

Communicable Disease Report

Toxigenic *Corynebacterium diphtheriae* associated with the Haj

A toxigenic strain of *Corynebacterium diphtheriae* has been confirmed by the Division of Hospital Infection in an eight year old asymptomatic boy from North London. The presumed source of infection is one (or both) of two other members of the same family who travelled to Saudi Arabia in June for the Haj pilgrimage. Throat swabs from both these individuals were negative, although one has subsequently developed a sore throat. A non-toxigenic strain of *C. diphtheriae* has been isolated from a third family member with a sore throat, who had not visited Saudi Arabia. The carrier of the toxigenic strain and the relative with a sore throat who had attended the Haj have been given diphtheria antitoxin. Household contacts have been offered a booster dose of diphtheria toxoid (or a full primary course if previously unimmunised) and a prophylactic course of erythromycin.

Diphtheria is common in the tropics although the risk to travellers from the UK is low. A review of cases reported to CDSC between 1970 and 1987 revealed twenty-one imported cases and 29 carriers of toxigenic strains of *C. diphtheriae* in England and Wales. None of these was associated with the Haj, although 15 of the cases and 22 of the carriers came from Bangladesh, Pakistan and Egypt. A diagnosis of diphtheria should be considered in patients returning from tropical countries with a sore throat.

HIV and hepatitis B virus infection in health care workers

New recommendations have been published recently¹ that update previous guidelines from the Centers for Disease Control (CDC). They outline CDC's advice on infection control practices and emphasise the importance of training in infection control. All health care workers (HCWs) at risk of occupational exposure to hepatitis B virus (HBV) should be vaccinated at an early stage in their career and should adhere to universal precautions. The risks of transmission of HIV or HBV after a single percutaneous exposure to HIV infected or HBeAg positive blood are estimated as 0.3% and 30%, respectively.

CDC suggests that certain invasive surgical and dental procedures should be considered 'exposure prone' and gives a definition of exposure prone procedures. HCWs who perform such procedures should know their HIV antibody status and have evidence of immunity to HBV. It is recommended that HCWs infected with HIV or HBV (and are HBeAg positive) should receive guidance on the circumstances, if any, under which they can continue to perform exposure prone procedures. Such circumstances would include notifying prospective patients of the HCW's seropositivity before the procedure. Mandatory testing of HCWs for HIV and HBV is not recommended.

The Expert Advisory Group on AIDS published guidelines on HIV infected health care workers in the United Kingdom in March 1988. These are currently under revision and should soon be available in published form. Twelve outbreaks of HBV infection associated with HBV infected surgical HCWs were reported between 1975 and 1990 in England, Wales and Northern Ireland². New guidelines for the management of HBV infected HCWs are in preparation by the UK Advisory Group on Hepatitis.

1. Centers for Disease Control. Recommendations for preventing transmission of human immunodeficiency virus and hepatitis B virus to patients during exposure-prone invasive procedures. *MMWR* 1991; 40 (RR-8): 1-9.
2. Heptonstall J. Outbreaks of hepatitis B virus infection associated with infected surgical staff. *Communicable Disease Report* 1991; 1: R81-85.

Salmonella infections:
weeks 91/28 - 31

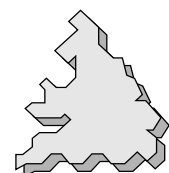
AIDS in the United Kingdom: monthly report

