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Common animal associated infections quarterly report (England and Wales): third quarter 2018

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Common animal associated infections (England and Wales): third quarter 2018

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 2018 (third quarter; weeks 27-39) and includes additional information on the quarterly trends for hepatitis E, leptospirosis, and Lyme disease. Overall case numbers (rolling four-quarters of data) 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 2017 - Q3 2018 (weeks 40-52/2017 to 01-39/2018) compared to the previous year

Disease (Organism)	Number of Reports								Total for weeks 40-39	
	weeks 40-52		weeks 01-13		weeks 14-26		weeks 27-39		2017/8*	2016/7
	2017	2016	2018	2017	2018	2017	2018*	2017		
Anthrax (<i>Bacillus anthracis</i>)	0	0	0	0	0	0	0	0	0	0
Brucellosis (<i>Brucella spp.</i>)	0	4	0	2	0	3	4	0	4	9
Hepatitis E	206	221	280	227	259	241	218	216	963	905
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>)	31	17	8	10	5	14	39	40	83	81
Lyme disease (<i>Borrelia burgdorferi</i>)										
All cases	362	267	133	200	295	293	816	724	1606	1484
Acute infections	246	213	64	138	188	209	629	621	1127	1181
Pasteurellosis [◇] (<i>Pasteurella spp.</i>)	164	161	178	177	157 [◇]	193	207	208	706	739
Psittacosis (<i>Chlamydia psittaci</i>)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Q-fever (<i>Coxiella burnetii</i>)										
All cases	7	4	5	3	9	2	5	6	26	15
Acute infections	3	3	4	3	7	0	5	6	19	12
Toxoplasmosis [†] (<i>Toxoplasma gondii</i>)	55	92	79	84	105	63	84	60	323	299

* Provisional data. † Based on date specimen received. ◇ *P. Dagmatis* and *P. Stomatidis* added into the query from 2018 onwards (accounted for three *P. Dagmatis* cases and six *P. Stomatidis* cases (one dual infection) in Q3 2018). Two further cases of Pasteurellosis were dual infections.

Hydatid data not available due to inconsistencies in surveillance data provided to PHE; these are currently being addressed. Psittacosis data for 2017/18 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 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 218 cases of hepatitis E in the third quarter of 2018 compared to 216 in the same quarter of 2017. One hundred and thirty nine (64%) were male (aged 20-96 years, median 59) and 77 (35%) were female (aged 2-93 years, median 56). Gender was not recorded for two cases. Age was not recorded for another two 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, 2018)

Age Group	Male	Female	Unknown	Total
Not recorded	2	0	0	2
<15	0	1	0	1
15-24	6	1	0	7
25-44	28	23	2	53
45-64	54	25	0	79
>64	49	27	0	76
Total	139	77	2	218

The total number of newly diagnosed cases of hepatitis E in the rolling year from Q4 2017 to Q3 2018 (n=963) compares to 905 cases in the same period in the year before (Q4 2016 – Q3 2017). Previously, between 2010 and 2016 [2], 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 39 confirmed cases of leptospirosis reported in the third quarter of 2018, compared with 40 during the third quarter of 2017.

Twenty eight of the cases were male (aged 17-76 years, median=40.5), ten were female (aged 17-70 years, median=31.5) and one case was of unknown gender (aged 17). The regions reporting the highest number of cases were the South West (7 cases), London and Yorkshire & Humber (6 cases each).

Twenty seven of the cases reported recent travel abroad with the majority of the cases having travelled to South and East Asia (18 cases). Two of the travel-related cases had been swimming with elephants and three reported walking or trekking through forests and jungles. Of 14 cases reporting outdoor water exposure, 11 were travel associated. Other reported exposures for non-travel cases were; two exposed to rats, one with occupational exposure to dead animals and one to working in sewers.

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

A total of 816 cases of laboratory confirmed Lyme disease were reported during the third quarter of 2018, compared with 724 cases reported in the third quarter of 2017. Of these cases, 629 were acute (including 65 with neurological Lyme disease) and 187 were longstanding.

