

## Communicable Disease Report

### **Outbreak of salmonella infection in a hospital ward**

Southampton Public Health Laboratory report an outbreak of salmonellosis in a medical ward in an acute care hospital.

In early January an elderly man was admitted with diarrhoea. A salmonella was isolated from a stool specimen obtained six days after admission. He died the following day, and an ante-mortem blood culture was also positive for salmonella.

Four more elderly patients on the ward, and one patient who had recently been transferred from the ward, were subsequently found to be excreting a salmonella. Of these five patients, three were symptomatic, and one died, probably from a pre-existing condition. Two other patients were discovered on testing to be excreting a salmonella, one of these died. The last onset date of illness was 17 January.

One member of staff on the ward has been ill, and salmonella was isolated from a stool specimen. Active case searching elsewhere in the hospital revealed no further cases. Investigations suggest that transmission in this outbreak was person to person, and not foodborne.

Two isolates, one from the index case, have been identified by DEP as *Salmonella typhimurium* DT49.

### **Falciparum malaria from Gambia**

A number of holidaymakers have been admitted to hospital in recent months with falciparum malaria contracted in the Gambia. Some had received no advice about the need for prophylaxis and were not aware of the risks.

Consideration of the diagnosis in febrile individuals recently returned from holidays in the Gambia is important. There is a high risk of malaria transmission (predominantly *P. falciparum*) throughout the year in the whole country and chloroquine resistance is reported (International Travel and Health: Vaccination requirements and health advice, WHO, Geneva, 1990).

### **Enteropathogenic *Escherichia coli***

The Division of Enteric Pathogens would like to receive recently isolated strains of *Escherichia coli* belonging to serogroups 026, 055, 0111 and 0128 isolated from patients with diarrhoea, haemorrhagic colitis or haemolytic uraemic syndrome to relate pathogenic properties to clinical information.

Strains of these serogroups are included in lists of enteropathogenic *E. coli* (EPEC), although it is known that some strains belonging to these particular EPEC serogroups produce Vero cytotoxin, a property that is not possessed by classical EPEC strains (Smith *et al.*, FEMS Microb Lett 1987; 42: 173-7; Kleanthous *et al.*, Arch Dis Child 1990; 65: 722-7). Other virulence properties that may be possessed have been discussed recently for strains of serotype 026:H11 (Scotland *et al.*, J Inf Dis 1990; 162: 1069-1074).

### **Gastrointestinal tract infections:**

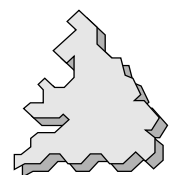
weeks 90/52-91/03

### **Typhoid and paratyphoid:**

weeks 90/52 – 91/03

### **Bacteraemia and bacterial meningitis:**

weeks 90/52-91/03



## Gastrointestinal virus infections, England and Wales: laboratory reports weeks 90/52 - 91/03

Laboratory reports	Number of reports received				Total reports 90/52-91/03	Cumulative total 1990
	90/52	91/01	91/02	91/03		
Adenovirus (EM faeces)	28	39	21	34	122	1499
Adenovirus type 40/41	1	1	4	-	6	49
Astrovirus	10	23	21	23	77	427
Calicivirus	-	5	4	5	14	121
Rotavirus	541	711	624	583	2459	14335
SRSV	4	17	9	16	46	418

**Adenovirus** (EM faeces): 4 regions reported more than 10% cases: Trent (15 cases), NE Thames (15), S Western (16) and W Midlands (20).

**Adenovirus type 40/41**: Northern region reported 4 cases.

**Astrovirus**: 5 regions reported more than 10% cases: Trent (8 cases), Oxford (8), S Western (13), W Midlands (8) and Mersey (10). One family outbreak was reported.

**Calicivirus**: Trent region reported 4 cases.

**Rotavirus**: 2 regions reported more than 10% cases: Yorkshire (707) and Trent (316). 18 family outbreaks were reported.

