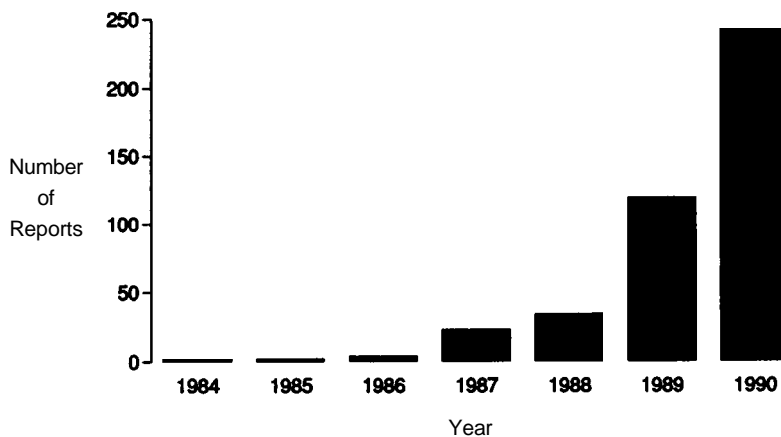


## Communicable Disease Report

### *Escherichia coli* O 157

The number of reports of *Escherichia coli* O 157 infection has increased markedly since surveillance began in 1984 (Figure). CDSC has so far received 265 laboratory reports of isolations of *E. coli* O 157 from laboratories in England and Wales in 1991, compared with 187 reports received during the equivalent period in 1990.

*E. coli* O 157: laboratory reports to CDSC



Preston Public Health Laboratory has recently reported seven isolations of *E. coli* O 157 from children in the surrounding area. Six of these isolates have been confirmed as *E. coli* O 157 phage type 49. All seven cases presented with bloody diarrhoea between 8-12 October. One case also has haemolytic uraemic syndrome (HUS). Local environmental health departments are currently investigating the outbreak.

*E. coli* O 157 PT 2 has been isolated from two children from South Wales. The onset dates are a week apart but both children are reported to have eaten cooked sausages of the same brand. These were poloni and garlic sausage, respectively, purchased from a local butcher's shop. Environmental health officers have inspected the shop and are satisfied with the condition of the premises. The CDSC Welsh Unit would be grateful to hear of further cases of *E. coli* O 157 associated with the consumption of cooked meat products. The two cases came to light during a programme of surveillance of the total population of Wales, initiated in February 1990.

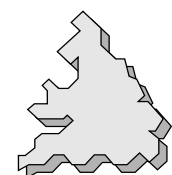
**Respiratory tract infections:**  
weeks 91/39 - 42

**Mycobacterial infections:**  
weeks 91/39 - 42

**Bacteraemia and bacterial meningitis:**  
weeks 91/39 - 42

**Unusual infections**

**Intradermal recombinant hepatitis B vaccine**



## Respiratory tract infections, England and Wales: laboratory reports, weeks 91/39 – 42

Laboratory reports	Number of reports received				Total reports 91/39-42	Cumulative total 1991
	91/39	91/40	91/41	91/42		
Adenovirus (excluding EM faeces)	41	22	34	22	119	2041
Coronavirus	–	1	5	1	7	42
Influenza A	1	–	1	1	3	114
Influenza B	–	1	–	–	1	1967
Parainfluenza	9	7	9	6	31	542
RS virus	22	23	18	25	88	6890
Rhinovirus	5	6	4	3	18	290

### Comment

**Adenovirus** (excluding EM faeces): 46 patients had eye infections, 2 had pneumonia, 2 had bronchiolitis, 1 had croup. Outbreak: 6 cases at a hospital in Yorkshire.

**Influenza A** (1 isolation subtype H<sub>3</sub>N<sub>2</sub>, 1 four-fold rise, 1 single titre): 1 patient had pneumonia.

**Influenza B** (1 single titre).

**Parainfluenza**: type 1, 1; type 2, 11; type 3, 16; type 4, 2; untyped 1. Four patients had pneumonia, 5 had bronchiolitis and 4 had croup.

**RS virus**: 1 patient had pneumonia and 19 had bronchiolitis.

**Rhinovirus**: 1 patient with pneumonia and 3 with bronchiolitis.

**Chlamydia psittaci**: 9 patients had pneumonia, 1 patient

keeps budgerigars, 1 had contact with a parrot and 1 (a farmer) had contact with farm animals.

**Legionella pneumophila**: 7 males and 2 females, age range 28-86 years. Nine patients had pneumonia. One patient died (M 53y). Recent travel abroad: Corfu 1, Italy 1, Portugal 2, Switzerland 1.

**Mycoplasma pneumoniae**: 2 regions reported more than 10% of cases: SW Thames (46 cases) and S Western (47). Thirty-seven cases were aged 5-9 years; 40, 30-34 years; and 39, 35-38 years. One hundred and fifty-three patients had pneumonia, 1 had bronchiolitis and 6 had a rash; M 35y with Stevens-Johnson syndrome, F 18y with transverse myelitis, F 29y with meningitis (no CSF), M 4y with onset of deafness, and M 1y with 6th nerve palsy.

