Penicillin allergy is reported by 10% of patients. Fewer than 10% of these have a positive skin test, allergy details are often sparse. Increasing gram negative resistance makes empiric therapy difficult if beta lactam antimicrobials cannot be utilized. Use of alternate agents is associated with higher costs, increased length of stay and other adverse outcomes. Vancomycin is frequently used with Aztreonam to provide gram positive coverage, exposing patients to risk of nephrotoxicity.

Methods: Several stepped interventions were instituted. At our institution, Aztreonam was frequently administered when penicillin allergy was noted. Annual cost for Aztreonam acquisition reached $360,000 annually. Requiring infectious disease approval for Aztreonam use: annual cost decreased by 2/3, to $108,000. Antibiotic Stewardship team approval required for Aztreonam use: annual cost decreased to $33,000.

Results: We evaluated 212 patients between July 1 of 2010 and April 22, 2014 who received at least one dose of Aztreonam. The single most frequent reason for Aztreonam request was penicillin allergy in form of rash. In 60% of patients a history of beta lactam administration could be documented after review of medical records and beta lactams were utilized. Quinolones were substituted in less than 15% of the time.

Carbapenem graded challenge:
1. 1% full dose given 30 mins observation
2. 10% full dose given 30 mins observation
3. Full dose given

Aztreonam substitution:
- Cephalosporins 61%
- Quinolones 15%
- Carbapenem 9%
- Aztreonam 15%

Conclusions: These interventions have led to marked decrease in the use of aztreonam in favor of cephalosporins and carbapenem antimicrobials, allowing for annual cost savings of $343,000 and the ability to choose from wider selections of antimicrobial agents.

REFERENCES
2. Food, drug, insect sting allergy, and anaphylaxis Health care use and serious infection prevalence associated with penicillin "allergy" in hospitalized patients: A cohort study. E. Macy, MD, MS,a and R. Contreras, MSb San Diego and Pasadena, Calif 2013.