



HEALTH ADVISORY #36

NEW HIGHLY DRUG-RESISTANT STRAINS OF BACTERIA REPORTED IN THE US

TO: West Virginia Healthcare Providers, Hospitals, and Laboratories

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DATE: September 8, 2010

LOCAL HEALTH DEPARTMENTS: Please distribute to community health providers, hospital-based physicians, infection preventionists, laboratory directors, and other applicable partners.

OTHER RECIPIENTS: PLEASE DISTRIBUTE TO ASSOCIATION MEMBERS, STAFF, ETC.

On June 2010, the CDC first reported *Enterobacteriaceae* species carrying the NDM-1 enzyme in the U.S. (http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5924a5.htm?s_cid=mm5924a5_w). The NDM-1 gene typically confers resistance to all beta-lactam antibiotics (including carbapenems) except aztreonam. However, these isolates were found to be resistant to aztreonam. The resistance gene can spread from one strain of bacteria to another.

Carbapenem is a mainstay for the treatment of antibiotic-resistant bacterial infections. Infections due to carbapenem-resistant *Enterobacteriaceae* (CRE) are extremely difficult to treat since most are resistant to different classes of antibiotics. Thus, morbidity and mortality rates are high.

Enterobacteriaceae are part of a normal human flora and are often associated with healthcare associated infections. The emergence of NDM-1 producing *Enterobacteriaceae* has raised concerns about the detection and control of CRE.

Clinicians and laboratorians are advised of the following:

- Be aware of the possibility of NDM-1 producing *Enterobacteriaceae* especially among patients who have received medical care in India and Pakistan, where NDM-1 was first identified.
- Infection control interventions should aim at preventing transmission. These include:
 - recognizing the organism when cultured from clinical specimens
 - instituting contact precautions for colonized or infected patients
 - conducting surveys or active surveillance testing especially among high-risk patients
- Carbapenem- resistant isolates from patients who had received medical care within 6 months from India or Pakistan must be sent to the WV Office of Laboratory Services.

- Guidance for the control of multi-drug resistant organisms is found at <http://www.cdc.gov/ncidod/dhqp/pdf/ar/MDROGuideline2006.pdf>
- Guidance for the control of CRE is available at <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5810a4.htm>

Health departments are advised of the following:

- They are encouraged to assess the incidence of CRE in their jurisdictions (especially in acute-care facilities).
- Health departments should determine appropriate local and regional public health responses to prevent spread.
- Local public health officials should encourage healthcare facilities that identify CRE to follow CDC guidance for the control of these organisms.

This message was directly distributed by the West Virginia Bureau for Public Health to West Virginia local health departments and to healthcare associations. Receiving entities are responsible for further disseminating the information as appropriate to the target audience.

Categories of Health Alert messages:

Health Alert: Conveys the highest level of importance, warrants immediate action or attention.

Health Advisory: Provides important information for a specific incident or situation. May not require immediate action.

Health Update: Provides updated information regarding an incident or situation. Unlikely to require immediate action.