DEPARTMENT OF DEFENSE (AFHSC)

Detecting and Reporting DoD Cases of Middle Eastern Respiratory Syndrome Coronavirus (MERS-CoV) Infection: Guidance as of 3 JUL 2013

1. CDC/WHO Guidance for Surveillance

CDC issued updated surveillance guidance for human infections with Middle Eastern Respiratory Syndrome Coronavirus (MERS-CoV) on 7 JUN 2013, paraphrased below.

CDC recommends that patients meeting these criteria be evaluated epidemiologically and tested for MERS-CoV:

Persons who meet the following criteria for "patient under investigation" (PUI) should be reported to the local preventive medicine/public health officer and evaluated for MERS-CoV infection:

- A person with acute respiratory infection, which may include fever (≥ 38° C, 100.4° F), cough; AND
- Suspicion of pulmonary parenchymal disease (e.g., pneumonia or Acute Respiratory Distress Syndrome (ARDS) based on clinical or radiological evidence of consolidation); AND
- History of travel to the Arabian Peninsula or neighboring countries (including Bahrain, Iraq, Iran, Israel, Jordan, Kuwait, Lebanon, Oman, Palestinian territories, Qatar, Saudi Arabia, Syria, the United Arab Emirates (UAE), and Yemen) within 14 days before onset of illness; AND
- Symptoms not already explained by any other infection or etiology, including clinically indicated tests for community-acquired pneumonia (including influenza A and B, respiratory syncytial virus, *Streptococcus pneumoniae*, and *Legionella pneumophila*) according to management guidelines.

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

- Persons who develop severe acute lower respiratory illness of known etiology within 14 days after traveling to the Arabian Peninsula or neighboring countries (including Bahrain, Iraq, Iran, Israel, Jordan, Kuwait, Lebanon, Oman, Palestinian territories, Qatar, Saudi Arabia, Syria, the UAE, and Yemen) but do not respond to appropriate therapies; OR
- Persons who develop severe acute lower respiratory illness who are close contacts (including healthcare workers) of a symptomatic traveler who developed fever and acute respiratory illness within 14 days of traveling from the Arabian Peninsula or neighboring countries.

CDC also recommends that clusters of severe acute respiratory illness (SARI) should be investigated and, if no obvious etiology is identified, local public health officials should be notified and testing for MERS-CoV conducted.

WHO has interim case definitions as of 3 JUL 2013. For further information on current case count, case definitions, and laboratory testing, please see the WHO Global Alert and Response coronavirus infections webpage or the CDC MERS-CoV page.

2. DoD Surveillance

Due to frequent deployments with geographic exposure potential and an unknown spectrum of illness presentation in DoD populations, AFHSC recommends more stringent screening criteria as follows*:

- A person with acute respiratory infection, which may include fever (≥ 38° C, 100.4° F), cough; AND
- History of travel to the Arabian Peninsula or neighboring countries within 14 days before onset of illness; AND
- Symptoms not already explained by any other infection or etiology, including clinically indicated tests for community-acquired pneumonia according to management guidelines.
  Note that these criteria apply to all suspect cases, even without evidence of pneumonia or ARDS

For population-based surveillance, DoD public health personnel at Military Treatment Facilities should use the Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE) or Medical Situational Awareness in Theater (MSAT) to monitor routine influenza-like illness infections in their population for any increases not usually seen during summer months. Any aberrations should be investigated for potential MERS-CoV risk factors. In addition, more severe respiratory illnesses can be monitored using ESSENCE or MSAT by creating a syndrome group with the ICD-9 codes listed below. Since ESSENCE captures only outpatient data, hospitalized individuals with severe respiratory disease should also be investigated. MSAT can be used to monitor both outpatient and inpatient populations.

The codes are:

- 480.9: Viral pneumonia, unspecified
- 486: Pneumonia, organism unspecified
- 518.8x: Other diseases of the lung (includes acute respiratory distress and failure)
  - 518.81: Acute respiratory failure, respiratory failure NOS
  - 518.82: Other pulmonary insufficiency, not elsewhere classified
  - 518.84: Acute and chronic respiratory failure, acute on chronic respiratory failure
- V07.0: Isolation – admission to protect the individual from his surroundings or for isolation of individual after contact with infectious diseases

3. Laboratory Testing

Please note that it is strongly recommended that lower respiratory specimens such as sputum, endotracheal aspirate, or bronchoalveolar lavage should be used when possible until more information is available. If patients do not have signs or symptoms of lower respiratory tract infection and lower tract specimens are not possible or clinically indicated, both nasopharyngeal and oropharyngeal specimens should be collected.

