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Middle East Respiratory Syndrome Coronavirus (MERS-CoV)

Case and Contact Management

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Identification, Evaluation and Management of Patients, in the Presence of MERS-CoV Activity Worldwide

An outbreak of a novel coronavirus originating in the areas of the Arabian Peninsula has been occurring since April 2012. This novel coronavirus has been named Middle East Respiratory Syndrome Coronavirus (MERS-CoV), and the disease it causes is Middle East Respiratory Syndrome (MERS). The following document has been created to assist the public health and health care community plan for the management of suspect MERS cases and their contacts. The information contained in this document is based on current knowledge of the virus and is subject to change based on new information.

Identification of Suspect MERS Cases

Healthcare professionals should evaluate patients for MERS-CoV infection to see if the case meets surveillance criteria, and providers who identify cases meeting these criteria should **IMMEDIATELY** report the case to the local health department (LHD) where the patient resides (<http://localhealth.nj.gov>). Additional information on the current situation, countries impacted, reporting procedures, and specimen collection can be found at the following websites:
<http://www.cdc.gov/coronavirus/mers/index.html>
<http://www.state.nj.us/health/cd/mers/index.shtml>

Management of MERS Cases in the Symptomatic Phase

MERS case-patients may be managed as an inpatient or outpatient, depending on their clinical status and need for hospitalization. Hospitalization is not required for isolation purposes alone, unless the patient is unable to be managed outside of a hospital setting.

Inpatient management

The hospital infection preventionist(s) must be notified of any patient under investigation (PUI) or probable MERS case-patient to ensure that appropriate infection control practices are implemented and maintained. Standard, contact, and airborne precautions are recommended for management of any patients with known or suspected MERS-CoV infection, based on CDC's case definition. Information regarding room placement, personal protective equipment and environmental cleaning is available at:

<http://www.cdc.gov/coronavirus/mers/infection-prevention-control.html>

Outpatient management

Ill people who are being evaluated for MERS-CoV infection and do not require hospitalization for medical reasons may be cared for and isolated in their home. In brief, in order for patients to be managed in the outpatient setting, the clinician must:

- Assess whether the home is suitable and appropriate for isolating the ill person. This assessment can be conducted by phone or direct observation.
- Be in contact with their local or state health department.

Additional guidance on the outpatient management of a confirmed or suspected case of MERS can be found at:

<http://www.cdc.gov/coronavirus/MERS/hcp/home-care.html>

The CDC has also developed materials to be used by the patient on homecare – including how to minimize the risk of spreading the disease to others. This information can be found at:

<http://www.cdc.gov/coronavirus/MERS/hcp/home-care-patient.html>

Management of Individuals who had close contact with a MERS Case

Close contact is defined as any person who provided care for the patient, including a healthcare worker or family member, or had similarly close physical contact; or any person who stayed at the same place (e.g., lived with, visited) as the patient while the patient was ill. Any symptomatic individual who had close contact with a MERS case should be referred for medical evaluation and evaluated as a patient under investigation for MERS. Keep in mind that it is unlikely for transmission of MERS-CoV via close contact that occurred prior to the onset of symptoms.

Management of Healthcare personnel with exposure to MERS patients

Healthcare personnel (HCP) refers all persons, paid and unpaid, working in healthcare settings who have the potential for exposure to patients and/or to infectious materials, including body substances, contaminated medical supplies and equipment, contaminated environmental surfaces, or contaminated air. HCP include, but are not limited to, physicians, nurses, nursing assistants, therapists, technicians, emergency medical service personnel, dental personnel, pharmacists, laboratory personnel, autopsy personnel, students and trainees, contractual personnel, home healthcare personnel, and persons not directly involved in patient care (e.g., clerical, dietary, house-keeping, laundry, security, maintenance, billing, chaplains, and volunteers) but potentially exposed to infectious agents that can be transmitted to and from HCP and patients.

Surveillance of health care personnel is necessary to ensure that workers who are ill receive appropriate care and are isolated to prevent transmission. Healthcare facilities (HCFs) that care for MERS patients should implement surveillance of all HCPs who have any contact with MERS patients or their environment of care. NJDOH and LHDs will work with hospitals to ensure that recommended surveillance activities are implemented, including:

- Develop and maintain a listing of all personnel who enter the rooms of MERS patients, or who are involved in the patient's care in other parts of the hospital;

- Instruct personnel who have contact with MERS patients or their environment of care to notify occupational health, infection control or their designee if they have unprotected exposure to a MERS patient or if they develop any fever or respiratory symptoms; and,
- Monitor employee absenteeism for increases that may suggest emerging respiratory illness in the workforce. Notify local and state health authorities of clusters or unusual increases in respiratory illness, including atypical pneumonia.

