

Communicable Disease Report

Influenza A virus subtype H₅N₁ infection in humans

Four cases of human infection with influenza A virus subtype H₅N₁ have been reported by the Hong Kong Department of Health to the World Health Organization (WHO). The first case was a 3 year old boy who became ill in May 1997. He died with respiratory illness and Reye's syndrome. Infection with influenza A virus subtype H₅N₁ was confirmed later¹. Three further cases occurred in November: a 2 year old boy who recovered, a 13 year old girl who is recovering, and a 54 year old man who died.

Influenza A virus subtype H₅N₁ infects birds and has not previously been isolated from humans. The 3 year old boy is believed to have acquired the virus through contact with infected chickens, and no transmission to other people was identified. Contacts of the cases are being investigated intensively, but there is no evidence so far of transmission from person to person.

No extra precautionary measures are recommended for people travelling to Hong Kong. Current influenza vaccines contain influenza A virus subtypes H₁N₁ and H₃N₂, and influenza B virus. In the United Kingdom, influenza vaccine is recommended for people with concurrent illness that predisposes to high risk of severe illness following influenza².

The probability that people infected with influenza A virus subtype H₅N₁ may travel from Hong Kong to the United Kingdom is currently considered to be very low. Laboratories that receive specimens identified as coming from a person who has recently returned from Hong Kong with flu-like illness or other acute febrile respiratory illness are advised to consult the PHLS Enteric and Respiratory Virus Laboratory (ERVL) as soon as possible and before beginning work on the specimens. Please contact Maria Zambon or Paul Laidler: tel 0181 200 4400 ext 3239; fax 0181 205 8195; email mzambon@phls.co.uk.

The PHLS internet site (<http://www.open.gov.uk/CDSC/flufact.htm>) provides further information about influenza A virus subtype H₅N₁.

1. de Jong JC, Claas ECJ, Osterhaus ADME, Webster RG, Lim WL. A pandemic warning? *Nature* 1997; **389**: 554.
2. Department of Health, Welsh Office, Scottish Office Department of Health, DHSS (Northern Ireland). *Immunisation against infectious diseases 1996*. *Edward Jenner bicentenary edition*. London: HMSO, 1996.

Influenza activity in England and Wales

The influenza season (the period of potential influenza activity) in England and Wales began in week 40 of 1997 and continues to week 20 of 1998. Laboratories are requested to investigate cases and clusters of influenza-like illness and to submit isolates to the PHLS Enteric and Respiratory Virus Laboratory (ERVL) for characterisation.

The consultation rate for 'influenza and influenza-like illness' with general practitioners in the Royal College of General Practitioners sentinel scheme in England and Wales in week 48 (ending 30 November) was 33.5 per 100 000 population (provisional rate) compared with 31.5 per 100 000 in the previous

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Influenza A virus subtype H₅N₁ infection in humans

Influenza activity in England and Wales

General outbreaks of foodborne illness:
weeks 46-49/97

Common gastrointestinal infections, England and Wales: laboratory reports
weeks 46-49/97

Laboratory reports of campylobacter

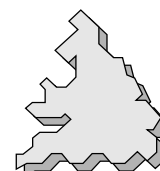
Salmonella infections:
monthly report

Salmonella infections in humans:
monthly totals for 1994 to 1997

Notices

Notifications of infectious diseases:
week 48/97

Quarterly reports:
Outbreaks of foodborne illness
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PHLS

Public Health Laboratory Service

General outbreaks of foodborne illness, England and Wales: weeks 46-49/97

Preliminary information has been received about the following outbreaks. Final information will be published in the quarterly report

Health authority	Organism	Place of outbreak	Month of outbreak	Number ill	Cases positive	Comments	Evidence
Merton, Sutton, and Wandsworth	<i>Salmonella enteritidis</i> PT4	Hospital	November	2	2	None	—
Avon	<i>S. enteritidis</i> PT4	School	November	7	7	None	—
East Sussex	<i>S. enteritidis</i> PT4	Nursery	November	3	3	None	—
Calderdale and Kirklees	<i>S. enteritidis</i> PT4	Residential institution	November	2	2	None	—
Redbridge and Waltham Forest	<i>S. enteritidis</i> PT8	Armed services	November	>1	1	None	—
Gwent	<i>S. enteritidis</i> PT24	Hotel	November	3	3	None	—
Pembrokeshire	<i>S. enteritidis</i> untyped	Restaurant	August	6	3	None	—
North Wales	<i>S. typhimurium</i> DT104	Residential institution	November	3	3	None	—
North Yorkshire	<i>Salmonella</i> sp	College	November	>2	2	None	—
Bedfordshire	<i>Bacillus cereus</i>	Restaurant	September	2	0	Chicken curry	M
Dorset	<i>B. cereus</i>	Restaurant	September	2	0	Chinese meal	—
Leeds	<i>Clostridium perfringens</i>	Residential institution	October	>20	20	Lamb	M
North Essex	<i>C. perfringens</i>	Restaurant	October	3	0	Chicken chow mein	M
North Essex	<i>C. perfringens</i>	Restaurant	November	2	2	Steak and kidney pie	M
Shropshire	<i>C. perfringens</i>	Reception	November	8	4	Tandoori chicken	M
Portsmouth and SE Hampshire	<i>C. perfringens</i>	Hotel	November	22	6	Boned, rolled lamb	M
East Norfolk	Unknown	Restaurant	November	10	0	None	—

M (microbiological): identification of an organism of the same type from cases and in the suspect vehicle or vehicle ingredient(s), or detection of toxin in faeces or food

Common gastrointestinal infections, England and Wales: laboratory reports weeks 46-49/97

