2014 Gage Awards

Reference #	7490502
Status	Complete
Name of hospital or health system	St. Luke's Magic Valley
Name of project	Antimicrobial Stewardship
CEO name	James Angle
CEO approval	Check here to confirm that your CEO approves of this project being submitted for a 2014 Gage Award
Submitter name (first and last)	Courtney Willis, BSN RN
Submitter title	Infection Prevention Practioner
Submitter email	courtneyw@slhs.org
Submitter phone	208-358-2555
Project contact person's name (First and Last)	Kenny Alexander- Pharm-D
Project contact title	Antimicrobial Stewardhsip Lead
Project contact email	courtneyw@slhs.org
Project contact phone	208-3083517
Within which of the two categories does your application best align?	Quality

1. Provide a brief description of the project. (This section should resemble an abstract for a poster presentation or an abstract for a peer reviewed journal. Include an objective, data sources, study design, findings, and conclusions.)	Objective: The SLMV Antimicrobial Stewardship group, aka “The Bug Squad,” is a multidisciplinary group of physicians, a pharmacist, nurse leaders and microbiologists with a goal of optimizing clinical outcomes, reducing costs & complications for patients, and closely monitoring/managing antimicrobial resistant bacterial strains. Data Sources: Collection methodology: -Daily screening of census -Daily screening of housewide antibiotic usage -Daily screening of all Hospitalist patients -Daily tracking of all changes made to antibiotic therapy initiated by Bug Squad Members Data is aggregated as follows: -All cases reviewed in Bug Squad meetings are tracked by intervention and review type -Cases in which antibiotic therapy is discontinued or de-escalated are tracked and correlated with a cost savings to the patient given an estimated length of treatment. Findings: Through its concurrent review process of all carbapenem usages in an effort to preserve the drug / prevent misuse and through a feedback to loop to providers, the Bug Squad has successfully avoided a formulary restriction. Additionally, the Bug Squad has saved patients a projected $837,793 over the course of a year through prompt antibiotic de-escalations and adjustments. A review of SLMV’s antibiogram over the course of 10 years with an active effort of antimicrobial stewardship indicates that susceptibilities have been preserved for many organisms including E.Coli and Klebsiella Pneumoniae – meaning there has been no change in the level of the organisms susceptibility. Conclusions: Through Bug Squad’s continual monitoring of SLMV antibiotic usage and its interventions, it has slowed down the progression of multiple drug resistant organisms and has resulted with significant cost savings to patients. It can be reasonably projected that through its continued efforts around antimicrobial stewardship that the Bug Squad will continue to preserve its antibiogram and increase patient safety and satisfaction – leading to a higher quality of care.
1A. Attachment, if applicable (Applicable examples include a peer reviewed journal article, other content published in the literature, or a presentation at a national meeting)	SHEA-IDSA-PIDSpolicystatement.docx (42k)

2. Describe the methods use in this project. Include where, why, and how the project was accomplished.	The Bug Squad meets formally twice a week, although is frequently consulted outside of the meetings. The team members consult with each other regularly on a daily basis. The multidisciplinary stewardship team consists of a Pharmacist, an Intensivist, a Hospitalist, Microbiology, Infection Prevention, the Sepsis Coordinator, and Ad Hoc Consultants from Pathology and Surgery. At the meetings current patient cases are reviewed including antibiotic coverage, diagnosis and microbiology to ensure cost-effective and appropriate coverage. Antibiotic usage identified as costly or high-risk for appropriateness are also reviewed. The chair of the stewardship team is a pharmacist who calls the attending physician caring for the patient with the group recommendations at the time of the discussion. He is also the Hospitalist group pharmacist, and meets each morning (Monday-Friday) with the hospitalists during their patient reports for consultation, dose optimization and de-escalation of all patients on service. With the review the diagnosis, clinical presentation, lab results, and any other pertinent data to assess antibiotic usage, some patients are able to be de-escalated to a more appropriate, less toxic antibiotic. Patient's treatments are also assessed for a cost effective alternative that is available, if appropriate. The team has put together an antibiogram for the prescribing healthcare providers to assess local susceptibility rates to assist them in selecting their antibiotic therapy and to monitor the resistance trends in our community. A booklet was created for prescribing providers to discuss multi-drug resistant organisms, the preferred antibiotic therapy, and the isolation precautions as required by the Centers for Disease Control (CDC). In 2012, the Bug Squad decided to take a look at its carbapenem usage due to the national trend of emerging resistant organisms. Many hospitals nationally use a formulary restriction to preserve this antibiotic and the Bug Squad wanted to avoid this if possible due to limited resources for approval of its usage. The Bug Squad began a review of all carbapenem usage for appropriateness and created a feedback loop to providers should misuse occur. In 2012, one provider was notified of inappropriate use with positive results. In 2013 two letters were sent to physicians requesting that they use other antibiotics first before starting therapy with Carbapenems. The team felt that using Carbapenems with patients with no allergies to other antibiotics was an abuse of this antibiotic. The physicians were very receptive and began using a more directed and appropriate therapy. Through this review process and feedback loop, a formulary restriction has been avoided.

