Presentation Type:
Poster Presentation
Variation in Measures of Antimicrobial Use Across Four Nursing Homes, Atlanta, Georgia, 2019

William Dube, Emory University School of Medicine; Sahebi Saiyed, Emory University, Department of Medicine, Division of General Medicine and Geriatrics; Patricia Comer, A.G. Rhodes Wesley Woods; Michael Hanichen, Emory Healthcare; Christie Klinczar, SAVA Senior Care, Northeast Atlanta Health and Rehabilitation Center; Crystal Price, A.G. Rhodes Wesley Woods; Scott Fridkin, Emory Healthcare and Emory University

Background: Although antibiotic stewardship programs (ASP) are now required in nursing homes, assimilating and responding to data to improve prescribing in nursing homes is novel. Four Atlanta-based skilled nursing facilities (SNFs) began collaborating (EASIL: Emory Antibiotic Stewardship in Long-Term Care) to share standardized prescribing data to allow interfacility comparisons and action. **Methods:** After SNF ASPs were evaluated and trained, standardized prescribing logs were submitted (January 2019 to June 2019) including the following data: start date, treatment site, prescriber attribution of order (ie, SNF order vs hospital order) and monthly resident days. SNF-specific point estimates of usage rates were calculated as pooled means for all antibiotic starts, SNF-order starts, and days of therapy (DOT), by treatment site per 1,000 resident days. Duration of urinary tract infection (UTI) therapy was assessed by calculating percentage of SNF-UTI starts over recommended duration defined by the local treatment guideline. Rate ratios (RRs) of use were calculated to compare SNF-specific rates to the largest SNF. The 95% CIs were calculated using normal approximation. **Results:** Monthly starts ranged from 124 to 177, with a pooled mean of 7.8 antibiotic starts (any type), 4.5 SNF-order starts, and 1.2 SNF-UTI starts per 1,000 resident days. Approximately half of all starts were SNF starts (range, 43%–53%), and less than half of DOT were attributed to SNF starts (range, 35%–45%). Overall, SNF-order treatment sites were most often UTIs (29%), lower respiratory infections (17%), and skin and soft-tissue infections (17%). SNF-order UTI starts per 1,000 patient days varied at 1 SNF (SNF B RR, 1.57; 95% CI, 1.04–2.36). SNF-order UTI DOT per 1,000 patient days was more variable, with SNFs B and C having significantly higher rates (B RR, 1.49, 1.24, and 1.82; C RR, 5.42; 95% CI, 4.65–6.34) than SNF A (Fig. 1). The percentage of SNF-order UTI starts that were over recommended duration ranged from 8% (nitrofurantoin, SNF A) to 100% (fluoroquinolones, SNF C) (Fig. 1). **Conclusions:** Although UTIs are the single most common reason to prescribe antibiotics after arriving in a SNF, they account for a small fraction of overall starts and an even smaller fraction of DOT. We identified outlier prescribing by different SNFs using 3 metrics, suggesting that distinct corrective actions are necessary to target distinct prescribing challenges (starts, duration, and transitions of care).
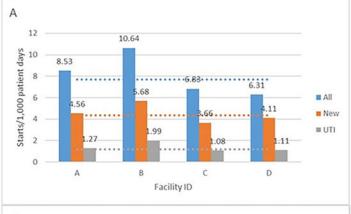
Figure. (A) Starts per 1,000 patient days and (B) days of therapy (DOT) per 1,000 patient days across, and (C) proportion of UTI-starts prescribed for longer than recommended duration among four most commonly prescribed agents, 4 long-term care facilities in Atlanta, GA. All = any antibiotic start, New = antibiotic prescribed for new condition after arriving in nursing home, UTI = new start for UTI indication.