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Common animal-associated infections (England and Wales): second quarter 2021

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Background

This quarterly report is produced by the Emerging Infections and Zoonoses team in the Clinical and Emerging Infections Directorate, UK Health Security Agency (UKHSA).

The report summarises confirmed cases of zoonoses reported in England and Wales between April and June 2021 (second quarter) and includes additional information on the quarterly trends for hepatitis E, leptospirosis, and Lyme disease.

The data presented in this report supersedes data in previous reports due to late notifications and de-duplication.

Common animal-associated infections (England and Wales): Q1 2019 to Q2 2021

Table 1. Animal-associated infections in England and Wales: quarterly laboratory reports by specimen date, Q1 2019 to Q2 2021

Disease (organism)	Number of reports												
	2019					2020					2021 ¹		
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total	Q1	Q2	Total
Anthrax (<i>Bacillus anthracis</i>)	0	0	0	0	0	0	0	0	0	0	0	0	0
Brucellosis (<i>Brucella spp.</i>) ³	7	4	5	8	24	1	1	6	1	9	1	3	4
Hepatitis E	345	330	291	240	1,206	278	190	271	198	937	293	262	555
Leptospirosis (<i>Leptospira spp.</i>)	12	5	36	38	91	15	7	22	7	51	8	5	13
Lyme disease (<i>Borrelia burgdorferi</i>)													
All cases	191	318	781	349	1,639	173	188	625	276	1,262	119	225	344
Acute infections	90	187	466	160	903	53	132	468	155	808	59	146	205
Pasteurellosis (<i>Pasteurella spp.</i>)	173	171	214	214	772	175	153	214	190	732	196	258	454
Q-fever (<i>Coxiella burnetii</i>)													
All cases	3	6	2	4	15	7	5	3	2	17	3	2	5
Acute infections	2	5	1	1	9	6	3	3	1	13	2	2	4
Toxoplasmosis (<i>Toxoplasma gondii</i>) ²	75	50	48	57	230	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

¹ Provisional data.

² Based on date specimen received.

³ Serology results, in addition to culture results, introduced in Q1 2019, are [available online](#).

n/a = not available.

Note: Hydatid and Psittacosis data not available due to inconsistencies in surveillance data provided to UKHSA and a laboratory reporting issue, respectively. These are being addressed.

Hepatitis E

The national hepatitis E virus (HEV) surveillance reports reference laboratory data (Public Health Laboratory Birmingham and Blood Borne Virus Unit Colindale) together with additional cases reported by local laboratories through the Second Generation Surveillance System (SGSS). The combined data sets provide a more accurate reflection of the number of acute HEV infected cases reported in England and Wales.

There were 262 laboratory reported cases of HEV infection in the second quarter of 2021 compared to 190 cases in the same quarter of 2020. Of those, 161 (61%) were male (aged 18 to 90 years, median=62) and 101 (39%) were female (aged 20 to 94, median=55; Table 2). The persisting observation of the predominance of older men remains unexplained.

Table 2. Laboratory confirmed cases of hepatitis E by age group and sex Q2 2021

Age group	Male	Female	Total
Under 15	0	0	0
15 to 24	1	1	2
25 to 44	17	30	47
45 to 64	69	36	105
Over 64	74	34	108
Total	161	101	262

Figure 1 shows the number of HEV infections by quarter between 2017 and 2021. The data shows a peak in cases in 2019 (n=1,206) followed by a decrease in 2020 (n=937).

Figure 1. Laboratory confirmed cases of hepatitis E by quarter, Q1 2017 to Q2 2021

