



New Hampshire Health Alert Network

Health.Alert@nh.gov

Status: Actual
Message Type: Alert
Severity: Moderate
Sensitive: Not Sensitive
Message Identifier: NH-HAN #20130220
Delivery Time: 12 hours
Acknowledgement: No
Originating Agency: NH Department of Health and Human Services, Division of Public Health Services

DATE: February 20, 2013 **TIME:** 1600 EST

TO: Physicians, Physician Assistants, Nurses, Infection Control Practitioners, Infectious Disease Specialists, Hospital Emergency Departments, Hospital CEOs, Laboratory Response Network, Manchester Health Department, Nashua Health Department, NHHA, DHHS Outbreak Team, DPHS Investigation Team, Public Health Network, and DPHS Management Team, Pharmacists

FROM: Sharon Alroy-Preis, MD, NH State Epidemiologist

SUBJECT: CDC Health Advisory on Carbapenem-Resistant Enterobacteriaceae (CRE)

NH Division of Public Health Services (NH DPHS) recommends:

1. Review the attached CDC Health Advisory on CRE for:
 - Current epidemiology
 - Guidance to prevent spread in healthcare settings
2. Send the following isolates to New Hampshire Public Health Laboratories (NH PHL) for further CDC testing:
 - Labs that are able to identify CRE: any isolate determined to be CRE
 - Labs that are not able to identify CRE: any highly resistant gram negative rod in a patient who was hospitalized abroad in the past 6 months

National CRE Update:

Carbapenem-resistant Enterobacteriaceae (CRE) are difficult-to-treat multidrug-resistant organisms that are emerging in the United States and there are several mechanisms of resistance that have been identified. Nationally, 37 Reports of unusual forms of CRE (e.g., New Delhi Metallo- β -lactamase and Verona Integron-mediated Metallo- β -lactamase) have been reported to the CDC with the last 15 cases being reported since July 2012. Most of the cases had a history of being hospitalized abroad.

CRE has been detected in NH but no unusual forms of CRE have been reported.

New Recommendations:

1. When a CRE is identified in a patient (infection or colonization) with a history of an overnight stay in a healthcare facility (within the last 6 months) outside the United States, determine the carbapenem resistance mechanism; at a minimum, this should include evaluation for KPC (*Klebsiella pneumoniae* carbapenemase) and NDM (New Delhi Metallo- β -lactamase). In laboratories that could not confirm CRE, send any highly resistant gram negative isolate from a patient with a history of hospitalization abroad in

the past 6 months to NH Public Health Laboratories. The NH PHL will send the isolates to CDC for determining the carbapenem resistance mechanism. To coordinate isolate submissions please call 603-271-4661.

2. 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 if CRE testing is available locally:

- Perform rectal screening cultures to detect CRE colonization.
- Place patients on Contact Precautions while awaiting the results of these screening cultures.

Attachment: CDC Health Advisory New Carbapenem-Resistant Enterobacteriaceae Warrant Additional Action by Healthcare Providers

For additional information from CDC on prevention, refer to their website at:
<http://www.cdc.gov/hai/organisms/cre/cre-toolkit/index.html>

PLEASE VISIT OUR WEBSITE AT <http://www.dhhs.nh.gov/dphs/cdcs/alerts/han.htm>

For any questions regarding this message, please contact NH DHHS, Division of Public Health Services, Bureau of Infectious Disease Control at 603-271-4496. After hours or toll free (In NH) at 800-852-3345, ext. 4496 or 603-271-5300 and ask for the public health professional on call.

DEFINITION OF TERMS AND ALERTING VOCABULARY

Message Type

Alert: Original alert
Update: Prior alert has been updated and superseded
Cancel: Prior alert has been cancelled
Error: Prior alert has been retracted

Status

Actual: Refers to a live event
Exercise: Designated recipients must respond to the communication or alert
Test: Related to a technical and/or system test

Severity

Extreme: Extraordinary threat to life or property
Severe: Significant threat to life or property
Moderate: Possible threat to life or property
Minor: Minimal threat to life or property
Unknown: Unknown threat to life or property

Sensitive

Sensitive: Indicates the alert contains sensitive content
Not Sensitive: Indicates non-sensitive content

Message Identifier

A unique alert identifier that is generated upon alert activation

Delivery Time

Indicates the time frame for the delivery of the alert

Acknowledgement

Indicates whether an acknowledgement on the part of the recipient is required to confirm that the alert was received, and the time frame in which a response is required.

Originating Agency

A guaranteed unique identifier for the agency originating the alert.

Alerting Program

The program sending the alert or engaging in alerts and communications using PHIN Communication and Alerting (PCA) as a vehicle for their delivery.

You have received this message based upon the information contained within our emergency notification database.

