

Communicable Disease Report

Meningococcal infection and Hajj

As a result of an outbreak of meningococcal infection associated with the Hajj in 2000, the Joint Committee on Vaccination and Immunisation is recommending that travellers on Hajj or Umrah from the United Kingdom (UK) should be offered a quadrivalent vaccine against meningococcal groups A, C, W135, and Y instead of the usual AC vaccine. This vaccine was previously available in the UK only on a named-patient basis, but will be generally from mid-January (ACWYVax \hat{O} manufactured by SmithKline Beecham). The 2001 Hajj is likely to begin around 24 to 26 February.

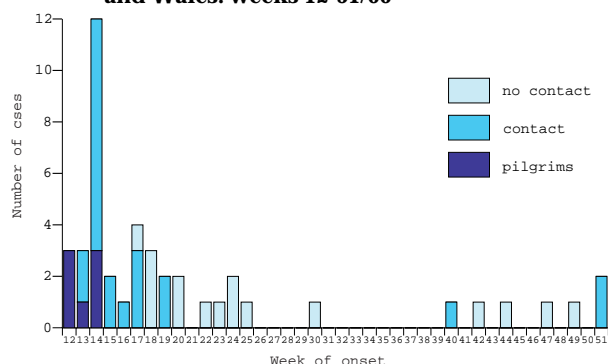
Most children and young people in the UK up to the age of 18 will now have been immunised with MenC vaccine, either by their general practitioner or in school. MenC vaccine protects only against meningococcal C infection. Children and young people travelling for Hajj or Umrah will still need the additional protection against A and W135 strains afforded by the quadrivalent vaccine. An interval of at least two weeks is recommended before administering the quadrivalent (or A&C) vaccine where MenC immunisation has only recently been given.

All pilgrims to Mecca are required to produce a certificate of vaccination against meningococcal infection before a visa is issued by the Saudi Arabian embassy, following an epidemic of group A meningococcal infection after Hajj in 1987. These control measures prevented any large epidemics of meningococcal infection at Hajj until 2000 (1-3).

In March 2000 the PHLS Meningococcal Reference Unit (MRU) detected an increase in the number of cases of meningococcal serogroup W135 infection, many in people who had recently returned from pilgrimage to Mecca. Case finding was initiated by active follow up of all W135 isolates, and by an epinet message to all consultants in communicable disease control and public health laboratories. Around 20 000 people were issued with visas for the 2000 Hajj by the Saudi Arabian embassy in the United Kingdom (UK). Cases were identified in several other European countries, the United States, and Saudi Arabia.

The epidemic strain was found to be serotype 2a, subtype P1.2,1.5; this serotype and subtype is usually associated with group C infection in the UK and is thought to be of high virulence and high transmissibility. To identify additional cases, the MRU rapidly initiated an additional PCR grouping assay for W135 infection for all PCR confirmed cases that are negative by both group B and group C grouping assays. By the end of December a total of 45 cases, including and eight deaths, from the epidemic strain had been identified. Seven cases were in pilgrims, 22 in people with a history of contact with pilgrims and 16 in people with no known contact. A further twelve cases who were PCR positive for W135 have also been identified. Unlike previous introductions of group A infection, transmission of this strain has been sustained nine months after it was introduced (figure). Although the number of cases is declining, increased vigilance is required over the winter season.

Figure Cases of infection with meningococcal serogroup W135, serotype 2a, subtype P1.2,1.5, England and Wales: weeks 12-51/00



Meningococcal infection and Hajj	1
The impact of conjugate group C meningococcal vaccination	2
Referencing the electronic CDR Weekly	2-3
General outbreaks of foodborne illness: England and Wales, weeks 49-52/00	4
Salmonella infections in humans: monthly totals for 1997 to 2000	4
Common gastrointestinal infections, England and Wales: laboratory reports, weeks 49-52/00	5
Other gastrointestinal infections, England and Wales: laboratory reports, weeks 40-52/00	5



1. CDSC. Meningococcal infection in pilgrims returning from the Haj. *Commun Dis Rep CDR Wkly* 2000; **10**(14): 125.
2. CDSC. Meningococcal infection in pilgrims returning from the Haj. *Commun Dis Rep CDR Wkly* 2000; **10**(17): 149, 52.
3. CDSC. Meningococcal disease associated with the Haj. *Commun Dis Rep CDR Wkly* 2000; **10**(19): 169.

