

## Executive Summary

### About these Guidelines

This guidance document describes the updated procedures for control and prevention of travel associated legionnaires' disease for participants in the European Surveillance Scheme for Travel Associated Legionnaires' Disease (EWGLINET). It has been produced by a small team from the surveillance scheme and the European Working Group for Legionella Infections and has been agreed by all collaborators in EWGLINET. The guidelines were submitted to the Network Committee for the Epidemiological Surveillance and Control of Communicable Diseases in the Community, that operates under Decisions 2119/98/EC(2) and 2000/96/EC(3). After some modifications the Network Committee has endorsed this document.

The guidelines offer a standardised approach to procedures for preventing and detecting legionella infections associated with travel and aim to further harmonise these procedures among Member States. However, national laws apply where advice on specific aspects of control and prevention differs between the European guidelines and regulations in force in Member States.

These guidelines are available on the EWGLI website ([www.ewgli.org](http://www.ewgli.org)).

Legionnaires' disease is a serious pneumonia infection caused by inhaling the bacteria *Legionella pneumophila* or other *Legionella* species. This bacterium is frequently found in domestic, hotel and other water systems and in water used for air conditioning or air cooling systems. After the first recognition of the disease in people attending a hotel conference in the USA in 1976 (4), national surveillance for the condition began in several countries. The European Working Group for Legionella Infections (EWGLI) was formed in 1986 and members of this group established a European surveillance scheme for travel associated infections in 1987 (5). Eighteen years later, EWGLI remains a voluntary group of international scientists who share a common goal of furthering the microbiological and epidemiological understanding of legionella infections. The surveillance scheme however, which was named EWGLINET in 2002, has grown in size and complexity since 1987, and now functions under an official EU Control of Communicable Disease programme.

Legionnaires' disease principally affects adults and around 10% to 15% of otherwise healthy individuals with the disease are reported to die each year, despite the availability of appropriate antibiotic treatment. Hence the main intervention against the condition is prevention, through control of the organism in water systems. For a number of reasons people travelling to holiday destinations, especially in warm climates are especially at risk and such cases account for up to half of the cases reported from some European countries. Through extensive media coverage the public has become increasingly aware of legionnaires' disease, the specific risks associated with travel and hotel stays and a view that early pan-European action should protect them against the risks of infection.

## **Part 1**

### **Introduction to legionnaires' disease and travel**

This section provides information on the nature of legionnaires' disease, how it is caught, the type of symptoms with which it is associated and the current known sources of infection. It also describes the systems in place in Europe to monitor the infection at the international level and some results from the European surveillance scheme.

## **Part 2**

### **Procedures for reporting and responding to cases of travel associated legionnaires' disease**

These define the roles and responsibilities in response to reports of single cases and clusters for the Scheme's co-ordinating centre in London, the national government authorities with responsibility for public health in the collaborating countries, and the scheme's national collaborators nominated by their governments. It outlines the important stages and deadlines required of collaborators in the country of infection to inform the co-ordinating centre in London of the steps taken to investigate and control reported clusters. There is also information in this section on how the public is informed of these procedures.

## **Part 3**

### **Procedures for the risk assessment, environmental investigation and control and prevention of legionella in water systems**

This section summarises the factors to be considered in the risk assessment which include: the responsibilities of the individuals concerned, measurement of competence, their training requirements; management structure; the factors promoting the growth of legionella bacteria; the types of water systems to be considered and the documentation of the risk assessment; the systems for implementing and monitoring the control scheme. It details the items that should be included in the written scheme for the control of the risk and the need for regular review of the control measures, including the role of microbiological sampling. The responsibilities of manufacturers, importers, suppliers and installers are also detailed.

## **Part 4**

### **Methods for the investigation and control of an outbreak of legionnaires' disease in an hotel or other accommodation site**

This section briefly outlines the procedures for investigating an outbreak, with an emphasis on sampling for legionella and consideration of the emergency and long-term remedial measures for control.

## **Supplement 1 Part A**

### **Technical guidelines for the control and prevention of legionella in water systems**

This document provides the technical background to the control measures commonly applied to hot and cold water systems and cooling systems, including

features of the design and construction; management of the systems during commissioning and re-commissioning and normal operation. It is separate from the main European guidance document, because it is mainly based on technical recommendations contained in the revised UK guidelines published in December 2000 (1). Supplement 1 should be regarded as one example of good practice, which may not be entirely consistent with guidance produced in some other European countries because of legal requirements or constraints within individual countries. It is however, a useful model to follow.

The supplement emphasises the use of temperature control for hot and cold water systems along with good maintenance with regular disinfection and cleaning. It also provides information on the use of alternatives such as chlorine, chlorine dioxide and copper/silver ionisation. The methods of monitoring the operation of the control measures are given. The design, construction operation and control of cooling systems with cooling towers or evaporative condensers is detailed, including the methods of cleaning and disinfection, biocidal regimes and the use of chemical and microbiological monitoring.

## **Supplement 1 Part B**

### **Treatment methods for different water systems**

This section provides brief information on the use of biocides for the regular control of cooling systems. It also describes the use of heat, chlorine, chlorine dioxide and copper/silver ionisation for the disinfection and control of growth of legionella bacteria in hot water systems and considers some alternatives.

## **Supplement 1 Part C**

A list of the current range of technical guidelines produced by individual European countries is provided at the end of Supplement 1, Part C.