Successes of a system-directed and multi-faceted inpatient antimicrobial stewardship program in a large, integrated delivery organization

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The purpose of this study was to describe the system ASP committee led by ID physicians and to evaluate changes in antibiotic use over two time periods across a large integrated delivery system.

**Methods**

- The interdisciplinary ASP committee created and approved antibiotic use guidelines (see figure 2B), policies, and set performance goals related to antibiotic use, which were then implemented at local facilities.
- Beginning July 2016, all 22 acute care facilities were live with a clinical decision support (CDS) tool (MedMined®, BD, Franklin Lakes, NJ), a mobile device platform (Dorsata, Arlington, VA), for physician access to ASP guidelines (see figure 2A), and a requirement for antibiotic review at 48 hours and 7 days performed by pharmacists.
- The CDS software also provided tracking of utilization data as well as point of care (PO) conversion and multi-faceted inpatient antimicrobial stewardship feedback.
- The committee’s purpose was to facilitate local implementation of antimicrobial stewardship elements recommended by the CDC and required for accreditation (i.e., TJC and CMS) and to improve antibiotic use in the health system.1,4
- The purpose of this study was to describe the system ASP structure, interventions implemented by the ASP, and evaluate changes in antibiotic use over two time periods across a large integrated delivery system.

**Results**

- While overall system trends show improvement, future efforts will continue to focus on reducing antibiotic use, as variability in antibiotic use over the time period.
- Antibiotics (carbapenems, fluoroquinolones and vancomycin).
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**Discussion**

- BSWH has made significant progress with reducing targeted antibiotics (carbapenems, fluoroquinolones and vancomycin). Daptomycin remains at a low level of use.
- Carbapenem and fluoroquinolones were comparably used over time period 1 compared to time period 2.
- Other large health systems have reported on a system ASP structure and metrics followed, with similar progress.
- Despite a reportedly worse fluoroquinolones resistance pattern, BSWH was able to easily gain feedback through a clinical decision support tool.

**Conclusion**

- The ASP committee was composed over one year ago due to expected seasonality of antibiotic use. Despite a reportedly worse fluoroquinolones resistance pattern, BSWH was able to easily gain feedback through a clinical decision support tool.
- Local institutional guidelines are paramount, as frontline stewardship personnel use these to make recommendations.
- While overall system trends show improvement, future efforts will continue to focus on reducing antibiotic use, as variability in antibiotic use over the time period.

**References**