HCP who care for patients with MERS should be advised to monitor and immediately report any signs or symptoms of acute illness to their supervisor or a facility designated person for a period of 14 days after the last known contact with the sick patient. An unprotected exposure for a HCP is defined as any exposure to a patient infected with MERS-CoV in which the HCP was not wearing recommended personal protective equipment (PPE) (i.e., gloves, a gown, and either a face shield that fully covers the front and sides of the face or goggles, and respiratory protection that is at least as protective as a fit-tested N95 filtering face piece respirator (e.g., powered air purifying or elastomeric respirator)) at the time of contact. Any HCP with an unprotected exposure who develops respiratory symptoms or fever should:

- Not report to work or immediately stop working
- Notify their supervisor;
- Implement respiratory hygiene and cough etiquette;
- Seek prompt medical evaluation; and,
- Comply with work exclusion until they are deemed no longer infectious to others.

For asymptomatic HCPs who have had an unprotected exposure (i.e., not wearing recommended PPE at the time of contact) to a patient with MERS-CoV:

- Consider exclusion from work for 14 days to monitor for signs and symptoms of respiratory illness and fever.
- If necessary to ensure adequate staffing of the facility the asymptomatic provider could continue to work if they wear a facemask at all times while in the healthcare facility for 14 days from their last unprotected exposure.

HCP who have cared for or otherwise been in contact with a MERS-CoV patients while adhering to recommended infection control precautions should be instructed to be vigilant for fever and respiratory symptoms, including measurement of body temperature at least twice daily for 14 days following the last contact with a MERS-CoV patient. These HCP should be contacted by occupational health, infection control or their designee regularly over the 14 day period following the last contact to inquire about fever or respiratory symptoms.

Management of household contacts of MERS patients

The following information is excerpted from CDC’s “Interim Guidance for Preventing MERS-CoV from Spreading in Homes and Communities”. Those who live with or care for someone at home who is ill and being evaluated for MERS-CoV infection should use the following guidance to help prevent MERS-CoV from spreading in their homes and communities. This information is available at:

<http://www.cdc.gov/coronavirus/MERS/hcp/home-care-patient.html>

Monitor your health for 14 days, starting from the day you were last exposed to the ill person and watch out for symptoms of fever, cough, shortness of breath or early symptoms of chills, body aches, sore throat, headache, diarrhea, nausea/vomiting, and runny nose. If you develop symptoms, call your healthcare provider as soon as possible and tell him or her about your possible exposure to MERS-CoV. This will help the healthcare provider's office take steps to keep other people from getting infected. Symptomatic person should refrain from going to work/school and limit activities outside of the home to those required for medical care. Ask your healthcare provider to call the local or state health department. If you do not have any of the symptoms, you can continue with your daily activities, such as going to work, school, or other public areas.

Management of others (non-household, non-health care workers) with possible exposure to MERS patients

Persons who may have been exposed to MERS-CoV should be vigilant for fever (i.e., measure temperature twice daily) and respiratory symptoms over the 14 days following exposure. During this time, in the absence of both fever and respiratory symptoms, persons who may have been exposed to MERS-CoV patients need not limit their activities outside the home and should not be excluded from work, school, out-of-home child care, church or other public areas. Exposed persons should notify their healthcare provider immediately if fever OR respiratory symptoms develop. In advance of clinical evaluation, healthcare providers should be informed that the individual may have been exposed to MERS-CoV so arrangements can be made, as necessary, to prevent transmission to others in the healthcare setting. Symptomatic person should refrain from going to work/school and limit activities outside of the home to those required for medical care.

Additional Resources

NJDOH – General Information Page

<http://nj.gov/health/cd/mers/index.shtml>

CDC – General Information Page

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

CDC – Information on Infection Control in Health Care Setting

<http://www.cdc.gov/coronavirus/mers/infection-prevention-control.html>

CDC – Information on Infection Control at Home

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