



# Health Protection Report

weekly report

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# News

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- ▶ **Ongoing outbreak of Q fever in the Netherlands: HAIRS group considers risk for the UK**
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## **Ongoing outbreak of Q fever in the Netherlands: HAIRS group considers risk for UK**

*The spread of Q fever in the Netherlands – a human and public health challenge that first emerged in 2007 and had led to over 3000 human cases being notified by the end of 2009 in that country – has not led to a significant increase in human cases in neighbouring areas of other countries and is highly unlikely to be repeated in the UK, according to two recent official risk assessments.*

Notifications of Q fever in the Netherlands – that in earlier years averaged 17 human cases annually [1] – increased to 168 cases in 2007, 1000 in 2008, and over 2000 in 2009 [2]. The most affected area is the highly agricultural southern province of Noord Brabant, but cases have also been reported from neighbouring provinces. The disease has now been confirmed on a total of 73 dairy goat farms and two sheep farms [3]. The specific epidemiology of Q fever in the Netherlands is most likely related to intensive goat farming in the proximity of densely populated areas.

### **Control measures in the Netherlands**

Dutch authorities have introduced a number of measures to try to control the spread of the outbreak. These include mandatory vaccination of small ruminants (initially in the affected regions but extended throughout the country in 2010 to include holdings of more than fifty sheep or dairy goats, and premises such as petting farms and zoos), a general ban on breeding, and fortnightly Q fever bulk milk testing on all farms with 50 or more dairy goats or dairy sheep. In December 2009 a cull commenced of all pregnant dairy goats, whether vaccinated or unvaccinated, on infected farms. Non-pregnant females were spared but are banned from use for breeding purposes during their lifetime.

### **ECDC threat assessment**

In December 2009 the European Centre for Disease Prevention and Control (ECDC) undertook a threat assessment concluding that “to date, there is no evidence for a significant increase in the number of human cases of Q-fever since 2007 in other European countries. In Belgium and Germany, goat population density is much less than in the Netherlands and ‘intensive’ farming is not practised in the same way. Therefore, sporadic occupational cases and localised outbreaks could be expected in other countries, including neighbouring Germany and Belgium, if infected animals reach the farms. However, the spread to the general population is unlikely to reach the extent it has in the Netherlands, as farms are not so often in the proximity of densely populated areas and goats are not kept in the same way.”

### **Implications for the UK**

The Human Animal Infections Risk Surveillance (HAIRS) group is a multi-agency and cross-disciplinary horizon scanning group with members from the HPA, Defra, Veterinary Laboratories Agency, Department of Health, Food Standards Agency, Animal Health, and the Devolved Administrations [4]. The HAIRS group met in January 2010 to discuss the implications of the Dutch situation for the UK, considering evidence from the Dutch outbreak and the ECDC threat assessment, together with UK Q fever surveillance data and information on UK farming practices.

Current surveillance of Q fever in humans and animals does not indicate any recent increase in numbers of cases in the UK. There are between 50-100 cases per year in humans in the UK, with no apparent increase seen in 2009. Less than 10 cases in animals were identified in Great Britain annually between 2006 and 2008, and none were diagnosed in 2009 to the end of September. Further information on the background level of Q fever infection in sheep and goats will be available from a Q fever seroprevalence study, commissioned by Defra, that involves screening blood samples (from approximately 6000 sheep and 500 goats) collected during the 2008 routine Brucella screening programme. Preliminary results are expected in early 2010.

There are significant differences in the pattern of husbandry and density of stocking of goats between the UK and the Netherlands. The goat industry in the UK is not intensive and there are very few large dairy goat farms, most goat farming being small-scale and not concentrated in any one area. The HAIRS group concluded that, due to these differences, it is highly unlikely that the events in the Netherlands could be repeated in the UK. In addition, current scientific evidence does not support the suggestion that a hypervirulent strain may be contributing to the extent of the outbreak in the Netherlands. HAIRS will continue to monitor the situation closely.

## References

1. Schimmer B, Dijkstra F, Vellema P, Schneeberger PM, Hackert V, ter Schegget R, et al. Sustained intensive transmission of Q fever in the south of the Netherlands, 2009. *Euro Surveill.* 2009;14(19). Available at: <http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=19210>.
2. Data from the National Institute for Public Health and the Environment, RIVM (<http://www.rivm.nl/cib/themas/Q-koorts/>).
3. Food and Consumer Product Safety Authority of Ministry of Agriculture (Netherlands), list of positive farms [http://www.vwa.nl/cdlpub/servlet/CDLServlet?p\\_file\\_id=47562](http://www.vwa.nl/cdlpub/servlet/CDLServlet?p_file_id=47562).
4. The Human Animal Infections Risk Surveillance group. Information available at <http://www.hpa.org.uk/HPA/Topics/InfectiousDiseases/InfectionsAZ/1206575051338/>.

