



Infection report

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Zoonoses

Common animal associated infections quarterly report (England and Wales) – fourth 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 October and December 2014 (fourth quarter; weeks 40-52).

Animal associated infections in England and Wales: laboratory reports to SGSS[†] (unless otherwise specified) by specimen date, Q4 (weeks 40-52/14)

| Disease (Organism) | Reports for weeks 01-13 | | Reports for weeks 14-26 | | Reports for weeks 27-39 | | Reports for weeks 40-52 | | Total weeks 01-52 | |
|--|-------------------------|------|-------------------------|------|-------------------------|------|-------------------------|------|-------------------|------|
| | 2014* | 2013 | 2014* | 2013 | 2014* | 2013 | 2014* | 2013 | 2014* | 2013 |
| Anthrax (<i>Bacillus anthracis</i>) | – | 1 | – | – | – | – | – | – | – | 1 |
| Brucellosis** (<i>Brucella spp.</i>) | 2 | 1 | 2 | 6 | 4 | 5 | 2 | – | 10 | 12 |
| Hepatitis E** | 217 | 148 | 249 | 155 | 234 | 184 | 169 | 205 | 869 | 692 |
| Hydatid** (<i>Echinococcus granulosus</i>) | 6 | 3 | 2 | 3 | 1 | 3 | 5 | 1 | 14 | 10 |
| Leptospirosis** (<i>Leptospira spp.</i>) | 7 | 14 | 9 | 5 | 30 | 18 | 30 | 10 | 76 | 47 |
| Lyme borreliosis** # (<i>Borrelia burgdorferi</i>) | 136 | 106 | 188 | 201 | 323 | 287 | N/A | 221 | N/A | 815 |
| Pasteurellosis (<i>Pasteurella spp.</i>) | 129 | 136 | 146 | 168 | 175 | 149 | 137 | 125 | 587 | 578 |
| Psittacosis (<i>Chlamydophila psittaci</i>) | 7 | 7 | 4 | 5 | 6 | 7 | 9 | 10 | 26 | 29 |
| Q-fever (<i>Coxiella burnetii</i>) | 11 | 8 | 14 | 11 | 14 | 11 | 14 | 13 | 53 | 43 |
| Toxoplasmosis**# (<i>Toxoplasma gondii</i>) | 79 | 70 | 94 | 86 | 98 | 71 | 80 | 83 | 351 | 310 |

[†]Second Generation Surveillance System has now replaced LabBase

* Provisional data

** Enhanced surveillance system

Based on date specimen received

N/A=Not Available

Anthrax

There were no cases reported in 2014.

Brucellosis (data from the Brucella Reference Laboratories)

There were two reports of brucellosis reported during the fourth quarter of 2014, compared with none during the fourth quarter of 2013. One of the cases was male and sex was not stated for the other case. Cases were aged 34 and 75 years). Both were confirmed as *Brucella melitensis* by APHA Weybridge. One had recently returned from a visit to rural Iraq where he had been previously resident. He denied consumption of dairy products whilst overseas. He presented with epigastric pain, weight loss, pyrexia and night sweats. No clinical or epidemiological details were available for the second case who is understood to be from a country where brucellosis is endemic.

In total there were 10 cases in 2014 compared with 12 cases in 2013. The age range of the cases was 28 to 75 years. All are understood to have come from countries where brucellosis is endemic. There was little information on clinical presentation but all appeared to have an insidious illness and were investigated for pyrexia of unknown origin (PUO).

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

There were 169 cases of hepatitis E in the fourth quarter of 2014 compared to 205 in the same quarter of 2013. One hundred and four cases (62%) were male (age range 13-90 years, median 57) and 64 (38%) were female (age range 22-91 years, median 58). The persisting observation of the predominance of older men (see table below) remains unexplained. Cases were reported from all regions. The majority of cases (82%, n=138) had no apparent travel history.

