



Health Protection Report

weekly report

Current Issue: Volume 2 Number 04 **Published on:** 25 January 2008

Current News

- ▶ Advice to pregnant women during the lambing season
- ▶ Listeriosis in England and Wales, 2007

Infection reports

Immunisation

- ▶ Laboratory reports of hepatitis A infection in England and Wales
- ▶ Laboratory reports of hepatitis C infection in England and Wales
- ▶ Quarterly report from the sentinel surveillance study of hepatitis testing in England: data for July to September 2007

HPR subscription

To subscribe to the Health Protection Report, please email hpr@hpa.org.uk

News

Next update: 1 February 2008

Last updated: 25 January 2008, Volume 2, No 04

▶ Advice to pregnant women during the lambing season

▶ Listeriosis in England and Wales, 2007

Advice to pregnant women during the lambing season

At this time of year, the HPA joins the Department for Environment, Food and Rural Affairs in reiterating the advice to pregnant women to avoid close contact with sheep during the lambing season.

Pregnant women who come into close contact with sheep during lambing may risk their own health and that of their unborn child, from infections that can occur in some ewes. Such infections include chlamydiosis (*Chlamydophila abortus* : enzootic abortion of ewes - EAE), toxoplasmosis and listeriosis, each of which is a common cause of abortion in ewes.

Another type of infection that can be acquired following exposure during lambing (or birthing in other livestock) is Q fever (caused by *Coxiella burnetii*). The causative organisms may be present in birth fluids of animals which have no clinical signs of disease. Although less likely to cause harm to the unborn child, Q fever may cause acute or chronic maternal infection if acquired during pregnancy. Q fever affects a wide range of animals including cattle, goats and domestic cats, and exposure to birth products of these animals, as well as sheep, should be avoided in pregnancy.

Although these infections are uncommon, and human miscarriages resulting from contact with sheep are rare, it is important that pregnant women are aware of the potential risks associated with close contact with sheep during lambing.

To avoid the possible risk of infection, pregnant women are advised that they should:

- not help to lamb or to milk ewes;
- avoid contact with aborted or new-born lambs or with the afterbirth, birthing fluids or materials (e.g. bedding) contaminated by such birth products ;
- avoid handling clothing, boots etc which have come into contact with ewes, lambs or afterbirth.

Pregnant women should seek medical advice if they experience fever or influenza-like symptoms, or if concerned that they could have acquired infection from a farm environment.

More information and advice is available at http://www.hpa.org.uk/infections/topics_az/zoonoses/lambing/default.htm

Defra press release 9 th January 2008 - <http://www.defra.gov.uk/news/2008/080109a.htm>

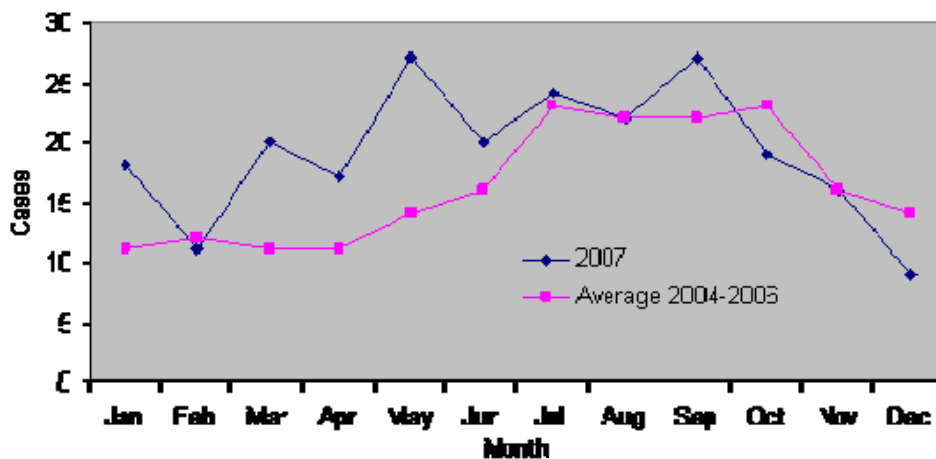
Listeriosis in England and Wales, 2007

Listeriosis is a rare but life-threatening foodborne disease caused by the bacterium *Listeria monocytogenes*. Pregnant women, unborn or newly delivered infants, the elderly and those with weakened immunity are most commonly affected and the disease usually presents as abortion, bacteraemia (bacterial invasion of the blood stream) or central nervous system (CNS) infection. Mortality is high in all patient groups.