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## Substantial increase in cases of *Lymphogranuloma venereum* (LGV) in UK

Diagnoses of LGV have risen substantially over the winter of 2009/10 (see figure). Diagnoses were 91% higher for November 2009 to January 2010 (88) than in the previous three months (46), and 115% higher than that seen in the same period in 2008/09 (41).

Since enhanced surveillance of LGV was introduced in 2004, the general diagnostic profile has been consistent over time, most cases being seen in HIV-positive white men who have sex with men (MSM), presenting with proctitis, some of whom have a large number of sexual partners [1,2]. The cases are geographically dispersed although the epidemic is focused on London and, to a lesser extent, Brighton and Manchester.

Since 2004, outbreaks amongst MSM have occurred in major cities in Europe, the largest cohort of 1,070 cases being seen in the UK [3]. LGV, which is caused by the L serovars of *Chlamydia trachomatis*, is endemic to areas of Africa, Asia, South America and the Caribbean.

Our understanding of the epidemiology of LGV remains poor. It has been difficult to identify the reservoir, with only a small number of asymptomatic cases detected [4]. The mode of transmission has also been elusive, urethral infection is uncommon and, whilst infected individuals have high risk sexual behaviour and links to sex toys and sex parties have been described, no definitive associations have emerged [1].

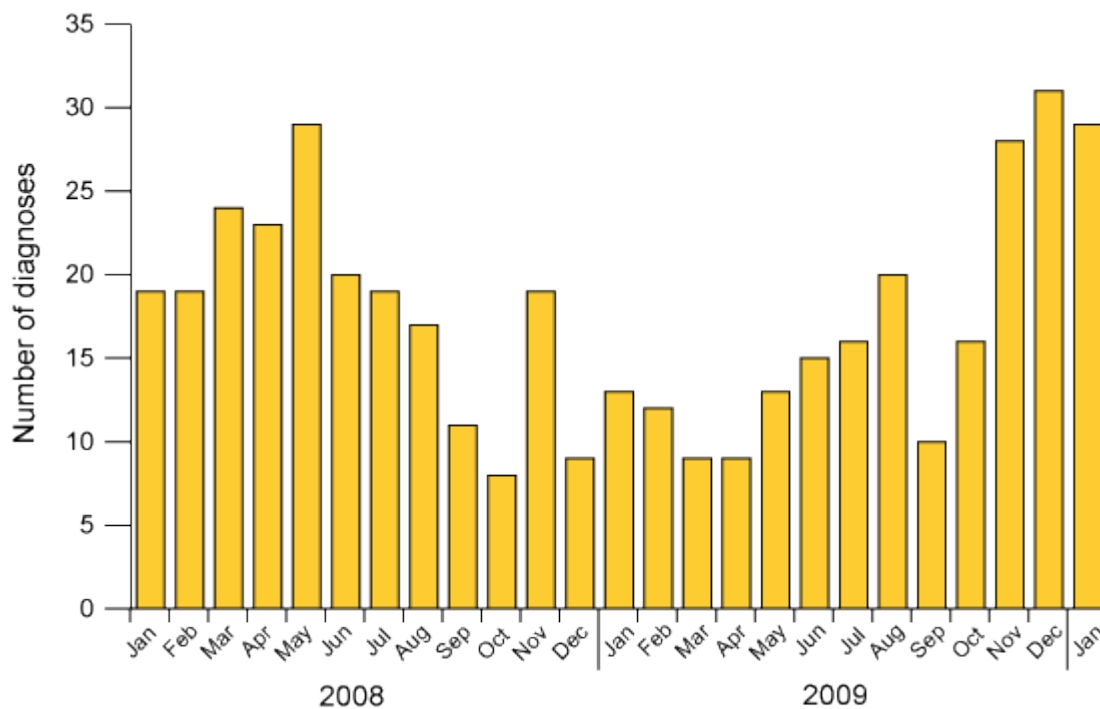
Unlike other forms of *C. trachomatis*, LGV is invasive. Most cases seen in the UK have presented with proctitis but symptoms vary according to the site of infection and may include ulcers and inflamed and swollen lymph nodes in the groin (inguinal syndrome). If left untreated symptoms can become more severe and cause lasting damage to health. Treatment with three weeks of doxycycline BD 100 mg is recommended by BASHH [5].