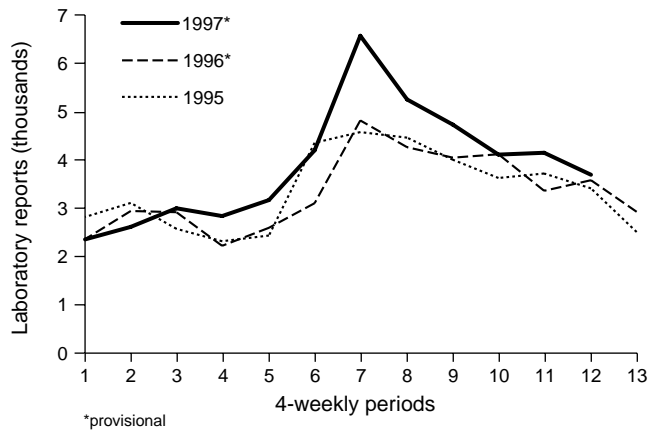
Laboratory reports	Number of reports received				Total reports 46-49/97	Cumulative totals for weeks 01-49 1997 1996	
	46/97	47/97	48/97	49/97			
<i>Campylobacter</i>	1063	1075	938	1193	4269	47857	41201
<i>Escherichia coli</i> O157*	25	19	18	10	72	997	592
<i>Shigella sonnei</i>	25	26	13	21	85	1421	1209
Rotavirus	61	114	75	67	317	14669	13870
SRSV	74	63	130	92	359	1905	2309
<i>Cryptosporidium</i>	135	108	123	88	454	4077	3549
<i>Giardia</i>	153	106	125	142	526	5032	5103

* Vero cytotoxin producing isolates (data from LEP)

Laboratory reports of campylobacter

Sixteen percent more reports of campylobacter were received in the first 49 weeks of 1997 than in the same period of 1996 (see table on page 444). The total for 1997 so far is higher than the annual total for any previous year. Over 6500 reports were received in weeks 25 to 28 (figure), the largest number received in a four week period, and the largest when numbers of reports have peaked every year since 1993.

Figure Laboratory reports of campylobacter, 1995 to 1997



Salmonella infections, England and Wales: reports to the PHLS (salmonella data set*)

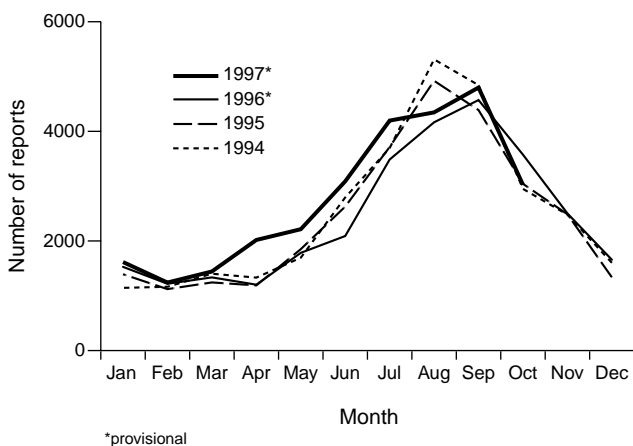
Details of serotypes of the 3292 salmonella infections recorded in October are given in the adjacent table. In November 1997, 430 salmonella infections were recorded and preliminary information was received about nine outbreaks (see table on page 444).

	October 1997
Salmonella (provisional total)	3292
S. enteritidis (PT4)	1724
S. enteritidis (other PTs)	939
S. typhimurium	342
S. virchow	42
Others (typed)	245

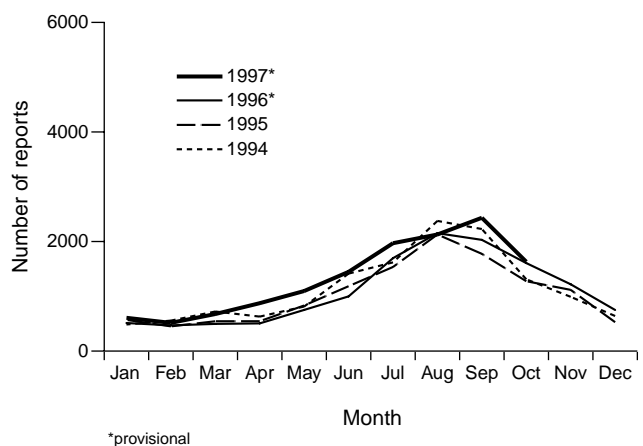
* figures quoted from the PHLS salmonella data set are for isolates confirmed and typed by PHLS Laboratory of Enteric Pathogens (LEP)

Salmonella infections in humans: monthly totals for 1994 to 1997

All salmonellas



S. enteritidis PT4



Just under 28 000 salmonellas were reported in the first ten months of 1997, 12% higher than in the same periods of 1996, and 10% and 6% higher than in the same periods of 1995 and 1994 respectively (figure). The number of reports of *Salmonella enteritidis* phage type (PT) 4 in the first ten months of 1997 was 19% higher than in the same period of

1996, and 23% and 10% higher than in the same periods of 1995 and 1994 respectively. *S. enteritidis* PT4 accounted for 48% of all salmonellas reported in the first ten months of 1997, compared with 45% in the same period of 1996, and 43% and 46% in the same periods of 1995 and 1994 respectively.

Topics in infection

This annual meeting will be held on Friday 30 January 1998 at the Conference Centre, Bloomsbury Hotel, Coram Street, London WC1N 1HT. Topics include viral hepatitis, bovine spongiform encephalopathy, *Candida*, Lyme disease, vancomycin resistant Gram positive organisms, antibiotic-neutrophil synergy in dealing with bacterial pathogens, quorum sensing, and microbiology on the celtic fringe. The fee is £10. For further information, contact Dr AM Sefton, Department of Medical Microbiology, St Bartholomew's and the Royal London School of Medicine and Dentistry, Turner Street, London E1 2AD.

