OBJECTIVE

To assess whether cost savings can be achieved by eliminating the use of long-acting antibiotics (eg, linezolid, vancomycin) in the outpatient management of acute bacterial skin and skin structure infections (ABSSSI).

METHODS

The study included all patients aged ≥18 years with an inpatient admission occurring between January 2011 and December 2014 with ≥1 diagnosis related group (MS-DRG) code of 602, 603, 581, or 863. Exclusion criteria included patients who exhibited evidence of severe disease during their admission (major complications and comorbidities [MCC] or complications [CC]), patients with 3-part S aureus infection, and patients with other infections, such as osteomyelitis. The outcome of interest was the number of inpatient admissions and the number of cases of ABSSSI-related readmissions. The study was performed using data from the Agency for Healthcare Research and Quality’s Nationwide Readmissions Database (2015). The study was approved by the institutional review board (IRB) of the study sponsors.

RESULTS

The study included 147,565 admissions for ABSSSI. The median age was 51 years (interquartile range [IQR], 38–63 years), 49.4% of admissions were female, 15.6% were discharged to a skilled nursing facility, and 14.7% were transferred to another inpatient facility. Abdominal infections were the most common type of infection, followed by skin infections and bone/joint infections. The most common infections were Staphylococcus aureus (39.8%), followed by Streptococcus (29.3%), and other organisms (29.9%). Antibiotics were used during most admissions (95%), and were used without concomitant oral antibiotics or antibiotics with other routes of administration in 69.7% of admissions. The average length of stay was 5.2 days, and the median length of stay was 4 days. The most common procedures included radiology and imaging procedures and services (16.7%), laboratory and diagnostic procedures and services (11.8%), surgery procedures and services (9.5%), and nonantibiotic medication acquisition (9.3%).

CONCLUSIONS

Potentially unnecessary admissions may represent the largest potential area for savings, and may eliminate the need for inpatient hospitalization for appropriate, low-risk patients, which could help reduce this substantial cost incurred by US hospitals.

REFERENCES


ACKNOWLEDGMENTS

The authors thank Allergan plc, Irvine, CA 92612-1599, for facilitating this research.

CONCLUSIONS

- ABSSSI admissions have a significant economic impact on US hospitals, costing an estimated $58.6 billion in 2014.
  - Largely due to room and board hospital costs.
  - Potentially unnecessary admissions, comprising 13.5% of ABSSSI admissions, were estimated to cost US hospitals $161 million in 2014.
  - Newer, less-toxic antibiotic therapies may eliminate the need for hospitalization for appropriate, low-risk patients, which could help reduce this substantial cost incurred by US hospitals.

DISCLOSURES

The authors report no conflicts of interest. The authors are employees of Allergan plc. Allergan plc may profit from clinical trials and other research activities related to this manuscript. This manuscript was prepared in accordance with good publishing practices and was peer-reviewed by two independent reviewers.

ACKNOWLEDGMENTS

The authors thank Allergan plc, Irvine, CA 92612-1599, for facilitating this research.