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CDR WEEKLY

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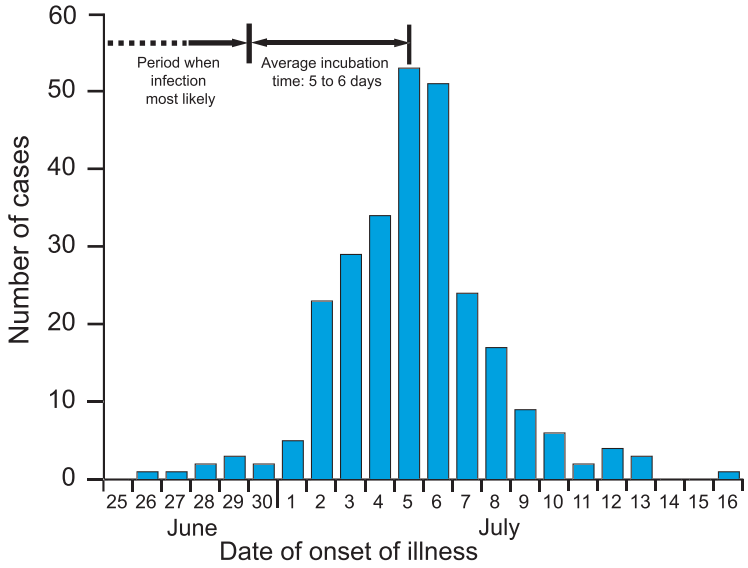
Outbreak of legionnaires' disease in Murcia, Spain

Between the end of June and the first few days of July a very large outbreak of legionnaires' disease occurred in Murcia, a city in south east Spain with a population of 360,000. As of 18 July, 745 cases of pneumonia had been diagnosed, of which 315 have been confirmed as legionnaires' disease by detection of legionella antigen in urine. Dates of onset of illness of confirmed cases ranged from 26 June to 16 July, with a peak on 5 to 6 July (figure). From 6 July the incidence declined rapidly. One death has been reported, in a case from whom *Legionella pneumophila* serogroup 1 has been isolated. Twelve cases were admitted to intensive care. Seventy-six per cent of cases were male and about two thirds of cases were aged over 50 years.

Figure Number of cases of Legionnaires' disease, confirmed by laboratory, by date of onset of symptoms. Data as of 17 July 2001



Nearly 70% of all cases lived in a small area to the north and northwest of the city centre. Preliminary information from patient interviews indicated that the other cases visited the city centre in the last week of June or the first few days of July. The likely source of infection for the outbreak is a city centre cooling tower. Several such towers were positive by PCR, but *Legionella pneumophila* serogroup 1 has yet to be isolated. Control measures have been applied to cooling towers in the vicinity, as well as to other potential sources of infection in the area.

Murcia is the host city for this year's European Youth Olympic Days, to be held from 22 to 27 July and the European Olympic Committee (EOC) arranged for an international group of legionella experts to visit Murcia between 11 and 15 July to rapidly assess the impact of the outbreak and discuss control measures with the local public health team. The international group comprised five epidemiologists and microbiologists, two from the United Kingdom Public Health Laboratory Service, one from the Netherlands National Institute of Public Health and one each from the National Centres of Epidemiology and Microbiology in Spain. All are national representatives in the European Surveillance Scheme for Travel Associated Legionnaires' Disease and members of the European Working Group for Legionella Infections. They concluded that the local health authorities had taken rapid steps to identify and control the outbreak and had implemented appropriate control measures to prevent the occurrence of further cases. The outbreak now appears to be over. Based on these findings, the international group recommended to the EOC and to the International Olympic Committee (IOC) that the games should continue. The IOC accepted the recommendation and the games are to go ahead as planned.