The observed pattern of listeriosis in England and Wales has changed since 2001 [1]. There has been an increase in the number of cases reported (an average of 185 cases reported annually between 2001 and 2006 compared with 109 cases between 1990 and 2000), especially in patients aged 60 years and over. The clinical presentation has also changed, with more cases presenting with bacteraemia in the absence of CNS involvement. Similar patterns have been reported in other European countries [2].

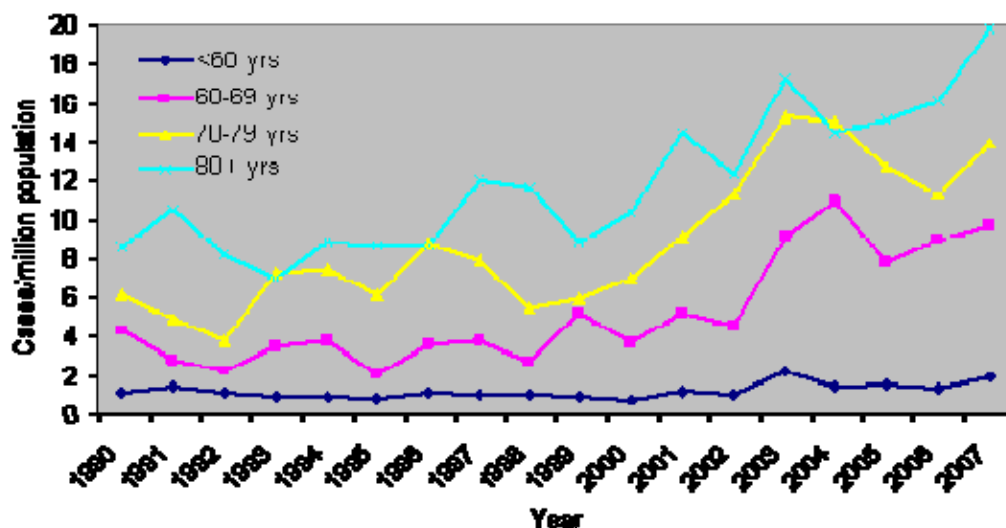
A provisional total of 230 cases of *Listeria monocytogenes* infection were reported in England and Wales in 2007, representing a 23% increase on incidence in 2006 and the second highest total since active surveillance began in 1990. Much of the increase can be explained by an unseasonably high number of cases reported between March and May 2007 [3], when 64 cases were reported against an average of 37 cases reported between 2004 and 2006 (figure 1).

Figure 1. Seasonal distribution of cases of *L. monocytogenes* infection by month. England and Wales, 2004-2007



