



*COMMONWEALTH of VIRGINIA*  
*Department of Health*

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March 12, 2013

**EMERGING INFECTIONS OF PUBLIC HEALTH CONCERN: Novel Coronavirus and  
New Carbapenem-Resistant Enterobacteriaceae**

Dear Colleague:

Greetings from the Commissioner's Office! Thank you for the diligent care that you are providing to patients and communities each day. I am writing to ask for your assistance in the early detection and subsequent control of two new infections. One is already present in the United States, carbapenem-resistant Enterobacteriaceae (CRE), and the other, novel coronavirus, may be introduced. Both are reportable to the health department as the "unusual occurrence of disease of public health concern."

**Severe Respiratory Illness Associated with a Novel Coronavirus**

On March 8, 2013, the Centers for Disease Control and Prevention (CDC) issued [a Health Advisory](#) "Updated Guidelines for Evaluation of Severe Respiratory Illness Associated with a Novel Coronavirus." This novel coronavirus was first reported to cause human infection in September 2012. Genetic sequence analyses have shown that this new virus is different from any other known human coronaviruses, including the one that caused the severe acute respiratory syndrome (SARS) outbreak in 2003.

As of March 7, 2013, a total of 14 confirmed cases of novel coronavirus infection have been reported to the World Health Organization, with eight deaths. A cluster of three cases in the United Kingdom provides the first evidence of person-to-person transmission of novel coronavirus, although the efficiency of person-to-person transmission of novel coronavirus appears to be low, given the small number of confirmed cases since the discovery of the virus. **To date, no cases have been reported in the United States.**

Clinicians are the first line in the early detection of any introduction of novel coronavirus to the United States. Please report to your local health district any patient who meets the following criteria:

- A person with an **acute respiratory infection**, which may include fever ( $\geq 38^{\circ}\text{C}$  ,  $100.4^{\circ}\text{F}$ ) 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 (Bahrain, Iraq, Iran, Israel, Jordan, Kuwait, Lebanon, Oman, Palestinian Territories, Qatar, Saudi Arabia, Syria, the United Arab Emirates, and Yemen) 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.

The local health district will work with you, the state public health laboratory (DCLS) and CDC to have patient specimens tested for the novel coronavirus. Other patients who may be considered for evaluation for novel

coronavirus are 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; 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 after travel from the Arabian Peninsula or neighboring countries.

Additional guidance is on the CDC's [coronavirus website](#). Until the transmission characteristics of the novel coronavirus are better understood, patients under investigation should be managed according to CDC's infection control recommendations for the coronavirus that caused the SARS outbreak.

### **New Carbapenem-Resistant Enterobacteriaceae (CRE)**

A recent CDC [Health Advisory](#) highlighted the need for clinicians to consider unusual forms of CRE [e.g., New Delhi Metallo- $\beta$ -lactamase (NDM) and Verona Integron-mediated Metallo- $\beta$ -lactamase (VIM)] in hospitalized patients with a recent history of hospitalization in countries outside of the United States. While these unusual forms of CRE remain uncommon in the United States, there have been more than 15 reports since July 2012. **Two persons in whom NDM-1 CRE has been isolated have been reported in Virginia: one in 2010 and one in February 2013.**

**For patients admitted to healthcare facilities in the United States after recently being hospitalized (within the last 6 months) in countries outside the United States, consider each of the following:**

- Perform rectal screening cultures to detect CRE colonization.
- Place patients on Contact Precautions while awaiting the results of these screening cultures.
- When a CRE is identified in a patient (infection or colonization), send the isolate to a reference laboratory for confirmatory susceptibility testing and test to determine the carbapenem resistance mechanism; at a minimum, this should include evaluation for *Klebsiella pneumoniae* carbapenemases (KPC) and NDM carbapenemases.

Please report to the local health district any suspected or confirmed outbreaks of CRE infection or colonization as well as any patient suspected or confirmed to be infected or colonized with one of the unusual forms of CRE (NDM or VIM carbapenemases). The local health district will work with you and DCLS to assist with appropriate laboratory evaluation for these new forms of CRE.

In this week's [MMWR](#), CDC also highlighted the broader concerns with CREs (Vital Signs: Carbapenem-Resistant Enterobacteriaceae.) We need your help to prevent spread before CRE gains a foothold in more hospitals, long-term care facilities, or in the community. This requires active case detection and Contact Precautions for colonized or infected patients, as well as cohorting of patients and staff; appropriate antibiotic use in all settings, and communication about infections when patients transfer. CDC's 2012 CRE Toolkit - [Guidance for Control of Carbapenem-resistant Enterobacteriaceae](#) provides guidance on prevention and control measures for health care facilities. The Virginia Department of Health has [additional resources and links available](#) for you and your patients.

Your assistance in this collaborative effort is greatly appreciated. Together, we can continue to protect the health of all Virginians by preventing further emergence of these infections.

Sincerely,

Cynthia C. Romero, MD, FAAFP  
State Health Commissioner