Urgent further investigation of the increase in diagnoses will be the focus for the LGV Incident Group but the following recommendations will help limit spread:

- Testing for LGV should be offered during routine clinical care to HIV positive MSM who have symptoms of LGV infection and have a positive test for *C. trachomatis*;
- MSM should have a full sexual health screen annually. This should include testing for HIV where it is not already diagnosed;
- Behavioural modification is a key component of control strategies. Campaigns that increase awareness and knowledge of STIs and promote safer sex need to be intensified.

The Sexually Transmitted Bacteria Reference Laboratory (at the HPA's Centre for Infections) is offering a reference service for symptomatic patients who are chlamydia positive or contacts of positive cases. Information on enhanced surveillance of LGV, including general information about LGV, and protocols for the submission of samples for testing, are available on the HPA website [6].

#### Trends in diagnoses of *Lymphogranuloma venereum*, UK: 2008 to 2010 (January)



#### References

1. Ward H, Martin I, Macdonald N, Alexander S, Simms I, Fenton K, et al. *Lymphogranuloma venereum* in the United Kingdom. *Clin Infect Dis* 2007; **44**: 26-32.
2. HPA. *Lymphogranuloma venereum* in the United Kingdom: data to end of June 2008, *Health Protection Report* 2(35) (29 August 2008).
3. Savage EJ, van de Laar MJ, Gallay A, et al. *Lymphogranuloma venereum* in Europe, 2003-2008. *Euro Surveill* 2009; **14**: 19428.
4. Ward H, Alexander S, Carder C, Dean G, French P, Ivens D, et al. The prevalence of *Lymphogranuloma venereum* (LGV) infection in men who have sex with men: results from a multi-centre case finding study. *Sex Transm Inf* 2009; **85**(3): 173-5.
5. Clinical Effectiveness Group of the British Association for Sexual Health and HIV (CEG/BASHH). 2006 National Guideline for the Management of *Lymphogranuloma venereum*. Available at: <http://www.bashh.org/documents/92/92.pdf> (300 KB PDF).

### **WHO influenza vaccine recommendations for 2010-11**

The World Health Organization (WHO) has published its recommendations for the composition of influenza virus vaccines for the forthcoming season in the northern hemisphere (November 2010 to April 2011): a trivalent vaccine including a pandemic influenza (H1N1) 2009 strain (an A/California/7/2009 (H1N1)-like virus; an A/Perth/16/2009 (H3N2)-like virus; and a B/Brisbane/60/2008-like virus.) [1].

### **HPA bulletins**

Due to the low influenza activity in the UK, the HPA is currently publishing full National Influenza Reports on a fortnightly basis, with shorter summaries of activity being published in alternate weeks [2]. The next full report will be published on Thursday 4 March 2010 [3].

### **References**

1. WHO. Recommended viruses for influenza vaccines for use in the 2010-2011 northern hemisphere influenza season, [http://www.who.int/csr/disease/influenza/recommendations2010\\_11north/en/index.html](http://www.who.int/csr/disease/influenza/recommendations2010_11north/en/index.html).
  2. HPA. Weekly National Influenza Report (week 8 - summary only), 25 February 2010 (PDF format, 154 KB),
  3. HPA website: [www.hpa.org.uk/swineflu/surveillance&epidemiology](http://www.hpa.org.uk/swineflu/surveillance&epidemiology).
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## Infection reports

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### Immunisation

- ▶ **Laboratory reports of *Haemophilus influenzae* by age group and serotype, England and Wales: fourth quarter, and quarters 1-4 inclusive, 2009 (2008)**
  
- ▶ **Laboratory-confirmed cases of measles, mumps and rubella, England and Wales: October to December 2009**
  
- ▶ **Tetanus in England and Wales: 2005 to 2008**

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### Laboratory reports of *Haemophilus influenzae* by age group and serotype, England and Wales: fourth quarter, and quarters 1-4 inclusive, 2009 (2008)

#### Fourth quarter 2009 (2008)

Type	Age					Total
	<1y	1-4y	5-14y	15+	n.k.	
b	-(2)	1(-)	-(2)	12(13)	-( -)	<b>13</b> (17)
nc	13(12)	9(5)	2(2)	66 (73)	-( -)	<b>90</b> (92)
a,e,f	2(1)	1(1)	-(1)	14(15)	-( -)	<b>17</b> (18)
not typed	3(1)	2(4)	2(2)	37(55)	1(-)	<b>45</b> (62)
<b>Total</b>	<b>18</b> (16)	<b>13</b> (10)	<b>4</b> (7)	<b>129</b> (156)	<b>1</b> (-)	<b>165</b> (189)

