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Seth Peters

Rhode Island Department of Health

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USING HOSPITAL DISCHARGE DATA TO ASSESS TRENDS OF CARBAPENEM-RESISTANT ENTEROBACTERIACEAE IN RHODE ISLAND

Seth Peters, MPH, and Sarah Hart Shuford, MPH
Center for Acute Infectious Disease Epidemiology, Division of Preparedness, Response, Infectious Disease, and Emergency Medical Services, Rhode Island Department of Health

In 2017, Carbapenem-resistant Enterobacteriaceae (CRE) will become a reportable infectious disease in Rhode Island. To prepare for this updated regulation, the Center for Acute Infectious Disease Epidemiology (CAIDE) analyzed Rhode Island Hospital Discharge Data (HDD), internal epidemiologic line lists, as well as antibiograms from local laboratories to gauge past incidence of CRE in Rhode Island healthcare facilities.

CAIDE used the HDD for a retrospective assessment of statewide CRE incidence in acute care hospitals from 2011-2015 using SAS 9.3 (SAS Institute, Cary, NC). Epidemiologists compiled lists of ICD-9/ICD-10 diagnosis codes that when combined indicate CRE. Codes included specific infections, antimicrobial resistance, and different specified sites (e.g. blood, urinary tract, lungs). The results of HDD inpatient population data analysis included annual counts of potential CRE diagnoses, which were used to calculate corresponding annual inpatient rates of CRE.

The results from this research inform CAIDE's development strategy for both a statewide surveillance system and registry for CRE. Moreover, CAIDE has an enhanced understanding of annual trends to predict more accurately the potential burden of the mandatory CRE reporting on the Rhode Island Department of Health.

Contact:

Seth Peters, MPH
Sarah Hart Shuford, MPH
Rhode Island Department of Health
Seth.Peters@health.ri.gov
Hart.Shuford@health.ri.gov