Other gastrointestinal tract infections:
weeks 91/28 - 31

Gastrointestinal virus infections:
weeks 91/28 - 31

Bacteraemia and bacterial meningitis:
weeks 91/28 - 31

Unusual infections



Salmonella infections, England and Wales: laboratory reports weeks 91/28 – 31

Serotype	Reports to CDSC					Reports from DEP
	91/28	91/29	91/30	91/31	Total	Total
<i>S. enteritidis</i> (PT4)	245 (179) *	244 (175) *	382 (293) *	391 (268) *	1262 (915) *	1659 (1378) *
<i>S. typhimurium</i>	71	52	133	98	354	560
<i>S. virchow</i>	5	7	15	20	47	60
<i>S. agona</i>	2	6	7	13	28	37
<i>S. infantis</i>	2	10	8	4	24	19
<i>S. bredeney</i>	4	5	7	3	19	10
<i>S. newport</i>	6	2	2	9	19	27
<i>S. montevideo</i>	4	4	4	3	15	15
<i>S. blockley</i>	1	1	2	10	14	10
<i>S. heidelberg</i>	4	2	2	6	14	22
<i>S. hadar</i>	4	1	7	1	13	58
<i>S. saint-paul</i>	–	5	5	2	12	13
<i>S. kedougou</i>	1	2	4	4	11	7
Other serotypes	29	19	31	24	103	172
Total	378	360	609	588	1935	2669

* *S. enteritidis* PT4

Less than 10 laboratory reports of the following serotypes were received by CDSC during this period:

- 7: *S. stanley*.
 6: *S. schwarzengrund*.
 5: *S. livingstone*.
 4: *S. berta*, *S. havana*, *S. panama*, *S. thompson*.
 3: *S. anatum*, *S. corvallis*, *S. derby*, *S. give*, *S. java*, *S. poona*.
 2: *S. adelaide*, *S. bareilly*, *S. bovis-morbificans*, *S. braenderup*, *S. ituri*, *S. kentucky*, *S. manhattan*, *S. mbandaka*, *S. oranienburg*, *S. tennessee*, *S. uganda*, *S. weltevreden*.
 1: *S. aberdeen*, *S. agama*, *S. augustenburg*, *S. bonn*, *S. cubana*, *S. ealing*, *S. emek*, *S. gatuni*, *S. indiana*, *S. javiana*, *S. johannesburg*, *S. kinshasa*, *S. kivu*, *S. liverpool*, *S. marina*, *S. molade*, *S. muenchen*, *S. meunster*, *S. new brunswick*, *S. newington*, *S. ohio*, *S. rubislaw*, *S. senftenberg*, *S. singapore*, *S. veneziana*, *S. waycross*, *S. zanzibar*.

Comment

***S. enteritidis* PT 4:** 25-30 women from the UK and Europe, who attended a seminar in NW region, were ill six hours after a meal which included home-made mayonnaise made with raw eggs (4 persons were positive). A number of guests were ill following a party in Northern region attended by 150 and catered for in a domestic kitchen (24 persons were positive; no food was

available for testing). Approximately 150 persons were ill after eating food from a sandwich bar (85 persons were positive). 35/100 persons at a military base had diarrhoea (5 persons were positive). 22/65 residents and staff of a residential home in Wales had diarrhoea; custard slices and turkey were identified as vehicles (17 persons were positive). **PT 6:** 15 persons in four families had D&V following holidays in Tenerife; others at the resorts were said to have been ill (10 persons were positive). **PT 8:** about 20/80 persons were ill after a barbecue in SW Thames region; home-made mayonnaise which had been left at room temperature was suspected (3 persons were positive). **PT 13a:** 140/400 guests at a barbecue in SE Thames region had D&V after eating quiche which had been left at ambient temperature (72 persons and quiche were positive).

***S. newport*:** a number of persons were ill following a meal at a public house in Trent region (4 persons were positive).

***S. typhimurium* DT 107:** more than 39/168 guests at a party in West Midlands region had D&V; a buffet included cold turkey which had been left at room temperature (16 persons were positive). **DT 141:** 13/19 children at a school in NW Thames region were ill after eating a raw cake mix they had made (2 persons were positive). **DT 203:** 19 persons in a community were ill after consuming cold meats from market stalls in the Sheffield area (32 persons were positive).

Food poisoning notifications from OPCS

	Number of notifications				Total notifications 91/28-31	Cumulative total 1991
	91/28	91/29	91/30	91/31		
Formally notified §	783	919	1030	983	3715	17675
Otherwise ascertained §	470	586	570	552	2178	9372

§ provisional

Typhoid and paratyphoid, England and Wales: laboratory reports weeks 91/28 - 31

***S. typhi*:** 12 cases aged 2-47 years were reported; 9 were from the Indian subcontinent, 2 from Africa and one from the Far East. Three excreters were reported (M 29y, F 65y and M 68y).
***S. paratyphi* A:** 4 cases aged 21-33 years were reported; 3 from the Indian subcontinent and one other abroad. One excreter

was reported (M 8y).