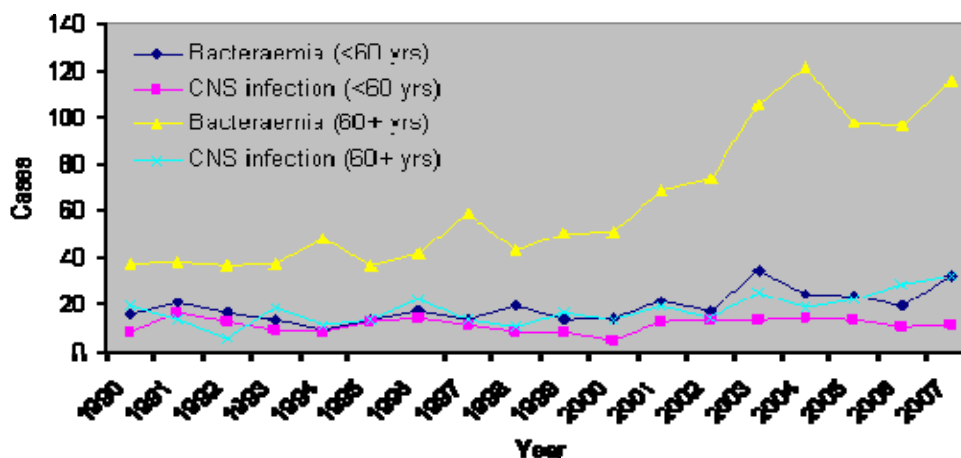
Two thirds (152; 66%) of patients reported in 2007 were aged 60 years or over, and the incidence in this age group (13.2 cases per million population) was over seven times higher than in younger people (1.8 cases per million population; relative risk 7.2; 95% confidence interval 5.5-9.4). Disease incidence in those aged 60 or more increased with increasing age group (figure 2). The number of pregnancy-associated cases reported in 2007 (28) was comparable with the number reported in 2005 and 2006 (25 in each).

Figure 2. Age specific rates of listeriosis. England and Wales, 1990-2007



Bacteraemia in the absence of CNS involvement was the most common disease presentation (166; 73%) where the source culture was known (227; 99%) and this occurred more frequently in patients aged sixty years and over (figure 3).

Figure 3. Clinical presentation by age group for pregnancy-associated cases of *L. monocytogenes* infection. England and Wales , 1990-2007 (N=1990)



The altered pattern of listeriosis, reported in England and Wales since 2001 and subsequently observed elsewhere in Europe, has continued in 2007. The Health Protection Agency (HPA) continues to collect isolates of *L. monocytogenes* from clinical cases of listeriosis in England and Wales and carries out a range of discriminatory tests to identify clusters of possibly related cases. A clinical questionnaire is sent to microbiologists in England and Wales and completed information is currently obtained for approximately 70% of cases. A standard detailed food and exposure history has been sought from cases since 2005 and analysis of data accrued to date (response rates of 20%, 28% and 63% in 2005, 2006 and 2007 respectively) is underway.

Laboratories in England and Wales are requested to:

- refer all *L. monocytogenes* isolates from clinical specimens and food samples to Dr Kathie Grant , HPA Centre for Infections, for confirmation and subtyping (telephone: 020 8327 6505; e-mail: kathie.grant@hpa.org.uk);
- notify local Health Protection Units of cases to ensure effective routine public health follow-up.

Health Protection Units are requested to:

- complete the standard HPA clinical questionnaire (available from http://www.hpa.org.uk/infections/topics_az/listeria/questionnaires.htm) and return to Iain Gillespie, Centre for Infections (telephone 020 8327 7486; e-mail Iain.Gillespie@hpa.org.uk).

References

1. Gillespie IA, McLauchlin J, Grant KA, Little CL, Mithani V, Penman C, Lane C, Regan M. Changing pattern of human listeriosis, England and Wales , 2001-2004. *Emerg Infect Dis.* 2006 Sep;12(9):1361-6.
2. European Food Safety Authority. The Community Summary Report on Trends and Sources of Zoonoses, Zoonotic Agents, Antimicrobial resistance and Foodborne outbreaks in the European Union in 2006. December 2007. Available from http://www.efsa.europa.eu/EFSA/DocumentSet/Full_report_light.pdf
3. Increased incidence of listeriosis in England and Wales, 2007. Health Protection Report Vol 1 No 21 (25 May 2007).

