Implementing an Antimicrobial Stewardship Program

Angela Vassallo, MPH, MS, CIC, Snezana Naumovski, PharmD, Sarah Turkel, MPH, MS, MT(ASCP)
Tanya Eigourt, PharmD, Robert Winters, MD, and Ellie JC Goldstein, MD
Saint John’s Health Center, Santa Monica, CA

BACKGROUND
The Antimicrobial Stewardship Program (ASP) at Providence Saint John’s Health Center was implemented in June, 2013. The Antimicrobial Stewardship Team, made up of representatives from Pharmacy and Infectious Disease Services, was established in two phases: 1st phase (3-6 months) and 2nd phase (>6 months).

1st phase:
1. Familiarize physicians with the program
2. Develop physician interactions related to antimicrobial stewardship
3. Create policies and procedures.

2nd Phase: Identify and quantify the benefits of the ASP (drug cost savings, decreased length of stay, decreased days of therapy).

PURPOSE
The purpose of this study is to evaluate the impact of antimicrobial stewardship on the usage of restricted and broad-spectrum antibiotics, measured as the number of doses administered over a period of time. Additionally, the study determined the cost-saving benefits of this program.

METHODS
The ASP tracked the following interventions in each phase: IV to PO, dosing adjustment redundancy, de-escalation of restricted and high-cost antibiotics (Daptomycin, Ertapenem, Ceftaroline, Linezolid, Vancomycin, Cefepime and Piperacillin-tazobactam), drug/bug mismatch, streamlining of broad-spectrum therapy and duration of treatment.

The cost savings impact of the ASP was determined by evaluating pharmacy-purchasing data as well as the difference in drug utilization, hospital-wide, during the study period.

RESULTS

CONCLUSION
Overall, physicians were receptive to the ASP program and intervention acceptance increased with each phase of implementation. Specifically, ID physician intervention acceptance increased from 19% in quarter 3, 2013 to 43% in quarter 2, 2014. During phases 1 and 2, the most frequently made interventions were redundancy and de-escalation. De-escalation was the highest cost saving intervention ($94,250). Total cost savings since ASP was implemented was estimated $134,323.42. Number of total doses of restricted and high-cost antibiotics showed significant decreases since the start of ASP. Future ASP goals are the development of an ASP policy with consequences for MDs who do not follow ASP recommendations and the analysis of the possible correlation between hospital-associated MDROs and an effective hospital ASP.

REFERENCES
APIC. Text for Infection Prevention, 2012