Style for reports and papers in medical and life science journals

Seminars for researchers, teachers in higher education, and others who write or edit reports and papers for life science journals, are being held on Tuesday 6 January, Tuesday 21 April, Thursday 2 July, Wednesday 14 October, and Wednesday 2 December 1998 at BMA House, Tavistock Square, London, and on Tuesday 24 March 1998 at Queen's Medical Centre, Nottingham. They are organised by the British Medical Journal with the John Kirkman Communication Consultancy (JKCC). Topics include writing readably, choosing words wisely, verbs, reviewing and revising text, and points and punctuation. The fee is £148 plus VAT. Contact Mrs Gillian Ward, JKCC, PO Box 106, Marlborough, Wiltshire SN8 2HQ (tel 01672 520429; fax 01672 521008).

Foodborne diseases

The Royal College of Physicians of Edinburgh is holding a symposium on Friday 6 February at the Queen Mother Conference Centre, 9 Queen Street, Edinburgh. Topics include: the changing epidemiology of Vero cytotoxin producing *Escherichia coli* in the United Kingdom, learning from the central Scotland *E. coli* O157 outbreak, salmonellosis in England and Wales, campylobacter, veterinary aspects of foodborne disease, the changing epidemiology of foodborne diseases, safe food, and the food standards agency. Admission is by ticket only, and tickets can be obtained from Eileen Strawn, Royal College of Physicians of Edinburgh, 9 Queen Street, Edinburgh EH2 1JQ (tel 0131 225 7324; fax 0131 220 4393; email e.strawn@rcpe.ac.uk).

Influenza activity in England and Wales (continued from page 443)

week. The consultation rate for 'influenza' in the sentinel scheme coordinated by CDSC (Wales) was 1.8 per 100 000 in week 48 (ending 03 December), compared with 6.2 per 100 000 in the previous week. These rates are below baseline rates for the influenza season. In Scotland, the consultation rates with general practitioners in two of eight health board areas showed significant influenza activity in week 48³.

Four reports of influenza A infection and three reports of influenza B infection were received by the PHLS Communicable Disease Surveillance Centre in week 49 (ending 05 December). All seven infections were diagnosed serologically. Reports of respiratory syncytial virus infection are rising: 766 reports were received in week 49, and 711 in week 48.

ERVL has characterised 11 isolates of influenza A virus this season. Ten isolates were collected by general practitioners and one isolate from a hospital came from a female aged 80 years who died. Seven were influenza A subtype H₃N₂ isolates and they showed limited antigenic heterogeneity. The influenza A subtype H₃N₂ component of the 1997/98 vaccine should protect against infection with these strains. Four isolates were influenza A subtype H₁N₁ and were all antigenically similar to the A/Bayern/7/95-like strain included in the current vaccine.

Very little influenza activity has been reported in the northern hemisphere so far this season. Influenza A and B viruses have been isolated or detected in small numbers in Europe. In the United States (US), 21 states have reported laboratory confirmed influenza. Thirty-eight of 40 isolates examined by WHO collaborating laboratories in the US were influenza A, and all those that were further characterised were subtype H₃N₂.

3. SCIEH. Influenza. *SCIEH Weekly Report* 1997; 31: 257.

Data are for England and Wales only, unless otherwise stated. Weekly numbers are provisional and should not be used to indicate trends.

Notifications of infectious diseases

Doctors in England and Wales have a statutory duty to notify a 'proper officer' of the local authority (usually the consultant in communicable disease control) of cases of certain infectious diseases (*CDR Review 1993; 3: R19-25*). Notifications of infectious diseases, not all of which are microbiologically confirmed, prompt local investigation and action to control the diseases. Proper officers are required each week to inform the Registrar General of the

number of cases of each disease that have been notified. The responsibility for collating the weekly returns from proper officers, and publishing analyses of local and national trends has been transferred to CDSC from ONS (*CDR Weekly 1997; 7: 145*). Data published here – and an expanded form of table 2 with data to district level – are also available in an electronic format to Epinet subscribers on the PHLS network.

Table 1 Notifications of infectious diseases* in the past 6 weeks, with totals for the current year compared with corresponding periods of the two preceding years.