#### Quarters 1-4 inclusive 2009 (2008)

Type	Age					Total
	<1y	1-4y	5-14y	15+	n.k.	
b	6 (10)	4 (3)	-(7)	26 (52)	-( -)	<b>36</b> (72)
nc	41 (42)	27 (15)	3 (7)	279 (242)	-(3)	<b>350</b> (309)
a,e,f	4 (5)	5 (2)	2 (6)	46 (47)	-( -)	<b>57</b> (60)
not typed	17 (12)	10 (8)	9 (8)	169 (188)	2 (3)	<b>207</b> (219)
<b>Total</b>	<b>68</b> (69)	<b>46</b> (28)	<b>14</b> (28)	<b>520</b> (529)	<b>2</b> (6)	<b>650</b> (660)

## Laboratory-confirmed cases of measles, mumps and rubella, England and Wales: October to December 2009

Data presented here is for the fourth quarter of 2009 (ie October to December 2009). Cases include those confirmed by CfI oral fluid testing (IgM antibody tests and/or PCR) and national routine laboratory reports (table 1). Analyses are by date of onset. Regional breakdown figures relate to Government Office Regions rather than regional health authorities (pre-April 2002 definitions).

Quarterly figures for cases confirmed by oral fluid antibody detection only from 1995 and annual total numbers of confirmed cases by health region and age are available from:

[http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb\\_C/1195733778332](http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1195733778332),  
[http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb\\_C/1195733841496](http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1195733841496), and  
[http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb\\_C/1195733752351](http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1195733752351).

**Table 1. Total confirmed cases of measles, mumps and rubella, and oral fluid IgM antibody tests in notified cases: weeks 40-53/2009**

		Confirmed cases						
	Notified cases	Oral fluid testing				Confirmed infections	Other samples	Total
		Number tested	% tested	Total positive	Recently vaccinated			
<b>Measles</b>	519	394	76%	20	14	6	2	<b>8</b>
<b>Mumps</b>	3009	1659	55%	659	7	652	312	<b>964</b>
<b>Rubella</b>	157	101	64%	–	–	–	–	–

### Measles

Only eight cases of measles were confirmed in the fourth quarter, compared to 81 in the previous quarter [1]. This brings the provisional total of laboratory confirmed measles cases for 2009 to 1,144, lower than the 2008 total of 1,370 cases but higher than 2007 (990 cases). The ten-fold decrease in measles incidence between the current and previous quarter was also reflected in a decrease in the overall proportion of oral fluid samples tested that were confirmed as measles infections (1% vs 10%).

Only five English regions and Wales identified cases in the fourth quarter (Wales 3, South West 2, Yorkshire and the Humber 1, South East 1 and West Midlands 1).

Two cases identified in this quarter were associated with travel to the Asian subcontinent. Another two had contact within a family. All eight cases were children aged less than 15 years (three under one year; three aged 1 to 4 years; one aged 5 to 9 years; and one aged 10 to 14 years). Only one case reported receiving a measles containing vaccine.

