

Figure 2.

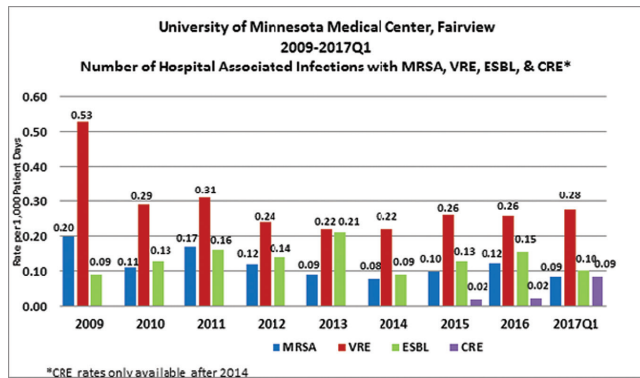
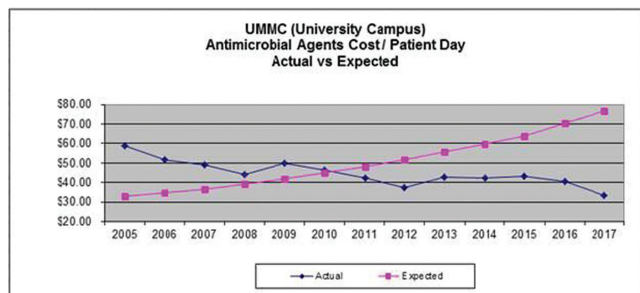


Figure 3.



Disclosures. All authors: No reported disclosures.

729. Impact of An Electronic “Antibiotic Time Out” on Provider Prescribing Patterns

Sui Kwong Li, MD¹; James S. Lewis II, PharmD, FIDSA²; Graeme N. Forrest, MBBS, FIDSA³; Miriam R. Elman, MPH⁴ and Jessica C. McGregor, PhD⁵; ¹Division of Infectious Diseases, Oregon Health & Science University, Portland, Oregon, ²Department of Pharmacy, Oregon Health & Science University, Portland, Oregon, ³Division of Infectious Disease, Veterans Affairs Portland Health Care System, Portland, Oregon, ⁴Department of Pharmacy Practice, Oregon State University/Oregon Health & Science University College of Pharmacy, Portland, Oregon, ⁵Department Pharmacy Practice, Oregon State University College of Pharmacy, Portland, Oregon

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Background. Current antibiotic stewardship guidelines suggest the use of an antibiotic time-out (ATO) 48–72 hours after antibiotic initiation to encourage review of empiric regimens once additional diagnostic information is available; however, the recommendation is based on low-quality evidence. Our objective was to retrospectively evaluate the impact of an electronic ATO alert within the EPIC™ electronic health record on provider prescribing patterns after implementation.

Methods. The ATO alerts were instituted in January 2017 and were triggered when an inpatient received Vancomycin (VAN), Piperacillin/Tazobactam (PT), Ceftriaxone (CEF), or a combination of them for >72 hours. We used an EPIC™ benchside report to identify ATO alerts between January and April 2017 and systematically reviewed charts from the last week of each month to identify de-escalation opportunities (DEO). Pediatric, bone marrow transplant, orthopedic, and cystic fibrosis patients were excluded. The primary outcome was de-escalation

within 12 hours of the alert, defined as narrowing of spectrum or discontinuation of antibiotics.

Results. We identified 805 alerts among 209 patients; 87 patients were excluded from analysis. Among 122 included patients, a median of 3 alerts were triggered per patient (470 in total). DEO was identified in 34.7% of alerts; de-escalation events (DEE) occurred in 34.3% of DEO. Table 1 lists alerts, DEO, and DEE by antibiotic. PT was the most frequently de-escalated antibiotic (46.4% [26/56] of DEE). De-escalation occurred more frequently among patients either actively followed ($P < 0.01$) or receiving new consultations by Infectious Disease ($P = 0.04$).

Table 1. De-escalation opportunities and events by antibiotic

Antibiotic	Alerts (n = 470)	De-escalation opportunities (n = 163)	De-escalation events (n = 56)
VAN	130 (27.6%)	23 (14.1%)	8 (14.3%)
PT	137 (29.1%)	66 (40.5%)	26 (46.4%)
CEF	123 (26.2%)	9 (5.5%)	6 (10.7%)
VAN/PT	65 (13.8%)	62 (38.0%)	15 (26.8%)
VAN/CEF	15 (3.2%)	3 (1.8%)	1 (1.8%)

Conclusion. An electronic ATO alert triggered only on the basis of drug and duration lacked specificity in identifying opportunities for antibiotic de-escalation. De-escalation occurred significantly more frequently with Infectious Disease team involvement. Additional study is required to identify how to best support de-escalation efforts.

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730. Implementation and Outcomes of an Advanced Antimicrobial Stewardship Program at a Quaternary Care Hospital in the United Arab Emirates

Rania El-Lababidi, Pharm.D.¹; Mohammad Mooty, MD²; Ahmad Nusair, MD² and Maria-Fernanda Bonilla, MD²; ¹Department of Pharmacy Services, Cleveland Clinic Abu Dhabi, Abu Dhabi, United Arab Emirates, ²Infectious Diseases, Cleveland Clinic Abu Dhabi, Abu Dhabi, United Arab Emirates

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Background. Antimicrobial stewardship programs (ASPs) are pivotal in health-care facilities to curb antimicrobial resistance, improve patient outcomes and decrease healthcare costs. There is lack of literature on integrating the electronic medical record and electronic surveillance into antimicrobial stewardship in the Middle East. We describe our experience with implementing an advanced antimicrobial stewardship program using computerized clinical decision support system (CDSS) and electronic real-time surveillance software at a newly operated quaternary care hospital in the United Arab Emirates.

Methods. The ASP was implemented at hospital inception in April 2015. ASP utilized strategies described in the IDSA/SHEA guidelines including the use of rapid diagnostics, CDSS and electronic real-time surveillance. Antimicrobial therapy consumption was monitored monthly and reported in days of therapy per (DOT) per 1,000 inpatient days. Antimicrobial cost was analysed as total antimicrobials dispensed (AED) per 1,000 inpatient days. Antimicrobial therapy consumption and cost were analysed from the third-quarter of 2015 until the first quarter of 2017.

Results. Although our program has only been active for a little over 2 years, it has achieved significant decrease in the use of targeted antimicrobials. Carbapenem use decreased by 32%, from 105 to 71 DOT/1,000 inpatient days ($P = 0.05$). Anti-MRSA agents use decreased by 57% from 109 to 46 DOT/1,000 inpatient days ($P = 0.003$), and anti-pseudomonal β -lactam use decreased by 49% from 84 to 43 DOT/1,000 inpatient days ($P = 0.015$). Total cost of antimicrobial therapy decreased as well by 67% from 323 AED/1,000 inpatient days to 105 AED/1,000 inpatient days, ($P = 0.01$), with a hard cost total saving of 943,324 AED (256,338 USD) since program inception. There was no change in the severity of illness scores as measured by the hospital Case Mix Index (CMI) during the study period.

Conclusion. To our knowledge this is the first advanced ASP program in the United Arab Emirates utilizing CDSS and electronic real-time surveillance. Our program demonstrated a significant decrease in the use and total cost of antimicrobials since hospital inception despite a significant increase in patient volume.

Disclosures. All authors: No reported disclosures.