

## **Progress in the surveillance and control of Legionella infection in France, 1998-2009**

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In France, the notification of Legionnaire's disease (LD) is mandatory since 1987. Following a study showing an important under-reporting of the disease, the surveillance system was strengthened in 1997. In parallel, the urinary antigen detection test was introduced and a guideline for prevention and control of the disease was implemented.

Thereafter, the sensitivity of the surveillance system increased (10% in 1995 to 33% in 1998).

From 1998 to 2009, a total of 12 353 cases were reported. Between 1998 and 2005 the incidence of LD increased gradually, by an average of 20% per year, reaching  $2.5/10^5$  in 2005 and then slightly decreased ( $1.9/10^5$  in 2009).

The delay between dates of onset and notification has decreased over the period from 28 days in 1998 to less than 7 days in the recent years. During this 10-year period, the majority of cases were diagnosed by urinary antigen test, and an isolate was available for 18% of cases. The median age of cases was 60 years [range 0-103], the M/F sex ratio was 2.9 and the case fatality rate was 13%.

An exposure during travel was suspected for 17% of cases. Nine percent were considered as potentially hospital-acquired infections, this percentage decreased over the 10-year period from 21% in 1998 to 7% in 2008.

Over this period, 14 outbreaks occurred (outbreak: more than 10 cases) with 380 cases notified. The median number of cases was 22 [range 11-86] and more than 40 cases were reported in only, one outbreak (Lens, 2003-2004). A single outbreak was identified in 2007, none in 2008 and 2009. Cooling towers were the most probable source of infection for 13 outbreaks (confirmed source: 8 outbreaks; suspected source: 5 outbreaks).

The surveillance and control systems for LD in France continue to evolve on a regular basis. In recent years, several regulations concerning prevention and control were implemented in hospital settings, home for elderly people and public water networks. At the end of 2004, a new regulation about the cooling towers was introduced to better control the dispersion of Legionella from these sources. The 1997 guideline for prevention and control was updated in 2005. All these measures have contributed to strengthen the French surveillance system and to improve our ability to prevent, detect and control LD.