***S. paratyphi* B:** 1 case was reported, M 19y infected in the South of France. One excreter was reported (F 84y).

Notifications: 12 cases of typhoid and 9 of paratyphoid fever were statutorily notified (weeks 91/28-31).

AIDS in the United Kingdom: monthly report

Ninety-three new cases of AIDS were reported during July 1991. Seventy were probably infected through sexual intercourse between men (8 died), 7 through sexual intercourse between men and women (1 died), 6 through injecting drug use (3 died), 4 through either injecting drug use or sexual intercourse between men (1 died), 3 through blood factor treatment (2 died), and 1, who died, was infected through transmission from mother to child. The exposure categories of 2 cases (who died) were undetermined.

Since reporting began in 1982, a total of 4847 AIDS cases (4577 male and 270 female) have been reported of whom 2813 are known to have died (Table 1). There was an increase of 22% in the number of cases reported in the two consecutive 12 month periods between August 1989 and July 1991. An

increase in the proportion of reports of AIDS in heterosexual men and women has also occurred between these two periods (Table 2).

Two-thirds of AIDS cases and of related deaths since 1982 have been reported from three health regions - North West Thames, North East Thames and South East Thames (Table 3). These regions contain 20% of the total UK population.

The annual number of AIDS cases reported continues to rise with each successive year (Table 4). Delay in reporting newly diagnosed cases will obscure trends in AIDS incidence in recent quarters. The data in Table 5 suggest, however, that the number of newly diagnosed cases continued to increase through 1990 albeit less rapidly than in earlier years.

Table 1 AIDS cases and deaths by exposure category and date of report: United Kingdom to 31 July 1991

How persons probably acquired the virus	Aug 89 - Jul 90		Aug 90 - Jul 91		Jan 82 - Jul 91			
	Male	Female	Male	Female	Male	Deaths	Female	Deaths
Sexual intercourse								
between men	828	—	932	—	3765	2213	—	—
between men and women								
"high risk" partner ¹	3	8	5	7	14	6	28	15
other partner abroad ²	53	22	82	40	192	92	89	37
other partner UK	4	5	9	8	20	11	16	6
Injecting drug use (IDU)	44	9	63	31	156	68	59	31
IDU & sexual intercourse between men	15	—	22	—	75	43	—	—
Blood								
blood factor (e.g. for haemophilia)	57	1	56	1	261	184	4	3
blood/tissue transfer (e.g. transfusion)								
abroad	2	3	1	8	14	9	26	17
UK	4	4	—	4	14	12	15	10
Mother to infant	1	2	8	12	17	7	27	13
Other/undetermined	9	3	24	1	49	33	6	3
Total	1020	57	1202	112	4577	2678	270	135

1. Includes men and women who had sex with injecting drug users, or with those infected through blood factor treatment or blood transfusion, and women who had sex with bisexual men.

2. Includes persons without other identified risks from, or who have lived in, countries where the major route of HIV-1 transmission is through sexual intercourse between men and women.

Table 2 Sexual orientation of adult (15 years or over) AIDS cases: United Kingdom to 31 July 1991

Sexual orientation	Aug 89 - Jul 90 ¹		Aug 90 - Jul 91		Jan 82 - Jul 91	
	Cases	(%)	Cases	(%)	Cases	(%)
Homosexual men	719	(68)	829	(66)	3254	(69)
Bisexual men	124	(12)	126	(10)	589	(13)
Heterosexual men and women	212	(20)	295	(24)	860	(18)
Total²	1055	(100)	1250	(100)	4703	(100)

1. Period during which reports were received.

2. Excludes some cases under investigation.

Tables 1-5 were prepared from voluntary confidential reports by clinicians and microbiologists sent directly to the PHLS AIDS Centre at CDSC (081 200 6868) and to the Communicable Diseases (Scotland) Unit (041 946 7120), from returns by Haemophilia Centre Directors to the Oxford Haemophilia Centre (0865 225316), and monthly returns by paediatricians to the British Paediatric Surveillance Unit.