This appears to be the largest outbreak of legionnaires' disease since the disease was first recognized in 1976. Remarkably, only one death is associated with the outbreak, which may be due in part to the fast diagnosis and adequate treatment of the patients. Another very large outbreak, which was associated with the Melbourne Aquarium and occurred in 2000 (1) was also recognised early and showed a case-fatality rate of less than 2% (2). Moreover, in Australia and Spain, many pneumonia patients are treated empirically with macrolides. In contrast, the outbreak in 1999 associated with a flower show in the Netherlands (3) was only recognised when a large majority of the cases were already ill and in that outbreak the case-fatality rate was 11% (4). Empiric therapy for pneumonia in the Netherlands is with beta-lactam antibiotics rather than macrolides. Other factors may also have contributed to the absence of deaths in the Murcia outbreak. The *Legionella* strain may have been less virulent and patients may have had prior exposure to this strain.

1. CDSC. Outbreak of legionnaires' disease associated with aquarium in Australia. *Commun Dis Rep CDR Wkly* 2000: **10** (18); 161.

2. Tallis G, Greig J, Zwolak B, Carnie J, Hart W, Tan A, *et al. A descriptive analysis of the Melbourne aquarium outbreak of Legionnaires' disease*. Fifth international conference on legionella infections. Ulm Germany, September 2000. Available from <www.uni-ulm.de/legionella/abstracts/v-tallis.doc>

3. CDSC. Legionnaires' disease – outbreak in the Netherlands. *Commun Dis Rep CDR Wkly* 1999: **9** (14); 123.

4. den Boer JW, Yzerman EPF, Schellekens J, Lettinga KD, Boshuizen H, van Steenbergen J, *et al. A large outbreak of Legionnaires' disease at a Dutch flower show*. Fifth international conference on legionella infections. Ulm, Germany, September 2000. Available from <www.uni-ulm.de/legionella/ abstracts/v-denboer.doc>

Tuberculosis in Leicester – update

A meeting to review the investigation of the previously reported outbreak of tuberculosis (1,2,3) in a secondary school in Leicester took place on 5 July 2001. Sixty-seven of the 1208 students at the school have been diagnosed with active tuberculosis and have been prescribed standard multi-drug therapy. A further 246 children have been found to have strongly positive tuberculin (Heaf) test reactions (grades 3 and 4, or grade 2 in those without prior BCG immunisation) and have been offered standard chemoprophylaxis. In addition two staff members have been diagnosed with active, but sputum smear negative, tuberculosis and six family members of the student cases have been diagnosed with active disease. A probable source case for the outbreak in the school has been identified among the students and investigation continues into the circumstances that led to the outbreak.

Isolates of *Mycobacterium tuberculosis* have been obtained from eleven of the cases: all are fully sensitive to standard anti-tuberculosis drugs. Information from mycobacterial strain typing of the isolates using rapid typing methods, have so far supported the clinical and epidemiological findings suggesting a single source for most of the cases. Definitive information from IS6110 RFLP typing, however, is not yet complete. The investigation of this outbreak in what is a high incidence population has revealed other clusters of tuberculosis cases, both within the school and in the community, that appear to be unrelated to the main outbreak. The results of further investigations both into the outbreak itself, and into recent cases of tuberculosis in the local population, will be reviewed by the local outbreak team and at a further incident committee meeting in August. Detailed reports on the outbreak are being prepared.

1. CDSC. Tuberculosis outbreak at a community college in Leicester. *Commun Dis Rep CDR Wkly* [serial online] 2001 [cited 18 July 2001]; **11** (14): news. Available at <www.phls.co.uk/publications/ CDR%20Weekly/ archive/news1401.html#tuberculosis>

2. CDSC. Tuberculosis in a school in Leicester - update outbreak at a community college in Leicester. *Commun Dis Rep CDR Wkly* [serial online] 2001 [cited 18 July 2001]; **11** (15): news. Available at <www.phls.co.uk/publications/CDR%20Weekly/archive/news1501.html#tuberculosis>

3. CDSC. Tuberculosis in a Leicester school - update. *Commun Dis Rep CDR Wkly* [serial online] 2001 [cited 18 July 2001]; **11** (16): news. Available at <www.phls.co.uk/publications/CDR%20Weekly/archive/ news1601.html#tuberculosis>

Department of Health invitation to tender - research on resistance to antibiotics

The Department of Health (DH) wishes to fund a broad range of research to address priority areas identified in a report form the Research Sub Group of the Inter-Departmental Steering Group on Resistance to Antibiotics and other Antimicrobial Agents. Priority areas for research include: linking resistance to prescribing data; cost-effective approaches to surveillance; appropriate use of antimicrobials in the prevention and treatment of infectious disease; impact of antimicrobial resistance on clinical outcomes; rapid detection techniques for quicker diagnosis; mechanisms and genetics of resistance to disinfectants; cell-to-cell communication.

