Rates of methicillin-resistant S. aureus bloodstream infections and infection control policies in California hospitals

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Background

- Healthcare-associated infections (HAI) caused by methicillin resistant Staphylococcus aureus (MRSA) are associated with significant morbidity and mortality in the acute care setting.
- There is a paucity of data on the extent to which infection control strategies are adopted in the hospital setting.

Purpose

- The purpose of this analysis was to identify infection control practices used by California hospitals to prevent MRSA after the implementation of mandatory reporting requirements and targeted MRSA screening requirements in the state in January 2009.

Methods and Materials

- A cross-sectional survey of infection control departments from acute care California Hospitals was conducted in the Spring of 2010.
- Respondents were asked to report the presence of specific policies directed at MRSA including:
  - Use of surveillance cultures
  - Screening for MRSA upon admission and periodically after
  - Use of presumptive isolation/contact precautions for patients with pending screens and for culture-positive patients
  - Screening of microbiology results to identify MRSA cases
- Quarterly MRSA bloodstream infection (BSI) rates were also collected.
- Descriptive statistics were conducted to examine rates of MRSA BSI and to describe the presence of MRSA infection control policies.

Results

- 180 hospitals completed the survey (response rate = 54%)
- The mean MRSA BSI Rate was 1.50 per 1000 central line days (n = 92, median = 0, range = 0 – 98) and 0.96 per 1000 inpatient days (n = 108, median = 0, range = 0 – 5.1).
- The most frequently used surveillance methods for MRSA was standard culture (36.7%), MRSA selective agar (32.2%) and PCR (23.9%).
- Most hospitals (87.3%) reported the use of targeted screening upon admission, specifically:
  - Transfers from nursing homes (96.0%)
  - Readmissions within 30 days (89.4%)
  - ICU patients (86.8%)
  - Dialysis patients (76.8%)
  - Patients with specific medical conditions (55.0%).

Conclusions

- This study represents a snapshot of the infection control policies aimed at MRSA utilized by California hospitals following implementation of mandatory reporting requirements.
- Most hospitals are involved in activities to decrease MRSA; however, there is variation in the specific type of activities utilized.