



Advisory
Middle East Respiratory Syndrome (MERS)
Arabian Peninsula, Republic of Korea
June 11, 2015



An outbreak of Middle East respiratory syndrome (MERS) is ongoing in the Republic of Korea following its introduction by an infected South Korean national who had traveled from the Middle East. Cases of laboratory-confirmed MERS have occurred in healthcare workers and patients exposed to cases during the course of medical care and in household settings. The situation continues to evolve. This is the largest cluster of MERS cases outside of the Middle East, to date. The importation of MERS into South Korea from the Middle East, and concerns that led to the monitoring of travelers from countries with ongoing transmission of Ebola virus disease, indicate the importance of travel history in the assessment of individuals presenting with symptoms suggestive of respiratory tract or other infection.

There are currently no warnings, restrictions or screening related to travel to or from South Korea. There are extensive efforts in South Korea for the identification of contacts at risk of infection. The likelihood that an exposed individual, at risk for developing active, transmissible infection, would travel to the United States is low. Nonetheless, awareness of the situation is important to reduce the consequence of an imported case. Eliciting a travel history from people presenting with acute respiratory illness is always an important part of patient assessment. If an individual with acute respiratory illness (see below) has a history of travel to the countries of the Arabian Peninsula or the Republic of Korea, or has had close exposure to someone who might have MERS, appropriate precautions should be instituted immediately. Standard, contact and airborne precautions (airborne infection isolation) are recommended by the U.S. Centers for Disease Control and Prevention (see: <http://www.cdc.gov/coronavirus/mers/infection-prevention-control.html>).

MERS is caused by the MERS coronavirus (MERS-CoV). The disease and the virus are similar to that of severe acute respiratory syndrome (SARS) and SARS CoV which emerged in 2003. MERS was first identified in the Middle East in 2012, and hundreds of cases have occurred in the countries of the Arabian Peninsula since that time, with imported cases and limited spread in countries in Europe, Asia and North America, including the United States in 2014 (without ongoing transmission). Bats have been implicated as the source of MERS-CoV, with camels serving as a more direct source of infection to humans. As with SARS, outbreaks of MERS in staff and patients of healthcare facilities have occurred when sufficient precautions have not been taken. The infection is spread by respiratory droplets.

Criteria for Suspecting MERS - Person Under Investigation (PUI)
<p>Fever <i>and</i> pneumonia or acute respiratory distress syndrome (based on clinical or radiological evidence)</p> <p style="text-align: center;">AND</p> <p>A history of travel from countries in or near the Arabian Peninsula within 14 days before symptom onset, <i>or</i> close contact with a symptomatic traveler who developed fever and acute respiratory illness (not necessarily pneumonia) within 14 days of such travel.</p> <p style="text-align: center;">OR</p> <p>A history of being in a healthcare facility (as a patient, worker, or visitor) in the Republic of Korea within 14 days before symptom onset.</p>
<p>Fever <i>and</i> symptoms of respiratory illness (not necessarily pneumonia; e.g., cough, shortness of breath)</p> <p style="text-align: center;">AND</p> <p>A history of being in a healthcare facility (as a patient, worker, or visitor) within 14 days before symptom onset in a country or territory in or near the Arabian Peninsula or the Republic of Korea in which recent healthcare-associated cases of MERS have been identified.</p> <p style="text-align: center;">OR</p> <p>Close contact with a confirmed MERS case while the case was ill.</p>

Testing for MERS-CoV should not be performed unless the patient meets clinical and epidemiological criteria for testing suspect samples. The MDPH State Public Health Laboratory (SPHL) performs MERS-CoV PCR diagnostic testing. Prior to sending a sample, the facility must consult MDPH for testing permission, specimen collection, handling, packaging and transport advice via the 24/7 line (617-983-6800). Preferred specimens include **one each of 3 different specimen types** (upper respiratory **and** lower respiratory **and** serum): combined nasopharyngeal/oropharyngeal (NP/OP) swabs placed together in a single viral transport media (VTM) tube (preferred), AND sputum, tracheal aspirate, pleural fluid or bronchoalveolar lavage in sterile, dry container AND serum all shipped at 4°C. Consult the MDPH SPHL MERS FAQ (<http://www.mass.gov/eohhs/gov/departments/dph/programs/state-lab/>) for additional specimen details and shipping information. The NP/OP may be used for subsequent testing of MERS-CoV negative samples for other, more likely, respiratory agents. The MDPH SPHL will report test results to the healthcare provider and local health department within 6-8 hrs of receipt of the specimen.

To report a suspect MERS case or contact, or if you have questions, call:

- For Boston residents and facilities, Boston Public Health Commission - 617-534-5611.
- Your local board of health/health department - number under government in the telephone book or on line.
- Massachusetts Department of Public Health: (617) 983-6800 or toll-free at (888) 658-2850.

For more information, go to:

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

WHO: http://www.who.int/csr/disease/coronavirus_infections/en/