**SRSV**: 5 regions reported 5 or more cases: Yorkshire (7), Trent (12), NW Thames (7), S Western (6) and W Midlands (5). Four outbreaks were reported: one in a family, one after a christening party, one in a hospital and one affecting Service personnel.

## Salmonella infections, England and Wales: laboratory reports weeks 90/52 - 91/03

Serotype	Reports to CDSC				Total
	90/52	91/01	91/02	91/03	
<i>S. enteritidis</i> *	130	125	135	167	557
<i>S. typhimurium</i>	30	46	50	45	171
<i>S. virchow</i>	20	13	4	10	47
<i>S. newport</i>	6	3	8	10	27
<i>S. montevideo</i>	1	3	5	7	16
<i>S. infantis</i>	1	6	3	4	14
<i>S. kedougou</i>	6	4	1	2	13
<i>S. agona</i>	2	2	4	4	12
<i>S. hadar</i>	4	3	-	5	12
Other serotypes	30	39	34	27	130
Total	230	244	244	281	999

\* *S. enteritidis* PT 4 reports to CDSC for this period were 446 (105, 100, 108, 133 weekly)

Less than 10 laboratory reports of the following serotypes were received by CDSC during this period: *S. panama* (9); *S. heidelberg* (8), *S. anatum*, *S. braenderup*, *S. brandenburg*, *S. java*, *S. mbandaka* (6 each); *S. berta*, *S. stanley* (5 each); *S. bredeney*, *S. indiana*, *S. javiana* (4 each); *S. blockley*, *S. bovis-morbificans*, *S. derby*, *S. ohio*, *S. saint-paul*, *S. senftenberg*, *S. singapore*, *S. weltevreden* (3 each); *S. abony*, *S. albany*,

The following identifications were recorded by DEP for England and Wales in December (see CDR 90/51 for CDSC totals): *S. enteritidis* 776 (PT 4, 678), *S. typhimurium* 251, *S. virchow* 44, *S. bredeney* 3, *S. hadar* 21, *S. infantis* 20,

The average number of salmonella reports for weeks 52-03, 1985-90 was 250.

*S. chester*, *S. corvallis*, *S. give*, *S. reading*, *S. richmond*, *S. thompson* (2 each); *S. babelsberg*, *S. bareilly*, *S. cerro*, *S. chailey*, *S. concord*, *S. dublin*, *S. duisburg*, *S. emek*, *S. lexington*, *S. limete*, *S. london*, *S. miami*, *S. newington*, *S. oranienburg*, *S. poona*, *S. portsmouth*, *S. potsdam*, *S. schwarzengrund*, *S. stanleyville*, *S. tsevie*, *S. wassenaar* (1 each).

*S. heidelberg* 11, *S. agona* 14, *S. montevideo* 13, *S. newport* 18, *S. thompson* 12 and *S. panama* 7. 198 identifications of other serotypes were recorded.

## Typhoid and paratyphoid, England and Wales: laboratory reports: weeks 90/52 - 91/03

*S. typhi*: 13 cases aged 2-65 years were reported (India 5, Pakistan 4, Middle East 2).

*S. paratyphi* A: 4 cases aged 27-39 years were reported, all from the Indian Subcontinent.

*S. paratyphi* B: 2 cases aged 35 and 74 years (Bolivia 1).

Notifications: 8 cases of typhoid and 7 of paratyphoid fever were statutorily notified (weeks 90/52 - 91/02).

## Food poisoning notifications from OPCS

	Number of reports received				Total reports 90/52-91/03	Cumulative total 1990
	90/52	91/01	91/02	91/03		
Reports from MOsEH formally notified#	279	490	554	N/A	N/A	37722
otherwise ascertained#	99	195	241	N/A	N/A	16397
N/A not available				# provisional		

### Comment

**S. montevideo:** 25/60 factory employees following a meal including turkey in December; the turkey was cooked and sliced by a local butcher and later served cold (3/4 persons and turkey).

