Successful Early Discharge and Avoided Hospitalization for Methicillin-Resistant Staphylococcus aureus (MRSA) Infections
Treated with Outpatient Parenteral Antimicrobial Therapy (OPAT) Result in Healthcare Cost Savings

Robin H. Dredder, MD, FIDSA1; Quyen Luu, MD1; Richard C. Prokesch, MD, FACP, FIDSA2; Andrew H. Kinsky, MD1; H. Barry Baker, MD, FACP1; Claudia P. Schroeder, PharmD, PhD3; Lucinda J. Van Angelen, PharmD4

1. Infectious Disease Specialists of Atlanta, PC, Decatur, GA; 2. Quyen Luu, MD, Macon, GA; 3. Infectious Diseases Associates, Riverside, GA; 4. Infectious Diseases Associates, Sarasota, FL; 1Infectious Disease Physicians, Miami, FL; 2Heals Infusion Therapy, Inc., Sugar Land, TX

ABSTRACT, revised
Background: Methicillin-resistant Staphylococcus aureus (MRSA) infections are responsible for 25% of all healthcare-associated infections in the USA. For the federal government, prevention and treatment of MRSA has increased significantly in recent years. Hospital-acquired infections (HAIs) by infecting organisms cause an estimated $45 billion dollars annually. The primary objective of this study was to determine the cost savings associated with MRSA infections treated with OPAT compared to hospitalization.

Methods: The dataset was composed of 620 patients with MRSA infections. The study started on the assumption that 63% of the infections were hospital-acquired (HA) and 37% were in the community (CM). The treatment duration was determined by daily antimicrobial costs calculated with the daily weighted average cost (DAWC) of each antimicrobial. The daily cost per gram (CGD) was used for calculating total costs. The study analyzed cost savings as a percentage of inpatient costs (inpatient cost savings) and as saved cost (saved cost savings).

Results: On average, 164 of 186 patients (88%) were discharged from the hospital without complications, and 75% had complete resolution of their MRSA infection. The study included 204 patients with a mean duration of 4.6 days. The study revealed a high overall discharge rate of 95% and no significant difference between patients on OPAT and patients who received hospital therapy. In the case of 44% of hospitalized patients, the length of stay was reduced by 3.5 days. The average savings as a percentage of inpatient cost was 135% and the total savings were $1,130,632.

Discussion: The study results demonstrate that OPAT provides a significant reduction in hospitalization costs compared to hospital therapy. The study suggests that OPAT can be a cost-effective alternative to hospitalization for the treatment of MRSA infections. The study results are consistent with previous studies that have shown that OPAT is associated with lower costs and shorter stays compared to hospital therapy. The study results also support the growing trend towards the use of OPAT for the treatment of MRSA infections.

Conclusion: The study demonstrated that OPAT is a cost-effective alternative to hospital therapy for the treatment of MRSA infections. The study results suggest that OPAT can be used to reduce hospitalization costs and improve outcomes for patients with MRSA infections.