



**LEGIONELLA PNEUMONIA 1999**

No. 36, 2000

**Notified cases**

In 1999 a total of 92 cases of Legionella pneumonia were notified, comprising 55 men and 37 women aged from 17 to 91 years, with a median age of 60 years. The diagnosis was laboratory-confirmed in 74 cases, while in 18 cases the laboratory findings supported the diagnosis without being conclusive. Eighteen cases, 17 of which were laboratory-confirmed, were related to foreign travel. 11 cases were definitely or possibly acquired in hospitals, which is half the figure for the previous year. Two patients were infected at home, as evidenced by analysis of water samples. For a further seven patients the presumed sources of infection were spas, swimming pools, water purification plants and sewage, etc. In the remaining 54 cases the mode of infection was unknown. Predisposing factors were known for 43 patients, while 17 were previously healthy. No information on prior health status was given for the remaining 32 cases. 11 patients died, nine of whom were affected by a known predisposing factor.

The county distribution of the 57 laboratory-confirmed cases acquired in Denmark is shown in table 1. The incidence varies considerably from year to year in individual counties, but the incidence for the country as a whole has been relatively steady over several years, EPI-NEWS 43/98 and 2/00.

**Nosocomial cases**

Surveillance of nosocomial Legionella infections carried out by Statens Serum Institut shows that a total of 76 recorded cases were definitely or possibly acquired in hospitals over the period 1995-99; this represents 21% (76/360) of all notified cases acquired in Denmark during this period. 36% (27/76) of these patients died during the course of the Legionella infection.

The infections were spread over hospitals throughout the country. In 1995, 24 cases were spread over 19 hospitals; in 1996, 11 cases were spread over nine hospitals, while in 1997, 1998 and 1999 the respective number of cases (10, 20 and 11) were spread over eight different hospitals in each year.

**Table 1. Notified laboratory-confirmed cases of Legionella pneumonia acquired in Denmark, 1999 (1998)**

County	Incidence	
	1999	(1998) per mio.
Cph. Municip.	5	(11) 10.2
Frb. Municip.	1	(0) 11.1
Cph. County	6	(5) 9.8
Frederiksborg	0	(5) 0,0
Roskilde	6	(2) 26.1
West Zealand	7	(6) 23.8
Storstrøm	1	(3) 3.9
Bornholm	0	(0) 0,0
Funen	6	(8) 12.7
South Jutland	0	(5) 0,0
Ribe	2	(1) 8.9
Vejle	4	(0) 11.6
Ringkøbing	1	(1) 3.7
Aarhus	8	(12) 12.6
Viborg	3	(1) 12.9
North Jutland	6	(8) 12.2
Other	1	(1) -
<b>Total</b>	<b>57</b>	<b>(69) 10.7</b>

**Laboratory-diagnosed cases**

At Statens Serum Institut a total of 88 cases of Legionella infection were diagnosed in 1999, according to the criteria described in EPI-NEWS 24/96. 10 of these cases were not notified. In four of these cases the diagnosis was made by Legionella PCR. The rest of the unnotified cases were confirmed either by culture, a rise in titre in the Legionella antibody test (LAT) or by the Legionella urine test (LUT).

**Comment**

As much as 55% of notifications were only received after a reminder had been sent. With the increasing decentralization of diagnosis it is again necessary to emphasize the importance of notification to ensure valid surveillance of Legionella infections. (D.A. Wandall, Dept. of Epidemiol., M.S. Nielsen, Central Dept. for Hosp. Hygiene, S. Uldum, ALMOS)

**Two cases of Legionella pneumonia in the same block of flats**

In the spring of this year, the Copenhagen Public Health Office was notified of two cases of Legionella pneumonia originating from the same block of flats, which had a communal hot water system.

The patients were taken ill at a month's interval. Water specimens were taken from the two patients' respective flats and from the water circulating to all the flats in the building. The Legionella content of the water was relatively high, 2.0 x 10<sup>5</sup> and 5.0 x 10<sup>4</sup> cfu/l being found in the water from the two flats and 1.2 x 10<sup>5</sup> cfu/l in the circulating water. Legionella pneumophila belonging to three different serogroups were found in the water. The serogroup of one of the patient isolates was identical with a serogroup found in the circulating water. The other patient isolate showed the same serogroup as isolates from the water from both patients' flats and from the circulating water. Typing (DNA fingerprinting) gave identical results for the serogroups isolated respectively from the patient and water in each case. The two patients were thus very probably infected from the same source, but by two different serogroups (serogroups 3 and 4/15). The residents of the flats were informed of the finding of Legionella in the hot water. The hot water tank in the block of flats was cleaned. In addition, the exit temperature of the water was increased to 60°C after it had been found at the time of sampling that the temperature of the water in the system was below 50°C. Further specimens were taken about a month after the first water sampling had been carried out. Analysis showed that the Legionella content had fallen, but was still high at 10<sup>3</sup>-10<sup>4</sup> cfu/l. The water system in the block of flats was then disinfected with chlorine. New water specimens will be taken in the autumn. No new cases of Legionella pneumonia have been diagnosed from the building. (L. Graversen, Copenhagen Public Health Office, S. Uldum, ALMOS)

**New guidelines**

Guidelines on the management of Legionella in hot water for domestic use will be issued in the autumn. The guidelines can be obtained from the Central Department for Hospital Hygiene.

## Patients with laboratory-diagnosed RSV or rotavirus infections, 2000

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May		June		July	
RSV	Rota	RSV	Rota	RSV	Rota
5	57	1	49	0	11

Reported from the following Clinical Microbiology Departments:  
Aalborg Hospital (South), Aarhus Municipal Hospital, Herning Central Hospital,  
Hvidovre Hospital, Odense University Hospital, Slagelse Central Hospital,  
Viborg Hospital, and the Department of Virology, Statens Serum Institut.

(Dept. of Epidemiology)