

## Severe Respiratory Illness Associated with a Novel Coronavirus — Saudi Arabia and Qatar, 2012

CDC is working closely with the World Health Organization (WHO) and other partners to better understand the public health risk presented by a recently detected, novel coronavirus. This virus has been identified in two patients, both previously healthy adults who suffered severe respiratory illness (1,2). The first patient, a man aged 60 years from Saudi Arabia, was hospitalized in June 2012 and died; the second patient, a man aged 49 years from Qatar with onset of symptoms in September 2012 was transported to the United Kingdom for intensive care. He remains hospitalized on life support with both pulmonary and renal failure (3,4). Person-to-person or health-care-associated transmission has not been identified to date (5). Interim case definitions based on acute respiratory illness and travel history were issued by WHO on September 29 and include criteria for “patient under investigation,” “probable case,” and “confirmed case” (6). This information is current as of October 4. Updates on the investigation and the WHO case definition are available at <http://www.who.int/csr/don/en/index.html>.

Coronaviruses are a large, diverse group of viruses that affect many animal species. A few of these viruses cause a wide range of respiratory illness in humans, typically with “common cold” symptoms. Genetic sequence data indicate that this new virus is a beta-coronavirus similar to bat coronaviruses, but not similar to any other coronavirus previously described in humans, including the coronavirus that caused severe acute respiratory syndrome (SARS) (1). Comparison of viral genetic sequences from the two patients indicated that the two viruses are closely related. Treatment is supportive because no specific therapy has been shown to be effective.

WHO and CDC have not issued any travel alerts at this time. The risk to U.S. residents traveling in the region currently is estimated to be low. For persons traveling to Saudi Arabia to participate in the Hajj, scheduled for October 24–29, 2012,

requirements and recommendations remain unchanged and can be found at <http://www.cdc.gov/features/Hajj>.

Persons who develop acute respiratory illness within 10 days after returning from Saudi Arabia or Qatar (excluding persons who only passed through airports) should consult a physician and mention their recent travel. Persons with acute severe lower respiratory illness requiring hospitalization should be evaluated using the guidance at the CDC coronavirus website (<http://www.cdc.gov/coronavirus/ncv>), which is based on the WHO case definition. Persons whose respiratory illness remains unexplained and who meet the WHO criteria for “patient under investigation” should be reported immediately to CDC through state and local health departments. At present, testing of specimens for the novel coronavirus will be conducted by CDC; widely available diagnostic tests for coronaviruses are not suitable for detecting this new virus.

Recommendations and guidance on the case definitions, infection control including personal protective equipment, case investigation, and specimen collection and shipment, are available at the CDC coronavirus website. Because of the possibility of frequent updates as new information becomes available, readers are encouraged to consult the CDC coronavirus website for current information. State and local health departments with questions should contact the CDC Emergency Operations Center (770-488-7100).

### Reported by

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## References

1. Corman VM, Eckerle I, Bleicker T, et al. Detection of a novel human coronavirus by real-time reverse-transcription polymerase chain reaction. *Euro Surveill* 2012;17(39).
2. Danielsson N, on behalf of the ECDC Internal Response Team, Catchpole M. Novel coronavirus associated with severe respiratory disease: case definition and public health measures. *Euro Surveill* 2012;17(39).
3. Bermingham A, Chand MA, Brown CS, et al. Severe respiratory illness caused by a novel coronavirus, in a patient transferred to the United Kingdom from the Middle East, September 2012. *Euro Surveill* 2012;17(40).
4. European Centre for Disease Prevention and Control (ECDC). Rapid risk assessment: severe respiratory disease associated with a novel coronavirus. Stockholm, Sweden: ECDC; 2012. Available at <http://ecdc.europa.eu/en/publications/Publications/RRR-Novel-coronavirus-final20120924.pdf>. Accessed October 4, 2012.
5. Pebody RG, Chand MA, Thomas HL, et al. The United Kingdom public health response to an imported laboratory confirmed case of a novel coronavirus in September 2012. *Euro Surveill* 2012;17(40).
6. World Health Organization. Global alert and response (GAR): revised interim case definition—novel coronavirus. Geneva, Switzerland: World Health Organization; 2012. Available at [http://www.who.int/csr/disease/coronavirus\\_infections/case\\_definition/en/index.html](http://www.who.int/csr/disease/coronavirus_infections/case_definition/en/index.html). Accessed October 4, 2012.