1545. Impact of System-wide Adoption of CDC Core Elements on Antimicrobial Use and *Clostridium difficile* Infection in a Large Health System

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Background. Antimicrobial stewardship programs (ASP) can help reduce the risk of development of multi-drug resistant organisms, and *Clostridium difficile* infections. The Centers for Disease Control and Prevention (CDC) recommended core elements for successful implementation of ASPs in 2014. We describe the adoption of the core elements and associated outcomes at a large health system in the United States.

Methods. We organized our program based on the seven core elements. We focused on 1) making antimicrobial stewardship a system priority with full leadership support, 2) creating an infrastructure to promote and disseminate best practices, 3) standardizing indications for use of the different antimicrobial classes promoting most narrow-spectrum agents, and 4) building capacity for hospitals to achieve their goals from local leadership buy-in to infrastructure to do the work.

Results. Local ASPs were established in 89 hospitals. 3.3 million defined daily doses (DDD) were used in FY16 compared with 2.9 million in FY16 and 2.8 million in FY17. There was a drop in systemic antimicrobial use from 877 (FY15) to 809 (FY16) and 776 (FY17) DDDs/1000 patient-days (7.7% and 4.1% reduction in FY 16 and FY 17; P < 0.001) (Figure 1 and 2). In addition, hospital onset C. difficile lab ID events standardized infection ratios (SIR) dropped from 0.89 (events=2292) in FY15 to 0.84 (events=2056) in FY16 (5.6% reduction) and 0.75 in FY 17 (events=1818), a 10.7% reduction compared with FY16.

Conclusion. Implementation of the CDC core elements in a very large health system has led to both an improvement in total systemic and targeted antibiotic use and reduction in C. difficile infections.