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Common animal associated infections quarterly report (England and Wales): second quarter 2017

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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 April and June 2017 (second quarter; weeks 14-26). Table 1 shows the overall case numbers for zoonoses covered in this report.

This includes short reports on the quarterly trends for hepatitis E, hydatid, leptospirosis, and Lyme disease.

Table 1. Animal associated infections in England and Wales: laboratory reports by specimen date, Q1 and Q2 (weeks 01-26/2017)

| Disease (Organism) | Reports for weeks 01-13 | | Reports for weeks 14-26 | | Cumulative total for weeks 01-26 | |
|--|-------------------------|------|-------------------------|------|----------------------------------|------|
| | 2017* | 2016 | 2017* | 2016 | 2017* | 2016 |
| Anthrax (<i>Bacillus anthracis</i>) | 0 | 0 | 0 | 0 | 0 | 0 |
| Brucellosis (<i>Brucella spp.</i>) | 2 | 2 | 3 | 7 | 5 | 9 |
| Hepatitis E | 227 | 347 | 230 | 368 | 457 | 715 |
| Hydatid (<i>Echinococcus granulosus</i>) | 13 | 12 | 12 | 12 | 25 | 24 |
| Leptospirosis (<i>Leptospira spp.</i>) | 9 | 3 | 12 | 17 | 21 | 20 |
| Lyme borreliosis (<i>Borrelia burgdorferi</i>) | | | | | | |
| All cases | 200 | 113 | 283 | 170 | 483 | 283 |
| Acute infections | 138 | 63 | 202 | 126 | 340 | 189 |
| Pasteurellosis (<i>Pasteurella spp.</i>) | 177 | 110 | 194 | 166 | 371 | 276 |
| Psittacosis (<i>Chlamydophila psittaci</i>) | 16 | 4 | N/A | 6 | N/A | 10 |
| Q-fever (<i>Coxiella burnetii</i>) | 3 | 6 | 2 | 11 | 5 | 17 |
| Toxoplasmosis [†] (<i>Toxoplasma gondii</i>) | 83 | 63 | 58 | 96 | 141 | 159 |

* Provisional data; [†] Based on date specimen received; N/A = Not Available

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

As more laboratories across the country acquire the capacity to investigate samples for hepatitis E virus and do not use the services of the reference laboratories, combining the reference laboratory data together with additional cases reported by local laboratories through the Second Generation Surveillance System (SGSS) is a more accurate reflection of the number of HEV infected cases reported in England and Wales. The combined datasets were first introduced in 2016¹.

There were 230 cases of hepatitis E in the second quarter of 2017 compared to 368 in the same quarter of 2016. One hundred and forty-one cases (61%) were male (aged 15-92 years, median 60) and 89 (39%) were female (aged 17-91 years, median 55). The persisting observation of the predominance of older men (see table below) remains unexplained.

The majority of cases (n=187; 81%) had no apparent travel history. Non-travel cases were reported from all regions.

Table 2. Reference and local laboratory confirmed cases of hepatitis E infection (Q2 weeks 14-26, 2017)

| Age Group | Male | Female | Total |
|--------------|------------|-----------|------------|
| <15 | 0 | 0 | 0 |
| 15-24 | 4 | 5 | 9 |
| 25-44 | 22 | 25 | 47 |
| 45-64 | 60 | 30 | 90 |
| >64 | 55 | 29 | 84 |
| Total | 141 | 89 | 230 |

The total number of cases (n=457) for weeks 01-26 shows a decrease in newly diagnosed cases. There had been a persisting increasing trend in the number of cases of hepatitis E reported by local and reference laboratories between 2010 and 2016². However, a small decrease in the number of newly diagnosed cases was observed in the last quarter of 2016 and this observed downward trend has continued through the first six months of 2017.

Hydatid disease (data from the Hospital for Tropical Diseases)

Twelve cases were reported during the second quarter of 2017, and this is the same as the number of cases reported in the same period of 2016. Of these, 7 were males and 5 females with ages ranging from 22 to 63 years (median 45 years). Three cases were reported with cystic lung lesions, 3 with liver cysts and 1 with abdominal cysts; no clinical information was available for the remainder. All are believed to have acquired their infections overseas.