		Week						Cumulative totals to week 48 [†]			Cumulative totals from mid-year to week 48 [‡]		
		43/97	44/97	45/97	46/97	47/97	48/97	1995 (i)	1996 (ii)	1997 (iii)	95/96(a)	96/97(b)	97/98(c)
Typhoid fever presumed contracted	Cases	4	4	2	5	4	2	247	168	138	119	75	83
	Abroad [§]	3	3	2	1	4	2	220	148	123	108	64	71
	GB	1	1	–	4	–	–	27	20	15	11	11	12
Paratyphoid fever presumed contracted	Cases	–	1	4	2	1	1	122	95	95	52	39	48
	Abroad [§]	–	1	4	2	1	1	109	92	88	48	38	46
	GB	–	–	–	–	–	–	13	3	7	4	1	2
Dysentery	Cases	35	42	45	41	33	28	4533	2166	2180	1780	1088	928
Food poisoning formally notified ascertained	Cases	1988	1787	1736	1824	1647	1704	79544	78758	88447	44376	43720	48599
	Cases	1082	914	925	994	882	971	47070	45327	49234	26023	25009	26950
	Cases	906	873	811	830	765	733	32474	33431	39213	18353	18711	21649
Tuberculosis	Cases [¶]	147	117	111	97	110	107	5432	5444	5660	2512	2571	2546
Whooping cough	Cases	64	39	41	60	48	69	1791	2131	2833	756	1461	1555
Scarlet fever	Cases	43	50	55	69	60	86	4936	4533	3342	1490	1313	1065
Meningitis meningococcal influenzae (<i>Haemophilus influenzae</i>)	Cases	45	29	44	37	37	42	2046	2524	2195	885	1145	780
	Cases	22	13	26	19	24	23	986	1101	1134	387	400	398
	Cases	3	–	1	2	–	1	55	49	37	25	32	15
other specified	Cases	14	12	9	14	8	16	696	977	726	313	518	280
	Cases	6	4	8	2	5	2	309	397	298	160	195	87
Meningococcal septicaemia (without meningitis)	Cases	26	37	27	29	33	37	626	1025	1326	242	401	516
Tetanus	Cases	–	2	1	–	–	–	6	8	7	4	5	5
Measles	Cases	64	57	72	76	81	89	7364	5596	3845	2569	1938	1608
Mumps	Cases	38	37	40	54	49	45	1926	1700	1846	771	752	783
Rubella	Cases	62	42	62	60	52	53	5838	9067	3204	2465	1973	1327
Viral hepatitis	Cases	91	63	66	74	67	61	3132	2314	2998	1468	976	1611
Malaria	Cases	28	14	24	26	25	32	1259	1632	1412	796	950	810
Leptospirosis	Cases	1	2	–	–	–	1	13	13	23	7	10	14
Acute encephalitis infective post-infectious	Cases	–	1	–	1	1	–	35	22	27	14	6	9
	Cases	–	–	–	–	1	–	28	15	17	13	4	6
	Cases	–	1	–	1	–	–	7	7	10	1	2	3
Ophthalmia neonatorum	Cases	7	2	7	3	8	5	234	233	213	108	101	101
Special cases													
Cholera	Cases	1	3	2	–	–	–	43	31	32	20	18	19
Diphtheria	Cases	1	–	–	1	–	1	13	10	23	4	6	8

All figures include late returns

* includes notifications from Port Health Authorities

† Cumulative totals commencing week ended (i) 6 Jan (ii) 5 Jan (iii) 3 Jan

‡ Cumulative totals from mid-year commencing week ended (a) 7 July (b) 5 July (c) 4 July

§ Includes cases of unstated origin

¶ Excluding chemoprophylaxis

Table 2 Notifications of infectious diseases in week 48/97 (standard regions, counties, and unitary authorities)

Area	Measles	Mumps	Rubella	Dysentery	Scarlet fever	Whooping cough	Viral hepatitis	TB all forms*	Meningitis†	Food poisoning notified§	ascertained#	Malaria
North	4	4	7	–	9	3	–	6	4	49	66	1
Tyne and Wear†	1	1	1	–	1	1	–	6	–	15	26	–
Cumbria	1	–	1	–	3	1	–	–	3	6	21	1
Durham	1	1	4	–	4	1	–	–	–	15	9	–
Northumberland	1	–	–	–	–	–	–	–	–	–	4	–
Hartlepool	–	–	–	–	–	–	–	–	–	2	–	–
Middlesbrough	–	1	–	–	–	–	–	–	–	6	–	–
Redcar and Cleveland	–	–	–	–	1	–	–	–	–	1	–	–
Stockton-on-Tees	–	1	–	–	–	–	–	–	1	4	–	–
Darlington	–	–	1	–	–	–	–	–	–	–	6	–
Yorkshire and Humberside	8	7	7	1	15	11	13	8	3	102	56	1
South Yorkshire†	2	–	5	–	4	4	4	1	1	21	6	–
West Yorkshire†	3	2	1	–	5	3	7	6	1	45	42	1
North Yorkshire	–	3	–	1	2	1	–	–	–	13	6	–
City of Kingston upon Hull	3	1	1	–	3	2	2	–	–	2	–	–
East Riding of Yorkshire	–	1	–	–	–	–	–	–	1	–	–	–
North East Lincolnshire	–	–	–	–	–	1	–	–	–	8	–	–
North Lincolnshire	–	–	–	–	–	–	–	1	–	11	–	–
York	–	–	–	–	1	–	–	–	–	2	2	–
East Midlands	4	3	9	–	12	17	3	5	10	77	47	3
Derbyshire	–	–	2	–	3	2	1	–	–	22	1	–
Leicestershire	1	–	–	–	1	5	–	–	3	5	1	–
Lincolnshire	–	–	–	–	1	–	–	1	1	10	13	–
Northamptonshire	–	1	–	–	–	1	–	–	2	8	22	–
Nottinghamshire	3	2	7	–	6	3	1	1	3	17	10	–
Derby	–	–	–	–	1	–	–	2	–	12	–	–
Leicester	–	–	–	–	–	3	1	1	1	3	–	3
Rutland	–	–	–	–	–	3	–	–	–	–	–	–
East Anglia	2	1	2	2	5	4	–	–	2	46	32	–
Cambridgeshire	1	–	–	–	1	–	–	–	–	17	5	–
Norfolk	–	1	2	–	1	1	–	–	2	13	19	–
Suffolk	1	–	–	2	3	3	–	–	–	16	8	–
South East	19	19	14	16	28	10	26	52	6	420	199	27
Greater London	4	9	2	7	9	2	18	42	4	181	14	27
Bedfordshire	1	–	1	–	–	–	–	–	–	4	5	–
Berkshire	3	–	2	3	2	1	1	1	–	28	8	–
Buckinghamshire	–	–	–	–	–	–	–	–	–	1	21	–
EastSussex	–	1	–	–	1	–	3	1	–	6	7	–
Essex	3	–	1	1	1	2	–	2	–	48	8	–
Hampshire	2	1	2	1	1	–	1	–	–	22	44	–
Hertfordshire	1	3	–	1	–	1	1	1	1	16	16	–
Kent	3	3	3	2	8	–	1	3	1	32	1	–
Oxfordshire	–	–	–	–	–	1	–	–	–	4	18	–
Surrey	–	–	2	1	2	–	1	–	–	47	17	–
West Sussex	2	–	–	–	2	2	–	2	–	12	25	–
Luton	–	1	–	–	–	–	–	–	–	3	9	–
Milton Keynes	–	–	–	–	–	–	–	–	–	7	–	–
Brighton and Hove	–	–	–	–	1	–	–	–	–	3	–	–
Portsmouth	–	–	–	–	1	–	–	–	–	6	–	–
Southampton	–	–	–	–	–	1	–	–	–	–	6	–
Isle of Wight	–	1	1	–	–	–	–	–	–	–	–	–
South West	31	8	4	3	4	4	11	5	–	70	124	–
Cornwall and Isles of Scilly	–	1	–	–	–	–	–	–	–	20	16	–
Devon	–	1	2	2	1	2	–	–	–	26	17	–
Dorset	–	1	–	–	1	2	6	–	–	3	20	–
Gloucestershire	30	1	–	–	–	–	–	4	–	3	2	–
Somerset	1	–	–	–	1	–	1	–	–	5	–	–
Wiltshire	–	2	–	–	–	–	–	–	–	4	16	–
Bath and North East Somerset	–	–	–	–	–	–	–	–	–	–	7	–
Bristol	–	1	1	–	–	–	1	–	–	3	13	–
North Somerset	–	–	–	1	–	–	–	–	–	2	15	–
South Gloucestershire	–	1	–	–	–	–	–	–	–	–	8	–
Bournemouth	–	–	1	–	1	–	3	1	–	–	4	–
Poole	–	–	–	–	–	–	–	–	–	4	1	–
Swindon	–	–	–	–	–	–	–	–	–	–	5	–

