Technical Bulletin
Division of Public and Behavioral Health

Date: May 21, 2014
Topic: MERS-CoV Technical Bulletin
Contact: Julia Peek, Manager, Office of Public Health Informatics and Epidemiology
To: All Providers and Medical Facilities

The *Middle East Respiratory Syndrome Coronavirus* (MERS-CoV) infection is a viral respiratory illness caused by a newly emerging coronavirus called MERS-CoV. Almost all cases of MERS-CoV have been linked to- or travelled from countries in the Arabian Peninsula. However, MERS-CoV can spread from infected individuals to others through close contact; and there have been a small number of cases in persons who were in close contact with infected travelers. Since mid-March 2014, a significant increase in cases from Saudi Arabia was observed and in May 2014 there have been two confirmed cases of MERS-CoV among travelers from the Arabian Peninsula to the United States (US) and an additional case was identified among US contacts to one of the two imported cases.

Although mild and asymptomatic infections have been reported, most patients with MERS-CoV developed severe acute respiratory illness, with fever, cough, and shortness of breath, and the Case-fatality Rate in symptomatic patients is 30%.

Currently, there is no vaccine to prevent MERS-CoV infection and no antiviral medication is specifically recommended for treating MERS-CoV infection. Medical care can help relieve symptoms and treatment for severe cases should include support for vital organs and functions.

Healthcare providers should evaluate their patients who meet the following criteria of a *Patient Under Investigation* (**PUI**).

A. Fever (≥38°C, 100.4°F) and pneumonia or acute respiratory distress syndrome (based on clinical and/or radiological evidence) **AND** EITHER:

- A history of travel from countries in or near the Arabian Peninsula within 14 days before symptom onset, **OR**
- Close contact 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 **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/local health departments.

OR

B. Close contact with a confirmed or probable case of MERS-CoV while the case was ill **AND**

- Fever (>100°F) or symptoms of respiratory illness within 14 days following the close contact (this is a lower threshold than in category A). **OR**
- Is a close contact of a PUI.

Healthcare professionals with a higher index of suspicion, please see Interim Guidance for Health Professionals for more information: http://www.cdc.gov/coronavirus/mers/interim-guidance.html

Additionally we want to remind healthcare providers to adhere to recommended infection control measures, including standard, contact, and airborne precautions, while managing symptomatic close contacts, patients under investigation, and patients who have probable or confirmed MERS-CoV infections. Recommended infection control precautions should also be utilized when collecting specimens. For an additional guidance on MERS-CoV infection control in healthcare settings, please see Interim Infection Prevention and Control Recommendations for Hospitalized Patients with MERS-CoV at:
http://www.cdc.gov/coronavirus/mers/infection-prevention-control.html

Additionally, to aid healthcare providers and facilities, CDC has developed two checklists that identify key actions that can be taken in order to enhance preparedness for MERS-CoV infection prevention and control. Please see: www.cdc.gov/coronavirus/mers/preparedness.

In Nevada, testing for MERS-CoV must be approved by the local/state health jurisdiction office of epidemiology. If the testing is approved the office of epidemiology will provide further guidance on submission and testing of specimens at the public health laboratory. Prior to contacting your local/state health jurisdiction, please collect the following information: Patient's **Name**, **Date of Birth**, **Travel History** (including dates, locations and mode/s of travel), **Signs and Symptom**s, **Laboratory Tests** performed, **Gender**, **Address**, and **Current Patient Status**.

Please see the contact information below for local/state health authorities in Nevada.

