropriate epidemiology, or positive serology with a positive Brucella PCR. For further information on BRU laboratory and clinical services, please visit <https://www.gov.uk/guidance/bru-reference-services>.

There were four cases diagnosed by serology and three culture confirmed cases of brucellosis in the first quarter of 2019. There have been 19 confirmed cases of brucellosis reported the rolling year (week 14 2018-week 13 2019) compared to the same period in 2017/18 (3 cases reported). The noted increase is most likely due to the additional serology cases being reported.

## **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)<sup>1</sup>. The combined datasets provide a more accurate reflection of the number of HEV infected cases reported in England and Wales.

There were 354 cases of hepatitis E in the first quarter of 2019 compared to 273 in the same quarter of 2018. Two-hundred and twenty-three (63%) were male (aged 9-94 years,

median age 58) and 127 (36%) were female (aged 0-93 years, median age 58). Gender was not recorded for four cases. The persisting observation of the predominance of older men remains unexplained (see Table 2).

The continued increasing trend is in line with cases reported since 2010<sup>2</sup>.

**Table 2. Reference and local laboratory confirmed cases of hepatitis E infection (Q1 weeks 01-13, 2019)**

Age Group	Male	Female	Unknown	Total
Not recorded	0	0	0	0
<15	1	1	0	2
15-24	10	8	0	18
25-44	36	37	3	63
45-64	89	32	1	122
>64	87	49	0	136
<b>Total</b>	<b>223</b>	<b>127</b>	<b>4</b>	<b>354</b>

### **Leptospirosis** (data from the National Leptospirosis Service)

There were 12 confirmed cases of leptospirosis reported in the first quarter of 2019, compared with eight during the first quarter of 2018.

Nine of the cases were male (aged 23-66 years, median age 41), three were female (aged 18-55 years, median age 28). The region reporting the highest number of cases was the South West (3 cases), followed by the East of England (2 cases), London (2 cases) and North West (2 cases).

Six of the cases reported recent travel abroad with four of the cases having travelled to South-East Asia (three to Indonesia) and two of the cases to the Caribbean. Of the travel related cases, two reported fresh water activities in South-East Asia. Of those cases which did not report travel abroad, one case had fresh water exposure as a kayaker and one case had potential occupational exposure as a farmer.

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

A total of 189 cases of laboratory confirmed Lyme disease were reported during the first quarter of 2019, compared with 135 cases reported in the first quarter of 2018. Of these cases, 89 were acute (including 14 with neurological Lyme disease) and 100 were longstanding.

Of the acute cases, 47 were male (aged 7-78 years, median age 50) and 42 were female (aged 3-78 years, median age 41). Table 3 shows the age group and gender distribution, and Table 4 shows the distribution by region. Four of the acute cases (4.5%) reported foreign travel: 2 to Africa, 1 to the Caribbean, and 1 to Eastern Europe.

**Table 3. Laboratory confirmed acute cases of Lyme disease, by age and sex (Q1 weeks 01-13, 2019)**

Age Group	Male	Female	Unknown	Total
0-14	2	3	0	5
15-24	6	2	0	8
25-34	4	7	0	11
35-44	9	9	0	18
45-54	8	4	0	12
55-64	13	7	0	20
65-74	4	7	0	11
75+	1	3	0	4
Unknown	0	0	0	0
<b>Total</b>	<b>47</b>	<b>42</b>	<b>0</b>	<b>89</b>

**Table 4. Laboratory confirmed acute cases of Lyme disease, by region (Q1 weeks 01-13, 2019)**

PHE Centre	Cases
East Midlands	3
East of England	10
London	19
North East	2
North West	13
South East	17
South West	16
Wales	2
West Midlands	4
Yorkshire and Humber	3
<b>Total</b>	<b>89</b>

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 Q1 2019

- In Q1 2019, 13 cases of *Capnocytophaga* sp. were reported of which 10 cases were speciated to *C. canimorsus*. Seven of the cases were male (aged 39 to 79, median age 66) and 6 cases were female (aged 54 to 87, median age 65). Cases were reported from North East (4), South East (2), East of England (1), London (1), North West (1), West Midlands (1), Yorkshire and the Humber (1), East Midlands (1), South West (1). Ten of the cases were reported as having bacteraemia.
- Two cases of *Erysipelothrix rhusiopathiae* (insidiosa) were reported in Q1 2019. The cases occurred in the West Midlands (1) and London (1).
- In Q1 2019, thirteen cases of *Mycobacterium marinum* were reported from the South West (4), Yorkshire and the Humber (3), East Midlands (2), West Midlands (2), London (1) and the South East (1).
- One case of toxigenic *Corynebacterium ulcerans* was reported in Q1 2019.
- In January, one case of Hantavirus was reported from South Wales in a rat farm worker.

## 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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