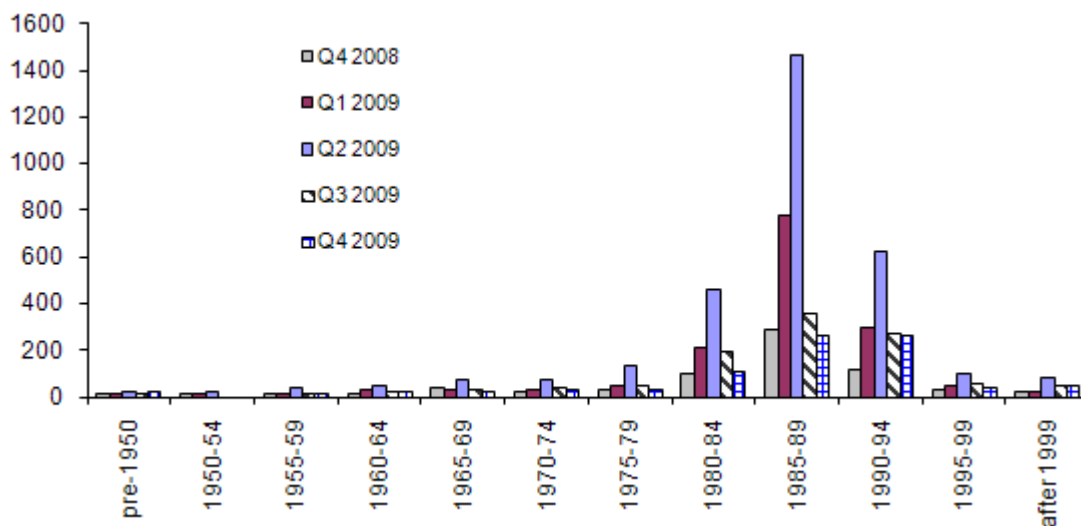
### Mumps

Nine hundred and sixty-four confirmed mumps cases with onset dates in the fourth quarter of 2009 were reported compared to 1,161 and 3,271 the two previous quarters [1] (figure). This brings the provisional total number of laboratory-confirmed mumps infections to 7,628 for the whole of 2009. Cases continue to occur predominantly in individuals born between 1980 and 1991 [1,2], the cohort known to be at highest risk due either to not having been routinely offered MMR vaccination in childhood, or having only received one dose (table 2 and figure). Although the highest number of cases were observed in the 15-19 age group, 70 % were aged 18 and 19 (born 1990 and 1991).

**Table 2 Confirmed cases of mumps by age group and region, England and Wales: weeks 40-53/2009**

Region	Age group								Total
	<1	1-4	5-9	10-14	15-19	20-24	25+	n.k.	
North East	1	–	1	2	30	21	15	–	70
North West	1	3	16	18	88	70	54	–	250
Yorks. & Humber	1	2	3	12	44	34	22	1	119
East Midlands	–	2	1	3	26	31	21	–	84
West Midlands	–	–	3	6	20	24	13	1	67
East of England	–	–	–	1	11	21	29	1	63
London	–	9	12	12	22	25	34	1	115
South East	–	4	4	2	21	20	44	1	96
South West	–	–	1	–	30	22	11	1	65
Wales	–	1	–	–	11	15	8	–	35
<b>Total</b>	<b>3</b>	<b>21</b>	<b>41</b>	<b>56</b>	<b>303</b>	<b>283</b>	<b>251</b>	<b>6</b>	<b>964</b>

**Number of laboratory confirmed mumps cases in England and Wales by year of birth and quarter**



### Rubella

No rubella cases were identified this quarter, compared to one case with confirmed infections in the previous quarter [1]. The provisional total of laboratory confirmed rubella infections for 2009 is eight.

## References

1. HPA. Laboratory confirmed cases of measles, mumps and rubella, England and Wales: July to September 2009. *Health Protection Report* [serial online] 2009; **3**(47): immunisation. Available at: <http://www.hpa.org.uk/hpr/archives/2009/hpr4709.pdf>.
  2. HPA. Laboratory confirmed number of mumps cases in England and Wales: update to end-November 2009. *Health Protection Report* [serial online] 2010; **4**(2): news. Available at: <http://www.hpa.org.uk/hpr/archives/2010/news0210.htm#mmps>.
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## Tetanus in England and Wales: 2005 to 2008

Tetanus is caused by a neurotoxin produced by *Clostridium tetani*, an anaerobic spore-forming bacillus. Tetanus spores are widespread in the environment, including in soil, and can survive hostile conditions for long periods of time. Transmission occurs when spores are introduced into the body, often through a puncture wound but also through trivial, unnoticed wounds, through injecting drug use, and occasionally through abdominal surgery. Tetanus is not transmitted from person to person. The incubation period of the disease is usually between three and 21 days, although it may range from one day to several months, depending on the character, extent and localisation of the wound.

Tetanus immunisation was introduced in the 1950s and became part of the national routine childhood programme in 1961. Since then, vaccine coverage at two years of age has always exceeded 70% in England and Wales and since 2001 has been 94%, just below the World Health Organization (WHO) target of 95%. The objective of the immunisation programme in the UK is to provide a minimum of five doses of tetanus-containing vaccine at appropriate intervals for all individuals. As there is no herd immunity effect, individual protection through vaccination is essential. In most circumstances, a total of five doses of vaccine at the appropriate intervals are considered to give satisfactory long-term protection, and routine boosters every 10 years are no longer recommended [1].