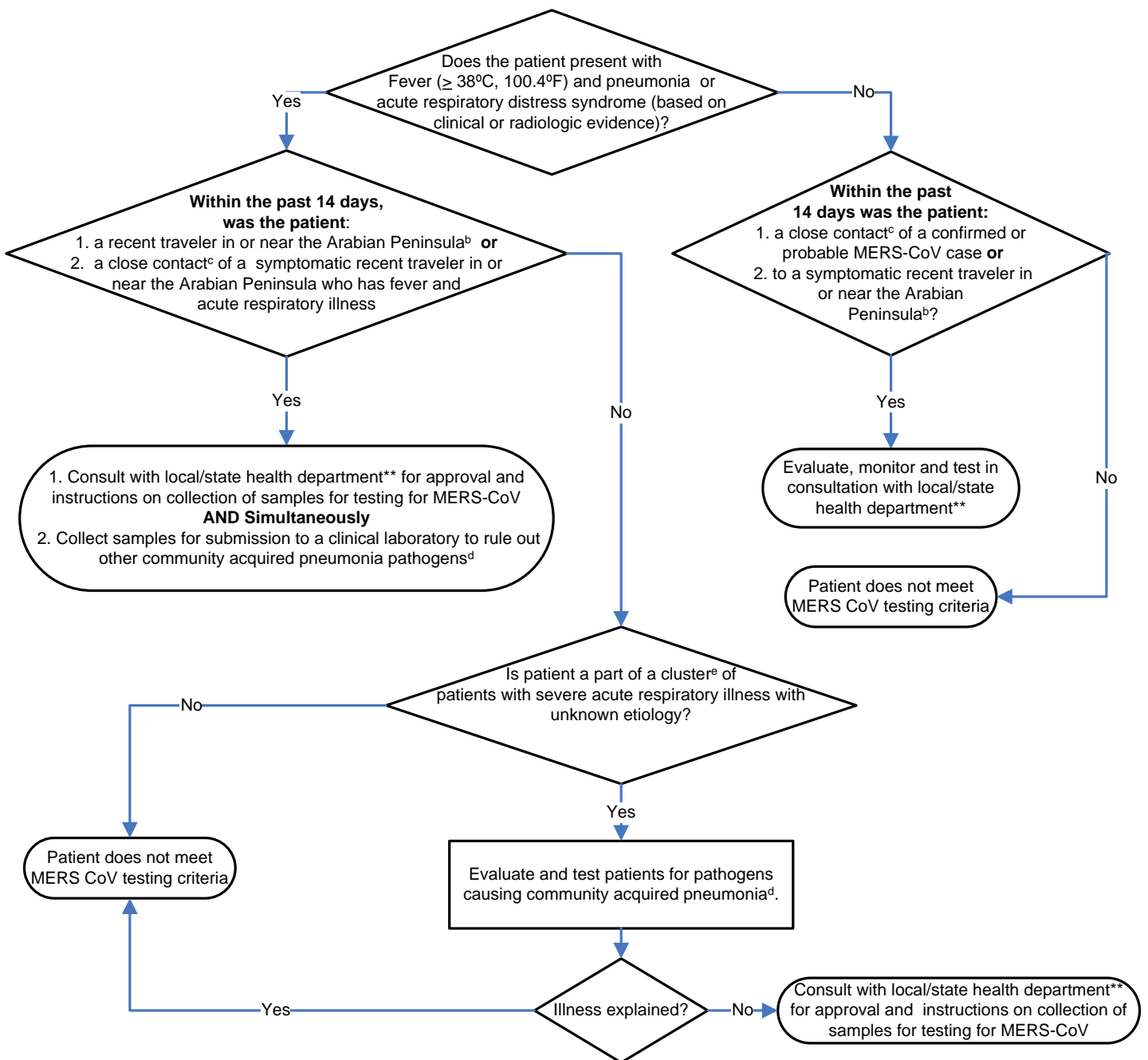|	
Carson City Health Department (Carson City, Douglas and Lyon Counties)	**775-887-2190**
Public Health and Clinical Services (Nevada Rural/Frontier Counties)	**775-434-4358**
Southern Nevada Health District	**702-759-1300**
Washoe County District Health Department	**775-328-2447**
Nevada State Office of Public Health Informatics and Epidemiology	**775-400-0333**

Tracey Green, MD
Chief Medical Officer

Richard Whitley, MS
Administrator

![SNHD - Southern Nevada Health District logo]

Interim CDC Guidance for Identifying and Testing a Patient Under Investigation (PUI) for MERS-CoV (last updated 5/14/2014)[a]

Does the patient present with Fever ($\geq$ 38ºC, 100.4ºF) and pneumonia or acute respiratory distress syndrome (based on clinical or radiologic evidence)?

Yes →

Within the past 14 days, was the patient:
1. a recent traveler in or near the Arabian Peninsula[b] **or**
2. a close contact[c] of a symptomatic recent traveler in or near the Arabian Peninsula who has fever and acute respiratory illness

— Yes →

1. Consult with local/state health department** for approval and instructions on collection of samples for testing for MERS-CoV **AND Simultaneously**
2. Collect samples for submission to a clinical laboratory to rule out other community acquired pneumonia pathogens[d]

— No →

No →

Within the past 14 days was the patient:
1. a close contact[c] of a confirmed or probable MERS-CoV case **or**
2. to a symptomatic recent traveler in or near the Arabian Peninsula[b]?

— Yes →

Evaluate, monitor and test in consultation with local/state health department**

— No →

Patient does not meet MERS CoV testing criteria

Is patient a part of a cluster[e] of patients with severe acute respiratory illness with unknown etiology?

— No → Patient does not meet MERS CoV testing criteria

— Yes →

Evaluate and test patients for pathogens causing community acquired pneumonia[d].

Illness explained?

— Yes → Patient does not meet MERS CoV testing criteria

— No → Consult with local/state health department** for approval and instructions on collection of samples for testing for MERS-CoV

**
Public Health and Clinical Services: 775-434-4358
Washoe County District Health Department: 775-328-2447
Carson City Health Department: 775-887-2190
Southern NV Health District: 702-759-1300 Option 2
NV State Office of Public Health & Epidemiology: 775-400-0333

---

[a] http://www.cdc.gov/coronavirus/MERS/interim-guidance.html

[b] Countries in the Arabian Peninsula include: Bahrain, Iraq, Iran, Israel, Jordan, Kuwait, Lebanon, Oman, Palestinian territories, Qatar, Saudi Arabia, Syria, the United Arab Emirates, and Yemen

[c] Close contact includes any person who provided care for a patient, including a healthcare provider or family member not adhering to recommended IC precautions, or had similarly close physical contact or any person who stayed at the same place (lived with, visited) as the patient while the patient was ill

[d] Community acquired pneumonia pathogens (CAP) may include *S. pneumoniae*, *L. pneumophila,* influenza A and B, RSV, adenovirus, Parainfluenza 1-4, and Human metapneumovirus. Contact clinical laboratories for assistance with sample collection and codes for CAP pathogen testing.

[e] cluster = two or more persons with onset of symptoms within the same 14 day period, and who are associated with a specific setting such as a classroom, workplace, household, extended family, hospital, other residential institution, military barracks, or recreational camp.

Developed by Linda Verchick and Pat Armour May 22, 2014 Southern Nevada Health District