



Risk assessment of Middle East respiratory syndrome coronavirus (MERS-CoV)

Update: February 2015

The risk of infection with MERS-CoV to UK residents in the UK remains **very low**.

The risk of infection with MERS-CoV to UK residents travelling to the Middle East remains **very low**.

The probability of MERS-CoV in those who come to the UK from, or return from, the Middle East and meet the case definition for a 'case under investigation' is **low** but requires testing for MERS-CoV infection.

The probability that a cluster of cases of severe acute respiratory infection of unexplained aetiology requiring intensive care admission is due to MERS-CoV remains **very low** but warrants investigation and testing. A history of travel to the Middle East would increase the likelihood of MERS-CoV.

The majority of outbreaks of MERS-CoV in the Middle East have been linked to healthcare settings, and a WHO mission concluded that gaps in infection control measures have most likely contributed to these outbreaks, reinforcing the importance of strict adherence to recommended infection control measures in healthcare facilities. Where UK infection control procedures have been followed, the probability that a case of severe acute respiratory infection in a healthcare worker caring for a case of MERS-CoV or a severe acute respiratory infection of unknown aetiology in a healthcare worker is due to MERS-CoV is **very low**, but warrants testing. The risk will be higher in healthcare workers exposed to MERS-CoV who have not adhered to UK infection control procedures or not used adequate personal protective equipment.

The risk to contacts of confirmed cases of MERS-CoV infection **is low** but contacts should be followed up in the 14 days following exposure and any new febrile or respiratory illness investigated urgently.

Further information and guidance on MERS-CoV are available on the PHE website:

<https://www.gov.uk/government/collections/middle-east-respiratory-syndrome-coronavirus-mers-cov-clinical-management-and-guidance>

Information update

On 21 January 2015, ECDC released their thirteenth updated rapid risk assessment for MERS-CoV: <http://www.ecdc.europa.eu/en/publications/Publications/RRA-MERS-CoV-thirteenth-update.pdf>

The vast majority of cases have been reported from countries in the Middle East, and all cases reported outside of the Middle East have had recent travel to the Arabian Peninsula, or contact with a case that had travelled to the affected areas. There was a small increase of cases in October 2014, most likely linked to nosocomial outbreaks in Taif and Riyadh. Case numbers have since declined.

Camels remain a likely source of human infection; however, transmission only occurs in a small number of those exposed. Immunological susceptibility may play an important role in camel–human transmission as close contact is not always required. The large peak of cases during the Spring of 2014 coincided with the camel birthing and weaning season; it is possible that a similar peak could occur in 2015.

Patterns of disease are suggestive of repeated zoonotic introductions, with limited human-to-human transmission that is not sustained. However the source and modes of transmission are still not completely understood.

http://www.who.int/csr/disease/coronavirus_infections/MERS_CoV_RA_20140613.pdf?ua=1

There remains a risk of imported cases to the UK, and health professionals should remain vigilant. Early identification and implementation of infection control measures for suspected cases is crucial.

Travel advice

All travellers to the Middle East are advised to avoid any unnecessary contact with camels. Travellers should practice good general hygiene measures, such as regular hand washing with soap and water at all times, but especially before and after visiting farms, barns or market areas. Travellers are advised to avoid raw camel milk and/or camel products from the Middle East. More generally, travellers are also advised to avoid consumption of any type of raw milk, raw milk products and any food that may be contaminated with animal secretions unless peeled and cleaned and/or thoroughly cooked.

Travellers returning from the Middle East with severe respiratory symptoms should seek medical advice and must mention their travel history so that appropriate measures and testing can be undertaken. People who are acutely ill with an infectious disease are advised not to travel.

The Hajj

The annual Muslim pilgrimage to Mecca in Saudi Arabia took place in October 2014 with no reported increase in travel-related cases. Intensive surveillance during the 2013 Hajj did not identify any cases of MERS-CoV among an estimated 2 million pilgrims. However, several

cases of MERS-CoV imported to countries outside of Saudi Arabia in 2014 had returned from Umrah, a minor pilgrimage. Specific advice regarding pilgrimages, including the Hajj and Umrah, is available at http://www.nathnac.org/pro/factsheets/Hajj_Umrah.htm

PHE remains vigilant and closely monitors developments in the Middle East and in the rest of the world where new cases have emerged, and continues to liaise with international colleagues to assess whether our recommendations need to change.

PHE case definition – possible case of MERS-CoV

Any person with severe acute respiratory infection requiring admission to hospital:

With symptoms of fever ($\geq 38^{\circ}\text{C}$) or history of fever, and cough

AND

With evidence of pulmonary parenchymal disease (eg clinical or radiological evidence of pneumonia or acute respiratory distress syndrome (ARDS))

AND

Not explained by any other infection or aetiology

AND AT LEAST ONE OF

History of travel to, or residence in, an area where infection with MERS-CoV could have been acquired in the 14 days before symptom onset*

OR

Close contact during the 14 days before onset of illness with a confirmed case of MERS-CoV infection while the case was symptomatic

OR

Healthcare worker based in ICU caring for patients with severe acute respiratory infection, regardless of history of travel or use of PPE

OR

Part of a cluster of two or more epidemiologically linked cases within a two week period requiring ICU admission, regardless of history of travel

*This definition includes all countries within the geographical Arabian Peninsula plus countries with cases that cannot be conclusively linked to travel. As of 22/01/2014, these included: Bahrain, Jordan, Iraq, Iran, Kingdom of Saudi Arabia, Kuwait, Oman, Qatar, United Arab Emirates and Yemen.

First published: February 2015

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