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Notice to Health Care Providers: Updated Guidelines for Evaluation of Severe Respiratory Illness Associated with a Novel Coronavirus

Summary: *The Centers for Disease Control and Prevention (CDC) is working closely with the World Health Organization (WHO) and other partners to better understand the public health risk posed by a novel coronavirus that was first reported to cause human infection in September 2012. The purpose of this HAN Advisory is to provide guidance to state health departments and health care providers in the evaluation of patients for novel coronavirus infection. Please disseminate this information to infectious diseases specialists, intensive care physicians, internists, infection preventionists, as well as to emergency departments and microbiology laboratories.*

Background

Novel coronavirus is a beta coronavirus that was first described in September 2012, when it was reported to have caused fatal acute lower respiratory illness in a man in Saudi Arabia. As of March 8, 2013, 14 laboratory-confirmed cases of novel coronavirus infection have been reported to WHO—seven from Saudi Arabia, two from Qatar, two from Jordan, and three from the United Kingdom (UK). Illness onsets were from April 2012 through February 2013. Of the 14 cases, eight were fatal. One of the 14 persons with novel coronavirus infection experienced a respiratory illness not requiring hospitalization. Diagnoses rely on testing with specific polymerase chain reaction (PCR) assays. Genetic sequence analyses have shown that this new virus is different from other known human coronaviruses, including the one that caused severe acute respiratory syndrome (SARS). There is no specific treatment for novel coronavirus infection; care is supportive. To date, no cases have been reported in the United States.

The three confirmed cases in the UK were reported in February 2013 as part of a cluster within one family; only the index patient had a history of recent travel outside the UK (to Pakistan and Saudi Arabia). This index patient is receiving intensive care treatment and tested positive for both novel coronavirus and influenza A (H1N1) virus. The other two patients became ill after contact with the index patient; one died, and one has recovered from mild illness. This cluster of illnesses is still under investigation by the UK Health Protection Agency, but provides the first clear evidence of human-to-human transmission of this novel coronavirus, co-infection of this novel coronavirus with another pathogen (influenza A), and a case of mild illness associated with this novel coronavirus infection. Additional details can be found in the March 7, 2013 *MMWR* Early Release (http://www.cdc.gov/mmwr/preview/mmwrhtml/mm62e0307a1.htm?s_cid=mm62e0307a1_e).

Recommendations

In light of these developments, updated guidance (<http://www.cdc.gov/coronavirus/ncv/case-def.html>) has been posted on the CDC coronavirus website. Persons who develop severe acute lower respiratory illness within 10 days after traveling from the Arabian Peninsula or neighboring countries* should continue to be evaluated according to current guidelines. In particular, persons who meet the following criteria for “patient under investigation” (PUI) should be reported to state and local health departments and evaluated for novel coronavirus infection:

- A person with an acute respiratory infection, which may include fever ($\geq 38^{\circ}\text{C}$, 100.4°F) and cough; AND
- suspicion of pulmonary parenchymal disease (e.g., pneumonia or acute respiratory distress syndrome based on clinical or radiological evidence of consolidation); AND
- history of travel from the Arabian Peninsula or neighboring countries* within 10 days; AND
- not already explained by any other infection or etiology, including all clinically indicated tests for community-acquired pneumonia[†] according to local management guidelines.

CDC requests that state and local health departments report PUIs for novel coronavirus to CDC. To collect data on PUIs, please use the [CDC Novel Coronavirus Investigation Short Form](#). State health departments should FAX completed investigation forms to CDC at 770-488-7107 or attach in an email to eocreport@cdc.gov (subject line: NCV Patient Form).

In addition, the following persons may be considered for evaluation for novel coronavirus infection:

- Persons who develop severe acute lower respiratory illness of known etiology within 10 days after traveling from the Arabian Peninsula or neighboring countries* but who do not respond to appropriate therapy; OR
- Persons who develop severe acute lower respiratory illness who are close contacts[‡] of a symptomatic traveler who developed fever and acute respiratory illness within 10 days of traveling from the Arabian Peninsula or neighboring countries.*

Testing of specimens for the novel coronavirus will be conducted at CDC. Recommendations and guidance on the case definitions, infection control (including use of personal protective equipment), case investigation, and specimen collection and shipment for testing, are available at the CDC coronavirus website (<http://www.cdc.gov/coronavirus/ncv/case-def.html>). Additional information and potentially frequent updates will be posted on the CDC coronavirus website. State and local health departments with questions should contact the CDC Emergency Operations Center (770-488-7100).

* Countries considered to be on or neighboring the Arabian Peninsula include Bahrain, Iraq, Iran, Israel, Jordan, Kuwait, Lebanon, Oman, Palestinian territories, Qatar, Saudi Arabia, Syria, the United Arab Emirates (UAE), and Yemen.

[†] Examples of respiratory pathogens causing community-acquired pneumonia include influenza A and B, respiratory syncytial virus, adenovirus, *Streptococcus pneumoniae*, and *Legionella pneumophila*.

[‡] Close contact is defined as 1) any person who provided care for the patient, including a health-care worker or family member, or who had other similarly close physical contact, or 2) any person who stayed at the same place (e.g., lived with or visited) as the patient while the patient was ill.

For more information:

For additional information, please consult the CDC coronavirus website at:

<http://www.cdc.gov/coronavirus/ncv>

State and local health departments with questions should contact the CDC Emergency Operations Center (770-488-7100).

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