Tetanus is usually confirmed by a clinical diagnosis alone, although three diagnostic laboratory tests are available: detection of tetanus toxin in a serum sample, isolation of tetanus bacillus from the infection site, and demonstrating low levels or absent antibody to tetanus toxoid in serum. The first two tests may provide laboratory confirmation, whereas the third can only support the diagnosis.

Data sources for the enhanced surveillance of tetanus include notifications, reference and NHS laboratory reports, death registrations, and individual case details such as vaccination history, source of infection, and severity of disease obtained from hospital records and from general practitioners. This report updates a previous review of tetanus cases reported in England and Wales in the four-year period 2001 to 2004 [2].

Seventeen cases of tetanus were reported between 2005 and 2008. Cases were aged between 23 and 85 years, with the 25-44 year and 45-64 year age groups being most commonly affected (table 1). The 65 years-and-over age group, which historically has been the most affected [3], accounted for only four of the 17 cases. Nine of the 17 cases were female, supporting previous findings that tetanus incidence rates for men and women may no longer differ significantly [3]. Sixteen cases were reported in England (four in London) and one in Wales.

Five cases aged 29 to 53 years were reported in injecting drug users (IDUs). Four of these five occurred in 2005, and one case in 2007. Two cases in heroin users were reported within a day of each other (one in the West Midlands, one in London) suggesting a possible batch contamination or common source. In 2003/04, a large cluster of 25 cases of tetanus in IDUs was reported in the UK (23 cases in England and Wales). In this incident the clustering of the place from which the heroin was supplied, compared with the residence of IDUs was consistent with contaminated heroin having been distributed from Liverpool [4].

**Table 1. Characteristics of tetanus cases in England and Wales: 2005 to 2008**

		Year				
		2005	2006	2007	2008	Total
<b>Total number of cases</b>		<b>6</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>17</b>
Source of information	Notified	3	–	4	7†	14†
	Other sources*	3	3	–	1	7
Age breakdown	15-24 years	–	1	–	–	1
	25-44 years	1	1	2	1	5
	45-64 years	3	–	1	3	7
	65+ years	2	1	1	–	4
Injecting drug users (IDUs)		4	–	1	–	5

\* Reports from hospital, laboratories and death registrations.

† Four notifications were subsequently found not to be tetanus.

Amongst non-IDUs, seven of the 12 cases had a definite history of injury. These were most commonly sustained in the home, garden or workplace and included four penetrating wounds by nails/gardening equipment, two in which an animal bite was thought to be the predisposing injury, and one scaffolding injury.

Three deaths, all individuals aged over 64 years, were reported. One had received a primary course of three doses of tetanus toxoid 14 years previously but no booster doses; the immunisation status of the other two cases was not known although both were born before routine childhood immunisation began in 1961. Only one was known to have received tetanus immunoglobulin (TIG).

None of the 17 cases had completed the recommended five doses of tetanus vaccine although eight were born before 1961. Three were unvaccinated, and seven had an unknown immunisation status (four were born before 1961). Of the remaining seven cases, four recalled that they had been vaccinated but could not provide any details (including number of booster vaccinations) and three were partially immunised (had received two, three and four doses respectively).

## References

1. Salisbury D, Ramsay M, Noakes K (2006). Immunisation against infectious disease (the 'Green Book'). London: The Stationary Office, Available 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)
2. HPA. Tetanus in England and Wales: 2001 to 2004. *Communicable Disease Report weekly* August 2005; **15** (34): Immunisation. Available at: <http://www.hpa.org.uk/cdr/archives/2005/cdr3405.pdf>
3. Rushdy AA, White JM, Ramsay ME, Crowcroft NS. Tetanus in England and Wales 1984-2000. *Epidemiol Infect* 2003; **130**: 71-7.
4. Hahne SJM, White JM, Brett M, George R, Beeching NJ, Roy K, et al. Tetanus emerges in injecting drug users in the UK [letter]. *Emerg Infect Dis* 2006; **12**(4): 709-10. Available at: <http://www.cdc.gov/ncidod/EID/vol12no04/05-0599.htm>.

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# Radiation

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## *Environmental Radon Newsletter (no. 62 - spring 2010)*

The HPA's Radiation Protection Division has published *Environmental Radon Newsletter 62* [1] which comprises articles covering:

- the launch of a new radon map of Northern Ireland
- the availability of large-scale laminated radon maps
- the eighth UK National Radon Forum
- the first of a new series of remediation case studies.

### Reference

1. HPA. *Environmental Radon Newsletter 62 (Spring 2010)* (1.7 MB PDF). HPA website: Publications ›Radiation ›Newsletters.

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