Area	Measles	Mumps	Rubella	Dysentery	Scarlet fever	Whooping cough	Viral hepatitis	TB all forms*	Meningitis†	Food poisoning notified§	ascertained#	Malaria
West Midlands	6	2	3	1	7	5	5	13	8	77	82	–
West Midlands†	3	2	1	–	4	3	5	13	7	36	33	–
Hereford and Worcester	–	–	–	1	1	–	–	–	–	11	14	–
Shropshire	–	–	–	–	–	2	–	–	–	3	18	–
Staffordshire	1	–	1	–	2	–	–	–	–	21	3	–
Warwickshire	2	–	–	–	–	–	–	–	1	5	8	–
<i>Stoke-on-Trent</i>	–	–	1	–	–	–	–	–	–	1	6	–
North West	13	–	4	2	3	9	3	14	5	73	82	–
Greater Manchester†	11	–	3	1	1	6	1	7	3	20	23	–
Merseyside†	1	–	–	–	–	1	2	3	–	16	9	–
Cheshire	–	–	–	–	–	1	–	2	1	6	18	–
Lancashire	1	–	1	1	2	1	–	2	1	31	32	–
Wales	2	1	3	2	3	6	–	4	4	57	45	–
<i>Isle of Anglesey</i>	–	–	–	–	–	–	–	–	–	–	1	–
<i>Gwynedd</i>	–	–	1	–	–	–	–	1	–	2	3	–
<i>Conwy</i>	–	–	–	–	–	–	–	–	–	5	4	–
<i>Denbighshire</i>	–	–	–	–	–	–	–	1	–	1	–	–
<i>Flintshire</i>	1	–	–	–	–	1	–	–	1	2	1	–
<i>Wrexham</i>	–	–	–	–	–	–	–	–	–	–	1	–
<i>Powys</i>	–	–	–	–	–	–	–	–	–	2	–	–
<i>Ceredigion</i>	–	–	–	–	–	–	–	–	–	–	1	–
<i>Pembrokeshire</i>	–	–	–	1	–	–	–	–	–	–	1	–
<i>Carmarthenshire</i>	–	–	–	1	–	–	–	–	–	2	2	–
<i>Swansea</i>	–	–	–	–	–	2	–	–	–	–	–	–
<i>Neath and Port Talbot</i>	–	–	–	–	–	–	–	–	–	–	–	–
<i>Bridgend</i>	–	–	–	–	–	–	–	–	–	10	–	–
<i>Vale of Glamorgan</i>	–	–	–	–	1	–	–	–	–	7	–	–
<i>Rhondda, Cynon, Taff</i>	–	1	–	–	–	–	–	–	3	8	–	–
<i>Merthyr Tydfil</i>	–	–	–	–	–	–	–	–	–	–	–	–
<i>Caerphilly</i>	1	–	1	–	–	1	–	–	–	2	9	–
<i>Blaenau Gwent</i>	–	–	–	–	–	–	–	–	–	–	3	–
<i>Torfaen</i>	–	–	–	–	–	–	–	–	–	–	–	–
<i>Monmouthshire</i>	–	–	–	–	–	–	–	–	–	9	–	–
<i>Newport</i>	–	–	–	–	–	2	–	2	–	–	2	–
<i>Cardiff</i>	–	–	1	–	2	–	–	–	–	7	17	–

* Excluding prophylaxis. † All forms. § Formally notified. # Ascertained by other means. Metropolitan county. Unitary authorities are shown in italics.

Notifications in week 48/97 of infectious diseases not shown in table 2

Diphtheria: one case in South Yorkshire (strain known to be non-toxicogenic).

Leptospirosis: one case in West Yorkshire.

Meningitis influenzal (*Haemophilus influenzae*): one case in Cumbria.

Meningitis – meningococcal: 23 cases; five in West Midlands, three in Leicestershire, two in Cumbria, and in Nottinghamshire, and one in each of Cheshire, East Riding of Yorkshire, Flintshire, Greater London, Greater Manchester, Kent, Lincolnshire, Norfolk, Rhondda Cynon Taff, Stockton-on-Tees, and Warwickshire.

