



# Health Protection Report

weekly report

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### **An imported case of canine rabies in a quarantine centre in London: immediate public health management of the incident, April 2008**

The HPA has successfully traced those known to have been exposed to a 10 week old puppy that died of rabies in quarantine in London at the end of April, and arranged post-exposure prophylaxis where appropriate.

On 25 April 2008, rabies was diagnosed in a 10 week old puppy which had died in a quarantine centre in London earlier that day. The puppy was one of five stray dogs that had been imported to the United Kingdom from Sri Lanka by an animal charity on 17 April 2008. On arrival at Heathrow Airport, the puppies spent one night at the Animal Reception Centre before being transferred to Chingford Quarantine Kennels in north east London the following day. The puppies were unwell on arrival at the kennels and were housed in an isolation unit until the death of the rabid puppy on the morning of 25 April 2008. Initial brain samples were strongly positive for rabies by the fluorescent antibody test (FAT) indicating a very high viral load. Subsequently the virus was confirmed by PCR and tissue culture to be a wild-type strain of classical rabies virus genotype 1. The Health Protection Agency (HPA) was informed of the diagnosis by the Department for Environment, Food and Rural Affairs (Defra) on the evening of 25 April 2008.

#### **Public health actions**

On the evening of 25 April 2008 the HPA initiated an investigation to identify all those who had had contact with the puppy from its retrieval from the streets in Sri Lanka on 12 April 2008 until its death on 25 April 2008. Information was obtained from Defra on the complete sequence of events around the importation, transport and quarantining of the animal, and information on potential human contacts, from the following:

- members of the animal rescue charity (details of those in contact with the puppy in Sri Lanka until boarding the plane),
- management at the Heathrow Animal Reception Centre (ARC) (details of persons in contact with the puppy during transfer from the plane to and during its stay at the ARC),
- management at the kennels (details of those in contact with the puppy during transfer from the ARC to the quarantine kennels and during its stay at the kennels).

In addition, there was ongoing communication between the HPA and Defra to ensure that the HPA was made aware of any other possible human contacts of the puppy.

On the basis of the information obtained, 42 people were assessed, using a specially developed risk assessment algorithm, to ascertain their degree of contact with the animal, their previous rabies immunisation status and their need for rabies post-exposure prophylaxis.

Twelve people were found to have had direct physical contact with the puppy and/or its body fluids during the relevant time period: one vet who took blood from the puppy in Sri Lanka, four members of the charity that imported the puppy, one baggage handler at the airport, and six

members of staff at the quarantine kennels. Of the 11 who had had direct contact with the puppy in the UK, five had previous complete vaccination against rabies, three had previous incomplete vaccination (primary course without adequate boosters) and three were unimmunised. All 11 received rabies post-exposure prophylaxis. Four of these individuals had had high risk contact with the puppy, all within the quarantine kennels. Three had been bitten by the puppy in the latter stages of its illness and one received faecal matter from the puppy into the eye. Information on the vet who had had contact with the puppy in Sri Lanka was passed to Sri Lankan authorities via the International Health Regulations Focal Point.

### **Discussion**

The UK has been free of indigenous classical rabies for over a century. Since 1922, 29 cases of rabies have been reported within quarantine in the UK, the most recent in 1990. The fact that this case occurred within quarantine premises effectively limited the animal and public health risk. This reinforces the value and effectiveness of the six-month quarantine period for animals imported into the UK outside the Pet Travel Scheme.

In this incident, several people who came into contact with the rabid animal, including members of the charity that had imported the puppy and some staff from the quarantine facility, had not had a complete course of rabies pre-exposure prophylaxis, including appropriate boosters. This highlights the importance of ensuring that all persons who regularly handle imported animals receive complete rabies pre-exposure prophylaxis (PEP).

PEP comprises a primary course of three doses of rabies vaccine (on days 0, 7 and 28) followed by a booster at one year. Thereafter further boosters should be given every 3-5 years. Serological testing is only advised for those who work with the live virus [1]. The HPA will be contacting quarantine facilities, and animal rescue organisations to remind them of the full recommendations.

In this incident, rapid laboratory diagnosis, close inter-agency working between Defra, the Department of Health and the HPA, and a prompt operational response at local level, permitted the timely identification those who had had at-risk contact with the rabid puppy and the initiation of appropriate post-exposure prophylaxis.

### **References**

1. *Immunisation against infectious disease - the Green Book*, via the HPA website, at: [http://www.dh.gov.uk/en/PublicHealth/HealthProtection/Immunisation/Greenbook/DH\\_4097254](http://www.dh.gov.uk/en/PublicHealth/HealthProtection/Immunisation/Greenbook/DH_4097254)

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### **Outbreak of measles in Cornwall**

The South West Peninsula Health Protection Unit and the Cornwall and Isles of Scilly Primary Care Trust (PCT) are working to control an outbreak of measles linked to a primary school in Camborne, Cornwall. Seven children between the ages of 2 and 8 years have been confirmed with the illness and a further six cases are suspected. Measles was introduced to the school in Camborne following family contact of the index case with relatives from London who attend a school where a measles outbreak had been reported.

This is the first outbreak of the viral infection in Cornwall and the Isles of Scilly for at least five years; there have been two isolated cases in the county since 2003.

The increase in measles cases reported in other parts of the country, notably London and the South East, poses a risk of measles spreading to unvaccinated children other parts of the country where measles cases in recent years have been rare.

