

Cameron Kaiser, MD  
Public Health Officer

Susan D. Harrington, MS, RD  
Director, Department of Public Health

## Middle East Respiratory Syndrome Coronavirus (MERS-CoV) June 17, 2013

### **SITUATION:**

In 2012 a Novel Coronavirus was identified, later named Middle East Respiratory Syndrome Coronavirus (MERS-CoV) in an individual who died with an acute respiratory distress syndrome in Saudi Arabia. As of June 5, 2013, case clusters have been reported in Saudi Arabia (40), the United Kingdom (3), France (2), Italy (3), Jordan (2), Qatar (2), the United Arab Emirates (1) and Tunisia (2), for a total of 55 individuals, 30 of whom have died. No patients with MERS-CoV have been identified in the U.S. The U.S. Centers for Disease Control & Prevention (CDC) has posted case counts, clinical and laboratory guidance, questions and answers, and additional information at: [cdc.gov/coronavirus/mers/index.html](http://cdc.gov/coronavirus/mers/index.html).

Many infections have been healthcare-associated -- almost half of the recognized cases are part of one healthcare cluster in Saudi Arabia. One person in France became infected after sharing a hospital room with another infected person. There is clear evidence of person-to-person transmission, though the efficiency of transmission and the modes and routes of transmission are still under investigation.

No travel warnings or restrictions are in effect for the Arabian Peninsula or neighboring countries.\*

### **ACTIONS REQUESTED OF CLINICIANS:**

- Remain alert for and evaluate potential cases of MERS-CoV using the criteria listed below.
- Report suspected cases of MERS-CoV to Disease Control at (951) 358-5107; after hours (951) 782-2974 and ask for second call Duty Officer.
- Notify your Infection Control Practitioner immediately, and implement Airborne, Contact, and Standard infection control precautions when caring for patients with known or suspected MERS-CoV.
- Collect and submit specimens to Riverside County Public Health Lab according to guidelines referenced below. Contact Disease Control at (951) 358-5107 BEFORE submitting any specimens.

**EVALUATION CRITERIA:** Those who should be evaluated for MERS-CoV infection:

- Acute respiratory infection, which may include fever ( $\geq 38^{\circ}\text{C}$  or  $100.4^{\circ}\text{F}$ ) and cough; AND
- Suspicion of pulmonary parenchymal disease (e.g., pneumonia or acute respiratory distress syndrome based on clinical or radiological evidence of consolidation); AND
- History of travel from the Arabian Peninsula or neighboring countries\* within 10 days; AND
- Not already explained by any other infection or etiology, including all clinically indicated tests for community-acquired pneumonia\*\*

In addition, the following persons may be considered for evaluation for MERS-CoV infection:

- Persons with severe acute lower respiratory illness of known etiology with symptom onset within 10 days of travel from the Arabian Peninsula or neighboring countries\* but do not respond to appropriate therapy; OR
- Persons with severe acute lower respiratory illness who are close contacts of a symptomatic traveler who developed fever and acute respiratory illness within 10 days after travel from the Arabian Peninsula or neighboring countries.\* Close contact is defined as providing care for the ill traveler (e.g., a healthcare worker or family member), or having similar close physical contact; or stayed at the same place (e.g. lived with, visited) as the traveler while the traveler was ill.

**LABORATORY SUBMISSION:** Contact Disease Control BEFORE submitting specimens (951) 358-5107; after hours (951) 782-2974.

Specimens from medical providers should be sent through the County of Riverside Public Health Laboratory in order to facilitate testing. Do not send specimens directly to the state lab.

To increase likelihood of detection it is recommended to collect multiple specimens from different sites at different times after symptom onset, if possible. Lower respiratory tract and stool specimens are considered a priority for collection and testing.

Full instructions for specimen collection and processing are available at: <http://www.rivco-diseasecontrol.org/>.

**INFECTION CONTROL:** For patients with known or suspected MERS-CoV infection, CDC recommends implementing infection control guidance developed for Severe Acute Respiratory Syndrome (SARS). CDC infection control guidance for SARS is available at: [cdc.gov/sars/infection](http://cdc.gov/sars/infection).

- Airborne and Contact Precautions, in addition to Standard Precautions, should be applied
- Your Infection Control Practitioner should be notified immediately.

With the absence of a vaccine, effective drugs, or natural immunity to MERS-CoV, the only means available to limit the spread of MERS-CoV are public health measures to rapidly identify infected persons and activate transmission control methods. These measures include:

- Surveillance for cases or suspicious clusters of disease, with appropriate diagnostic testing;
- Rapid isolation and strict adherence to infection control precautions;
- Prompt identification and careful monitoring of contacts; and
- Consideration of quarantine, in some instances, to minimize movement of exposed persons.

#### ADDITIONAL RESOURCES:

County of Riverside Department of Public Health: <http://www.rivco-diseasecontrol.org/>

California Department of Public Health: [cdph.ca.gov/programs/cder/Pages/MERS-CoV.aspx](http://cdph.ca.gov/programs/cder/Pages/MERS-CoV.aspx) Centers for Disease Control & Prevention: [cdc.gov/coronavirus/mers/index.html](http://cdc.gov/coronavirus/mers/index.html)

World Health Organization: [who.int/csr/disease/coronavirus\\_infections/en/index.html](http://who.int/csr/disease/coronavirus_infections/en/index.html)

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\*Arabian Peninsula or neighboring countries include: Bahrain, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Palestinian territories, Oman, Qatar, Saudi Arabia, Syria, the United Arab Emirates, and Yemen.

\*\* Examples of respiratory pathogens causing community acquired pneumonia include influenza A and B, respiratory syncytial virus, Streptococcus pneumonia, and Legionella pneumophila.