Laboratory reports	Number of reports received				Total reports 91/39-42	Cumulative total 1991
	91/39	91/40	91/41	91/42		
<i>Chlamydia psittaci</i>	6	5	8	2	21	348
<i>Coxiella burnetii</i>	1	1	–	1	3	70
<i>Legionella pneumophila</i>	3	2	3	1	9	110
<i>Mycoplasma pneumoniae</i>	88	80	75	84	327	2482

## Mycobacterial infections, England and Wales: laboratory reports, weeks 91/39 – 42

**Mycobacterium tuberculosis** 131: 80 males, 44 females, 7 sex not stated.

Pulmonary infections 93: 66 males, 25 females, 2 sex not stated. Sixteen were sputum smear positive. One patient was aged less than 15 years and 30 were aged 65 years or more. Four deaths were reported: M 60y, M 71y, M 73y and M 87y. There were 8 isolates from a pleural aspirate and 1 from a post mortem specimen.

Disseminated 2: M 8m (gastric, pulmonary) and M 3y (sputum and lymph nodes).

Meningitis 2: M 7y (CSF) and F 28y with encephalitis (CSF) who died.

Lymph nodes 17: 6 male, 9 female, 2 sex not stated. Two from the Indian subcontinent.

Genitourinary 2: both male.

Bone/joint 2: both female, one from the Indian subcontinent.

Abdomen 1: female with tubercular peritonitis.

Abscess 11: 3 males (all with neck abscess), 7 female (2 neck, 1 sternum, 1 axillary, 1 olecranon, 1 submandibular, 1 site not stated). One sex and site not stated.

Skin 1: female from the Indian subcontinent.

**M. bovis** 3: M 54y (urine); F 63y with pulmonary infection; F 80y with osteomyelitis had abscess on wrist and hands, also psoriasis abscess.

**M. kansasii** 6: 5 males aged 57-70 years and F 47y, all with pulmonary infections; 1 sputum smear positive.

**M. xenopi** 4: M 75y with bronchiectasis; M 78y, M 80y and F 20y with pulmonary infections.

**Avium intracellulare group** 10: M 2y, F 1y and 3 year old, sex not stated, with lymphadenopathy; M 33y with haemophilia (blood isolate and bone marrow); M 69y, M 71y, M 78y and male, age not stated, with pulmonary infections; F 5y with cervical abscess; HIV-1 antibody positive F 31y (blood isolate).

**M. malmoeense** 7: male, age not stated (trachea); M 1m, M 64y, F 64y, F 76y, F 79y with pulmonary infections; F 6y with neck abscess.

**M. chelonae** 1: M 68y with pulmonary infection.

**M. fortuitum** 1: F 68y had ulcerated skin.

**M. gordonae** 1: F 69y with pulmonary infection.

**M. marinum** 1: F 62y with skin infection (fish contact).

**Mycobacterium sp** 4: M 67y, M 82y, F 25y, all with pulmonary infections and all sputum smear positive. M 37y with lymphadenopathy.

## Bacteraemia and bacterial meningitis, England and Wales: laboratory reports, weeks 91/39 – 42

Laboratory reports	No. of reports received		Age		Total received	Cumulative total 1991
	blood only	CSF only or CSF & blood	<1m	≥65y		
<b>Staphylococci</b>						
<b>S. aureus</b>	386	8	9	176	394 (8) *	3429
Coagulase negative	186	3	24	31	189	2019
<b>Streptococci</b>						
group A	24	–	–	10	24	447
group B	57	7	21	20	64	587
group C & G	35	–	1	20	35	335
enterococci	126	–	7	55	126	1172
α- and non-haemolytic	122	3	10	34	125	1179
<b>S. pneumoniae</b>	144	11	3	75	155	3160

\* methicillin-resistant strains of *Staphylococcus aureus*

### Bacteraemia

#### Staphylococci:

**S. aureus:** 27 of 88 patients with IV-lines were on haemodialysis; 4 of 36 with joint/bone infection had prostheses. Eight patients with methicillin-resistant strains were reported: NW Thames (2), Oxford, S Western, W Midlands (2), N Western (2). Three women had post partum infection. Seventeen patients had UTI and 8 had pneumonia. F 67y had pyoderma gangrenosum. Also reported: 3 patients with septic arthritis/osteomyelitis (joint only). Neonate had scalded skin syndrome (blister only).

**Coagulase negative:** 6 of 100 patients with IV-lines were on haemodialysis.

#### Streptococci:

**group A:** 10 patients had skin infection, including one with renal transplant. One woman had post partum infection. F 44y had pleural effusion (blood, pleural fluid, eye).

**group B:** 22 neonates including one pair of twins. Five women had post partum infection; 3 patients had UTI/GU

surgery; 4 patients had skin infection.

**group C, 9 and group G, 26:** 12 patients had skin infection, including one with infected shingles. F 29y had spinal abscess following bone biopsy.