Table 3 Geographical distribution of AIDS cases and deaths by date of report: to 31 July 1991

Country or region of first report	Aug 89 – Jul 90		Aug 90 – Jul 91		Cumulative total since 1982	
	Cases	Related deaths ¹	Cases	Related deaths	Cases	Related deaths
England:						
Northern	23	11	16	2	89	51
Yorkshire	27	17	35	13	126	79
Trent	24	10	28	12	97	58
E Anglia	12	7	11	2	51	33
NW Thames	441	205	452	76	1877	1056
NE Thames	136	51	281	73	873	460
SE Thames	129	59	143	52	529	332
SW Thames	47	29	48	11	183	118
Wessex	24	13	38	18	114	73
Oxford	23	12	34	10	107	62
S Western	19	12	22	8	91	59
W Midlands	24	11	35	7	110	59
Mersey	7	3	21	10	62	43
N Western	57	28	47	17	192	118
Wales	18	10	18	14	75	58
Northern Ireland	7	6	5	4	24	21
Scotland	59	26	80	27	247	133
United Kingdom total	1077	510	1314	356	4847	2813
Ch. Islands/Isle of Man	1	1	1	1	4	4

1. These deaths are of patients referred to in the previous column and known to have occurred at any time up to 31 July 1991. Reporting of recent deaths is incomplete.

Table 4 AIDS cases by date of report and number known to have died: United Kingdom to 30 June 1991

Year ¹	First quarter		Second quarter		Third quarter		Fourth quarter		Annual Total	
	Reports	Related deaths ²	Reports	Related deaths	Reports	Related deaths	Reports	Related deaths	Reports	Related deaths Number(%)
1985	35	34	31	28	45	38	47	43	158	143 (91)
1986	50	46	61	58	99	87	95	84	305	275 (90)
1987	149	133	143	126	197	168	156	132	645	559 (87)
1988	203	165	167	134	195	141	194	127	759	567 (75)
1989	208	134	179	106	273	142	185	89	845	471 (56)
1990	325	150	278	115	367	127	305	100	1275	492 (39)
1991	357	85	308	53						

1. The three cases reported in 1982, 25 of the 26 reported in 1983 and 74 of the 77 reported in 1984 are known to have died.

2. These deaths are of patients referred to in the previous column and known to have occurred at any time up to 30 June 1991. Reporting of recent deaths is incomplete.

Table 5 AIDS cases by date of diagnosis and AIDS deaths by date of death: United Kingdom to 30 June 1991

Year ¹	First quarter		Second quarter		Third quarter		Fourth quarter		Annual Total	
	Diagnosis	All Deaths ²	Diagnosis	All Deaths	Diagnosis	All Deaths	Diagnosis	All Deaths	Diagnosis	All Deaths
1985	44	19	35	34	69	30	72	33	220	116
1986	90	47	115	63	104	60	129	92	438	262
1987	143	78	154	98	169	90	185	76	651	342
1988	188	88	216	96	227	100	216	116	847	400
1989	244	129	231	156	259	137	239	180	973	602
1990	270	148	239	167	249	164	261	185	1019	664
1991	207	162	129	93						

1. For 117 diagnoses and 35 deaths the quarter of occurrence is unknown; 19 cases were diagnosed in 1982 or earlier, 33 in 1983, and 105 in 1984; 8 cases died in 1982 or earlier, 16 in 1983, and

47 in 1984. Reporting of recent cases and deaths is incomplete.
2. ie, not necessarily related to cases diagnosed in the same period.