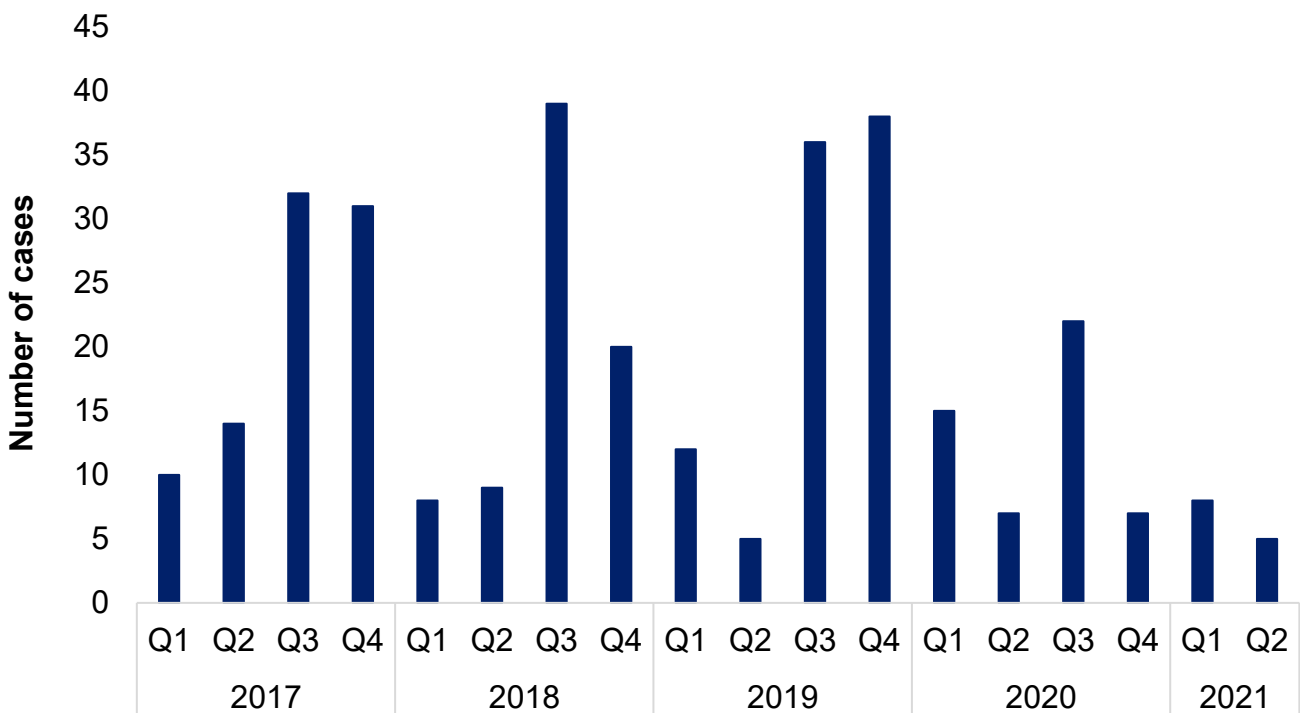


Leptospirosis

Data for leptospirosis was obtained from the Rare and Imported Pathogens Laboratory (RIPL, PHE Porton). As of 01 August 2020, a laboratory confirmed case of leptospirosis is defined by a positive 16SrRNA PCR result only. An IgM enzyme-linked immunoabsorbent assay (EIA) continues to be performed on all samples of suspected leptospirosis cases. A case with a positive leptospirosis IgM result will usually be treated clinically on the basis of this result, even in the absence of a positive PCR result. A case with a positive IgM but without a confirmatory PCR result is therefore reported as a probable case for surveillance purposes.

There were 5 confirmed cases of leptospirosis reported in the second quarter of 2021, compared to 7 cases reported in the second quarter of 2020. Figure 2 shows the number of confirmed cases reported by quarter over the past 5 years (2017 to 2021). There were 13 probable cases reported in the second quarter of 2021.

Figure 2. Laboratory confirmed cases of leptospirosis by quarter, Q1 2017 to Q2 2021



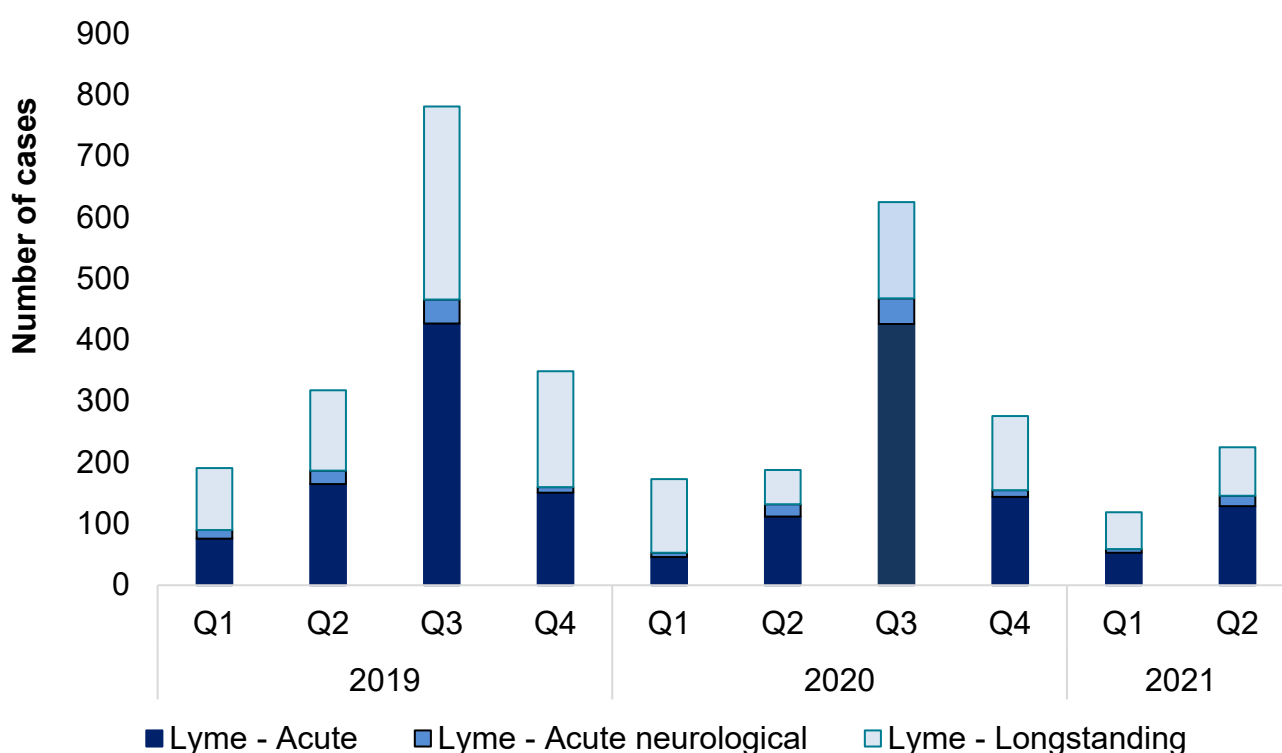
In the second quarter of 2021, most confirmed cases (4 out of 5; 80%) were male (aged 10 to 42 years) and one case was female (aged 51 years). Cases were reported in London (1), the North West (1), the South West (2) and Yorkshire and the Humber (1). No cases were reported in Wales.

