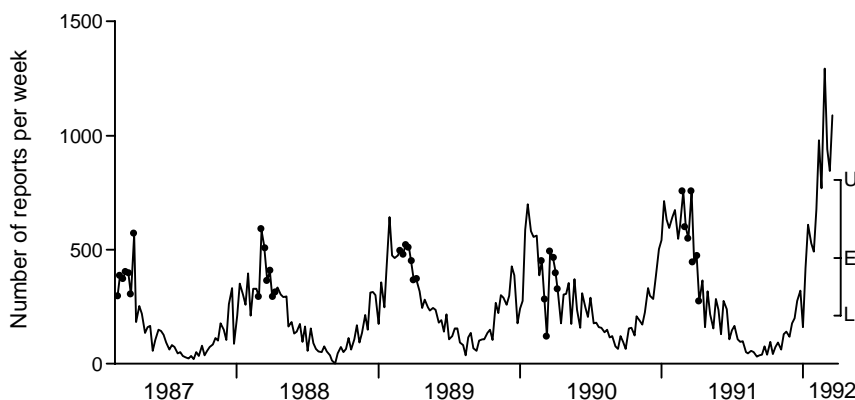


Communicable Disease Report

Rotavirus surveillance and cluster detection

The number of rotavirus infections reported to CDSC in England and Wales has increased in recent weeks, in keeping with the expected seasonal rise (Figure). This year the increase is higher than expected, with 8438 reports received during the first eleven weeks of 1992 compared with 6979 for the same period of 1991. An epidemiological technique for the early detection of clusters and exceptional events has been developed by CDSC and is currently under evaluation. It involves the analysis of each week's laboratory report data and a comparison with seven baseline points obtained from each of the five preceding years. A 98% prediction limit is then computed to give upper and lower limits of a prediction range. The figure illustrates that the number of rotavirus reports for week 92/11 falls above this range, suggesting that this is an exceptional event.

Figure Laboratory reports of rotavirus infections up to week 92/11



E - expected, U and L - upper and lower limits for predicted range derived from baseline data (closed circles) for week 11 and its six adjacent weeks from each of the last five years.

Over 90% of reported illness occurs in children below the age of five years, and consists of fever, vomiting, abdominal pain and profuse diarrhoea, often accompanied by dehydration. The larger numbers of rotavirus identifications have come from the following regions: Northern, Yorkshire, Trent, North East Thames, West Midlands and North Western.

Salmonella typhimurium DT 141

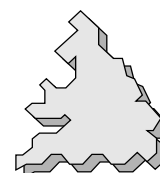
Six cases of gastroenteritis due to *Salmonella typhimurium* DT 141 occurred in guests at a hotel in East Anglia during February. Two were among 80 who attended a dinner dance, three were among 32 participants in a two-week residential training course and one was a member of the hotel kitchen staff. One case was admitted to hospital. *S. typhimurium* DT 141 was also isolated from five other kitchen staff who were asymptomatic. A cohort study is underway to determine the likely vehicle of infection. CDSC received 45 laboratory reports of *S. typhimurium* DT 141 in 1991. These included an outbreak of *S. typhimurium* DT 141 infection affecting 11 of 19 pupils in a class at a boarding school. The State Veterinary Service has received two reports of isolations of *S. typhimurium* DT 141 in recent months. One was associated with sheep, the other with cattle. CDSC will be grateful for any further relevant information.

Salmonella infections:
weeks 92/09 - 12

Gastrointestinal virus infections:
weeks 92/09 - 12

Other gastrointestinal tract infections:
weeks 92/09 - 12

Bacteraemia and bacterial meningitis:
weeks 92/09 - 12



Salmonella infections, England and Wales: laboratory reports, weeks 92/09 – 12

Serotype	Reports to the PHLS (Salmonella dataset [†])				Total reports 92/09-12
	92/09	92/10	92/11	92/12	
<i>S. enteritidis</i> (PT4)	143 (116)	157 (145)	139 (128)	181 (161)	620 (550)
<i>S. typhimurium</i>	50	38	32	40	160
<i>S. newport</i>	10	8	3	6	27
<i>S. virchow</i>	5	6	9	4	24
<i>S. agona</i>	6	1	3	2	12
<i>S. hadar</i>	4	2	3	2	11
<i>Salmonella</i> sp	1	–	1	–	2
Other serotypes	35	31	22	27	115
Total	254	243	212	262	971

† This dataset is described in CDR volume 1, number 51. Because of the change, the figures are not directly comparable with those for 1991 from either CDSC or the Division of Enteric Pathogens (DEP).

