

# HAI Prevention Stories from the States



## Florida Stops Outbreak of Carbapenem-Resistant Enterobacteriaceae

### **Dramatic Decline**

In number of patients with CRE, from 60 percent to under 10 percent in one facility alone

### **Detect & Protect**

Screening, isolating, and grouping patients with CRE to prevent spread to other patients

### **40 Hours**

Spent observing staff at the facility to check hand hygiene, glove and gown use, and other practices during care of the patients

### **Public Health Partnership**

Continued communication between the facility and local, state, and federal public health partners to ensure the interventions were working

Carbapenem-resistant Enterobacteriaceae (CRE) are bacteria that cause healthcare-associated infections and have emerged in the United States as a serious public health threat. They are resistant to almost all drugs, difficult to treat, and are associated with high death rates (up to 40% in some studies). More and more, CRE is being seen in long-term acute care hospitals, where patients who need to be on life-support for long periods of time receive care.

In response to this healthcare threat, CDC has urged state health departments to find out how common CRE are in healthcare facilities in their states and to assist in developing prevention strategies.

In July 2010, the Florida Department of Health became aware of CRE at a long-term acute care hospital. The county and state health department worked with the facility to develop an infection prevention plan to determine the total number of patients with CRE and stop CRE from spreading to more patients. Concerned that patients were still contracting CRE, Florida Department of Health expanded their efforts with the assistance of the Centers for Disease Control and Prevention.

### What Florida Accomplished

- Created a tailored infection control plan for a long-term acute care hospital with a CRE outbreak
- Provided education of long-term acute care staff on special infection control measures necessary to prevent the spread of CRE from patient to patient
- Partnered with CDC and the long-term acute care hospital to understand how CRE is spread and the best way to prevent spread in this high-risk setting
  - Used surveillance cultures to detect colonized patients, ensure proper isolation precautions, and monitor effectiveness of interventions
- Gained a better understanding of how CRE is spread between hospitals when patients are transferred, a critical step in regional prevention efforts
- As a result of this partnership, the hospital was able to prevent the spread of CRE, resulting in a dramatic reduction in the number of patients with CRE in the facility

### CDC's Role

CDC sent a team of disease detectives to Florida to assist the state and a healthcare facility stop a CRE outbreak. The team reviewed nearly 2 years of microbiology records from the long-term acute care hospital to determine the extent of the CRE outbreak. They observed infection control practices at the hospital and conducted a study to determine how the spread of CRE might be occurring. Together with state and local health departments, CDC worked with the facility to develop strategies to stop the spread of CRE.

CDC labs tested CRE isolates to provide additional details about the bacteria and determine if isolates from different patients were related. When the team returned to Atlanta, CDC staff continued to provide technical assistance to Florida and the facility to refine infection prevention efforts and protect patients from CRE.

### What We Learned

- Spread of CRE can be reduced through tracking CRE and targeting prevention practices to patients who are colonized or infected with CRE.
- Critical strategies to stop CRE spread include: quickly detecting patients with CRE, separating patients with and without CRE and dedicating nursing staff and equipment to each group. Facilities must ensure constant adherence to isolation and hand hygiene practices to protect patients and save lives.
- Reducing CRE within and across healthcare facilities will require a regional public health approach.

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