Implementation and Year 3 Outcomes of an Antimicrobial Stewardship Program in a Community Hospital

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Objectives
Small community hospitals often have limited staffing and infrastructure resources to dedicate towards antimicrobial stewardship (AS). We describe the implementation and results of a pharmacist-led (0.3 FTE) AS program over a 3 year period in a 150 bed community hospital using multiple AS interventions.

Methods
Initial assessment of antibiotic use was performed in summer 2016. The overuse of piperacillin-tazobactam (TZP) and fluoroquinolones (FQ) was identified as priority areas for intervention. The AS program utilizes multiple strategies:
• local guidelines for empiric antibiotic prescribing
• specific clinical recommendations for fluoroquinolones, vancomycin and piperacillin-tazobactam including alternate agents
• publishing of an annual local antibiogram
• IV to PO therapeutic interchange
• Prospective audit and feedback is performed on a limited basis.
• Infectious diseases consultation is available remotely.

Results
• FQ use has decreased 68% (25 vs. 74 DDD/1000 patient days)
• TZP use has decreased 46% (17.8 vs. 33 DDD/1000 patient days).
• Meropenem use decreased 80% (2 vs. 10 DDD/1000 patient days).
• When FQs were prescribed, a 12% decrease in parenteral administration was observed.
• There has been a demonstrated trend towards narrow-spectrum antibiotic use with 1st and 2nd generation cephalosporins representing 49% of all antimicrobials prescribed compared to 25% at baseline.

Conclusion
We demonstrate that an antimicrobial stewardship program can be successfully implemented in a community hospital with a significant impact in antimicrobial prescribing. Wider adoption of ASPs in community hospitals is essential in minimizing antimicrobial resistance and improving patient safety.

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