Laboratory confirmed cases of Hepatitis E infection (week 40-52, 2014)

| Age Group | Male | Female | Unknown | Total |
|--------------|------------|-----------|----------|------------|
| 0-14 | 1 | – | – | 1 |
| 15-24 | 7 | 3 | – | 10 |
| 25-44 | 12 | 11 | – | 23 |
| 45-64 | 43 | 24 | – | 67 |
| >64 | 41 | 26 | – | 67 |
| Unknown | – | – | 1 | 1 |
| Total | 104 | 64 | 1 | 169 |

A total of 869 cases of hepatitis E were reported in 2014 compared to a total of 692 cases last year. This is consistent with the on-going increase in cases observed since 2010 [1].

Hydatid disease (data from the Parasitology Reference Laboratory)

Five reports of hydatid disease were received during the fourth quarter of 2014, compared with one case during the fourth quarter of 2013. Four of the cases in the last quarter of 2014 presented with liver cysts.

Overall there were 14 cases of hydatid disease reported in 2014 compared with ten cases in 2013. All are believed to have had exposures, often many years previously, in countries where cystic echinococcosis is prevalent.

Leptospirosis (data from the Leptospira Reference Unit)

Thirty cases of leptospirosis were confirmed in the fourth quarter of 2014 compared with 10 during the fourth quarter of 2013. Of these, twenty-three infections were reported to have been acquired in the UK and seven were acquired overseas.

Of the 23 autochthonous cases, four were confirmed with *L. Icterohaemorrhagiae*, one with *L. Sjerøe* and one with *L. Saxkøbing* and for the remainder (n=17) the infecting serogroup was not determined. Twenty-one infections were identified in males and two in females. The age range was 34- 72 years (median 49 years). The majority (n=17) reported occupational or recreational exposures: water contact or exposure was reported in eleven cases and animal exposure in nine cases, some of whom had exposure to both. For the remainder (n=6), exposure details were not recorded.

Seven cases (age range 23-62 years, median 51 years), all male, were reported to have acquired infection overseas. Of these, cases had travelled to Thailand (2 cases), Jamaica (1) and Central America (1) and France (1). Two cases were acquired occupationally, one whilst maintaining lakes in France and one on military exercise in Germany. In one case the infecting serovar was identified as *L. Icterohaemorrhagiae*, for the remainder, the serovar was not determined.

Overall, 2014 has seen an increase in confirmed cases of leptospirosis (76 cases in 2014 compared to 47 in 2013), exceeding the peak reporting of 74 in 2007. In common with recent years, the majority (89%) of autochthonous cases occurred in males, representing a predominance of occupational exposures. Most (79%) cases were identified with first specimen dates in the last 6 months of 2014. Twenty nine (38%) of reports indicated animal exposures with 18 (24%) reporting water contact; both animal and water exposures were reported in 13 (17%) cases. Cases were reported throughout England and Wales, with no specific geographic foci. Nineteen of the 22 cases who acquired their infection overseas were reported during the last 6 months of 2014. The majority were linked to recreational water exposure, mainly swimming, kayaking or white-water rafting on inland waters. The age range was 19- 67 years and unusually, all were males. The majority of exposures occurred in South East Asia, Central America and the Caribbean, and France.

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>

Data on serologically confirmed cases of Lyme borreliosis were not available for the fourth quarter of 2014. These will be included in the next quarterly report.

Pasteurellosis

A total of five hundred and eighty-seven confirmed cases of pasteurellosis were reported between January and the end of December 2014 (129 in Q1, 146 in Q2, 175 in Q3, 137 in Q4). This compares to a total of 578 in 2013.

One hundred and thirty-seven cases of pasteurellosis were reported in the fourth quarter of 2014, compared with 125 in the same quarter of 2013: *Pasteurella multocida* (93 cases, 68%), *Pasteurella pneumotropica* (3 cases, 2%), *P. canis* (2 cases, 1%) and *P. haemolytica* (1 case). In addition there were *Pasteurella* other named (7 cases, 5%) and *Pasteurella* sp. (31 cases, 27%).

