



July 15, 2010
From: MDCH Bureau of Laboratories
Re: New resistance mechanism Identified in *Enterobacteriaceae*

Dear Michigan Laboratory System Colleague,

CDC has recently documented the first report of *Enterobacteriaceae* isolates that exhibit a newly-described resistance mechanism not seen previously in the U.S. The New Delhi metallo-beta-lactamase (NDM-1) has been confirmed in isolates of *Escherichia coli*, *Klebsiella pneumoniae*, and *Enterobacter cloacae*; and appears to be closely linked to receiving medical care in India and Pakistan. Resistance was detected in the course of routine testing.

See the report in MWR at
http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5924a5.htm?s_cid=mm5924a5_e

Laboratories are asked to forward carbapenem-resistant isolates from patients who have received medical care within 6 months in India or Pakistan. Although MDCH Bureau of Laboratories (BOL) is not currently performing confirmatory testing for carbapenemase resistance, we will forward the isolates to CDC for further characterization. New/revised criteria for interpreting the results of testing carbapenem vs. *Enterobacteriaceae* have been recently published by CLSI as document M100-S20-U *Performance Standards for Antimicrobial Susceptibility Testing; Update (M100-S20-U) June 2010*. MDCH will be able to provide a copy for your laboratory through funding from the CDC under the Epidemiology-Laboratory Capacity Grant.

Link to MDCH Lab test requisition
http://www.michigan.gov/documents/DCH-0583TEST_REQUEST_7587_7.pdf

Link to form to request shipping kits (Unit 42A or Unit 42B) for isolate submission
http://www.michigan.gov/documents/dch-0568_7396_7.pdf

Infection Control Preventionists are asked to implement interventions aimed at preventing transmission, as outlined in current guidance when NDM-1--producing isolates are identified; even in areas where other carbapenem-resistance mechanisms are common among *Enterobacteriaceae*.

Link to Infection Control Guidance:
<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5810a4.htm>

Physicians are asked to consider the possibility of NDM-1--producing *Enterobacteriaceae* in patients who have received medical care in India and Pakistan.

Thank you for all you do every day to protect the health of the people of Michigan.

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