The impact of conjugate group C meningococcal vaccination

Conjugate Men C vaccine was introduced into the routine childhood schedule in the United Kingdom on 29 November 1999. Older children were vaccinated as part of a catch-up programme in general practitioner surgeries and schools during late 1999 and 2000 (1). The programme was phased in order of priority according to groups with the highest incidence of meningococcal C disease, with vaccination of infants and adolescents commencing in late 1999, and vaccination of other children taking place during 2000.

Preliminary data from the PHLS Meningococcal Reference Unit (MRU) indicates that the vaccine has already had a dramatic impact on the epidemiology of group C infection. The total numbers of cases of group C infection confirmed by the MRU in 2000 was only 710, compared to 982 in 1999. In contrast, overall confirmed cases of group B infection increased from 1,462 to 1,636 in the same period.

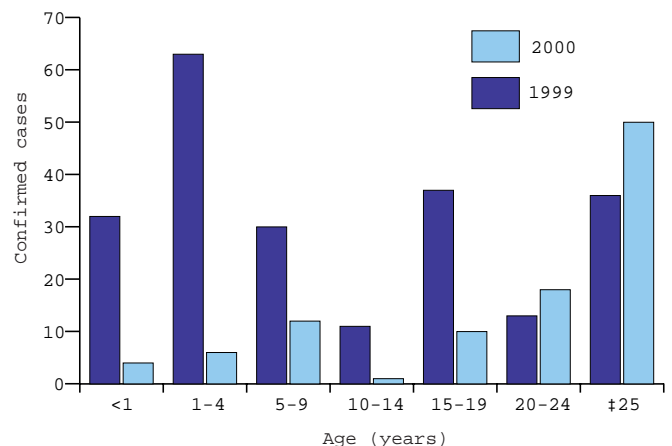
The impact was most apparent during the second half of the year when a 49% reduction in cases of group C infection occurred (from 372 to 190), and in people aged under 20 years where the number of infections fell by 72% (from 277 to 77) in weeks 27-52 of 1999 and 2000 respectively. The reduction in group C infections was observed first in the age groups targeted first for vaccination (those aged 15-17 years and infants under one year). By the final quarter of 2000, however, all of the vaccinated age groups had shown a substantial decline in group C infection (see figure below).

Allowing for undiagnosed and unreported cases, the Department of Health have estimated that a total of 500 cases and 50 deaths have been prevented so far (2). These results suggest that the vaccine is highly effective and that acceptability of the vaccine, and hence vaccination coverage, is high. A further decline in the number of group C cases observed is expected early next year.

Group B meningococci continue to circulate, and it is important that parents and doctors maintain a high level of awareness. Guidance for professionals and parents is available on the PHLS website at <http://www.phls.co.uk/advice/mening.htm>

1. Chief Medical Officer, Chief Nursing Officer, Chief Pharmaceutical Officer. *Introduction of immunisation against group C meningococcal infection*. London: Department of Health, 1999. (PL/CMO/99/2, PL/CNO/99/4, PL/CPHO/99/1).
2. Department of Health. *Biggest vaccination drive for 40 years smashes meningitis C disease. (2001/0007)*. London: Department of Health, 2001 (press release).

