



CAHAN San Diego

California HEALTH ALERT NETWORK

To: CAHAN San Diego Participants
Date: June 23, 2015

Update: Middle East Respiratory Syndrome Coronavirus (MERS-CoV)

This health alert provides updated guidance regarding the evaluation of patients for MERS-CoV infection given the ongoing outbreak associated with healthcare facilities in the Republic of Korea. It also contains MERS-CoV resource links and recommendations for local healthcare providers.

Update on Cases

From September 2012, when MERS-CoV was first identified to June 12, 2015, the World Health Organization (WHO) [has been notified](#) of 1,289 laboratory-confirmed cases of MERS-CoV infection reported from 25 countries, including 455 (35%) deaths. An estimated 85% of cases have been reported from the [Kingdom of Saudi Arabia](#).

On May 20, 2015, the Republic of Korea reported a case of MERS-CoV infection that was subsequently linked to what has become the largest outbreak of MERS-CoV infections outside of the Arabian Peninsula. As of June 23, 2015, a total of 175 outbreak-associated cases [have been reported](#) from the Republic of Korea, including 27 deaths and one case imported to China. Transmission has been limited to patients, healthcare workers, and visitors in healthcare facilities where the initial and subsequent cases of MERS-CoV infection received care. Korean health officials have completed 14 days of monitoring on 10,718 close contacts of the MERS cases, and 2,805 individuals remain on home or facility quarantine as of June 23, 2015.

Updated Guidance

Given the ongoing outbreak in the Republic of Korea, the Centers for Disease Control and Prevention (CDC) issued a [Health Advisory](#) on June 11, 2015 which included updated guidance for the evaluation of patients for MERS-CoV. In addition to travel to the Arabian Peninsula, the [patient under investigation](#) (PUI) criteria now include consideration of recently being in a healthcare facility (as a patient, worker, or visitor) in the Republic of Korea within 14 days before symptom onset.

CDC continues to advise healthcare providers to routinely **obtain travel histories from all patients** and to consider MERS-CoV as a diagnosis for those who meet [the PUI criteria](#) for MERS-CoV infection (see also table on next page). Healthcare providers should integrate early inquiry about travel history into the workflow of evaluating ill patients, especially those with fever and cough and with fever and rash, so that appropriate infection control precautions can be taken.

Patients who meet the MERS-CoV PUI criteria should immediately be reported to the Epidemiology Program at 619-692-8499 during business hours and 858-565-5255 on evenings, weekends and County-observed holidays. Timely diagnostic suspicion, reporting, and infection control can help prevent MERS-CoV transmission in healthcare settings.

Standard, contact, and airborne precautions should be taken when caring for PUIs or confirmed cases of MERS-CoV infection. A PUI should be immediately placed in a private room with the door closed until placement in an Airborne Infection Isolation Room (AIIR) can be arranged. Healthcare providers should adhere to CDC [updated infection control guidance](#) for MERS-CoV when managing patients in hospital settings.

Three types of specimens should be collected for MERS-CoV testing: 1) a lower respiratory specimen (e.g., induced sputum, tracheal aspirate, or bronchoalveolar lavage), 2) an upper respiratory specimen (e.g., nasopharyngeal swab AND oropharyngeal swab, nasopharyngeal wash/aspirate or nasal aspirate), and 3) serum. While lower respiratory tract specimens have the highest yield for MERS-CoV, CDC strongly recommends collection and testing of all three specimen types. CDC has released [updated laboratory guidance](#) on MERS-CoV testing which provides additional information. Questions about specimen collection and packaging for MERS-CoV may be directed to the San Diego Public Health Laboratory at 619-692-8500.

Symptoms and Management

Common symptoms in patients with MERS-CoV include fever, cough, chills, and shortness of breath. Pneumonia is common. Most hospitalized patients have had chronic co-morbidities. No specific treatment is currently available for MERS-CoV infection.

Given the clinical spectrum of MERS-CoV infections may range from asymptomatic infection to acute and progressively severe respiratory illness, the importance of obtaining a patient travel history cannot be overemphasized.

Patients with severe acute lower respiratory illness should also be evaluated for common causes of community-acquired pneumonia, such as influenza A and B, respiratory syncytial virus, *Streptococcus pneumoniae*, and *Legionella pneumophila* at the same time as obtaining laboratory specimens for MERS-CoV. Positive results for another respiratory pathogen should not necessarily preclude testing for MERS-CoV, since co-infection can occur.

Person Under Investigation (PUI) Criteria

PUI criteria for MERS-CoV serve as a guidance for testing. Patients should be evaluated and discussed with the Epidemiology Program on a case-by-case basis, especially if a patient’s clinical presentation or exposure history is questionable.

Clinical Features	Epidemiologic Risk
<p>Severe Illness Fever and pneumonia or acute respiratory distress syndrome (based on clinical or radiological evidence)</p>	<p>A history of travel from countries in or near the Arabian Peninsula¹ within 14 days before symptom onset, or close contact² 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 Peninsula¹.</p> <p>-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>-or-</p> <p>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 departments in the US.</p>
<p>Milder Illness Fever and symptoms of respiratory illness (not necessarily pneumonia; e.g., cough, shortness of breath)</p>	<p>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 Peninsula¹ in which recent healthcare-associated cases of MERS have been identified.</p>
<p>Fever or Symptoms of Respiratory Illness (not necessarily pneumonia; e.g., cough, shortness of breath)</p>	<p>AND</p> <p>Close contact² with a confirmed MERS case while the case was ill.</p>

¹Countries considered in the Arabian Peninsula and neighboring include: Bahrain; Iraq; Iran; Israel, the West Bank, and Gaza; Jordan; Kuwait; Lebanon; Oman; Qatar; Saudi Arabia; Syria; the United Arab Emirates (UAE); and Yemen.

²Definition of close contact can be found at: <http://www.cdc.gov/coronavirus/mers/case-def.html>

Patient Education

Patients who have recently traveled to the Arabian Peninsula or Republic of Korea should be advised that if fever with cough or shortness of breath develops within 14 days after travel, they should seek medical attention promptly and contact their healthcare provider prior to seeking care so that appropriate infection control precautions may be taken. An updated [poster for waiting rooms](#) is available to increase patient awareness about MERS-CoV.

Additional MERS-CoV Resources

Updated MERS-CoV information may be found at dedicated websites maintained by [WHO](#), [CDC](#), and the [California Department of Public Health](#) (CDPH). The CDPH has also recently updated a [MERS-CoV Quicksheet](#) that provides a useful summary of MERS-CoV response measures.

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County of San Diego, Health & Human Services Agency
 Epidemiology and Immunization Services Branch
 Phone: (619) 692-8499, Fax: (858) 715-6458
 Urgent Phone for pm/weekends/holidays: (858) 565-5255
 E-mail: cahan@sdcounty.ca.gov
 Secure Website: <https://cahan.ca.gov>
 Public-Access Website: <http://www.cahansandiego.com>