



Risk Assessment on Legionnaires' disease associated with travel to Dubai

Background about Legionnaires' disease

Legionnaires' disease (LD) is an uncommon, severe pneumonia caused by legionella bacteria. The principal route of infection is by direct exposure to aerosols from man-made environmental sources colonised by the legionella bacteria such as cooling towers, hot and cold water systems and spa pools. This can be prevented through appropriately designed and managed systems, including correct regulation of cold and hot water temperatures and where appropriate, incorporate regular disinfection of the system.

People more likely to develop LD are over 50 years of age, smokers and/or have underlying medical conditions such as immunosuppression or long-term respiratory conditions. LD is extremely rare in children. LD can only be diagnosed by appropriate clinical testing of people with pneumonia.

This document has been produced by Public Health England and the National Travel Health Network and Centre (NaTHNaC).

Travel-associated Legionnaires' disease

The European Centre for Disease Prevention and Control (ECDC) has received as of 01 August 2017, reports of 72 cases of LD associated with travel to Dubai, with symptom onset dates from 1 October 2016 to 31 July 2017 [1]. Of these cases, 34 have been reported by the United Kingdom (UK); the remainder have been reported by Sweden (8), Germany (7), France (6), The Netherlands (6), Denmark (4), Austria (1), Belgium (1), The Czech Republic (1), Hungary (1), Ireland (1), Spain (1) and Switzerland (1). In comparison, the UK had an average of ten cases for the corresponding period in 2014-15 and 2015-16.

The large proportion of cases reported by the UK may be explained by the observation from the Dubai tourist authorities indicating that UK visitors represent the third largest group of visitors by nationality to Dubai (over 1.2 million in 2016), and

the largest number of visitors from any European Union (EU) member state [2]. This also represents an increase in the number of visitors compared to 2015.

In addition, the UK reports anonymised information to ECDC for cases associated with private accommodation. The purpose of this is to support public health action in other countries; this is supplementary to the minimum requirements of ECDC for Legionnaires' disease surveillance.

Actions taken so far and information from United Arab Emirates

PHE has been working with ECDC (who co-ordinate the European surveillance scheme in monitoring and alerting travel-associated LD cases diagnosed in EU countries) in response to this increase in LD cases associated with travel to Dubai.

Information about this increase in LD cases has also been published on the TravelHealthPro [3] and Travax [4] websites, as well as the ECDC website [5]. Public health agencies in the UK have actively supported ECDC in the collection of additional anonymised information to assist the United Arab Emirates (UAE) authorities in their local investigations.

ECDC and the World Health Organization (WHO) supported UAE authorities with a joint mission to Dubai. ECDC were informed by authorities in UAE that environmental microbiology sampling in commercial accommodation in Dubai indicated that levels of legionella were within acceptable limits [5]. However, ECDC has not received any information from the UAE authorities as to whether other environmental investigations were undertaken in Dubai. UAE authorities have informed ECDC that there has been no increase in pneumonia notifications in Dubai between October to December 2016 [5].

Risk Assessment

Although the UAE authorities have reported to ECDC that results of environmental testing for legionella from commercial accommodation sites associated with LD cases were within acceptable limits, there is uncertainty about the potential environmental source of the reported infections in travellers in the absence of information about wider community investigations in Dubai.

Based on the available information, the overall risk of LD to UK travellers to Dubai remains low. There may be an increased risk for those persons who are generally more likely to develop LD due to their older age (over 50 years), smoking or an underlying medical condition (such as immunosuppression or long term respiratory conditions). For travellers with clinical or radiological evidence of pneumonia and a travel history to Dubai in the 2 -10 days preceding the onset of their symptoms, LD testing should be considered.

Information for travellers to Dubai

The risk of LD among UK travellers to Dubai is low. However, there are some people whose age or underlying conditions might put them at increased risk of LD. These include:

- persons aged over 50 years
- smokers
- persons with respiratory conditions
- persons with immunosuppression

All travellers should be aware of the symptoms of LD (cough, shortness of breath, fever). If these occur within ten days of travel, then travellers should seek medical attention, specifying where they have travelled. In these situations, travellers may find it useful to refer their health professional to this document.

The information about recent travel will enable their healthcare professional to make an appropriate assessment of their clinical condition and to arrange appropriate testing. If travellers develop these symptoms while in Dubai, they should seek medical attention locally (as directed by their travel insurance provider).

WHO has not issued any advice against travel to Dubai. All the cases identified so far have travelled to Dubai itself; a small number of cases have travelled to Dubai in addition to other destinations both in and outside of UAE. There is therefore insufficient information to suggest there is an increased risk of LD associated with travel to other Emirates within UAE.

Acknowledgements

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References

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