Figure Confirmed cases of meningococcal group C infection by agegroup, England and Wales: weeks 27 to 52, 1999 and 2000



Referencing the electronic *CDR Weekly*

During the past week we have received a number of inquiries asking how to reference the *CDR Weekly* in its electronic format. The referencing of electronic publications was addressed by the International Committee of Medical Journal Editors (commonly known as the Vancouver Group) in 1997, and by the International Standards Organization (ISO) in 1999 (1,2). Fortunately their conclusions are compatible.

The general style for a reference to *CDR Weekly* would be as follows:

CDSC. Title of item. *Commun Dis Rep CDR Wkly* [serial online] year [citation date]; **volume** (part number): section. Available from <www.phls.co.uk/publications/CDRelectronic/CDR%20Weekly/CDR%20Weekly/index.html>

The information on respiratory tract infection published in last week's *CDR* might therefore be referenced
 CDSC. Respiratory tract infections, England and Wales: laboratory reports, weeks 48-52/00. *Commun Dis Rep CDR Wkly* [serial online] 2001[cited 10 January 2000]; **11**(1): respiratory. Available from <<http://www.phls.co.uk/publications/CDRelectronic/CDR%20Weekly/CDR%20Weekly/pages/respiratory.html>>

All material is credited to CDSC unless otherwise noted. Serial online [in square brackets] shows that *CDR Weekly* is an online publication updated at regular intervals. The citation date is important as it shows when the publication was

viewed online, as it may have been taken down by the time the reference is published. The equivalent of the page number varies depending on the organisation of the website: for *CDR Weekly* this is by subject matter, so, for instance, salmonella data would be referenced as 'enteric'. Internet addresses are bracketed by 'greater than' and 'less than' symbols.

For more detailed explanations of how to reference different types of electronic media consult the references below.

1. International Committee of Medical Journal Editors. Uniform requirements for manuscripts submitted to biomedical journals. *Ann Intern Med.* 1997; 126: 36-47. An electronic version of this document can be found at <<http://www.acponline.org/journals/annals/01jan97/unifreqr.htm>>
2. International Standards Organization. *Information and documentation – bibliographic references. Part 2: Electronic documents or parts thereof. (ISO 690-2)*. Ottawa: International Standards Organization, 1999. Excerpts this document can be found at <<http://www.acponline.org/journals/annals/01jan97/unifreqr.htm>>

General outbreaks of foodborne illness: England and Wales, weeks 49-52/00

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	Suspect vehicle	Evidence
Enfield and Haringey	<i>Salmonella enteritidis</i> PT25	Restaurant	December	10	4	Various	M
Morgannwg	<i>S. indiana</i>	Hospital	December	2	2	Egg sandwiches	–
South and West Devon	<i>S. kottbus</i>	Restaurant	December	5	5	Turkey	–
Cornwall and Isles of Scilly	<i>S. montevideo</i>	Hotel	December	12	12	None	–
Berkshire	Campylobacter	Restaurant	December	4	3	Lemon chicken, duck	D
East Kent	Unknown	Restaurant	November	9	0	Oysters	D
Berkshire	Unknown	Caterers	December	6	0	Turkey	D
East Kent	Unknown	Restaurant	December	5	0	Oysters	D
Berkshire	Unknown	Restaurant	December	7	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

D (descriptive): other evidence, usually descriptive, reported by local investigators as indicating the suspect vehicle

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

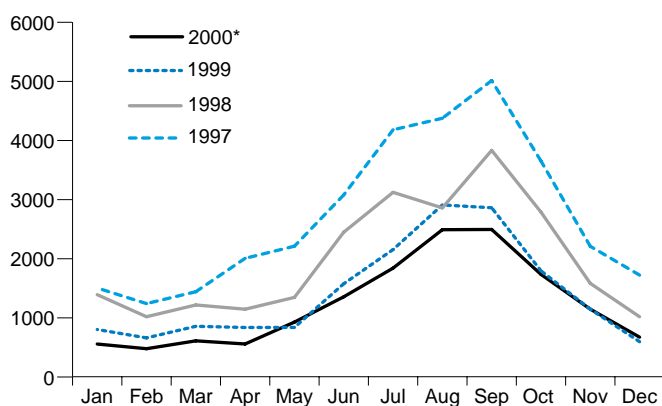
Details of serotypes of the 1143 salmonella infections recorded in November are given in the adjacent table. In December 2000, 656 salmonella infections were recorded and preliminary information was received about four outbreaks (see table above).