Fifty-one of the cases were male (7-91 years, median 59 years) and 86 were female (3-93 years, median 61). The South of England reported the most cases (37) and East of England reported the fewest (3).

Laboratory confirmed cases of pasteurellosis (week 40-52, 2014)

| Age group | Male | Female |
|--------------|-----------|-----------|
| 0-14 | 1 | 6 |
| 15-29 | 2 | 7 |
| 30-39 | 5 | 7 |
| 40-49 | 10 | 9 |
| 50-59 | 9 | 10 |
| 60-69 | 7 | 18 |
| 70-79 | 8 | 16 |
| 80+ | 9 | 13 |
| Total | 51 | 86 |

Psittacosis

Nine cases of psittacosis were diagnosed in the fourth quarter of 2014, compared with ten during the fourth quarter of 2013. Four cases were male (aged 38 and 69, median 62) and five were female (aged 17 to 72, median 49). All of the cases were from the South of England.

Overall there were 26 cases of psittacosis reported in 2014 compared with 29 cases in 2013.

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 fourth quarter of 2014, compared with 13 in the fourth quarter of 2013. Eleven cases were male (aged 20-78 years, median 52) and three were female (aged 10, 23 and 56). Five cases were reported in the South of England, three in the North of England, two in London, two in the Midlands and one in the East of England.

In total there were 53 cases in 2014 compared with 43 cases in 2013.

Toxoplasma (Data from the Toxoplasma Reference Unit)

In the fourth quarter of 2014 there were 80 laboratory-confirmed cases of Toxoplasma infection, compared with 83 cases in the fourth quarter of 2013. Two cases reported ocular symptoms. Six cases occurred in pregnant women and there were two confirmed congenital cases, both of which formed mother-child pairs with two of the pregnant cases.

Laboratory confirmed cases of toxoplasma infection (week 40-52, 2014)

| Age group | Male | Female | Total |
|--------------|-----------|-----------|-----------|
| 0 | – | 2 | 2 |
| 1-9 | 2 | – | 2 |
| 10-14 | 2 | 3 | 5 |
| 15-24 | 7 | 5 | 12 |
| 25-44 | 13 | 25 | 38 |
| 45-64 | 9 | 7 | 16 |
| >64 | 2 | 3 | 5 |
| Total | 35 | 45 | 80 |

| Age group | Con-genital | Pregnant | HIV | Organ donor | Organ recipient | Other (Immuno-competent) | Other (Immuno-suppressed) | Unknown* | Total |
|--------------|-------------|----------|----------|-------------|-----------------|--------------------------|---------------------------|----------|-----------|
| Foetus | – | – | – | – | – | – | – | – | – |
| 0 | 2 | – | – | – | – | – | – | – | 2 |
| 1-9 | – | – | – | – | – | 2 | – | – | 2 |
| 10-14 | – | – | – | – | – | 5 | – | – | 5 |
| 15-24 | – | 1 | 1 | – | – | 10 | – | – | 12 |
| 25-44 | – | 5 | 5 | – | – | 28 | – | – | 38 |
| 45-64 | – | – | 3 | – | 1 | 9 | 3 | – | 16 |
| >64 | – | – | – | – | 1 | 2 | 2 | – | 5 |
| unknown | – | – | – | – | – | – | – | – | – |
| Total | 2 | 6 | 9 | – | 2 | 56 | 5 | – | 80 |

* No clinical details or information given.

A total of 351 confirmed cases of toxoplasmosis were reported between January and the end of December 2014 (79 in Q1, 94 in Q2, 98 in Q3, 80 in Q4). This compares to 310 cases reported in 2013. In 2014, there were a total of 15 cases with ocular symptoms, 32 pregnant cases and 11 congenital toxoplasmosis cases confirmed by the reference laboratory.

Reference

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