Less than 10 laboratory reports of the following serotypes were recorded during weeks 92/09-12:

- 9: *S. montevideo*.
- 7: *S. heidelberg*, *S. saint-paul*.
- 6: Unnamed salmonella.
- 5: *S. anatum*, *S. infantis*, *S. mbandaka*.
- 4: *S. bareilly*, *S. blockley*, *S. braenderup*.
- 3: *S. bredeney*, *S. kentucky*.
- 2: *S. arizonae*, *S. chester*, *S. give*, *S. indiana*, *S. java*, *S. kedougou*, *S. oranienburg*, *S. senftenberg*, *S. stanley*, *S. stanleyville*, *S. thompson*, *S. uganda*.
- 1: *S. arechavaleta*, *S. berta*, *S. bovis-morbificans*, *S. brandenburg*, *S. cerro*, *S. coleypark*, *S. corvallis*, *S. dar-es-salaam*, *S. derby*, *S. dublin*, *S. duisburg*, *S. emek*, *S. garoli*, *S. hartford*, *S. havana*, *S. jerusalem*, *S. muenchen*, *S. nottingham*, *S. ohio*, *S.*

orientalis, *S. reading*, *S. richmond*, *S. schwarzengrund*, *S. singapore*, *S. tennessee*, *S. uzaramo*, *S. waycross*, *S. worthington*, *S. zanzibar*.

Comment

***S. enteritidis* PT 4:** 4/4 members of a family had D&V starting 7-12 hours after eating an egg custard flan prepared at a local college and made from pooled raw egg (4/4 persons and egg custard flan were positive). A number of persons had D&V following a banquet at a restaurant attended by over 80 persons (10/13 persons positive). A number of guests were ill following a private party; a variety foods was served and the information available suggested inadequate cooking and temperature control of prepared foodstuffs (2/2 persons positive).

Food poisoning notifications from OPCS

	Number of notifications				Total notifications 92/09-12	Cumulative total 1992
	92/09	92/10	92/11	92/12		
Formally notified §	491	504	525	497	2017	5262
Otherwise ascertained §	223	253	228	217	921	2912

§ provisional

Gastrointestinal virus infections, England and Wales: laboratory reports, weeks 92/09 – 12

Laboratory reports	Number of reports received				Total reports 92/09-12	Cumulative total 1992
	92/09	92/10	92/11	92/12		
Adenovirus (EM faeces)	30	28	45	42	145	434
Adenovirus type 40/41	6	1	1	4	12	31
Astrovirus	24	12	10	15	61	172
Calicivirus	1	4	4	10	19	42
Rotavirus	929	816	1074	854	3673	9296
SRSV	22	19	15	21	77	248

Adenovirus (EM faeces): four regions reported more than 10% of cases: NE Thames (21 cases), S Western (15), W Midlands (21) and Wales (15).

Adenovirus 40/41: NW Thames region reported 10 cases.

Astrovirus: one region reported more than 10% of cases: N Western (13 cases). One outbreak in a nursing home was reported.

Calicivirus: one outbreak in a geriatric ward was reported.

Rotavirus: three regions reported more than 10% of cases: Yorkshire (475 cases), Trent (461) and W Midlands (391). Twenty-six family outbreaks were reported.

SRSV: four regions reported more than 10% of cases: Northern

(10 cases), Oxford (9), N Western (12) and Wales (14). Eight outbreaks were reported: 3 in hospitals, one in an old people's home, 2 in a hotel, one in a day nursery, and one involving company employees.

