



Referral of Samples for Testing for the Middle East Respiratory Syndrome Coronavirus (MERS-CoV) in England¹

Deciding whether testing is indicated and obtaining samples

- For possible MERS-CoV infections, the local clinician/microbiologist should follow the respective **PHE investigation and management algorithm**
- If the patient is considered to be a possible case, diagnostic testing should be performed urgently (within 24 hours)
- The referring clinician must notify the **local PHE health protection team (HPT)** about the possible case
- The HPT will notify the Respiratory Diseases Department (RDD) (respiratory.lead@phe.gov.uk or telephone 020 8327 6661; out of hours, call the Colindale duty doctor: 020 8200 4400 (17:30-21:00h weekdays; 09:00-21:00h at weekends))

Recommended minimum diagnostic sample set:

- an upper respiratory tract sample (combined nose and throat viral swabs, or nasopharyngeal aspirate) AND
- if obtainable, a lower respiratory tract sample (sputum, or an endotracheal tube aspirate if intubated)²

Appropriate personal protective equipment and infection prevention and control (IPC) measures should be used when obtaining diagnostic samples (see **PHE guidance**)

All samples for MERS-CoV testing should be handled at Containment Level 3 in the local laboratory (see **PHE guidance**).

Sample transfer to an appropriate MERS-CoV testing laboratory

- PHE offers a primary diagnostic testing service for MERS-CoV infection, but some healthcare providers may offer in-house testing or have local arrangements in place with non-PHE laboratories; refer to local testing policy

Samples to be tested by PHE public health laboratories (PHLs):

- send the samples to the appropriate PHL testing laboratory (see below) after notifying the PHL by telephone
 - London, South West, South East, East of England, West Midlands, East Midlands: send to **Birmingham PHL**
 - Northwest, Yorkshire & Humber and the North East: send to **Manchester PHL**
- the referring hospital/laboratory is responsible for arranging and paying for the transportation of samples

All samples, regardless of where testing is performed:

- samples should be sent by **Category B transport**, arriving in time to meet the MERS-CoV testing laboratory's next run
- the referring laboratory should provide contact details for telephone and hard copy reporting
- the MERS-CoV testing laboratory is asked to remind the referring centre to inform the local HPT and follow IPC guidance

MERS-CoV PCR +/- respiratory virus screen (if requested)³ performed at MERS-CoV testing laboratory

Presumptive positive MERS-CoV result

(virus detected by screening but confirmatory testing by Respiratory Virus Unit (RVU) PHE Colindale is pending)

Immediate reporting of presumptive positive MERS-CoV results:

MERS-CoV testing laboratory informs the local HPT, the referring laboratory and **RVU**. All presumptive positive results should be telephoned and confirmed in writing.

Local HPT informs RDD Colindale respiratory.lead@phe.gov.uk (or Colindale duty doctor at any time if out of hours: 020 8200 4400)

MERS-CoV testing laboratory sends residual material **URGENTLY** to RVU by Category B Transport, for **confirmatory testing**⁵

MERS-CoV detection confirmed by RVU (confirmed case)⁶

Reporting confirmatory results:

RVU informs the original referring laboratory, the primary diagnostic testing laboratory, the relevant PHL duty microbiologist/virologist, the HPT and RDD Colindale, by telephone and in writing.

MERS-CoV not detected⁴

Reporting negative MERS-CoV results:

MERS-CoV testing laboratory informs the local HPT, and the referring laboratory (if applicable). All results should be telephoned and confirmed in writing.

Local HPT informs RDD Colindale respiratory.lead@phe.gov.uk (or Colindale duty doctor at any time if out of hours: 020 8200 4400)

¹ A similar but region-specific and locally agreed testing process applies to laboratories in Scotland, Wales and Northern Ireland.

² Lower respiratory tract samples obtained within 7 days after symptom onset appear to have the best diagnostic sensitivity. A negative result for an upper respiratory tract sample may not exclude MERS in a patient with lower respiratory tract disease.

³ PHLs that test for MERS-CoV can also perform seasonal respiratory virus screens if desired, but panels offered may vary. If a referring laboratory chooses to perform its own respiratory virus panel (in addition to requesting MERS-CoV testing), a local risk assessment should be performed and appropriate health and safety measures followed. As of 1 July 2017, PHLs will charge for MERS-CoV (and respiratory virus screens, if requested), unless testing is being performed in response to a confirmed outbreak.

⁴ If appropriate samples were obtained and an alternative diagnosis is possible, then MERS-CoV infection may be considered excluded. If clinical suspicion remains, the local clinician/microbiologist should discuss repeat sampling and testing with the MERS-CoV testing laboratory.

⁵ All presumptive positive MERS-CoV samples must be sent to RVU for confirmatory testing, regardless of where the primary testing was performed; refer to separate **guidance**.

⁶ In the event of an indeterminate result, RVU will contact the relevant local microbiologist/virologist to discuss further actions.