**enterococci:** *S. bovis* 10; *S. faecalis* 66; *S. faecium* 22. Seventeen patients had UTI/GU surgery. Thirteen patients had biliary tract disease/surgery (including F 5y with liver transplant). Three patients had burns.

**α- and non-haemolytic:** *S. cremoris* 2; *S. milleri* 19; *S. mitior* 2; *S. mitis* 19; *S. mutans* 4; *S. salivarius* 7; *S. sanguis* 44. Four patients had UTI/GU surgery, including 3 with pregnancy-related infections. Five had biliary tract disease/surgery. *S. milleri*, M 12y with brain abscess (blood only). *S. sanguis*, F 57y following recent injection of oesophageal varices.

**S. pneumoniae:** 15 children aged 4 years or less, including 3 with pneumonia. Fifty-six adult patients had pneumonia. Sixteen immunocompromised patients. F 73y had epiglottitis.

Laboratory reports	Total bacteraemia	Acute bone/joint	Age		IV/CVP lines	Pace-makers	Endocarditis (with prostheses)	IVDA (with endocarditis)
			<15y	≥65y				
<b>Staphylococci</b>								
<b>S. aureus</b>	386	36	10	15	88	6	12 (5)	2 (1)
Coagulase negative	186	1	1	–	100	–	5 (1)	–
<b>Streptococci</b>								
group A	24	3	1	2	–	–	–	–
group B	57	–	–	–	2	–	1 (–)	1 (–)
group C & G	35	1	–	1	–	1	–	–
enterococci	126	–	–	–	21	–	13 (4)	–
α- and non-haemolytic	122	–	–	–	8	–	30 (3)	–
<b>S. pneumoniae</b>	144	5	1	2	3	–	–	–

**Meningitis****Staphylococci:**

**S. aureus:** premature female neonate (CSF, blood and PM lung isolates). Six patients aged 1 month - 66 years with CSF shunts. M 59y with endocarditis and CNS involvement (CSF, blood isolates).

**Coagulase negative:** 3 patients with CSF shunts: 1 neonate, 1 preterm baby and F 9y.

**Streptococci:**

**group A:** F 58y (blood isolate only).

**group B:** 7 neonates.

**α- and non-haemolytic:** F 15y with CSF shunt. *S. milleri*, M 31y had cerebral abscess (brain). *S. salivarius*, M 46y had cerebral abscess (brain).

**Streptococcus pneumoniae:** 7 children aged less than 4 years, including one neonate (2 blood isolate only). Nine patients aged 12-64 years (3 blood isolate only). F 56y with otitis media.

**Unusual infections**

**Diphtheroids** 3: M 65y with gastrointestinal malignancy (blood isolate); immunosuppressed F 74y with IV-line (blood, IV catheter tip); F 45y with leukaemia had IV-line (blood isolate).

**Hafnia alvei** 2: M 51y with perforated bowel (blood isolate);

M 84y with biliary tract disease (blood isolate; diphtheroids also isolated from blood).

**Providencia stuartii** 2: M 61y (blood isolate); M 80y with genitourinary disease had catheter (blood isolate).

**Responsiveness to intradermal recombinant hepatitis B vaccine**

It is recommended that health care workers who are likely to come into contact with the blood or body fluids of patients should be offered hepatitis B (HB) vaccine<sup>1</sup>. Plasma derived HB vaccine has been shown to induce seroconversion in a similar proportion of those immunised by intradermal (ID) or intramuscular (IM) routes but several studies comparing immune responses to recombinant HB vaccine have shown that a smaller proportion of vaccinees develop satisfactory levels of antibody to HBsAg after ID immunisation. Females respond better than males to the recombinant vaccine and immune responses to both HB vaccines are greater in younger vaccinees.

A recent article in MMWR<sup>2</sup> has reported the inadequate immune responses of workers in four United States public safety (ie, police and fire service) departments to primary courses of three 0.1 ml doses of recombinant HB vaccine administered by the ID route. Only 24-48% of workers developed a satisfactory immune response. Age and gender-specific variations in immune responses may partially explain these results as most employees were older males. Satisfactory levels of anti-HBsAg were achieved, however, in over 90% of workers in two of these groups after additional doses of recombinant HB vaccine were given. The extra doses brought the final cost per vaccinated employee close to the estimated cost for immunisation by the IM route.

Present UK guidance recommends that HB vaccine should normally be given intramuscularly, although employees in the emergency services are not amongst those for whom HB vaccine is recommended. The ID or subcutaneous routes may be used in patients with haemophilia but until such time as manufacturers apply for and are granted variations to their product licence for the ID route of administration, the use of this route is the doctor's personal responsibility. Plasma derived HB vaccine is no longer available in the UK.

1. Department of Health, Welsh Office and Scottish Home and Health Department. Immunisation against infectious disease. London: HMSO, 1990.
2. Centers for Disease Control. Inadequate immune response among public safety workers receiving intradermal vaccination against hepatitis B - United States, 1990-1991. MMWR 1991; 40: 569-72.

**From week 91/01, data in CDR will be from England and Wales only, unless otherwise stated.**

**Weekly numbers are provisional and should not be used to indicate trends**