Other gastrointestinal tract infections, England and Wales: laboratory reports, weeks 92/09 – 12

Laboratory reports	Number of reports received				Total reports 92/09-12 (acquired abroad)	Cumulative total 1992
	92/09	92/10	92/11	92/12		
<i>Campylobacter</i>	376	366	448	487	1677 (150)	5046
<i>Shigella</i>	551	472	429	748	2200 (45)	5499
Enteropathogenic <i>E. coli</i> (children <3 years)	5	9	6	12	32 (–)	129
<i>Aeromonas</i>	3	3	–	3	9 (1)	50
<i>Plesiomonas</i>	1	–	–	1	2 (1)	10
<i>Vibrio</i>	2	1	–	–	3 (3)	8
<i>Clostridium difficile</i>	18	38	25	37	118 (–)	272
<i>C. difficile</i> toxin	43	28	39	90	200 (–)	450
<i>Yersinia</i>	10	7	7	5	29 (–)	71

Comment

Campylobacter: four regions reported more than 10% of cases: Yorkshire (186 cases), Trent (184), W Midlands (168) and N Western (181). Sixteen family outbreaks were reported. **Shigella:** *S. boydii* 2 (1 abroad); *S. dysenteriae* 3 (2 abroad); *S. flexneri* 41 (18 abroad); *S. sonnei* 2154 (24 abroad). *S. flexneri*, an outbreak in a travellers' camp in W Midlands region was reported. *S. sonnei*, one school outbreak (NW Thames), an outbreak in a hostel (W Midlands) and continuing community outbreaks in Yorkshire, N Western and W Midlands regions were reported.

Aeromonas: *A. caviae* 3; *A. hydrophila* 3; *A. sobria* 3 (1 abroad). **Plesiomonas shigelloides** 2 (1 abroad).

Vibrio: *V. cholerae* non O1, 2 (both abroad); *V. parahaemolyticus* 1 (abroad). One family outbreak of *V. cholerae* non O1 was reported.

Clostridium difficile: three regions reported more than 10% of cases: Yorkshire (35 cases), Wessex (17) and Wales (32).

Yersinia: *Y. enterocolitica* 21; *Y. frederiksenii* 4; *Y. pseudotuberculosis* 1; *Yersinia sp* 3.

Laboratory reports	Number of reports received				Total reports 92/09-12 (acquired abroad)	Cumulative total 1992
	92/09	92/10	92/11	92/12		
<i>Cryptosporidium</i>	44	49	43	69	205 (7)	711
<i>Entamoeba histolytica</i>	39	16	4	11	70 (29)	228
<i>Giardia</i>	91	83	125	102	401 (83)	1350
<i>Blastocystis hominis</i>	6	2	–	–	8 (1)	52
<i>Dientamoeba fragilis</i>	3	–	–	–	3 (2)	13

Cryptosporidium: three regions reported more than 10% of cases: Yorkshire (31 cases), S Western (40) and N Western (25). Three outbreaks were reported: 2 family outbreaks and one in a playgroup.

Giardia: one region reported more than 10% of cases: N Western (45 cases).

Entamoeba histolytica: one family outbreak was reported.

Taenia: *T. saginata* 6 (Kenya, Spain, one each); *T. solium* 1 (Tanzania and Zimbabwe); *Taenia sp* 1 (Gambia).

Trichostrongylus sp 10.

Trichuris 37 (Hong Kong, Vietnam, 3 each; Jamaica, Pakistan, 2 each; Kuwait, Sierra Leone, Somalia, Tanzania, one each).

Typhoid and paratyphoid, England and Wales: laboratory reports, weeks 92/09 – 12

S. typhi: 19 cases aged 1-58 years were reported: 15 from the Indian subcontinent, one from East Africa, and one from the Far East. One case was infected with two phage types. Two home-acquired infections were reported: one was the contact of a previously reported case who had returned from Pakistan

and the other was the contact of a recently returned traveller to Pakistan who was asymptomatic and had a negative faecal sample.

S. paratyphi A: 5 cases aged 13-57 years were reported, all from the Indian subcontinent.

Bacteraemia and bacterial meningitis, England and Wales: weeks 92/09–12

Laboratory reports of blood and CSF isolates of bacteria are grouped into four categories and published in a weekly sequence:

1. Staphylococci and streptococci (excluding anaerobic cocci).
2. Enterobacteriaceae ie, *Citrobacter*, *Enterobacter*, *Escherichia coli*, *Klebsiella*, *Proteus* and *Salmonella species*.
3. Environmental and anaerobic bacteria ie, *Bacteroides*, *Clostridia*, *Acinetobacter*, *Aeromonas*, *Pseudomonas*, *Serratia* and anaerobic cocci.
4. *Neisseria meningitidis*, *Haemophilus species* and *Listeria monocytogenes*.

This week's CDR contains reports for category 2. Less commonly reported causes of bacteraemia or bacterial meningitis are listed under **unusual infections**.

