



## Infection report

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### Zoonoses

## Common animal associated infections quarterly report (England and Wales) – third quarter 2014

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 July and September 2014 (third quarter; weeks 27-39).

### Animal associated infections in England and Wales: laboratory reports to LabBase (unless otherwise specified) by specimen date, Q3 (weeks 27-39/14)

Disease (Organism)	Reports for weeks 01-13		Reports for weeks 14-26		Reports for weeks 27-39	
	2014*	2013	2014*	2013	2014*	2013
Anthrax ( <i>Bacillus anthracis</i> )	–	1	–	–	–	–
Brucellosis** ( <i>Brucella spp.</i> )	2	1	2	6	4	5
Hepatitis E**	218	147	243	155	221	173
Hydatid** ( <i>Echinococcus granulosus</i> )	6	3	1	3	–	3
Leptospirosis** ( <i>Leptospira spp.</i> )	5	14	6	5	26	18
Lyme borreliosis** # ( <i>Borrelia burgdorferi</i> )	136	106	188	201	323	287
Pasteurellosis ( <i>Pasteurella spp.</i> )	105	136	164	168	181	149
Psittacosis ( <i>Chlamydophila psittaci</i> )	4	7	10	5	6	7
Q-fever ( <i>Coxiella burnetii</i> )	11	8	14	11	14	11
Toxoplasmosis**# ( <i>Toxoplasma gondii</i> )	88	70	96	86	101	71

\* Provisional data

\*\* Enhanced surveillance system

# Based on date specimen received

## Anthrax

There were no cases reported in the third quarter of 2014.

## Brucellosis (data from the Brucella Reference Laboratories)

There were four reports of brucellosis reported during the third quarter of 2014, compared with five during the third quarter of 2013. Of the four cases, three were male and one female (age range 27 – 63 years) all confirmed as *Brucella melitensis*, with typing confirmed by APHA Weybridge. No clinical or epidemiological details are available; all are understood to be from countries where brucellosis is endemic.

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

There were 221 cases of Hepatitis E in the third quarter of 2014 compared to 173 in the same quarter of 2013. This is consistent with the on-going increase in cases observed since 2010<sup>1</sup>.

One hundred and forty-five cases (65%) were male (aged 15-89 years, median 57) and 76 (35%) were female (aged 24-90 years, median 59). Older men predominate and this is a persisting observation, although the excess remains unexplained. Cases were reported from all regions. The majority of cases (85%, n=189) had no apparent travel history.

### Laboratory confirmed cases of Hepatitis E infection (week 27-39, 2014)

Age Group	Male	Female	Unknown	Total
0-14	–	–	–	–
15-24	7	1	–	8
25-44	22	18	–	40
45-64	67	26	–	93
>64	49	31	–	80
<b>Total</b>	<b>145</b>	<b>76</b>	<b>–</b>	<b>221</b>

## Hydatid disease (data from the Parasitology Reference Laboratory)

No reports of hydatid disease were received during the third quarter of 2014, compared with three cases during the third quarter of 2013.

## Leptospirosis (data from the Leptospira Reference Unit)

Twenty-six cases of leptospirosis were confirmed in England and Wales residents during the third quarter of 2014 compared with 18 during the third quarter of 2013. Of these, seventeen infections were acquired in the UK and nine were acquired overseas.

Of the autochthonous cases, four were confirmed with *L. Icterohaemorrhagiae* and for the remainder (n=13) the infecting sero-group was not determined. Fifteen infections were identified in males and two in females. Ages of the cases ranged from 16 to 79 years (median= 51 years).

Occupational exposures were reported in a veterinary surgeon, a builder, a gardener and an estate worker. Recreational exposures occurred in two people who swam in the river Thames, one who swam in the river Lune and two triathlon swimmers, one of whom swam in a police triathlon at Chatsworth and one person who had cleaned out a pond. For the remainder (n=7), exposure details were not recorded.

Overseas acquired infections were reported in nine males aged 19 to 58 years (median=31 years) of whom six were in South East Asia including Thailand where exposures included wading in rivers, one in Sri Lanka, one in Nigeria and one individual who had been fishing in France. For one case the infecting serovar was identified as *L. Icterohaemorrhagiae*, for the remainder, the serovar was not determined. Confirmations by PCR (undertaken by both the Leptospira Reference Unit [LRU] and the Rare and Imported Pathogens laboratory [RIPL], Porton) remain a developmental test with limited technical validation. Clinicians are asked to submit a second specimen from the patient to the LRU, together with exposure and clinical histories as this increases the likelihood that the infecting serovar can be determined.

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

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

Three hundred and twenty-three serologically confirmed cases of Lyme borreliosis were reported during the third quarter of 2014 compared with 287 in the same quarter 2013. A total of six hundred and forty seven serologically confirmed cases were reported between January and the end of September 2014 (136 in Q1, 188 in Q2, 323 in Q3).

The 323 cases comprised 196 males and 127 females. Ages of cases ranged from 1 to 90 years (median = 61). Sera from cases were submitted from regions throughout England and Wales. The majority of cases were reported from the South of England (n=192).

Cases were reported with specimen dates in each month (July n=78, August n=117, September n=128), onset dates are seldom reported.