**Clostridium perfringens serotype 13:** 16/16 staff at an Organisation in December (9/11 persons).

**Scombrototoxin:** 5 diners had D & V, flushing, headache and

tachycardia up to 4 hours after a meal of fresh tuna in a restaurant (430mg histamine/100g tuna).

**Unknown:** 9/14 bank employees had diarrhoea 6-11 hours after a restaurant meal in December (2 persons). 16/96 at a hotel had vomiting. 9/15 in a coach party had vomiting, with or without diarrhoea, 24 hours after leaving a hotel.

## Other gastrointestinal tract infections: weeks 90/52 - 91/03

	Number of reports received				Total reports 90/52-91/03 (acquired abroad)	Cumulative total 1990
	90/52	91/01	91/02	91/03		
Campylobacter	261	472	400	362	1495 (114)	34552
Shigella	70	83	158	80	391 (37)	3365
Enteropathogenic E.coli (children <3 years)	16	13	12	14	55 (1)	1153
Aeromonas	3	3	3	3	12 (2)	436
Plesiomonas	2	1	2	1	6 (5)	67
Vibrio	2	2	1	-	5 (4)	89
Clostridium difficile	7	15	13	14	49 (-)	671
Yersinia	6	7	5	7	25 (2)	415

### Comment

**Campylobacter:** 2 regions reported more than 10% cases: Yorkshire (186 cases) and Trent (170). Thirteen family outbreaks were recorded (27 cases), 7 from Yorkshire.

**Shigella:** *S. boydii* 1 (India); *S. dysenteriae* 3 (Tanzania 1, Zimbabwe 1); *S. flexneri* 49 (21 abroad); *S. sonnei* 338 (13 abroad). *S. sonnei*, 232 cases were reported from Yorkshire region, including 1 school and 25 family outbreaks. Notifications of dysentery for weeks 90/52-91/01 were: 24, 96 and 96 respectively; the cumulative total for 1990 was 2805.

**Aeromonas:** *A. caviae* 4; *A. hydrophila* 5; *A. sobria* 2; *aeromonas sp* 1.

**Plesiomonas shigelloides** 6: 5 of whom contracted their infection abroad.

**Vibrio:** *V. cholerae non O1*, one infected in Kenya; *V. fluvialis* 1 (abroad); *V. parahaemolyticus* 3 (2 abroad).

**Clostridium difficile:** 3 regions reported more than 10% cases: Yorkshire (22 cases), NE Thames (8) and Wessex (11).

**Yersinia:** *Y. enterocolitica* 23 (2 abroad); *Y. pseudotuberculosis* 2.

	Number of reports received				Total reports 90/52-91/03 (acquired abroad)	Cumulative total 1990
	90/52	91/01	91/02	91/03		
Cryptosporidium	39	115	72	70	296 (10)	4677
Entamoeba histolytica	4	7	43	5	59 (33)	844
Giardia	73	144	112	109	438 (109)	6903
Blastocystis hominis	-	-	3	-	3 (1)	148
Dientamoeba fragilis	-	-	1	-	1 (-)	73

**Cryptosporidium:** 3 regions reported more than 10% cases: SE Thames (32 cases), Wessex (48) and S Western (42). Outbreaks: family 5, community one in SE Thames (28 positive).

**Giardia:** 2 regions reported more than 10% cases: Yorkshire (51 cases) and SW Thames (54). 9 family outbreaks were reported.

**Entamoeba histolytica:** outbreaks: family 1.

**Taenia** 5: *T. saginata* 1; *taenia sp* 4 (Kenya 1).

**Trichostrongylus** 2.

**Trichuris** 45: Uganda 11; Vietnam 10; Bangladesh 4; Angola, Colombia, India, Pakistan, Nicaragua, Nigeria, Somalia, S America, Yemen 1 each.

