

Abstract:

Background – Although many studies have examined outcomes of health care-associated bloodstream infections (HCABSIs), population-based estimates of length of stay (LOS) and costs have seldom been reported.

Objectives – Our objective was to generate US national estimates of LOS and costs associated with HCABSIs using the 2003 National Inpatient Sample (NIS).

Methods – This study utilized a matched case-control design to estimate LOS and costs associated with HCABSIs based on the 2003 (NIS). A special set of ICD-9-CM codes was used to identify cases. A 1:1 matching procedure was used in which HCABSIs in patients were matched with uninfected patients based on age, sex, and admission diagnosis. We performed weighted analysis to construct population estimates and their standard deviations for LOS and total charges.

Results – After applying the case finding criteria, 113,436 HCBSI cases were identified. The
weighted mean LOS for HCABSIs cases was 16.0 days compared with 5.4 days for the control group (P < .001). The weighted mean total charges for patients with HCABSIs were $85,813 ($110,183 US in 2010) compared with $22,821 ($29,302 US in 2010) for uninfected patients (P < .001). We estimated that, in 2003, HCABSIs potentially cost the US economy nearly $29 billion ($37.24 billion US in 2010).

Conclusion – This study estimated the economic burden of HCABSIs on the US national economy. With some modifications, the annually published NIS data could be useful as a national surveillance tool for health care adverse events including HCABSIs.