Meningococcal septicaemia (without meningitis): 37 cases; five in Greater London, four in Greater Manchester, two in each of Caerphilly, Cumbria, Hampshire, Hertfordshire, Merseyside, Nottinghamshire, Staffordshire, West

Yorkshire, and Wrexham, and one in each of Cardiff, Carmarthenshire, Cheshire, Leicestershire, Monmouthshire, North Somerset, North Yorkshire, South Yorkshire, Tyne and Wear, and Warwickshire.

Ophthalmia neonatorum: five cases; two in Greater London, and one in each of Greater Manchester, Hampshire, and Nottinghamshire.

Paratyphoid fever: one case of unknown origin – from West Midlands.

Typhoid fever: two cases presumed to have been contracted abroad – from Greater London and Warwickshire

No cases of acute encephalitis, acute poliomyelitis, anthrax, cholera, plague, rabies, relapsing fever, smallpox, tetanus, typhus, viral haemorrhagic fever, or yellow fever were notified.

Table 3 Weekly analysis report of notifications above expected rates in week 48/97

District	County	Observed number	Expected number	Ratio observed/expected	District	County	Observed number	Expected number	Ratio observed/expected
Dysentery					Measles				
Babergh	Suffolk	2	0.04	46.85	Stroud	Gloucestershire	29	0.18	160.72
Islington	Greater London	2	0.09	21.17					
Food poisoning					Meningitis				
<i>All</i>					<i>All</i>				
Allerdale	Cumbria	10	3.16	3.16	Mansfield	Nottinghamshire	2	0.08	24.24
Basingstoke and Deane	Hampshire	17	4.86	3.50	Rhondda, Cynon, Taff	Rhondda, Cynon, Taff	3	0.19	15.40
Blackpool	Lancashire	17	5.06	3.36					
Cardiff	Cardiff	24	10.19	2.35	<i>Meningococcal</i>				
Fareham	Hampshire	10	3.38	2.96	Mansfield	Nottinghamshire	2	0.05	44.26
Kerrier	Cornwall and Isles of Scilly	21	2.93	7.18					
Monmouthshire	Monmouthshire	9	2.82	3.19	Rubella				
North Somerset	North Somerset	17	6.05	2.81	Ashfield	Nottinghamshire	4	0.11	36.72
North Wiltshire	Wiltshire	11	4.01	2.75					
Runnymede	Surrey	12	2.49	4.82	Scarlet fever				
South Hams	Devon	10	2.61	3.84	Allerdale	Cumbria	3	0.15	20.31
South Lakeland	Cumbria	10	3.31	3.02	Ashfield	Nottinghamshire	3	0.18	17.14
Wandsworth	Greater London	23	8.73	2.63	Chester-le-Street	Durham	2	0.09	22.94
West Devon	Devon	6	1.54	3.91	Rochester upon Medway	Kent	3	0.26	11.72
Wycombe	Buckinghamshire	20	5.41	3.70	Ryedale	North Yorkshire	2	0.07	30.32
<i>Formally notified</i>					Tuberculosis†				
Basildon	Essex	11	3.06	3.60	Birmingham	West Midlands	11	2.10	5.23
Bracknell Forest	Berkshire	9	2.02	4.45	Ealing	Greater London	5	0.60	8.28
Bridgend	Bridgend	10	2.45	4.08	Gloucester	Gloucestershire	4	0.22	18.27
Bromley	Greater London	13	5.51	2.36	Newcastle upon Tyne	Tyne and Wear	5	0.59	8.54
Camden	Greater London	11	3.47	3.17	Newham	Greater London	5	0.47	10.59
Canterbury	Kent	8	2.53	3.16					
Chesterfield	Derbyshire	9	1.89	4.75	Viral hepatitis				
Derby	Derbyshire	12	4.35	2.76	Bournemouth	Dorset	3	0.19	15.81
Fareham	Hampshire	10	1.92	5.20	Greenwich	Greater London	3	0.25	12.04
Harrow	Greater London	12	3.94	3.04	Rother	East Sussex	2	0.10	19.45
Kerrier	Cornwall and Isles of Scilly	16	1.67	9.60	West Dorset	Dorset	3	0.11	28.36
Monmouthshire	Monmouthshire	9	1.61	5.60	Weymouth and Portland	Dorset	2	0.07	26.98
North Lincolnshire	North Lincolnshire	11	2.85	3.85					
Plymouth	Devon	13	4.83	2.69	Whooping cough				
Runnymede	Surrey	12	1.42	8.45	Ashfield	Nottinghamshire	3	0.14	21.15
Stafford	Staffordshire	9	2.31	3.89	East Dorset	Dorset	2	0.09	22.69
SurreyHeath	Surrey	7	1.54	4.54	Ipswich	Suffolk	3	0.16	18.98
Wandsworth	Greater London	23	4.98	4.62	Melton	Leicestershire	2	0.06	32.98
West Devon	Devon	6	0.88	6.86	Oadby and Wigston	Leicestershire	2	0.07	29.49
Woking	Surrey	8	1.70	4.72	Rutland	Leicestershire	3	0.04	68.01
Wolverhampton	West Midlands	13	4.59	2.83					
Malaria									
Greenwich*	Greater London	18	0.13	137.67					
Leicester	Leicestershire	3	0.18	16.40					
Newham	Greater London	4	0.14	28.32					

Note: This table shows those districts from which the rates of notifications reported this week were significantly higher than expected ($P < 0.005$). The number of notifications in each district is shown in the third column (observed). The number expected if the national rate is applied to the district population is shown in the fourth column (expected). The fifth column shows by how many times the number of notifications exceeds the expected number (ratio observed/expected). Caution must be exercised when interpreting this table, as listing is wholly dependent on comparable reporting of notifiable infectious diseases from all districts of England and Wales and on local patterns of disease.

