Washoe County Health District

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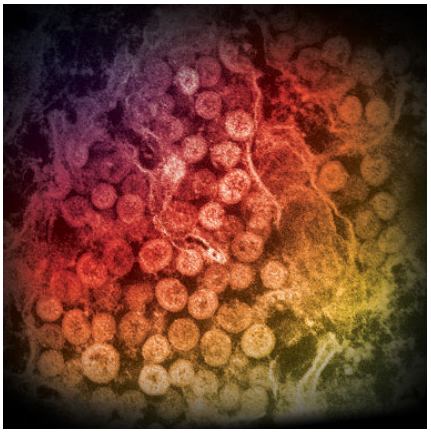
Are You Prepared for Middle East Respiratory Syndrome (MERS)?

Middle East Respiratory Syndrome (MERS) is viral respiratory illness first reported in Saudi Arabia in 2012. It is caused by a coronavirus called MERS-CoV. Most people who have been confirmed to have MERS-CoV infection developed severe acute respiratory illness. They had fever, cough, and shortness of breath. About 30% of people confirmed to have MERS-CoV infection have died.[1] The objectives of this issue of Epi-News are to:



- provide an overview of MERS from world, national, and statewide perspectives;
- let local healthcare providers know how public health agencies are prepared;
- describe the role of clinicians in MERS preparedness.

WORLD PERSPECTIVE

MERS-CoV was first reported to cause human infection in September 2012. Since mid-March 2014, the frequency with which cases have been reported has increased. As of May 12, 2014, 536 laboratory-confirmed cases of MERS-CoV infection have been reported by the World Health Organization. The median age of persons with laboratory-confirmed MERS-CoV infection is 49 years (range = <1–94 years); 346 (65%) cases are in males, and 104 (19%) occurred in health-care workers. Sixty-two percent (62%) of cases involved severe respiratory illness requiring hospitalization, 32 (5%) occurred in persons who had mild symptoms or illness not requiring hospitalization and 110 (21%) were asymptomatic. Asymptomatic cases were generally identified through contact investigations. As of May 29 2014, eight (8) countries in or near the Arabian Peninsula including Saudi Arabia, United Arab Emirates (UAE), Qatar, Oman, Jordan, Kuwait, Yemen, and Lebanon (see following map) have reported cases. Ten (10) countries with travel-associated cases include: the United Kingdom (UK), France, Tunisia, Italy, Malaysia, Philippines, Greece, Egypt, the United States of America (USA), and the Netherlands.

Countries in or near the Arabian Peninsula

NATIONAL PERSPECTIVE

In the United States, only two cases of MERS have been identified in Indiana and Florida on May 1 and May 11, respectively. Both cases are male and over 40 years of age. They were healthcare workers who lived and worked in Saudi Arabia but were not linked to each other. The Indiana case was fully recovered after he was hospitalized for 11 days. More than 140 contacts have been identified and no secondary cases have been reported thus far according to CDC. These contacts include healthcare workers, household contacts, airline passengers and bus passengers. The Florida case was admitted to the hospital on May 9th. As of May 19th, Florida announced that the case had been discharged and all healthcare workers and household contacts who had contact with the patient were tested and all of results came back negative.[2] In May and June, 2014, five US cities (New York, Washington, Los Angeles, Atlanta, Chicago) accounted for 75% of arrivals from Saudi Arabia and the UAE. Approximately 100,000 travelers are estimated to arrive in these five cities from Saudi

[1] http://www.cdc.gov/CORONAVIRUS/MERS/INDEX.HTML

[2] http://www.floridahealth.gov/diseases-and-conditions/mers/index.html

Arabia and the UAE [3]. More cases are expected due to tourism. However, CDC does not recommend that travelers change their plans because of MERS.

Clinicians should consider MERS in the differential diagnosis of any patients meeting the case definition below:

Patient Under Investigation (PUI)

A. Fever AND pneumonia or acute respiratory distress syndrome (based on clinical or radiological evidence) AND EITHER:

- a history of travel from countries in or near the Arabian Peninsula[1] within 14 days before symptom onset, OR
- close contact[2] 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[1] OR
- 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.

OR

B. Fever AND symptoms of respiratory illness (not necessarily pneumonia; e.g. cough, shortness of breath) AND 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 in which recent healthcare-associated cases of MERS have been identified[3].

[1]Bahrain; Iraq; Iran; Israel, the West Bank, and Gaza; Jordan; Kuwait; Lebanon; Oman; Qatar; Saudi Arabia; Syria; the United Arab Emirates (UAE); and Yemen.

[2] a) being within approximately 6 feet (2 meters) or within the room or care area for a prolonged period of time (e.g., healthcare personnel, household members) while not wearing recommended personal protective equipment (i.e., gowns, gloves, respirator, eye protection); or b) having direct contact with infectious secretions (e.g., being coughed on) while not wearing recommended personal protective equipment (i.e., gowns, gloves, respirator, eye protection). At this time, brief interactions, such as walking by a person, are considered low risk and do not constitute close contact.

[3] As of June 1, 2014, Jordan, Saudi Arabia, UAE; this may change as more information becomes available.

NEVADA PERSPECTIVE

The Nevada Division of Public and Behavioral Health (NDPBH), Local Health Departments (LHD), and the Nevada State Public Health Laboratory (NSPHL) have been working together to prepare for MERS. Having a timely diagnosis and testing is the highest priority. NSPHL has issued general guidelines for collection of MERS-CoV specimens to hospital laboratories in Nevada.

For local clinicians' convenience, Washoe County Health District (WCHD) is providing following check list to assist your preparedness for MERS. It is highly recommended that each healthcare provider's office have this check list in hand and check your preparedness as soon as possible.

ABOUT MERS
For Healthcare Providers in Washoe County

1. Become familiar with the most recent CDC PUI definition to assist in patient evaluation and identification of suspect cases (see left box).
2. To report a suspect case, call WCHD at 775-328-2447 at any time including evenings, weekends, or holidays.
3. All testing for MERS-CoV must be authorized by WCHD before shipping specimens to NSPHL. Without an approval, NSPHL will NOT test. Testing methods include PCR and serology tests. PCR will be done at NSPHL Southern office in Las Vegas and serology will be done at CDC.
4. The following specimens should be collected.
    a. Respiratory specimens: broncheoalveolar lavage, tracheal aspirate, pleural fluid, sputum, nasopharyngeal and oropharyngeal swabs.
    b. Blood components: serum and plasma
5. Should you have any questions regarding sample collection, please contact NSPHL at 775-688-1335 (Mon-Fri 8-5) or 775-823-1150 (24/7). It is highly recommended that you obtain detailed instructions from NSPHL regarding specimen collection A.S.A.P.
6. To further evaluate whether your office or facility is prepared for MERS, please see CDC's check lists.
    - For healthcare providers working in outpatient setting, please check this website http://www.cdc.gov/coronavirus/mers/preparedness/checklist-provider-preparedness.html
    - For healthcare facilities, please use this check list http://www.cdc.gov/coronavirus/mers/preparedness/checklist-facility-preparedness.html
7. For hospitalized patients with MERS, follow CDC's interim infection prevention and control recommendations http://www.cdc.gov/coronavirus/mers/infection-prevention-control.html
8. For home care and isolation, follow this CDC's interim guidance. http://www.cdc.gov/coronavirus/mers/hcp/home-care.html
9. At this time, CDC does not recommend that anyone change travel plans because of MERS.
10. Information on MERS has been evolving rapidly. Check for updates regularly here: http://www.cdc.gov/coronavirus/mers/index.html

[3] http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6319a4.htm?s_cid=mm6319a4_w#fig3