## Bacteraemia and bacterial meningitis, England and Wales: weeks 90/52 - 91/03

Laboratory reports	No. of reports received		Age		Total received	Cumulative total for 1990
	Blood only	CSF only or CSF & blood	<1m	≥65y		
<i>Citrobacter sp</i>	14	—	—	8	14	203
<i>Enterobacter sp</i>	65	—	6	27	65	944
<i>Escherichia coli</i>	490	6	11	308	496	8147
<i>Klebsiella sp</i>	120	—	2	62	120	1636
<i>Proteus sp</i>	99	—	—	69	99	1358
<i>Salmonella sp</i>	30	—	—	16	30	360

### Bacteraemia

*Citrobacter sp*: *C. freundii* 10; *C. koseri* 3.

*Enterobacter sp*: *E. aerogenes* 9; *E. agglomerans* 4; *E. cloacae* 45. *E. cloacae*, M 7y and M 69y had septic arthritis.

*Escherichia coli*: 4 patients aged 65 years or more had acute bone/joint infections and one had infected aortic graft (vessel).

*Klebsiella sp*: *K. aerogenes* 32; *K. oxytoca* 24; *K. pneumoniae* 52; *K. ozaenae* 1. *K. pneumoniae*, M 41y had septic arthritis.

*Proteus sp*: *P. mirabilis* 71; *P. morganii* 11; *P. vulgaris* 5.

Comment: these Gram negative bacteria account for a large proportion of total bacteraemias reported each year.

*Escherichia coli* is regularly the most frequently reported organism isolated from blood cultures.

	Total bacteraemia	UTI/GU surgery (pregnant)	Biliary tract disease (ERCP)	Leukaemia/BM (suppression with IV-lines)	intra-vascular lines
<i>Citrobacter sp</i>	14	4 (—)	3 (—)	2 (2)	2
<i>Enterobacter sp</i>	65	11 (—)	7 (—)	6 (1)	8
<i>Escherichia coli</i>	490	181 (8)	44 (1)	42 (7)	9
<i>Klebsiella sp</i>	120	26 (—)	17 (2)	21 (5)	9
<i>Proteus sp</i>	99	50 (2)	2 (—)	6 (1)	6

*Salmonella sp*: *S. dublin*, 1: diabetic F 33y with infected skin lesions, lives on a farm (blood only). *S. enteritidis*, 20 (PT 4, 11): 12 patients aged 22-88 years had gastrointestinal symptoms and/or faecal isolate also; 4 elderly patients with fever (blood only); 2 HIV-1 antibody positive men (blood only); F 80y with vertebral osteomyelitis (blood); M 85y with pneumonia (blood only). *S. montevideo*, 1: F 11m (blood). *S. newport*, 1: M 9m with gastroenteritis. *S. typhimurium*, 5: 3 elderly patients with gastrointestinal symptoms and/or faecal isolate also; M 54y from Zambia (blood only); M 83y. *S. virchow*, 2: pregnant F 27y; M 30y

after holiday in Minorca.

Also reported: *S. agama*, M 26y with cerebral abscess had *bacteroides sp*,  $\alpha$ -haemolytic streptococci and coagulase negative staphylococci also (pus). *S. blockley*, HIV-1 antibody positive M 52y (urine). *S. enteritidis*, patient with thymus tumour had diarrhoea (faeces, surgical wound); M 6y (urine). *S. newport*, M 5m with perianal abscess (pus). Comment: as expected, *S. enteritidis* (200 reports) accounted for most of the salmonella blood culture isolates reported (56%) in 1990. This serotype also accounted for 62% of faecal isolates of salmonellas reported in 1990.

### Meningitis

*Escherichia coli* 7 (1 blood only): 3 neonates; M 4m; F 54y; M 84y and female, age not stated.

*Salmonella enteritidis* 1: F 6d, died suddenly (faeces, PM brain).

### Unusual organisms

*Campylobacter sp*: 5 patients aged 29-81 years, 4 of whom had gastrointestinal symptoms (blood).

*Shigella dysenteriae* 1: F 34y with diarrhoea (blood). *Yersinia enterocolitica* 2: M 62y and M 70y (blood).

From week 91/01 data in CDR will be from England and Wales only, unless otherwise stated.  
Because of this change, 4-weekly averages for the previous 5 years will not be included.

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