Other gastrointestinal tract infections: weeks 91/28 – 31

Laboratory reports	Number of reports received				Total reports 91/28-31 (acquired abroad)	Cumulative total 1991
	91/28	91/29	91/30	91/31		
<i>Campylobacter</i>	971	869	1203	900	3943 (305)	18300
<i>Shigella</i>	319	218	272	226	1035 (71)	5367
Enteropathogenic <i>E. coli</i> (children <3 years)	22	11	26	20	79 (1)	376
<i>Aeromonas</i>	2	4	6	10	22 (1)	120
<i>Plesiomonas</i>	–	1	1	2	4 (2)	28
<i>Vibrio</i>	3	1	4	1	9 (8)	34
<i>Clostridium difficile</i>	18	15	17	14	64 (–)	535
<i>Yersinia</i>	6	13	2	13	34 (1)	227

Comment

Campylobacter: one region reported more than 10% cases: Trent (411 cases).

Thirty-five outbreaks were reported: 34 family outbreaks and one on a farm.

Shigella: *S. boydii* 11 (9 abroad); *S. dysenteriae* 1; *S. flexneri* 39 (23 abroad); *S. sonnei* 984 (39 abroad). *S. sonnei*: continuing community outbreaks in Yorkshire, N Western and S Western regions. Ten other outbreaks were reported: 8 family outbreaks, one in a brownie camp and one in a school.

Notifications of dysentery for this period were: 215, 133, 195 and 186 respectively; the cumulative total for 1991 is 4619.

Aeromonas: *A. caviae* 1; *A. hydrophila* 15; *A. sobria* 5; *Aeromonas* sp 1 (abroad).

Plesiomonas shigelloides: 4 (2 abroad).

Vibrio: *V. cholerae* non O1, 6 (all abroad); *V. fluvialis* 1;

V. parahaemolyticus 2 (both abroad).

Clostridium difficile: 2 regions reported more than 10% cases: Yorkshire (18 cases) and Wessex (15).

Yersinia: *Y. enterocolitica* 29 (1 abroad); *Y. frederiksenii* 3; *Y. pseudotuberculosis* 1; *Yersinia* sp 1.

Cryptosporidium: 4 regions reported more than 10% cases: Yorkshire (41 cases), Trent (31), S Western (33) and N Western (32). Six family outbreaks were reported.

Giardia: one region reported than 10% cases: SW Thames (54 cases). Twenty-two family outbreaks were reported.

Entamoeba histolytica: 2 family outbreaks were reported.

Taenia: 4: *T. saginata* 2 (Ethiopia, Saudi Arabia, one each).

Trichostrongylus: 5: (Pakistan 1).

Trichuris: 29 (Vietnam 8, Bangladesh, India, Maldives, Somalia, one each).

Laboratory reports	Number of reports received				Total reports 91/28-31 (acquired abroad)	Cumulative total 1991
	91/28	91/29	91/30	91/31		
<i>Cryptosporidium</i>	83	55	82	64	284 (11)	2984
<i>Entamoeba histolytica</i>	10	44	10	2	66 (44)	583
<i>Giardia</i>	107	109	134	113	463 (114)	3195
<i>Blastocystis hominis</i>	2	11	1	1	15 (1)	90
<i>Dientamoeba fragilis</i>	–	4	–	–	4 (–)	31

Gastrointestinal virus infections, England and Wales: laboratory reports weeks 91/28 - 31

Laboratory reports	Number of reports received				Total reports 91/28-31	Cumulative total 1991
	91/28	91/29	91/30	91/31		
Adenovirus (EM faeces)	37	20	38	25	120	816
Adenovirus type 40/41	1	1	1	1	4	59
Astrovirus	3	1	2	5	11	192
Calicivirus	3	–	2	1	6	62
Rotavirus	101	93	97	49	340	11157
SRSV	10	13	5	5	33	433

Adenovirus (EM faeces): 4 regions reported more than 10% cases: Trent (20 cases), S Western (13), Mersey (24) and N Western (15). One family outbreak was reported.

Astrovirus: 2 regions reported more than 2 cases: Yorkshire (4) and S Western (3).

Rotavirus: 2 regions reported more than 10% cases: Yorkshire (61 cases) and S Western (56).

Five outbreaks were reported: one in an old peoples home and 4 in families.

SRSV: 3 regions reported more than 4 cases: Yorkshire (6), Trent (5) and E Anglia (6).