3. Describe the results of the project. What data was used to support improvement results?	Through its concurrent review process of all carbapenem usages in an effort to preserve the drug, prevent misuse and through a feedback to loop to providers, the Bug Squad has successfully avoided a formulary restriction. Additionally, the Bug Squad has saved patients a projected $837,793 over the course of a year through prompt antibiotic de-escalations and adjustments. A review of SLMV's antibiogram over the course of 10 years with an active effort of antimicrobial stewardship indicates that susceptibilities have been preserved for many organisms including E.Coli and Klebsiella Pneumoniae – meaning there has been no change in the level of the organisms susceptibility. The stewardship committee estimated patient cost savings over a twelve month period was $50,000 to $55,000 per month. On average during the formal twice weekly meetings there have been 54 antibiotic changes per month, over the past 6 months
3A. Attachment, if applicable (Only graphically displayed data such as charts will be accepted. Data should include baseline and improvement data)	GageAward22.xlsx (264k)
4. Describe what happened as a result of the project. Was the improvement related to the intervention? Can the project be duplicated by other organizations?	This is innovative work due to bringing in experts from various specialties to consult on each admitted patient that is at St. Luke's Magic Valley that is on a high risk or expensive antibiotics to find the best course of treatment for them. It is not typical to use a multidisciplinary team on an antimicrobial stewardship especially of this stature or to have them meet formally this frequently. This is also innovative due to the changing of physician behavior. Most physicians respect the work that the antimicrobial stewardship team does, and they have all been receptive to the recommendations. The antibiotic stewardship has played a big role in slowing antibiotic resistance and improvement in the quality of care of patients, and the community they live in. This project can and should be duplicated by other organizations. In fact,the CDC states that improving antibiotic use is a medication-safety and patient-safety issue. Antimicrobial Stewardship has also been recommended by The Society for HealthCare Epidemiology of America (SHEA), PubMed, Association for Professionals in Infection Control and Epidemiology (APIC), the Infectious Diseases Society of America (IDSA) and many more reputable organizations.

5. Describe how patients, families, and if appropriate, community was included in the work.	The team follows along patients antibiotic therapies and inpatient treatments, to minimize the adverse events related to overuse of antibiotics and decrease the possibility of patients getting a multidrug resistant organism from exposure to unnecessary antibiotics. This optimizes drug therapy and clinical outcomes, leading to a decrease in readmissions and increase in patient satisfaction and quality of care. Stewardship provides better health for populations by decreasing the amount of antimicrobial resistance in our communities. The team recently reached out to their community through a news broadcast called “Eye on Health” to educate on antibiotic resistance. They want the community to know that they are working with them, to find the most cost effective alternative and bestantibiotic therapy for them. The Infection Prevention nurses also educate student nurses and graduate nurses on what antimicrobial stewardship is, and why it is being done. From October 2012 to October 2013 the stewardship committees average monthly estimated patient cost savings were between $50,000 to $55,000 per month. This includes cases in which the patient’s antibiotic therapy was optimized by de-escalation, and adjustments made in antibiotic therapy in relation to microbiology findings, clinical response and available cost-considerate alternative antibiotics. Based on patient’s diagnosis, allergies, and lab results the team assesses for cost effective alternatives if available and appropriate. If the patient is unable to change antibiotics at the time their chart is being reviewed, they are reassessed a couple of days later. Discharge antibiotics are also assessed for better therapy and cost effectiveness.
5A. Attachment, if applicable (Applicable attachments include documents created for patients, families, or community members or by them as a result of the project)	HandHygieneGeneralPublic.rtf (97k)
Last Update	2013-12-13 17:43:44
Start Time	2013-12-13 16:21:43
Finish Time	2013-12-13 17:43:44