Of the acute cases, 345 were male (aged 2-85 years, median 46) and 275 were female (aged 2-90 years, median 50). Nine cases had no gender specified. Table 3 shows the age group and gender distribution, and table 4 shows the distribution by region.

Of the acute cases 28 (4.45%) reported foreign travel: 24 to Europe, one to North America, one to Asia, one to Latin America and the Caribbean and one reported travel to South Africa, Asia and Europe.

Table 3. Laboratory confirmed acute cases of Lyme disease, by age and sex (Q3 weeks 27-39, 2018)

Age Group	Male	Female	Unknown	Total
0-14	40	17	2	59
15-24	27	17	1	45
25-34	35	30	0	65
35-44	59	32	2	93
45-54	54	46	2	102
55-64	59	55	1	115
65-74	49	56	1	106
75+	22	21	0	43
Unknown	0	1	0	1
Total	345	275	9	629

Table 4. Laboratory confirmed acute cases of Lyme disease, by region (Q3 weeks 27-39, 2018)

PHE Centre	Cases
East Midlands	12
East of England	47
London	92
North East	13
North West	34
South East	197
South West	182
Wales	11
West Midlands	20
Yorkshire and Humber	21
Total	629

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

A **trichinella** cluster was reported from the East of England. There were two related cases of trichinellosis (two adult family members) who reported eating pork imported from Romania. These cases of trichinellosis occurred early in 2018 (Q1) but have not previously been reported.

Other zoonotic infections of interest diagnosed in the third quarter of 2018 were as follows:

- Twenty one cases of ***Capnocytophaga sp.*** were reported of which 11 cases were speciated to *C. canimorsus*. Seven of the cases were male (aged 49-88, median age 57) and fourteen of the cases were female (aged 3-87, median age 58). Cases were reported from South East, (4), West Midlands (4), East of England (4), Yorkshire and Humber (3), North West (2), London (2) and East Midlands (1) and North East (1). Sixteen of the cases reported bacteraemia. Five of the cases reported being bitten by a dog. This is an unusually large number of *Capnocytophaga* cases reported in one quarter and there have been a total of 43 cases in Q1-Q3 of 2018. In comparison there were between 18 and 26 cases reported each year for the last four years.
- There were three cases of **monkeypox** diagnosed in the UK. Two of the cases were individuals who had travelled from Nigeria [3] (one case each in the South West and North West regions). The third case was a UK-resident healthcare worker who had been caring for the NW case. This case represents the first documented case of human-to-human onward transmission of monkeypox outside Africa [4]. Further information and guidance on monkeypox is available at <https://www.gov.uk/guidance/monkeypox>.

- Three cases of ***Erysipelothrix rhusiopathiae*** (*insidiosa*) were reported. One of the cases was an adult male and two cases were adult females. The cases were reported from South East, London and North West (one case each).
- Two cases of ***Streptobacillus moniliformis*** were reported in an adult male from the South East and an adult female and the West Midlands regions
- Two cases of **West Nile virus** were reported in adult males from London. Both cases reported recent travel. One case was a visitor to the UK from the USA and the other case reported recent travel to Nepal.
- One case of **tularemia** was reported in an adult female from the South East. The case reported recent travel to Sweden where cases of *Francisella tularensis* infection is considered to be endemic.
- A case of ***Toxocara canis*** was reported in an adult female from the East Midlands.
- One case of Tick-Borne Encephalitis was reported in an adult male from London. The case reported recent travel to Lithuania where he had exposure to animals and received insect bites while walking in fields.
- One case of ***Mycobacterium marinum*** was reported in 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>
3. *HPR 12*(33): news (14 September). <https://www.gov.uk/government/publications/health-protection-report-volume-12-2018/hpr-volume-12-issue-33-news-14-september>
4. *HPR 12*(37): news (19 October). <https://www.gov.uk/government/publications/health-protection-report-volume-12-2018/hpr-volume-12-issue-37-infection-reports-19-october>.

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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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