Thirty three (10%) cases reported overseas travel, primarily to Northern European countries (Czech Republic n=2, Sweden n=5, Germany, n=5, Poland n=7, Estonia n=1, Norway n=1, France n=5, Spain n=2) and to the USA (n=5); three cases reported exposure in Scotland.

Clinical presentations were available for 149 (46%) cases: 131 (41%) tick bite, 79 (24%) erythema migrans, 11 (3.4%) facial palsy; other presentations included influenza-like illness, fatigue, myalgia and arthralgia; many cases reporting multiple symptoms.

### **Laboratory confirmed cases of Lyme borreliosis (week 27-39, 2014)**

Age group	Male	Female
0-14	21	6
15-24	13	4
25-34	27	21
35-44	34	20
45-54	32	20
55-64	34	26
65-74	26	20
75+	7	10
Unknown	2	–
<b>Total</b>	<b>196</b>	<b>127</b>

## Pasteurellosis

One hundred and eighty-one cases of pasteurellosis were reported in the third quarter of 2014, compared with 149 in the same quarter of 2013: *Pasteurella multocida* (143 cases, 79%), *Pasteurella pneumotropica* (6 cases, 3%), *Pasteurella* other named (10 cases, 6%) and *Pasteurella* sp. (22 cases, 12%). One of the cases had a dual infection with *Pasteurella multocida* and *Pasteurella* sp.

Seventy-three of the cases were male (2-89 years, median 54 years) and 108 were female (0-97 years, median 64). The South of England reported the most cases (62) and Wales reported the fewest (7). Of the 28 cases giving an animal exposure, 15 had cat bites and two had been scratched by cats, and 11 reported dog bites.

### Laboratory confirmed cases of pasteurellosis (week 27-39, 2014)

Age group	Male	Female
0-14	3	4
15-29	8	8
30-39	12	5
40-49	7	11
50-59	15	16
60-69	14	25
70-79	6	25
80+	8	14
Unknown	-	-
<b>Total</b>	<b>73</b>	<b>108</b>

## Psittacosis

Six cases of psittacosis were diagnosed in the third quarter of 2014, compared with seven during the third quarter of 2013. Two cases were male (aged 55 and 62) and four were female (aged 48 to 65, median 53). All of the cases were from the South of England.

Note: Serological tests for respiratory chlamydia infections cannot consistently distinguish psittacosis. The cases reported above have been identified by reporting laboratories as infection with *Chlamydia psittaci*.

### Q fever (data from the Rare and Imported Pathogens Laboratory, Porton, and Bristol Reference Laboratory)

There were 14 cases of Q fever reported in the third quarter of 2014, compared with 11 in the third quarter of 2013. Seven cases were male (aged 27-73 years, median 41) and seven were female (aged 31-76, median 53). Six cases were reported by the South of England, five by the North of England, two by London and one each by Midlands and the East of England.

## Toxoplasma (Data from the Toxoplasma Reference Unit)

There were 101 laboratory-confirmed cases of *Toxoplasma* infection in the third quarter of 2014, compared with 71 cases in the third quarter of 2013. Five cases reported ocular symptoms. Ten cases occurred in pregnant women and there were four confirmed congenital cases, of which two were twins (one died). The four confirmed congenital cases formed mother-child pairs with three of the pregnant cases.

### Laboratory confirmed cases of toxoplasma infection (week 27-39, 2014)

Age group	Male	Female	Unknown	Total
Foetus	–	–	2	2
0	1	–	1	2
1-9	–	1	–	1
10-14	–	1	–	1
15-24	7	3	1	11
25-44	15	40	2	57
45-64	12	7	1	20
>64	3	2	1	6
Unknown	–	–	1	1
<b>Total</b>	<b>38</b>	<b>54</b>	<b>9</b>	<b>101</b>

Age group	Con-genital	Pregnant	HIV	Organ donor	Organ recipient	Other (Immuno-competent)	Other (Immuno-suppressed)	Unknown*	Total
Foetus	2	–	–	–	–	–	–	–	2
0	2	–	–	–	–	–	–	–	2
1-9	–	–	–	–	–	1	–	–	1
10-14	–	–	–	–	–	1	–	–	1
15-24	–	–	–	–	–	10	–	1	11
25-44	–	10	4	–	1	41	1	–	57
45-64	–	–	2	–	1	15	2	–	20
>64	–	–	–	–	2	3	1	–	6
Unknown	–	–	–	–	–	1	–	–	1
<b>Total</b>	<b>4</b>	<b>10</b>	<b>6</b>	<b>–</b>	<b>4</b>	<b>72</b>	<b>4</b>	<b>1</b>	<b>101</b>

\* No clinical details or information given.

## Other zoonotic organisms

Other zoonotic infections of interest diagnosed in the third quarter of 2014 were as follows:

- Ten cases of *Capnocytophaga sp.* infection; four in females (aged 38 to 78 years, median 78) and six in males (aged 9 to 72 years, median 62). Five were reported from the South of England, four from the Midlands and East of England, and one from Wales. All the infections were bacteraemias.
- Three cases of *Mycobacterium marinum*, one in a female aged 63 and two in males aged 52 and 72 years. All had tissue infections.

## Reference

1. <https://www.gov.uk/government/publications/hepatitis-e-symptoms-transmission-prevention-treatment/hepatitis-e-symptoms-transmission-treatment-and-prevention>