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

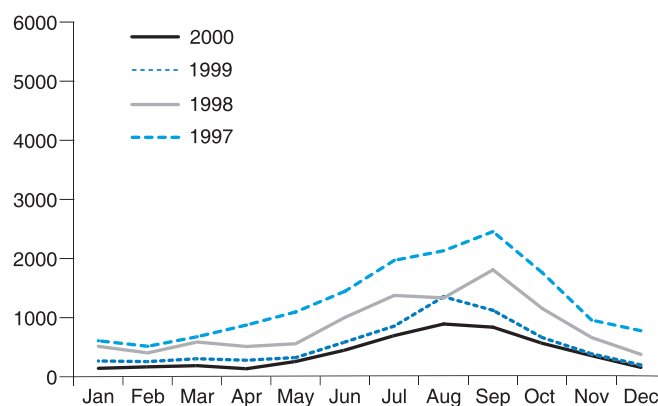
	November 2000
<i>Salmonella</i> (provisional total)	1143
<i>S. enteritidis</i> (PT4)	356
<i>S. enteritidis</i> (other PTs)	289
<i>S. typhimurium</i>	165
<i>S. virchow</i>	16
Others (typed)	317

Salmonella infections in humans: monthly totals for 1997 to 2000

a) All salmonellas



b) *S. enteritidis* phage type 4



Just over 14,800 salmonellas were reported in 2000, a total 13% lower than in 1999, and 38% and 55% lower than in 1998 and 1997 respectively (figure a). The number of reports of *Salmonella enteritidis* phage type (PT) 4 in 2000 was 27% lower

than in 1999, and 53% and 68% lower than in 1998 and 1997 respectively (figure b). *S. enteritidis* PT4 accounted for 33% of all salmonellas reported in 2000, compared with 39% in 1999, and 43% and 47% in 1998 and 1997 respectively.

Common gastrointestinal infections, England and Wales: laboratory reports, weeks 49-52/00

Laboratory reports	Number of reports received				Total reports for weeks 49-52/00	Annual totals	
	49/00	50/00	51/00	52/00		2000	1999
<i>Campylobacter</i>	989	684	774	207	2654	53858	54987
<i>Escherichia coli</i> O157*	4	6	4	1	15	758	968
<i>Shigella sonnei</i>	10	6	7	3	26	700	909
Rotavirus	32	24	38	12	106	16454	14965
SRSV	28	23	33	3	87	1951	2005
<i>Cryptosporidium</i>	153	43	69	19	284	1951	2005
<i>Giardia</i>	57	43	47	11	158	3892	4240

* Vero cytotoxin producing isolates (data from LEP)

Other gastrointestinal infections, England and Wales: laboratory reports, weeks 40-52/00

Organism	Number of reports	Annual totals		Organism	Number of reports	Annual totals	
		2000	1999			2000	1999
Adenovirus*	55	264	381	Vibrio	11	60	77
Astrovirus	22	223	200	Yersinia	3	24	71
Calicivirus	18	52	53	<i>Entamoeba histolytica</i>	55	255	304
<i>Shigella boydii</i>	12	55	70	<i>Blastocystis hominis</i>	110	396	272
<i>S. dysenteriae</i>	6	26	42	<i>Dientamoeba fragilis</i>	47	196	150
<i>S. flexneri</i>	45	188	243	Taenia	7	49	56
Aeromonas	82	161	284	<i>Trichostrongylus</i>	–	–	–
Plesiomonas	6	31	43	<i>Trichuris trichiura</i>	12	60	101

* includes adenovirus EM faeces and adenovirus group F