Six outbreaks were reported: 2 in families, 2 in residential homes, one on a geriatric ward and one on a river boat trip.

Bacteraemia and bacterial meningitis, England and Wales: weeks 91/28 - 31

Laboratory reports	No. of reports received		Age		Total received	Cumulative total 1991
	Blood only	CSF only or CSF & blood	<1m	≥65y		
<i>Citrobacter sp</i>	25	–	–	18	25	119
<i>Enterobacter sp</i>	84	–	5	30	84	539
<i>Escherichia coli</i>	643	4	21	369	647	4467
<i>Klebsiella sp</i>	126	–	6	59	126	928
<i>Proteus sp</i>	105	1	1	66	106	776
<i>Salmonella sp</i>	25	–	1	4	25	132

Bacteraemia

Citrobacter sp: *C. amalonaticus* 1; *C. freundii* 16; *C. koseri* 5.

Enterobacter sp: *E. aerogenes* 8; *E. agglomerans* 7; *E. cloacae* 60; *E. intermedius* 2; *E. sakazakii* 3. *E. aerogenes*, M 54y with endocarditis (blood isolate).

Escherichia coli: M 60y had endocarditis and extradural spinal abscess (pus isolate also); two patients aged 65 years or more had pacemakers; three patients aged 65 years or more had septic arthritis.

Klebsiella sp: *K. aerogenes* 42; *K. oxytoca* 21; *K. pneumoniae* 45.

Proteus sp: *P. mirabilis* 75; *P. morgani* 13; *P. rettgeri* 1; *P. vulgaris* 1.

Salmonella sp: *S. enteritidis* 15: 9 patients aged 7 months-75 years with gastrointestinal symptoms and/or faecal isolate also; 5 patients aged 28-73 years with positive blood cultures only including M 28y HIV-1 antibody positive. *S. heidelberg*,

M 21y after travel in Kenya (blood isolate only). *S. liverpool*, M 54y visiting United Kingdom had no gastrointestinal symptoms (blood isolate only). *S. montevideo*, M 41y with diarrhoea after travel in Nigeria. *S. typhimurium* 6: one infant and 4 patients aged 51-87 years with gastrointestinal symptoms and/or faecal isolate also, including Ugandan woman HIV-1 antibody positive; 1 male had blood isolate only. *S. virchow*, F 14y with fever and headache had faecal isolate only.

Also reported: *S. blockley*, F 68y (urine isolate only). *S. enteritidis*, M 73y with non-Hodgkin lymphoma (urine isolate only) and M 80y after amputation of toes (wound isolate only). *S. kedougou*, M 65y (bile and faecal isolates). *S. typhimurium*, M 36y and F 76y with diarrhoea (both faecal isolates only).

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>	25	4 (–)	5 (–)	2	6 (1)
<i>Enterobacter sp</i>	84	14 (1)	12 (1)	13	9 (2)
<i>Escherichia coli</i>	643	261 (13)	78 (1)	14	50 (7)
<i>Klebsiella sp</i>	126	26 (1)	21 (–)	8	19 (3)
<i>Proteus sp</i>	105	52 (1)	1 (–)	–	7 (–)

Meningitis

Escherichia coli: 3 neonates and M 1m (all CSF isolates).

Proteus mirabilis: M 4d (CSF isolate).

Salmonella enteritidis: M 16d (blood isolate only).

Unusual infections

Bacillus cereus 5: M 15y with rhabdomyosarcoma and IV-line; F 27y, M 36y and F 79y (all blood isolates). M 1y after surgery for medulloblastoma (CSF isolate) and F 49y with infected wound after shark bite (wound isolate).

Bacillus sp: M 23y with CSF shunt (CSF isolate).

Campylobacter sp: M 56y with diarrhoea and vomiting (blood

and faecal isolates).

Diphtheroids 4: M 25y with aplastic anaemia and IV-line; M 75y with IV-line; F 52y with leukaemia and IV-line; male, age not stated, with lymphoma and IV-line (all blood isolates).

Plesiomonas shigelloides: M 75y with urinary tract disease and trans-urethral resection (blood isolate).

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