Laboratory reports	No. of reports received		Age		Total received 92/09-12	Cumulative total 1992
	Blood only	CSF only or CSF & blood	<1m	≥65y		
<i>Citrobacter sp</i>	13	–	–	7	13	50
<i>Enterobacter sp</i>	60	–	3	25	60	212
<i>Escherichia coli</i>	585	3	12	363	588	1881
<i>Klebsiella sp</i>	132	–	4	68	132	382
<i>Proteus sp</i>	101	–	–	69	101	331
<i>Salmonella sp</i>	16	–	–	11	16	61

Bacteraemia

Citrobacter sp: *C. freundii* 7; *C. koseri* 2; *Citrobacter sp* 4. *C. freundii*, M 63y with prosthetic heart valve.

Enterobacter sp: *E. aerogenes* 12; *E. agglomerans* 13; *E. cloacae* 24; *E. intermedius* 1; *Enterobacter sp* 10. *E. aerogenes*, F 27y with lung transplant was on haemodialysis (also isolated from peritoneal fluid and sputum). *E. cloacae*, M 43y and M 52y were on haemodialysis; M 69y had endocarditis.

Escherichia coli: M 7y with cystic fibrosis; M 48y with liver cirrhosis (blood and peritoneal fluid isolates; *Streptococcus pneumoniae* also isolated); HIV-1 antibody positive M 68y with haemophilia; M 72y on haemodialysis; M 86y had cholangitis and osteomyelitis; F 18y with Gaucher's disease; F 54y with lymphoma had splenectomy; F 69y had prosthetic heart valve; F 69y on peritoneal dialysis; F 76y had joint prosthesis. Three patients aged 61-89 years had pyelonephritis. Four women had post partum infection.

Klebsiella sp: *K. aerogenes* 35; *K. oxytoca* 20; *K. ozaenae* 2; *K. pneumoniae* 56; *Klebsiella sp* 19. *K. aerogenes*, M 44y had liver abscess (also isolated from pus along with *Streptococcus milleri*). *K. pneumoniae*, premature M 1d (*Streptococcus milleri* also isolated). *Klebsiella sp*, M 61y had subphrenic abscess.

Proteus sp: *P. mirabilis* 72; *P. morgani* 12; *P. vulgaris* 3; *Proteus sp* 14. *P. vulgaris*, M 52y on haemodialysis.

Salmonella sp: *S. bonariensis*, F 60y had pyrexia (blood isolate only). *S. enteritidis* 14 (PT 4, 12): 6 patients aged 28-82 years had gastrointestinal symptoms (blood and faecal isolates); 7 patients aged 65-92 years had blood isolate only, 6 of whom had gastrointestinal symptoms, including male, age not stated (*Streptococcus pneumoniae* also isolated from blood). One patient, sex and age not stated, had gastrointestinal symptoms (blood and urine isolates). *S. typhimurium*, F 55y had gastrointestinal symptoms (blood isolate only).

Also reported: *S. enteritidis* 6 (PT4, 5): F 12y, recently returned from Kuwait, had osteomyelitis (pus isolate); F 21y had gastrointestinal and urinary symptoms (urine isolate); 3 patients aged 67-84 years had gastrointestinal symptoms (all urine isolate only); F 85y had cellulitis (pus isolate). *S. indiana*, M 79y had gastrointestinal symptoms (faecal and urine isolates). *S. typhimurium*, male, age not stated, had gastrointestinal symptoms (faecal and urine isolates).

Meningitis

Escherichia coli: premature F 8d (blood and CSF isolates). M 3m after neurosurgery, M 49y and male, age not stated (blood isolate only), all with CSF shunts.

Laboratory reports	Total bacteraemia	UTI/GU surgery (pregnant)	Biliary tract disease (ERCP)	Intravascular lines	Leukaemia/bone marrow suppression (with IV-lines)
<i>Citrobacter sp</i>	13	1 (–)	2 (–)	1	3 (1)
<i>Enterobacter sp</i>	60	10 (–)	6 (–)	7	9 (1)
<i>Escherichia coli</i>	585	241 (3)	69 (3)	9	43 (7)
<i>Klebsiella sp</i>	132	32 (–)	16 (1)	14	17 (5)
<i>Proteus sp</i>	101	65 (1)	–	4	3 (–)

Data are for England and Wales only, unless otherwise stated.

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