▶ **Laboratory reports of hepatitis A infection in England and Wales**

▶ **Laboratory reports of hepatitis C infection in England and Wales**

▶ **Quarterly report from the sentinel surveillance study of hepatitis testing in England: data for July to September 2007**

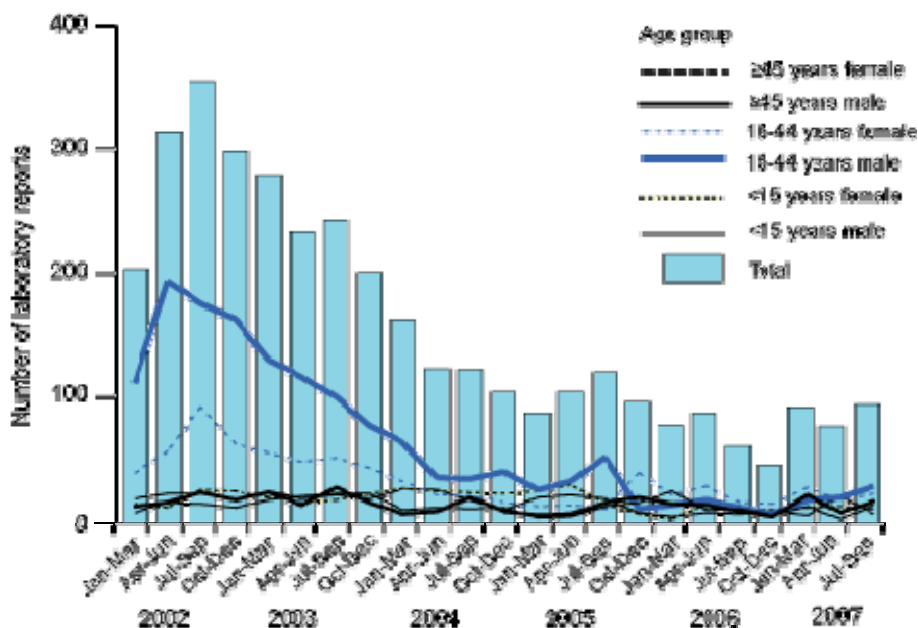
Laboratory reports of hepatitis A infection in England and Wales

During the third quarter of 2007, 99 cases of hepatitis A were reported to the Health Protection Agency Centre for Infections. This is higher than the 78 cases reported in the second quarter but similar to the number of cases reported in the first (95). In the third quarter, 23% of the cases were men aged 15-44 years (table 1) and 29% were females in this age group. Of those aged 45 years and over, 17% of cases were females and 14% males. Males and females under 15 accounted for 6% and 10% of cases, respectively. The ratio of males to females is approximately 1:1.3. The overall decline in the number of hepatitis A cases reflects a decline in the number of reports in all age groups (figure 1).

Table 1 Laboratory reports of hepatitis A infection in England and Wales : July to September 2007

Age group	Male	Female	Unknown	Total
<1 year	0	0	0	0
1-4 years	3	1	1	5
5-9 years	3	5	0	8
10-14 years	0	4	0	4
15-24 years	7	7	0	14
25-34 years	10	10	0	20
35-44 years	5	11	0	16
45-54 years	3	5	1	9
55-64 years	3	2	1	6
>65 years	7	9	1	17
Unknown	-	-	-	-
Total	41	54	4	99

Figure 1 Number of laboratory reports of hepatitis A by age group and sex: 2002 to September 2007



Laboratory reports of hepatitis C infection in England and Wales

A total of 1,548 cases of hepatitis C infection were reported to the Health Protection Agency Centre for Infections in the third quarter of 2007 (table 2) compared to 2188 and 2305 laboratory cases reported in the first and second quarters of 2007, respectively. In the third quarter of 2007, 62% of the cases (947/1522) occurred in 25 to 44-year-olds compared to 63% and 62% in the first and second quarters of 2007, respectively. The ratio of males to females was 2.2:1.