No cases reported recent travel abroad, and details on possible exposures were unavailable for all of these cases.

Lyme disease

Data for Lyme disease was obtained from the Rare and Imported Pathogens Laboratory (RIPL, UKHSA Porton). The total number of confirmed Lyme disease cases reported in the second quarter of 2021 (n=225) was higher than in the same period in 2020 (n=188). The number of acute cases remained similar to the same time period in 2020 (Q2 2020: 132; Q2 2021: 146). As shown in Figure 3, the number of cases peaked during the summer months (third quarter), which corresponds to the peak times of exposures to ticks in the UK in the spring and summer months.

Figure 3. Laboratory confirmed cases of Lyme disease by quarter, Q1 2019 to Q2 2021



Of the total cases, 146 (65%) were acute (including 17 with neurological Lyme disease) and 79 (35%) were longstanding. Of the acute cases, 70 were male (aged 2 to 87, median 46) and 76 were female (aged 3 to 72, median 42). Table 3 shows the age group and sex distribution.

Table 3. Laboratory confirmed acute cases of Lyme disease by age group and sex, Q2 2021

Age group	Male	Female	Total
0 to14	7	3	10
15 to 24	2	7	9
25 to 34	9	17	26
35 to 44	11	15	26
45 to 54	24	12	36
55 to 64	8	14	22
65 to 74	6	8	14
Over 75	3	0	3
Total	70	76	146

The regions that reported the most acute cases in the second quarter of 2021 were the South West (n=31) and the South East (n=30) (Table 4). Two of the acute cases reported foreign travel, one to southern Europe and one to the Middle East.

Table 4. Laboratory confirmed acute cases of Lyme disease by region, Q1 2020 to Q2 2021

PHE centre	2020					2021		
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Total
East Midlands	2	1	3	0	6	2	2	4
East of England	3	5	23	9	40	7	11	18
London	17	33	90	38	178	21	27	48
North East	1	4	4	4	13	3	6	9
North West	5	7	33	24	69	4	24	28
South East	12	48	152	45	257	11	30	41
South West	6	29	143	23	201	6	31	37
West Midlands	4	1	3	2	10	3	3	6
Yorkshire and Humber	1	2	10	7	20	1	8	9
Wales	2	2	7	3	14	1	4	5
Total	53	132	468	155	808	59	146	205

Note: specimens sent for Lyme disease referral testing should be accompanied by a completed [referral form](#).

Other zoonotic organisms (provisional data)

There were 29 reports of *Capnocytophaga* spp. in the second quarter of 2021. Of these, 24 were speciated to *C. canimorsus* and one to *C. canis*. Of those speciated, 10 cases were female and 15 were male. Overall, most cases were reported in the South East (n=6) and the North West (n=5). *Capnocytophaga* spp. are frequently carried in the mouths of companion animals (cats and dogs) or humans and may be associated with an animal bite or opportunistic infections in those with impaired immune systems. Unfortunately, limited information is available in these cases to determine the likely route of exposure.

There were 2 reports of *Mycobacterium marinum* in the second quarter of 2021. Exposure information was not available for these cases.

There was one report of *Erysipelothrix rhusiopathiae* in the second quarter of 2021. *E. rhusiopathiae* is the cause of swine erysipelas and can cause erysipeloid in humans. Infection is often linked to exposure to infected animals or animal products. No additional information on potential exposures was available for these cases.

Four toxigenic *Corynebacterium ulcerans* infections were reported in the second quarter of 2021. Of these, 2 were male and 2 were female, all cases were aged over 40 years and all cases had reported contact with companion animals in the home. Animals were swabbed in 2 of the households, of which one animal tested positive for toxigenic *C. ulcerans*. Contact with companion animals remains the most frequently reported exposure for individuals with confirmed toxigenic *C. ulcerans* infections, however, the animals may not show evidence of infection and it is not always possible to confirm the carriage of *C. ulcerans*.

There were 4 reports of *Taeniasis* in the second quarter of 2021, of which one was speciated to *T. saginata*.

Three cases of rat bite fever (*Streptobacillus moniliformis*) were reported in the second quarter of 2021.

About the UK Health Security Agency

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