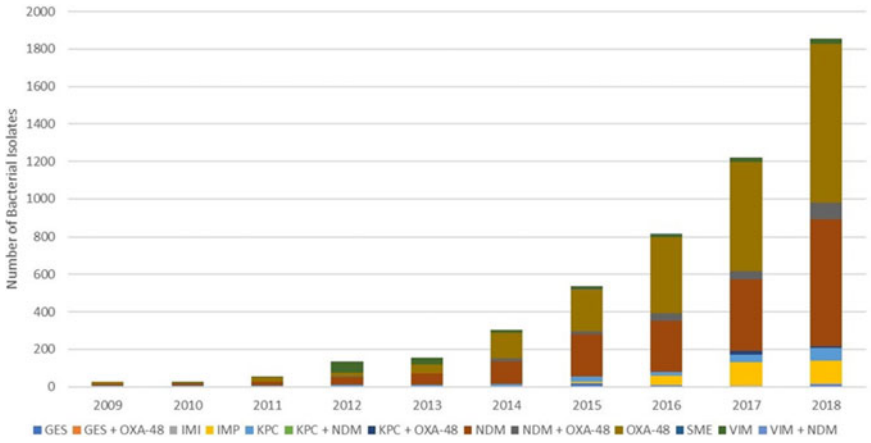

Fig. 1

44.9%), followed by NDM (1822, 35.5%), IMP (313, 6.1%), VIM (207, 4.0%), NDM+OXA-48-like (205, 4.0%), and KPC (196, 3.8%). The first detection of a CPE with 2 distinct enzymes occurred in 2012 (OXA-48-like and NDM) and since then 235 co-detections have been identified; 233 related to OXA-48-like with another gene. **Conclusion:** The first CPE isolate in London was identified in 2003, a *Klebsiella* spp with a VIM enzyme. The number of isolates submitted to the national reference laboratory has continued to increase year on year. VIM and NDM carbapenemases predominated in the early years, because of their association with several outbreaks; these have now been overwhelmed by OXA-48-like detections and outbreaks. The increasing numbers of CPE with a combination of a metallo- and a non-metallo carbapenemase increases the therapeutic challenges to treat infected patients. Bacteremia caused by CPE remains rare, suggesting that infection prevention and control efforts are having some impact. However, as colonization prevalence increases, the number of clinical infections will rise in the future unless control measures to limit transmission and spread are improved.

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Clinical Metrics for a Large Healthcare System's Antimicrobial Management Program

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Background: Clinical metrics and outcomes for evaluation of antimicrobial management programs (AMP) are challenging and inconsistent throughout the United States. Here, we present the results of the development of clinical metrics to measure and trend AMP outcomes within 161 acute-care facilities affiliated with a large healthcare system. **Methods:** Key AMP metrics were implemented in 2018 using 2017 as baseline: use of fluoroquinolones in UTIs, dosing of vancomycin, de-escalation, and intravenous (IV)-to-oral conversion of targeted drugs. Fluoroquinolone (FQ) and UTI metric evaluated all inpatients who received at least 1 dose of a FQ based on barcoded medication administration (BCMA) data and urinary tract infections were based on cystitis ICD-10 coding. Vancomycin dosing metric evaluated inpatient vancomycin troughs within therapeutic range during the admission. De-escalation metric evaluated for patients on a broad-spectrum antibiotic with a positive culture and sensitivity to narrower antibiotics. The IV-to-oral ratio was used to monitor targeted medications. Nonantimicrobial medications appropriate for IV-to- oral conversion were included in the ratio. Goals were established for each metric using the 75th percentile and ranges for "at goal," "close to goal," and "not at goal" were established using green–yellow–red color coding. Metrics were monitored via a systemwide dashboard that included all affiliated facilities. Data were shared monthly to key stakeholders including physicians, pharmacists, and senior leadership. **Results:** From 2017 to the third quarter of 2019, the FQ and UTI metric decreased 55%. This reduction in the FQ usage in UTI metric correlated with a reduction of 26.7 days of therapy (DOT) per 1,000 days present for FQ and a 50% reduction in FQ DOT for all affiliated facilities. The vancomycin dosing metric improved 2.9% from 75.2% of patients to 78.1% of patients with at least 1 vancomycin trough within range during the admission, which represents ~2,000 more patients with dosing in the target range over baseline. The de-escalation metric improved by 7% overall from 2018 to the third quarter of 2019, which translates to ~1,600 more patients with therapy de-escalated. The IV-to-oral ratio metric improved 5.5%, which means that ~180,000 more oral dosages were administered. **Conclusions:** Implementing AMP program clinical metrics in a large health system positively influenced antimicrobial medication therapy management for patients. Monitoring of process metrics should be considered for all AMP programs to advance antibiotic stewardship.

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Decreased Hospitalizations and Costs From Infection in Sixteen Nursing Homes in the SHIELD OC Regional Decolonization Initiative

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