Table 2 Laboratory reports of hepatitis C infection in England and Wales : July to September 2007

Age group	Male	Female	Unknown	Total
1-4 years	1	2	0	3
5-9 years	0	1	0	1
10-14 years	0	0	0	0
15-24 years	44	47	1	92
25-34 years	272	164	7	443
35-44 years	377	134	7	518
45-54 years	243	71	5	319
55-64 years	67	29	2	68
65 years or more	36	30	2	68
Unknown	2	2	2	6
Total	1042	480	26	1548

Quarterly report from the sentinel surveillance study of hepatitis testing in England: data for July to September 2007

The sentinel surveillance study of hepatitis testing, which began in 2002, aims to supplement routine surveillance of hepatitis B and C in England by providing information on trends in testing, individual risk exposures and clinical symptoms.

The study collects information on all hepatitis B and C testing carried out in participating centres regardless of test result and therefore can also be used to estimate prevalence in those individuals tested.

It is important to note that no laboratory methods are currently available to distinguish between acute, chronic or resolved hepatitis C virus infections. Positive anti-HCV results do not therefore necessarily represent incident infections and the data presented here should be interpreted with care.

Hepatitis C virus (HCV) testing

During the third quarter of 2007, a total of 30,343 individuals were tested at least once for hepatitis C-specific antibodies (anti-HCV) in 15 participating sentinel centres (Table 1). This is the first time these individuals had been reported to the sentinel surveillance scheme.

It should be noted that data from four participating centres in the North West are not included in this report due to problems in data extraction. Figures presented in this report relating to testing in the North West region and for England as a whole are therefore not directly comparable with those from previous quarters. Work is ongoing to solve this problem and restore normal data collection in these laboratories.

Overall, 4.1% of individuals tested for anti-HCV were positive, though this varied by region (Table 1). As last quarter, the percentage of positive tests was highest in South West England: this may reflect more targeted testing of risk groups and/or genuinely higher prevalence in people being tested in this area.

Table 1. Individuals tested for anti-HCV in participating centres, July - September 2007

Region (number of centres)	Number tested *	Number positive * (%)
East Midlands (1)	1,700	52 (3.1)
Eastern (1)	1,099	59 (5.4)
London (5)	9,576	368 (3.8)
North East (1)	1,249	25 (2.0)
North West (1)**	1,210	92 (7.6)
South East (2)	3,745	49 (1.3)
South West (1)	3,917	346 (8.8)
West Midlands (1)	1,239	53 (4.3)
Yorkshire and Humberside (2)	6,608	208 (3.1)
Total, all centres (15)	30,343	1,252 (4.1)

* Excludes reference and confirmatory testing. Includes individuals aged less than one year (n tested = 116, n positive = 14), in whom positive tests may reflect the presence of passively-acquired maternal antibody rather than true infection. Some duplication of individual patients may occur due to limitations of the information supplied. All data are provisional.

** Data from four centres in the North West were not available for this quarter due to problems in data extraction.

Of the 1,252 individuals testing positive for anti-HCV during the third quarter of 2007, 736 (58.8%) were also tested for HCV RNA by PCR. Of these individuals, 474 were PCR positive (64.4%).

Sex was reported for the majority of people tested. Similar numbers of males and females were tested (table 2); the ratio of males to females tested was 1.0:1. Twice as many males were positive than females; the ratio of males to females testing positive was 2.0:1. The majority (66.6%) of people tested were aged 15-44 years. Excluding individuals aged less than one year (in whom a positive anti-HCV result does not necessarily reflect HCV infection) and those for whom age is unknown, the percentage of individuals testing positive was highest among people aged 35-54 years, for both sexes.

Table 2. Age and sex of individuals tested for anti-HCV in participating centres, July – September 2007