* The 18 cases of malaria in Greenwich are late notifications, and not an outbreak

† Excluding prophylaxis

General outbreaks of foodborne illness in humans, England and Wales: quarterly report

Table 1 Final information on general outbreaks¹ of foodborne illness: April to June 1997

Local authority	Organism	Location of food prepared or served	Number ill ²	Cases positive	Suspect vehicle ³	Evidence ⁴
Lewisham	<i>Salmonella enteritidis</i> PT4	Residential institution	3	1	None	–
Tynedale	<i>S. enteritidis</i> PT4	School	13	6	Spanish tortilla	M+S
West Surrey	<i>S. enteritidis</i> PT4	School	NA	NA	NA	NA
Brentwood	<i>S. enteritidis</i> PT4	Private house	14	10	Chicken	S
Gwynedd	<i>S. enteritidis</i> PT4	Restaurant	19	14	Apple and raspberry pie, pastry made with raw shell eggs	S
Flintshire	<i>S. enteritidis</i> PT4	Residential institution	24	16	Fish or mashed potato	D
South Pembrokeshire	<i>S. enteritidis</i> PT4	Restaurant	6	6	None	–
Leeds	<i>S. enteritidis</i> PT4	Caterer	21	8	Rice salad and coronation chicken	M
Milton Keynes	<i>S. enteritidis</i> PT4	Restaurant	28	16	Lemon chicken	D
Berkshire	<i>S. enteritidis</i> PT4	School	NA	NA	NA	NA
Slough	<i>S. enteritidis</i> PT4	Restaurant	28	18	Garlic mayonnaise dressing	M
Hillingdon	<i>S. enteritidis</i> PT4	Nursery	46	19	None	–
Southampton	<i>S. enteritidis</i> PT4	Private house	5	5	Fish curry with stir-fried egg	D
Copeland	<i>S. enteritidis</i> PT4	Retailer	10	8	Lemon meringue pie made with raw shell eggs	M
Wokingham	<i>S. enteritidis</i> PT4	Residential institution	15	8	Liquidised meals	D
Kensington, Chelsea, and Westminster	<i>S. enteritidis</i> PT4	Restaurant	3	3	Tiramisu made with raw shell eggs	D
Hull	<i>S. enteritidis</i> PT4	Residential institution	4	3	Scrambled and fried eggs	D
Tunbridge Wells	<i>S. enteritidis</i> PT4	Restaurant	26	11	Tiramisu made with raw shell eggs	S
Cardiff	<i>S. enteritidis</i> PT6	Residential institution	7	4	Pureed food	D
Bury	<i>S. enteritidis</i> PT6	Retailer	118	108	Chocolate mousse made with raw shell eggs	M
Wirral	<i>S. enteritidis</i> PT14B	College	15	9	Tiramisu made with raw shell eggs	D
Wakefield	<i>S. enteritidis</i> PT29A and 34A	Restaurant	13	8	Turkey	D
Sunderland	<i>S. panama</i>	Private house	14	8	Egg mayonnaise	S
Newcastle	<i>S. typhimurium</i> DT104	Hospital	36	12	None	–
East Kent	<i>S. typhimurium</i> DT104	Hospital	NA	NA	NA	NA
North Tyneside	<i>S. typhimurium</i> DT104	Retailer	34	34	Cooked meats	D
Colchester	<i>S. typhimurium</i> DT104	Armed services	17	12	None	–
Mole Valley	<i>S. typhimurium</i> DT104	School	43	20	Turkey burger and spaghetti bolognese	D
Newcastle	<i>S. typhimurium</i> DT104B	Retailer	18	7	Cooked chicken	M+S
Fylde	<i>S. virchow</i> PT8	Restaurant	3	3	Chicken barbecue	S
Port Talbot	<i>Bacillus subtilis</i>	Restaurant	9	0	Chicken Barbados	M
Sheffield	<i>Bacillus cereus</i>	Restaurant	2	2	Rice, meat	M
Cardiff	<i>Campylobacter</i> sp	Restaurant	12	5	Stir-fried chicken	M
Powys	<i>Clostridium perfringens</i>	Public house	47	5	Beef	M
West Devon	<i>C. perfringens</i>	Armed services	20	6	Steak	M
Gloucester	<i>C. perfringens</i>	Private club	5	1	Gravy	M
Taunton	<i>C. perfringens</i>	Hospital	14	4	Cottage pie	M
Purbeck	<i>C. perfringens</i>	Hotel	35	10	Ham, turkey, mixed salad	M
Basingstoke and Deane	<i>C. perfringens</i>	Commercial caterer	99	11	Cold chicken	M
Craven	<i>Escherichia coli</i> O157	Farm	8	6	Unpasteurised milk	D
Windsor and Maidenhead	Scombrotoxin	Canteen	22	*	Tuna fish	M
Poole	Scombrotoxin	Restaurant	2	*	Tuna	M
Sevenoaks	SRSV	Hotel	10	2	Raw oysters	S
Winchester	SRSV	Public house	3	0	Raw oysters	M
Chiltern	SRSV	Restaurant	25	5	Sandwiches	–
West Lancashire	Unknown	Restaurant	8	0	Raw oysters	S
Torbay	Unknown	Restaurant	7	0	Cockles	D

1. 'General outbreaks' involve members of more than one household
2. The number known to have been ill
3. Local investigations may not provide conclusive evidence of vehicles of infection. Vehicles are therefore designated 'suspect'.
4. M (microbiological): identification of an organism of the same type from cases and in the suspect vehicle, or vehicle ingredient(s), or detection of toxin in faeces or food

- S (statistical): a significant statistical association between consumption of the suspect vehicle(s) and being a case
D (descriptive): other evidence, usually descriptive, reported by local investigators as indicating the suspect vehicle
NA (information not available): summary report not yet received
* Not applicable