If you have a different or additional e-mail or fax address that you would prefer to be used, please contact:

Denise M. Krol, MS
NH HAN Coordinator
Denise.Krol@dhhs.state.nh.us

Business Hours: 8 AM – 4 PM
Tel: 603-271-4596
Fax: 603-271-0545

This is an official **CDC Health Advisory**

Distributed via Health Alert Network

February 14, 2013 12:30:00 ET

CDCHAN-00341-02-14-2013

New Carbapenem-Resistant Enterobacteriaceae Warrant Additional Action by Healthcare Providers

Summary

Carbapenem-resistant Enterobacteriaceae (CRE) are untreatable or difficult-to-treat multidrug-resistant organisms that are emerging in the United States. Because of increased reports of these multidrug-resistant organisms, CDC is alerting clinicians about the need for additional prevention steps regarding CRE. Key points include:

- While still uncommon, reports of unusual forms of CRE (e.g., New Delhi Metallo- β -lactamase and Verona Integron-mediated Metallo- β -lactamase) in the United States are increasing. Of the 37 unusual forms of CRE that have been reported in the United States, the last 15 have been reported since July, 2012.
- This increase highlights the need for U.S. healthcare providers to act aggressively to prevent the emergence and spread of these unusual CRE organisms.
- Current [CDC guidance](#) includes key elements of CRE prevention (e.g., use of Contact Precautions) in healthcare settings.
- Because the vast majority of these unusual organisms were isolated from patients who received overnight medical treatment outside of the United States, additional measures described in this HAN advisory are now recommended to be taken when such patients are hospitalized in the United States.

Background

Klebsiella species and *Escherichia coli* are examples of Enterobacteriaceae, a family of bacteria that normally live in water, soil, and the human gut. CRE are Enterobacteriaceae that have developed high levels of resistance to antibiotics, including last-resort antibiotics called carbapenems. CRE infections most commonly occur among patients who are receiving antibiotics and significant medical treatment for other conditions.

Although there are a large number of mechanisms that can lead to carbapenem resistance among Enterobacteriaceae, the production of an enzyme that breaks down broad-spectrum carbapenem antibiotics (carbapenemases) has emerged as an important mechanism in the United States over the last decade. Most carbapenemase-producing CRE in the United States produce a carbapenemase called *Klebsiella pneumoniae* carbapenemase, or KPC, which was first reported in 2001 and has been found in many different types of Gram-negative bacteria.

KPC-producing Enterobacteriaceae appear to have spread throughout the United States since 2001 but still remain relatively uncommon in most hospitals. Enterobacteriaceae producing other carbapenemases, such as New Delhi Metallo- β -lactamase (NDM) and the Verona Integron-mediated Metallo- β -lactamase (VIM), have been very uncommon in the United States but are more common in other parts of the world. Many countries may not be actively looking for CRE; therefore, it is unclear which countries have experienced unusual carbapenemases (e.g., NDM, VIM) and it is difficult to know their overall incidence

at any given time. The vast majority of CRE producing non-KPC carbapenemases reported to CDC were isolated from patients with a history of an overnight stay in a healthcare facility outside the United States.

Recommendations

CDC continues to recommend that facilities follow the CDC guidance for preventing the spread of CRE in healthcare settings (<http://www.cdc.gov/hai/organisms/cre/cre-toolkit/index.html>). Facilities should:

- Ensure that the patient is on [Contact Precautions](#).
- Reinforce and evaluate adherence to hand hygiene and Contact Precautions for healthcare personnel who come into contact with the patient (e.g., enter the patient's room).
- Since clinical cultures will identify only a minority of patients with CRE, screen epidemiologically linked patient contacts for CRE colonization with stool, rectal, or perirectal cultures. At a minimum, this should include persons with whom the CRE patient shared a room but could also include patients who were treated by the same healthcare personnel. A laboratory-based screening protocol is available here: (http://www.cdc.gov/HAI/pdfs/labSettings/Klebsiella_or_Ecoli.pdf).
- Should the patient be transferred to another healthcare facility, ensure that the presence of CRE colonization or infection is communicated to the accepting facility. An example transfer form is available here (<http://www.cdc.gov/HAI/toolkits/InterfacilityTransferCommunicationForm11-2010.pdf>).
- Dedicate rooms and staff to CRE patients when possible. It is preferred that staff caring for CRE patients do not also care for non-CRE patients.
- Remove temporary medical devices as soon as they are no longer needed.

In addition to that guidance, CDC now also recommends the following:

- When a CRE is identified in a patient (infection or colonization) with a history of an overnight stay in a healthcare facility (within the last 6 months) outside the United States, 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 KPC and NDM carbapenemases.
- 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.

Further information about the prevention of CRE transmission is available in CDC's [CRE toolkit](#) (<http://www.cdc.gov/hai/organisms/cre/cre-toolkit/index.html>).

DEPARTMENT OF HEALTH AND HUMAN SERVICES

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.

##This Message was distributed to **State and Local Health Officers, Public Information Officers, Epidemiologists and HAN Coordinators as well as Clinician organizations**##

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You have received this message based upon the information contained within our emergency notification data base. If you have a different or additional e-mail or fax address that you would like us to use please contact your State-based Health Alert Network program at your State or local health department.

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