Public Health England

MERS-CoV Case Algorithm

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Investigation and public health management of possible cases of severe acute respiratory illness associated with Middle East respiratory syndrome coronavirus (MERS-CoV)

For all email contact please use respiratory.lead@phe.gov.uk

POSSIBLE CASE

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

- with symptoms of fever (≥ 38^{0}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)[1]) **AND**
- not explained by any other infection or aetiology[2]

AND AT LEAST ONE OF

- history of travel to, or residence in an area where infection with MERS-CoV could have been acquired[3] in the 14 days before symptom onset **OR**
- close contact[4] 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

[1] Clinicians should additionally be alert to the possibility of atypical presentations in patients who are immunocompromised

[2] If the patient has an alternative aetiology, but this does not fully explain the presentation and/or clinical course, then the patient should be considered a possible case and tested for MERS-CoV

[3] As of 8 June 2015: Bahrain, Jordan, Iraq, Iran, Kingdom of Saudi Arabia, Kuwait, Oman, Qatar, United Arab Emirates , Yemen and South Korea – see map and Risk Assessment

[4] Close contact is defined as:

• prolonged face-to-face contact (>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

Meets possible case definition

- **Local clinician /microbiologist**
  - clinical risk assessment to be undertaken in conjunction with health protection team and duty microbiologist/virologist at local PHE public health laboratory
  - ensure full PPE* is worn (see infection control advice)
  - notify local PHE health protection team (HPT) and local PHE laboratory
  - ensure appropriate samples are collected and sent to both the designated PHE MERS-CoV testing lab and local PHE lab – contact local lab for advice
- **PHE health protection team**
  - if a cluster is suspected, establish if there is an epidemiological link between cases
  - inform PHE Colindale by **email** (respiratory.lead@phe.gov.uk, or contact the duty doctor if out of hours) and enter case details on HPZone (Infection and specific context: MERS-CoV
  - collect possible case dataset (Form 1) – **email** to PHE Colindale

PHE testing laboratory result **Negative for MERS-CoV** → **DISCARD**

PHE testing laboratory result **positive for MERS-CoV** (presumptive positive)

- **Clinician/microbiologist**
  - ensure full PPE* is worn (see infection control advice)
- **PHE MERS-CoV testing laboratory**
  - inform local PHE laboratory
  - send residual material **urgently** to PHE reference laboratory (RVU) for confirmatory testing – see laboratory guidance
- **PHE laboratory**
  - inform local PHE HPT, source hospital/GP, PHE reference laboratory (RVU)
- **PHE HPT**
  - inform PHE Colindale by **email** or contact the duty doctor if out of hours
  - identify and collate list of close contacts[4] – **email** to PHE Colindale

Reference laboratory result **Negative for MERS-CoV** → **DISCARD**

Reference laboratory result **positive for MERS-CoV = confirmed case**

BASELINE

- **Clinician/microbiologist** – collect appropriate baseline samples and send to PHE reference laboratory (RVU) – see laboratory guidance
- **PHE HPT** – complete confirmed case initial form (Form 1a) – **email** to PHE Colindale

ADDITIONALLY FOLLOW PHE MERS-CoV CLOSE CONTACT ALGORITHM

FOLLOW UP

- **Clinician/ microbiologist (RVU)** – ensure appropriate sequential follow-up samples are taken after discussion with the PHE Colindale incident control team, and sent to PHE reference laboratory. See laboratory guidance
- **PHE HPT** – complete confirmed case follow-up Form 1b **14-21 days since** Form 1a **completed** – **email** to PHE Colindale

* Full personal protective equipment (PPE): correctly fitted high filtration respirator (FFP3), gown, gloves and eye protection