

LEGIONNAIRES' DISEASE

KEY POINTS

Legionellosis and other forms of "atypical" pneumonia are not considered to be an infectious risk to carers or contacts

The air conditioning in hospitals has been a common source of *Legionella pneumophila*

INTRODUCTION

Legionnaires' disease is a form of atypical pneumonia usually affecting more than one lobe of the lung caused by a Gram-negative bacillus *Legionella pneumophila*. The disease was first recognised during an outbreak involving delegates to the 1976 Pennsylvania American Legion convention at a Philadelphia Hotel. Clusters of cases are associated with air conditioning and there are sporadic cases which presumably arise from domestic or hotel showers or baths. In hospital the organism may be transmitted from faulty air conditioning or in drinking water.

Most transmission is by the inhalation of aerosols or by micro-aspiration of contaminated water. Aerosol-generating systems linked to outbreaks include cooling towers, wet evaporative air cooling systems, respiratory-therapy equipment and whirlpool baths. Drinking water has been implicated as a source in some immunosuppressed patients. Several studies have shown nosocomial legionellosis associated with aspiration particularly via nasogastric tubes and a higher incidence among patients who had undergone head and neck surgery. There is no evidence of person-to-person spread. Legionellosis tends to affect middle-aged sedentary men who smoke. The attack rate is low but the mortality is high. Pontiac Fever is also caused by *Legionella pneumophila* and paradoxically is probably caused by a large inoculum. This is an influenza-like illness with a short incubation period and high attack rate. The mortality is negligible and recurrences on re-exposure are common.

ACTION

The diagnosis is made by examining the urine for legionella antigen. Antibody rises tend to be delayed so are not helpful in making the initial diagnosis.

If a case is suspected or proved:

- Inform the Infection Control Team
- The ICT will inform the CCDC
- Isolation is not necessary
- If the case is suspected to be hospital acquired an outbreak meeting will be convened (see policy for Outbreak Management).

Trusts have a duty of care and responsibility to control legionellosis in the water supply applying the guidance in HTM 2040 The control of legionellae in healthcare premises, HTM 2027 Hot and cold water supply and mains services, HSE HS(G) 70 The control of legionellosis, HSE ACOP The prevention and control of legionellosis, BS6700 and Health and Safety at Work Act 194, Control of Substances Hazardous to health Regulations 1988.

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REFERENCES

- *The control of legionellae in healthcare premises. 1994 HTM2040
- *The control of legionellae in healthcare premises. Department of Health HTM 2027
- Hot and cold water supply and mains services, Department of Health HSE HS(G) 70
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- Health and Safety at Work Act 1994
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