Age	Female		Male		Unknown		Total	
	Number tested	Number positive (%)	Number tested	Number positive (%)	Number tested	Number positive (%)	Number tested	Number positive (%)
<1	52	8 (15.4)	60	5 (8.3)	4	1 (25.0)	116	14 (12.0)
1-14	213	2 (0.9)	190	3 (1.6)	14	0 (0.0)	417	5 (1.2)
15-24	3,072	46 (1.5)	2,174	28 (1.3)	175	1 (0.6)	5,421	75 (1.4)
25-34	4,050	111 (2.7)	4,043	217 (5.4)	331	10 (3.0)	8,424	338 (4.0)
35-44	2,731	103 (3.8)	3,417	303 (8.9)	196	7 (3.6)	6,344	413 (6.5)
45-54	1,476	79 (5.4)	1,913	159 (8.3)	131	7 (5.3)	3,520	245 (7.0)
55-64	1,161	36 (3.1)	1,356	72 (5.3)	94	0 (0.0)	2,611	108 (4.1)
65 plus	1,569	23 (1.5)	1,655	27 (1.6)	130	1 (0.8)	3,354	51 (1.5)
Unknown	31	0 (0.0)	37	2 (5.4)	68	1 (1.5)	136	3 (2.2)
TOTAL	14,355	408 (2.8)	14,845	816 (5.5)	1143	28 (2.4)	30,343	1,252 (4.1)

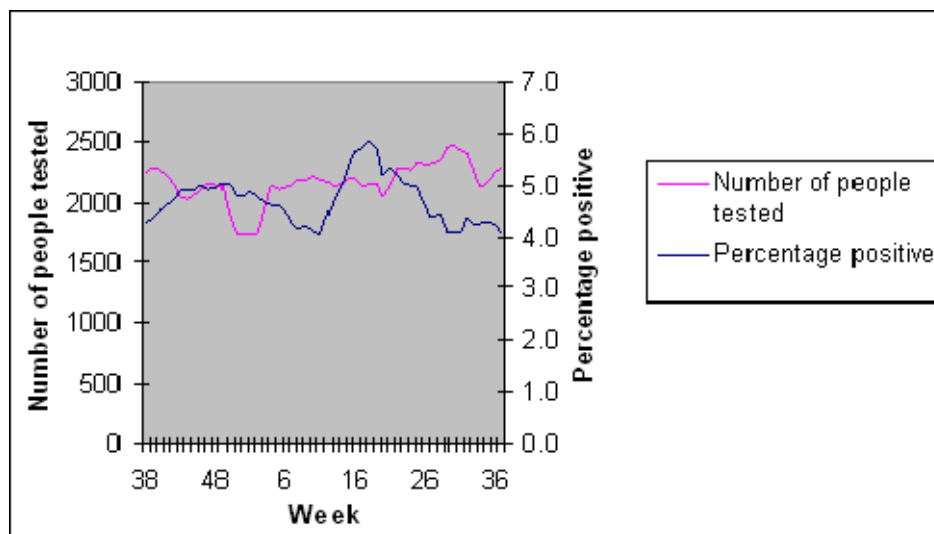
Excludes reference and confirmatory testing. Individuals aged less than one year are shown separately since positive tests in this age group may reflect the presence of passively-acquired maternal antibody rather than true infection. Some duplication of individual patients may occur due to limitations of the information supplied. All data are provisional.

To provide an indication of trends in testing, data from the 15 sentinel centres from which full data were available were compared for the third quarters of 2006 and 2007. In the period July to September 2007, 1,252 of 30,343 (4.1%) people tested were positive for anti-HCV, compared to 1,394 of 27,804 (5.0%) for the same period in 2006.

Please note that these data relate to different sentinel centres to those for whom trends data were presented in the last quarterly report and therefore comparisons should not be made between reports. However, Figure 1 shows the five-weekly moving average for number of people tested for anti-HCV and percentage positive over the last year (October 2006 to September 2007) for the 15 centres from which full data were available.

A slight overall increase in anti-HCV testing can be observed over the course of the year. The decrease in number of people tested between week 50 2006 and week 2 2007 corresponds to the Christmas and New Year holiday period; a slight drop is also apparent around week 34, which may correspond to the August holidays. The reasons for the two peaks that can be observed in the percentage positive are currently unknown, and work to investigate these patterns further is underway.

Figure 1. Five-weekly moving average of number of people tested, and percentage positive, for anti-HCV between October 2006 and September 2007*.



*October 2006 to September 2007 is the last yearly period for which full data are currently available.