



UK Health
Security
Agency

Investigation and public health management of possible cases of Middle East respiratory syndrome coronavirus (MERS-CoV)

There are 3 possible case definitions – either 1, 2 or 3	
1.	<p>Any person with severe acute respiratory infection requiring admission to hospital with symptoms of fever (greater than or equal to 38°C) or history of fever, and cough plus evidence of pulmonary parenchymal disease (for example, clinical or radiological evidence of pneumonia or acute respiratory distress syndrome (ARDS)¹)</p> <p>And at least one of:</p> <ul style="list-style-type: none">• history of travel to, or residence in, an area where infection with MERS-CoV could have been acquired² in the 14 days before symptom onset• close contact during the 14 days before onset of illness with a symptomatic confirmed case of MERS-CoV infection (see definition of close contact, below)• person is a healthcare worker based in ICU caring for patients with severe acute respiratory infection, regardless of travel or PPE use• part of a cluster of 2 or more epidemiologically linked cases within a 2-week period requiring ICU admission, regardless of history of travel
2.	<p>Acute influenza-like-illness symptoms (ILI) plus either of the following in the 14 days prior to onset:</p> <p>(A) In countries in list A²: contact with camels, camel environments or consumption of camel products (for example, raw camel milk, camel urine) or contact with a hospital</p> <p>Or</p> <p>(B) In countries in list B³: very close occupational exposure (for example via animal husbandry or abattoirs) to camels or consumption of camel products (for example, raw camel milk, camel urine)</p> <p>(ILI is defined as sudden onset of respiratory infection with measured fever of 38°C or more and cough.)</p>

¹ Clinicians should additionally be alert to the possibility of atypical presentations in patients who are immunocompromised. Atypical presentations may include absence of fever.

² List A: Bahrain, Jordan, Iraq, Iran, Kingdom of Saudi Arabia, Kuwait, Oman, Qatar, United Arab Emirates and Yemen (see [map](#) and [risk assessment](#)).

³ List B: [Kenya](#). See below for guidance on list B precautionary measures.

3. Acute respiratory illness (ARI) **plus** contact with a confirmed case of MERS-CoV in the 14 days prior to onset.
 (ARI is defined as sudden onset of respiratory infection with at least one of: shortness of breath, cough or sore throat.)

Meets possible case definition ↓

Local clinician or microbiologist	UKHSA Health Protection
<ul style="list-style-type: none"> ensure appropriate samples are taken and contact the nearest MERS-CoV testing laboratory ensure full PPE is worn (correctly fitted respirator [FFP3], gown, gloves and eye protection) and patient managed as per MERS-CoV infection control advice (see IPC precautions, below) notify local UKHSA health protection team (HPT) consider testing for Legionnaire’s disease 	<ul style="list-style-type: none"> inform UKHSA Colindale by email at respiratory.lead@phe.gov.uk and enter case details on HPZone (Infection and unlisted managed context: MERS-CoV) collect possible case dataset (Form 1) and email to UKHSA Colindale (respiratory.lead@phe.gov.uk) if a cluster is suspected, establish if there is an epidemiological link between cases

Testing laboratory result **positive** for MERS-CoV (presumptive positive)

Testing laboratory result **negative** for MERS-CoV

Clinician or microbiologist: ensure full PPE is worn (see [infection control advice](#))
MERS-CoV testing laboratory: Inform local HPT, the referring laboratory and UKHSA reference laboratory (RVU) and send residual material urgently to UKHSA reference laboratory (RVU) for confirmatory testing – see [laboratory guidance](#)
UKHSA HPT: Telephone UKHSA Colindale immediately or contact the duty doctor if out of hours. Start to identify and collate [list of close contacts](#) and email to UKHSA Colindale (see definition of [close contact](#), below)

Discard as MERS-CoV



Reference laboratory result **positive** for MERS-CoV = confirmed case (see next page)

Confirmed case actions

Clinician or microbiologist to collect appropriate baseline samples and send to UKHSA reference laboratory (RVU) (see [laboratory guidance](#)).

UKHSA HPT to complete confirmed case initial form ([Form 1a](#)) and email to respiratory.lead@phe.gov.uk

In addition, follow the [UKHSA MERS-CoV close contact algorithm](#).

Follow up

Clinician or microbiologist to ensure appropriate sequential follow-up samples are taken after discussion with the UKHSA Colindale incident management team (see [laboratory guidance](#)).

UKHSA HPT to complete confirmed case follow-up [Form 1b](#) 14 to 21 days since Form 1a was completed, and email to respiratory.lead@phe.gov.uk

Important notes

Close contact

Close contact is defined as:

- prolonged face-to-face contact (more than 15 minutes) with a **symptomatic confirmed** case in a household or other closed setting

or

- healthcare or social care worker who provided direct clinical or personal care or examination of a **symptomatic confirmed** case, or within close vicinity of an aerosol generating procedure AND who was not wearing full PPE at the time ([infection control advice](#))

All persons meeting the close contact definition should be notified to the local HPT regardless of decision to test or test results.

The HPT to discuss with the National Incident Management Team.

IPC precautions

It is recommended that patient assessment and collection of clinical specimens for MERS-CoV testing is undertaken in settings where appropriate [infection prevention and control \(IPC\) measures](#) can be implemented. This may not be feasible in primary care settings, in which case an appropriate local secondary care service should be contacted to discuss if patient referral is appropriate and to ensure IPC measures can be implemented.

Co-infection

MERS-CoV co-infection with other respiratory pathogens has been reported previously, therefore any patient meeting the possible case definition should be tested for MERS-CoV infection regardless of other infections being identified.

Occupational exposure in cases from countries in list B

No human cases have been reported by WHO from the countries named in list B. However, peer reviewed studies have identified evidence of MERS-CoV infection in individuals with close occupational exposure to camels (including but not limited to animal husbandry and abattoirs) from these countries. This is a precautionary measure to maximise preparedness.

About the UK Health Security Agency

UKHSA is responsible for protecting every member of every community from the impact of infectious diseases, chemical, biological, radiological and nuclear incidents and other health threats. We provide intellectual, scientific and operational leadership at national and local level, as well as on the global stage, to make the nation health secure.

[UKHSA](#) is an executive agency, sponsored by the [Department of Health and Social Care](#).

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