

CARBAPENEM-RESISTANT ENTEROBACTERIACEAE

THREAT LEVEL **URGENT**



13,100
Estimated cases
in hospitalized
patients in 2017



1,100
Estimated
deaths in 2017



\$130M
Estimated attributable
healthcare costs in 2017

Carbapenem-resistant Enterobacteriaceae (CRE) are a major concern for patients in healthcare facilities. Some bacteria in this family are resistant to nearly all antibiotics, leaving more toxic or less effective treatment options.

WHAT YOU NEED TO KNOW

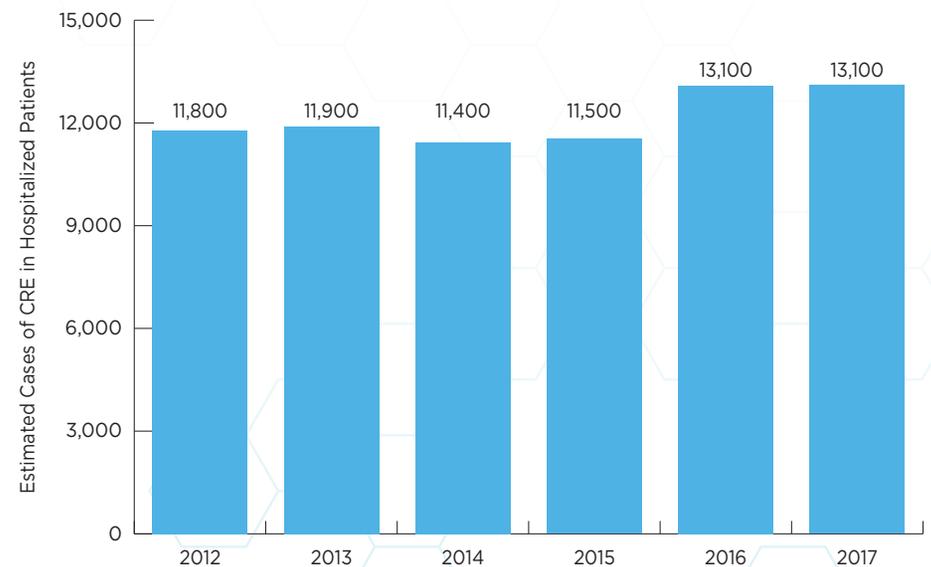
- Patients who require devices (e.g., catheters) and patients taking long courses of some antibiotics are most at risk for CRE infections.
- CRE can carry mobile genetic elements that are easily shared between bacteria. Approximately 30% of CRE carry a mobile genetic element that can make an enzyme, which makes carbapenem antibiotics ineffective and rapidly spreads resistance that destroys these important drugs.
- Preventing CRE infections and containing the spread of carbapenem resistance is important to protect people.



U.S. Department of
Health and Human Services
Centers for Disease
Control and Prevention

CASES OVER TIME

Containment strategies have prevented further spread of some types of CRE in the United States, but continued action is needed.



STOPPING CRE

CDC developed a robust system for detecting and responding to carbapenemase-producing CRE (CP-CRE) in the United States. In 2016, CDC established the Antibiotic Resistance Laboratory Network (AR Lab Network). Through the network, labs in 50 states, many major cities, and Puerto Rico provide clinical laboratories access to advanced detection capacities to identify patients with CP-CRE infections. The AR Lab Network also provides testing to screen people at risk for CP-CRE to help slow or stop its spread.

Patients with CP-CRE may have gone unrecognized before the AR Lab Network. When CP-CRE is identified now, health departments and healthcare facilities can take action to contain its spread, such as having healthcare providers wear gowns and gloves when providing care. This new national public health infrastructure means rapid action is taken to stop spread when even one CP-CRE case is identified.



CDC'S AR LAB NETWORK

To avoid spread seen in the past, CDC funded infrastructure to rapidly detect and respond to future unusual resistance threats. Laboratories nationwide work together to fight antibiotic resistance.



CLINICAL LABS

Collect and submit patient samples for testing at public health department and regional labs



PUBLIC HEALTH DEPARTMENT LABS

Characterize patient samples for species type, carbapenemase production, and resistance profiles



7 REGIONAL LABS AND NATIONAL TB CENTER

Detect antibiotic resistance, track changes in resistance, and identify outbreaks



CDC

Coordinates the network, provides technical expertise, and supports outbreak responses

ONLINE RESOURCES

About CRE in Healthcare Settings

www.cdc.gov/hai/organisms/cre

CDC Vital Signs: Containing Unusual Resistance

www.cdc.gov/vitalsigns/containing-unusual-resistance