## Respiratory

- Laboratory reports of respiratory infections made to Cfl from HPA and NHS laboratories in England and Wales

### Laboratory reports of respiratory infections made to Cfl from HPA and NHS laboratories in England and Wales

Data are recorded by week of report, but include only specimens taken in the last eight weeks (i.e. recent specimens)

**Table 1 Reports of influenza infection made to Cfl, by week of report: weeks 14-17/2008**

Week	Week 14	Week 15	Week16	Week 17	Total
Week ending	06/04/08	13/04/08	20/04/08	27/04/08	
<b>Influenza A</b>	<b>13</b>	<b>7</b>	<b>18</b>	<b>6</b>	<b>44</b>
Isolation	–	1	2	–	3
DIF	2	–	8	1	11
Four-fold rise in paired sera	–	–	–	–	–
PCR	1	1	1	2	5
Other	10	5	7	3	25
<b>Influenza B</b>	<b>33</b>	<b>31</b>	<b>52</b>	<b>43</b>	<b>159</b>
Isolation	7	4	12	6	29
DIF	7	2	7	7	23
Four-fold rise in paired sera	–	–	–	–	–
PCR	8	18	15	19	60
Other	11	7	18	11	47
<b>Influenza (untyped)</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>
Isolation	–	–	–	–	–
DIF	–	–	–	–	–
Four-fold rise in paired sera	–	–	–	–	–
PCR	–	–	–	–	–
Other	–	–	–	–	–

DIF = Direct immunofluorescence.

"Other" = 'Antibody detection -single high titre' or 'method not specified'.

**Table 2 Respiratory viral detections by any method (culture, direct immunofluorescence, PCR, four-fold rise in paired sera, single high serology titre) by week of report: weeks 14-17/2008.**

Week	Week 14	Week 15	Week 16	Week 17	Total
Week ending	06/04/08	13/04/08	20/04/08	27/04/08	
Adenovirus*	25	32	29	41	127
Coronavirus	1	–	5	1	7
Para-influenza **	14	12	23	28	77
Rhinovirus	29	12	27	41	109
Respiratory syncytial virus (RSV)	31	13	23	24	91

\* Respiratory samples only. Excludes diagnoses made by electron microscopy (EM)

\*\* Includes para-influenza types 1, 2, 3, 4 and untyped.

**Table 3 Respiratory viral detections by age group: weeks 14-17/2008**

Age group (years)	<1 year	1-4 years	5-14 years	15-44 years	45-64 years	≥65 years	Unknown	Total
Adenovirus*	19	29	4	56	16	3	–	127
Coronavirus	1	2	–	1	2	1	–	7
Influenza A	1	6	10	15	10	2	–	44
Influenza B	9	16	10	30	52	38	4	159
Para-influenza†	37	26	2	3	5	4	–	77
Rhinovirus	54	20	6	13	10	4	2	109
Respiratory syncytial virus (RSV)	49	13	1	15	3	10	–	91

\* Respiratory samples only.

† Includes para-influenza types 1, 2, 3, 4, and untyped.

**Table 4 Laboratory reports of infections associated with atypical pneumonia, by week of report: weeks 14-17/2008**

Week	Week 14	Week 15	Week 16	Week 17	Total
Week ending	06/04/08	13/04/08	20/04/08	27/04/08	
<i>Coxiella burnetii</i>	–	1	1	–	2
Respiratory <i>Chlamydia</i> sp.	–	4	3	3	10
<i>Mycoplasma pneumoniae</i>	9	19	14	9	51
<i>Legionella</i> sp.	4	1	4	6	15

Includes *Chlamydia psittaci*, *Chlamydia pneumoniae* and *Chlamydia* sp detected from blood, serum and respiratory specimens.

**Table 5a Reports of legionnaires' disease cases in England and Wales, by week of report: weeks 14-17/2008**

Week	Week 14	Week 15	Week 16	Week 17	Total
Week ending	06/04/08	13/04/08	20/04/08	27/04/08	
Nosocomial	–	–	1	–	1
Community	3	–	2 (1+)	2	7
Travel Abroad	1	1	–	4	6
Travel UK	–	–	1	0	1
<b>Total</b>	<b>4</b>	<b>1</b>	<b>4</b>	<b>6</b>	<b>15</b>
Male	4	1	4	5	14
Female	–	–	–	1	1

(+) 2007 non-pneumonic case(s)

Fourteen cases were reported with pneumonia and one with non-pneumonic infection; 14 males aged from 34 to 88 years and one female aged from 49 years. Seven cases had community-acquired infection. Two deaths were reported in males aged 60 and 88 years.

Seven cases were travel-associated: France (1), Italy (1), Spain (2), Thailand (1), Turkey (1) and United Kingdom (1).

**Table 5b Reports of legionnaires' disease cases by region of report in England and Wales: weeks 14-17/2008**

Region	Nosocomial	Community	Travel abroad	Travel UK	Total
North East	–	–	–	–	–
Yorkshire & Humber	–	1	2	–	3
East Midlands	–	2 (1+)	–	–	2
East of England	–	1	1	1	3
London	–	1	–	–	1
South East	1	1	1	–	3
South West	–	–	1	–	1
West Midlands	–	1	1	–	2
North West	–	–	–	–	–
Wales	–	–	–	–	–
<b>Total</b>	<b>1</b>	<b>7</b>	<b>6</b>	<b>1</b>	<b>15</b>

(+) 2007 non-pneumonic case(s)