A. Clinical Diagnostic Testing

DoD medical personnel requiring clinical diagnostic laboratory testing for suspected MERS-CoV infection may contact the following POCs, whose laboratories have relevant testing capabilities:

LRMC Infectious Disease Laboratory
Landstuhl, Germany
Major Jim Managbanag
jim.r.managbanag.mil@mail.mil
DSN: (314) 486-7807

US Air Force School of Aerospace Medicine
Wright-Patterson AFB, OH
Elizabeth Macias Ph.D.
Elizabeth.macias@us.af.mil
DSN: 798-3175
Civ: (937) 581-8552

Naval Health Research Center
San Diego, CA
Ms. Melinda Balansay
Melinda.balansay-ames@med.navy.mil
Civ: (619) 553-0573

Naval Medical Research Unit – 3
Cairo, Egypt
Emad W. Mohareb, PhD
Emad.Mohareb.eg@med.navy.mil
Civ: (20-2) 2342-1375

B. Surveillance Testing

DoD medical personnel requiring surveillance laboratory testing for suspected MERS-CoV infection may contact the following POCs, whose laboratories have relevant testing capabilities:

I. CDC-supplied surveillance testing kits:

LRMC Infectious Disease Laboratory
Landstuhl, Germany
Major Jim Managbanag
jim.r.managbanag.mil@mail.mil
DSN: (314) 486-7807

US Air Force School of Aerospace Medicine
Wright-Patterson AFB, OH
Elizabeth Macias Ph.D.
Elizabeth.macias@us.af.mil
DSN: 798-3175
Civ: (937) 581-8552

US Army Medical Research Unit – Kenya
Nairobi, Kenya
Dr. Wallace Bulimo
Wallace.Bulimo@usamru-k.org
Civ: +254 733 616602

Naval Medical Research Unit – 3
Cairo, Egypt
Emad W. Mohareb, Ph.D.
Emad.Mohareb.eg@med.navy.mil
Civ: (20-2) 2342-1375

Naval Health Research Center
San Diego, CA
Ms. Melinda Balansay

Melinda.balansay-ames@med.navy.mil
Civ: (619) 553-0573

II. Naval Medical Research Center-supplied surveillance testing kits:

Armed Forces Research Institute of Medical Sciences
Bangkok, Thailand
Dr. Stefan Hernandez
Stefan.hernandez@afrims.org
Civ: 66 81 936 3508

Naval Medical Research Unit – 2
Phnom Penh, Cambodia
CDR Steve Newell
SteveN@namru2.org.kh

Naval Medical Research Unit - 3
Cairo, Egypt
Emad W. Mohareb, Ph.D.
Emad.Mohareb.eg@med.navy.mil
Civ: (20-2) 2342-1375

Naval Medical Research Unit – 6
Lima, Peru
LT Mark Simons
Mark.Simons@med.navy.mil
Civ: (51-1) 614-4134

Naval Health Research Center
San Diego, CA
Ms. Melinda Balansay
Melinda.balansay-ames@med.navy.mil
Civ: (619) 553-0573

Please ensure that you report which testing kit source (CDC or NMRC) was used when reporting results.

4. Reporting

AFHSC recommends that cases of MERS-CoV infection be reported to the Service-specific public health Chain of Command within 4 hours of laboratory confirmation of infection and be immediately followed with a report to AFHSC as an "outbreak or disease cluster" consistent with the Armed Forces Reportable Event Guidelines.

AFHSC POC:
For further information, contact the AFHSC's Division of Integrated Biosurveillance (DIB) or the Division of Global Emerging Infections Surveillance & Response Systems (GEIS):

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LCDR Amy Peterson, USPHS, Veterinary Epidemiologist (DIB): 240-743-9853
CAPT Michael Cooper, Lead, Respiratory Surveillance (GEIS): 301-319-3258