A detailed research brief, the Research Sub-Group's report, and application form are available on the DH website at

<www.doh.gov.uk/research/callsforproposals.htm> or contact Jackie Littlechild, DH, Research and Development Division, Room 402A, Skipton House, 80 London Road, London SE1 6LH; e-mail: jackie.littlechild@doh.gsi.gov.uk. The closing date for outline proposals is 31 August 2001.

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Bacteraemia, England and Wales: laboratory reports for the first six months of 2000 and 2001

	Totals for the first six months of the year					
	blood (cerebrospinal fluid +/- bacteraemia)				2001 ranking	
	January to June 2000		January to June 2001*		In section	Overall
Gram negative bacteria						
Acinetobacter sp	305	(1)	280	(7)	8	16
Aeromonas sp	25		31		16	31
Branhamella/Moraxella sp	46	(1)	42	(2)	14	29
Campylobacter sp	50	(7)	37	(2)	15	30
Citrobacter sp	192	(1)	168		10	20
Enterobacter sp	770	(5)	632	(6)	4	9
Escherichia coli	5205	(15)	4881	(10)	1	2
Haemophilus influenzae (1)	164	(3)	151	(5)	11	22
H. influenzae type b	12	(3)	13	(1)	18	34
Klebsiella sp	1388	(8)	1232	(4)	2	6
Neisseria meningitidis	498	(134)	344	(133)	7	15
Proteus sp	914	(3)	756	(1)	3	8
Providencia sp	32		30		17	32
Pseudomonas aeruginosa	702	(3)	621	(9)	5	10
Pseudomonas sp (2)	473	(1)	413		6	12
Salmonella typhi and *S. paratyphi*	108		116		12	23
Salmonella sp (3)	93	(2)	75		13	24
Serratia sp	276	(2)	248	(2)	9	17
Totals	**11253**		**10070**			
Gram positive bacteria						
Bacillus sp	58	(5)	63	(6)	10	26
Corynebacterium sp and diphtheriods	169	(8)	224	(16)	9	19
Listeria sp	33	(3)	22	(5)	13	33
Micrococcus sp	46		44	(2)	12	28
Staphylococci:						
S. aureus	5990	(45)	5620	(34)	1	1
coagulase negative (4)	2167	(84)	2425	(128)	2	3
Streptococci and enterococci:						
group A	521	(5)	406		6	13
group B	426	(19)	369	(19)	7	14
group C	74	(3)	57		11	27
group G	259		235	(1)	8	18
Enterococcus sp (5)	1856	(15)	1577	(17)	4	5
α- and non-haemolytic	984	(24)	965	(20)	5	7
S. pneumoniae	2099	(102)	1982	(78)	3	4
Totals	**14682**		**13989**			
Anaerobic bacteria						
Anaerobic cocci (6)	98		70		3	25
Bacteroides sp (7)	468	(3)	416	(3)	1	11
Clostridium sp	196	(1)	153		2	21

Totals	**762**	**639**	
Mycobacterium avium-intracellulare group	14	8	35
Overall totals	**26697**	**24698**	

* provisional data; 1: includes all *H. influenzae* except type b; 2: includes all *Pseudomonas* sp and *Pseudomonas*-like sp except *P. aeruginosa*; 3: includes all salmonellas except *S. typhi* and *S. paratyphi*; 4: includes all staphylococci except *S. aureus*; 5: *Enterococcus avium*, *E. durans*, *E. faecalis*, *E. faecium*, *E. gallinarum*, *Enterococcus* sp, group D streptococci, 6: includes *Peptococcus* sp, *Peptostreptococcus* sp, *Veillonella* sp; 7: includes *Bacteroides* sp, *Fusobacterium* sp, *Prevotella* sp, *Porphyromonas* sp.

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