Table 2 Outbreaks¹ of salmonella infection: July to September 1997

Outbreak type	<i>S. enteritidis</i>		<i>S. typhimurium</i>	Other serotypes	Total
	PT4	Other PTs			
General ²	47	20	10	6	83
Household ³	128	52	26	16	222
Acquired abroad ⁴	8	22	19	8	57
Total	183	94	55	30	362

1. An 'outbreak' represents two or more related laboratory confirmed infections in humans of whom at least one was ill, or two or more related cases of illness in humans of whom at least one had confirmed infection with salmonella

2. 'General outbreaks' involve members of more than one household
3. 'Family outbreaks' involve members of one household only
4. Family and general outbreaks in which infection was acquired outside England and Wales

SALMONELLA SEROTYPES RECORDED IN THE PHLS SALMONELLA DATA SET

July to September 1997

All serotypes recorded in the PHLS salmonella data set in the third quarter of 1997 are listed below. There were more than ten reports of 31 serotypes (table), two to ten reports of 63 serotypes, and one report of 44 serotypes.

	July to September 1997
Salmonella (provisional total)	13297
S. agona	56
S. anatum	31
S. bareilly	18
S. blockley	11
S. bovis-morbificans	22
S. braenderup	61
S. brandenburg	34
S. bredeney	39
S. chester	23
S. derby	14
S. enteritidis	9726
S. gold-coast	13
S. haardt	13
S. hadar	321
S. heidelberg	137
S. indiana	30
S. infantis	76
S. java	42
S. kedougou	20
S. kentucky	17
S. livingstone	14
S. mbandaka	29
S. montevideo	41
S. newport	56
S. oranienburg	28
S. saint-paul	18
S. senftenberg	19
S. stanley	18
S. thompson	25
S. typhimurium	1752
S. virchow	250
Others (typed)	297
Others (unnamed)	46

Two to ten reports of each of the following serotypes were received (number of reports in brackets):

(3) <i>S. abony</i>	(2) <i>S. limete</i>
(6) <i>S. adelaide</i>	(3) <i>S. litchfield</i>
(4) <i>S. agama</i>	(4) <i>S. london</i>
(3) <i>S. ajiobo</i>	(6) <i>S. manhattan</i>
(2) <i>S. alachua</i>	(4) <i>S. mikawasima</i>
(5) <i>S. albany</i>	(2) <i>S. mississippi</i>
(8) <i>S. arizonae</i>	(8) <i>S. muenchen</i>
(2) <i>S. augustenborg</i>	(5) <i>S. muenster</i>
(4) <i>S. bardo</i>	(2) <i>S. negev</i>
(3) <i>S. binza</i>	(5) <i>S. newington</i>
(6) <i>S. cerro</i>	(9) <i>S. ohio</i>
(2) <i>S. chailey</i>	(2) <i>S. orion</i>
(2) <i>S. coeln</i>	(2) <i>S. oslo</i>
(3) <i>S. coleypark</i>	(5) <i>S. panama</i>
(2) <i>S. colindale</i>	(8) <i>S. poona</i>
(7) <i>S. corvallis</i>	(2) <i>S. potsdam</i>
(4) <i>S. cubana</i>	(3) <i>S. reading</i>
(3) <i>S. dublin</i>	(3) <i>S. richmond</i>
(2) <i>S. duisburg</i>	(2) <i>S. san-diego</i>
(3) <i>S. emek</i>	(8) <i>S. schwarzengrund</i>
(2) <i>S. essen</i>	(2) <i>S. singapore</i>
(2) <i>S. florida</i>	(2) <i>S. tel-el-kebir</i>
(6) <i>S. give</i>	(8) <i>S. tennessee</i>
(3) <i>S. haifa</i>	(2) <i>S. tornow</i>
(7) <i>S. havana</i>	(8) <i>S. uganda</i>
(3) <i>S. hindmarsh</i>	(2) <i>S. vitkin</i>
(2) <i>S. ibadan</i>	(2) <i>S. wangata</i>
(8) <i>S. javiana</i>	(9) <i>S. weltevreden</i>
(2) <i>S. kiambu</i>	(6) <i>S. worthington</i>
(5) <i>S. kottbus</i>	(2) <i>S. zaiman</i>
(2) <i>S. kouka</i>	(7) <i>S. zanzibar</i>
(2) <i>S. lexington</i>	

One report of each of the following serotypes was received:

<i>S. aba</i>	<i>S. cotham</i>	<i>S. grumpensis</i>	<i>S. okatie</i>
<i>S. aberdeen</i>	<i>S. degania</i>	<i>S. hvittingfoss</i>	<i>S. rissen</i>
<i>S. amsterdam</i>	<i>S. drypool</i>	<i>S. jangwani</i>	<i>S. rubislaw</i>
<i>S. arechavaleta</i>	<i>S. durban</i>	<i>S. johannesburg</i>	<i>S. santhiaba</i>
<i>S. argentina</i>	<i>S. ealing</i>	<i>S. kambole</i>	<i>S. sofia</i>
<i>S. avonmouth</i>	<i>S. eastbourne</i>	<i>S. kisangani</i>	<i>S. suelldorf</i>
<i>S. boecker</i>	<i>S. flint</i>	<i>S. kokomlele</i>	<i>S. tel-aviv</i>
<i>S. bonn</i>	<i>S. gaminara</i>	<i>S. meleagridis</i>	<i>S. tyresoe</i>
<i>S. carrau</i>	<i>S. gatow</i>	<i>S. napoli</i>	<i>S. vejle</i>
<i>S. chameleon</i>	<i>S. gatuni</i>	<i>S. new-brunswick</i>	<i>S. virginia</i>
<i>S. chandans</i>	<i>S. glostrup</i>	<i>S. nottingham</i>	<i>S. zinder</i>