

## Update #3 on Middle East Respiratory Syndrome Coronavirus (MERS-CoV)

Tuesday August 13, 2013

### Target audience: Clinical laboratories

#### Background:

Since April 2012, Middle East Respiratory Syndrome Coronavirus (MERS-CoV) has been confirmed in 8 countries: France, Italy, Jordan, Qatar, Saudi Arabia, Tunisia, United Kingdom (UK) and United Arab Emirates (UAE). Of 94 laboratory-confirmed cases, 46 were fatal for a case fatality rate of 49% (current CDC data August 12, 2013).

Although **no cases have been reported in the US** as of August 12, 2013, healthcare providers should remain alert for patients with possible MERS-CoV, formerly called “novel coronavirus”, or “nCoV”.

#### Key Points:

- Update information concerning case definitions.
- Provide clarification on specimens to be collected when testing for MERS-CoV.
- MDCH laboratory can perform PCR testing for MERS CoV. Consultation and prior authorization are still required before specimens will be accepted.

#### CDC Case Definitions:

Patients who meet the criteria (below) for investigation of MERS-CoV infection should be reported to their local health department. Authorization for testing can be obtained by contacting MDCH Communicable Disease Division at 517-335-8165.

##### ***Patient Under Investigation (PUI)***

A patient under investigation (PUI) is a person with the following characteristics:

- fever ( $\geq 38^{\circ}\text{C}$ ,  $100.4^{\circ}\text{F}$ ) and pneumonia or acute respiratory distress syndrome (based on clinical or radiological evidence);

AND EITHER

- history of travel from countries in or near the Arabian Peninsula within 14 days before symptom onset;

OR

- close contact with a symptomatic traveler who developed fever and acute respiratory illness (not necessarily pneumonia) within 14 days after traveling from countries in or near the Arabian Peninsula;

OR

- is a member of a cluster of patients with severe acute respiratory illness (e.g. fever and pneumonia requiring hospitalization) of unknown etiology in which MERS-CoV is being evaluated, in consultation with state and local health department

##### ***Confirmed Case***

A confirmed case is a person with laboratory confirmation of MERS-CoV infection

##### ***Probable Case***

A probable case is a PUI with absent or inconclusive laboratory results for MERS-CoV infection who is a close contact of a laboratory-confirmed case.

<http://www.cdc.gov/coronavirus/mers/case-def.html#pui>

### **Specimen and Testing Recommendations:**

To date, little is known about pathogenic potential and transmission dynamics of MERS-CoV. To increase the likelihood of detecting infection, CDC recommends collecting multiple specimens from different sites at different times after symptom onset, if possible. Lower respiratory tract specimens should be a priority for collection and PCR testing. Refer to the complete guidelines at the link below.

Testing for MERS-CoV and other respiratory pathogens can be done simultaneously by molecular or antigen detection methods. Viral isolation in cell culture of MERS-CoV specimens is NOT recommended.

<http://www.cdc.gov/coronavirus/mers/guidelines-clinical-specimens.html>

### **Steps for laboratories to take now:**

No action is required at this time, other than to monitor the situation and be aware of current guidance.

### **Further Information:**

More information is available on the CDC MERS website at:

<http://www.cdc.gov/coronavirus/mers/hcp.html>

<http://www.cdc.gov/coronavirus/mers/interim-guidance.html>

## **Questions and Additional Information**

For laboratory related questions, please contact

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(517) 335-8067

To report a possible case or to request MERS-CoV testing authorization, please call

MDCH Communicable Disease Division

517-335-8165