Leptospirosis (data from the Leptospira Reference Unit)

There were twelve confirmed cases of leptospirosis reported in the second quarter of 2017, compared with seventeen during the second quarter of 2016. Nine of the cases were male (aged 23-56 years, median=30) and three were female (ages 36, 50 and 65 years). Cases were reported from the following regions: London (3 cases), South East (3 cases), West Midlands (2 cases), and one case each from the North West, South West, Yorkshire and the Humber, and Wales.

Two cases reported exposure to rats; one case was a farmer with occupational exposure who reported recently cleaning out a shed infested with rats. Water exposure was reported by one case who had been white water rafting in Scotland.

Eight cases reported travelling abroad: three cases travelled together to Grenada in the Caribbean, two to Sri Lanka, one to France, one to Mexico and Guatemala and one case had visited Thailand, Vietnam and Cambodia. Two of the cases who travelled abroad reported water exposure.

An evaluation of the pilot enhanced surveillance for leptospirosis is currently underway and further details will be published by the end of the year.

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

An increase in laboratory confirmed Lyme disease cases has been noted in 2017 compared with the same period in 2016. It is likely that this is related to weather patterns affecting tick numbers, increased awareness in healthcare professionals and the public, and increased demand for Lyme disease testing.

A total of 283 cases of laboratory confirmed Lyme disease was reported during the second quarter of 2017, compared with 170 cases reported in the first quarter of 2016. Of the 2017 cases, 202 were acute (including 17 with neuroborreliosis) and 81 were longstanding.

Of the acute cases, 90 were male (aged 1-83 years, median 43) and 104 were female (aged 0-86 years, median 39). Gender was not reported for 8 cases.

Eleven (4%) of the acute cases reported foreign travel: six to Europe, two to Africa, one to America, one to both Asia and the Caribbean, and one had an unspecified travel history.

Table 3. Laboratory confirmed acute cases of Lyme disease, by age and sex (Q2 weeks 14-26, 2017)

| Age Group | Male | Female | Unknown | Total |
|--------------|-----------|------------|----------|------------|
| 0-14 | 8 | 14 | 0 | 22 |
| 15-24 | 8 | 10 | 1 | 19 |
| 25-34 | 14 | 17 | 1 | 32 |
| 35-44 | 15 | 23 | 1 | 39 |
| 45-54 | 11 | 15 | 0 | 26 |
| 55-64 | 19 | 11 | 2 | 32 |
| 65-74 | 10 | 11 | 2 | 23 |
| 75+ | 5 | 3 | 0 | 8 |
| N/K | 0 | 0 | 1 | 1 |
| Total | 90 | 104 | 8 | 202 |

Table 4. Laboratory confirmed acute cases of Lyme disease, by region (Q2 weeks 14-26, 2017)

| PHE Centre | Cases |
|----------------------|------------|
| East Midlands | 9 |
| East of England | 19 |
| London | 50 |
| North East | 5 |
| North West | 11 |
| South East | 49 |
| South West | 37 |
| Wales | 5 |
| West Midlands | 10 |
| Yorkshire and Humber | 7 |
| Total | 202 |

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

Other zoonotic organisms

Other zoonotic infections of interest diagnosed in the second quarter of 2017 were as follows:

- Two cases of *Capnocytophaga* sp. were reported, both bacteraemic. Neither case was speciated. One case were male (age 58 years) and one was female (age 52 years). The cases were reported from Yorkshire and Humber and from the South East.
- One case of *Erysipelothrix rhusiopathiae* was reported. The case, who came from the South West, was a 73 year old female with unspecified tissue infection.
- One case of *Streptococcus suis* was reported from the CSF of a 48 year old male with suspected meningitis from the East of England. The infection may have been acquired through his occupational exposure as a butcher.

References

1. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/593004/hpr0617_zoos.pdf
2. <https://www.gov.uk/government/publications/hepatitis-e-symptoms-transmission-prevention-treatment/hepatitis-e-symptoms-transmission-treatment-and-prevention>

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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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