

Conclusion. OPAT-eCIP therapy in a cohort of patients was highly effective and well-tolerated. While ED visit frequency indicates the necessity of close patient monitoring, low 30-day hospital readmission rates were encouraging. Along with the above, the significant cost savings demonstrated when compared with standard inpatient antimicrobial therapy suggest that OPAT-eCIP should be increasingly utilized as an effective therapeutic option.

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130. Effects of COVID-19 on a Complex Behavioral Intervention to Improve the Diagnosis and Management of UTI in Nursing Homes

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Session: P-07. Antimicrobial Stewardship: Program Development and Implementation

Background. Half of all urinary tract infections (UTI) are probably unnecessary. We conducted a cluster-randomized trial in which a toolkit to enhance the diagnosis and treatment of UTIs was introduced in study NHs via usual implementation versus an enhanced implementation approach based on external facilitation and peer comparison reporting.

Methods. Thirty Wisconsin NHs were randomized to each treatment arm in a 1.5:1 ratio. NHs used an online portal to report urine culture and antibiotic treatment data over a 6-month pre-intervention period (Jan-June 2019), a pre-COVID 8-month post intervention period (July 2019-Feb 2020) and an 8-month post-COVID intervention period (Mar-Oct 2020). Study outcomes included urine culture (UC), antibiotic start (AS), and antibiotic days of therapy (DOT) rates per 1,000 resident days. A generalized estimating equation model for panel data was used to assess differences in study outcomes between treatment arms before and after onset of the COVID-19 pandemic. STATA 16.1 was used for all analyses.

Results. A total of 802 UCs (457 pre-COVID, 345 post-COVID), 724 AS (401 pre-COVID, 323 post-COVID), and 6,454 DOT (3553 pre-COVID and 2901 post-COVID) were reported over the 16-month intervention period. No significant differences in the study outcomes were observed during the pre-COVID intervention period, however, UC rates in NHs assigned to the usual care arm of the study increased while those in the enhanced arm declined following onset of COVID-19 (Figure 1). AS and DOT rates followed a similar pattern although the differences between the study arms were not statistically significant.

Figure 1. Post Implementation Periods

	Period 1 (before COVID-19)			Period 2 (after COVID-19)		
	Control (Mean)	Intervention (Mean)	P-value	Control (Mean)	Intervention (Mean)	P-value
Urine Cultures (per 1,000 rdays)	1.17	1.03	0.33	1.25	0.88	0.02
Antibiotic Starts (per 1,000 rdays)	0.97	0.93	0.75	1.12	0.86	0.08
Days of Therapy (per 1,000 rdays)	8.92	7.48	0.25	9.57	7.54	0.16

Conclusion. Our findings suggest that NHs assigned to usual implementation regressed in their diagnosis and treatment of UTIs during the COVID-19 pandemic while those receiving external facilitation and peer comparison reports were more resilient to the effects of COVID-19.

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131. A Pharmacist Led Antimicrobial Stewardship Pilot at Discharge Improves Outpatient Antibiotic Utilization

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Session: P-07. Antimicrobial Stewardship: Program Development and Implementation

Background. The impact of antimicrobial stewardship programs has been well observed in institutional settings; however, patients complete over one-third of their antibiotic course after discharge. This creates a gap in stewardship efforts at transitions of care. We studied whether pharmacist review of antibiotic prescriptions at discharge would improve outpatient antibiotic prescribing.

Methods. This was a pilot project of patients in medicine wards of an academic medical center who were discharged on oral antibiotics between February and May 2021. Patients who were pregnant, <18 YO, had COVID-19, or leaving against medical

advice were excluded from evaluation. For the pilot, a verification queue was created in the electronic health record (EHR) system where orders for discharge antibiotics were reviewed by investigator pharmacists before prescriptions were electronically sent to outpatient pharmacies. During the pilot, prescriptions were reviewed Monday-Friday afternoons from 12pm-4pm. Data was collected on incidence, type, and acceptance rate of pharmacist interventions, and a cost savings analysis was conducted with values calculated by the EHR system.

Results. There were 149 patients included with oral antibiotic prescriptions reviewed during the time frame. Of those patients, 48 (32.2%) had at least one prescription that was intervened on by a pharmacist. A total of 55 interventions were made with an acceptance rate of 76%. The median time for pharmacist review was 10 minutes (IQR 5-15). Patients who received infectious diseases (ID) consultation during admission required less intervention than patients without expert consultation but did not reach significance (8/35 and 47/114 respectively, p=0.07). The total cost savings associated with all interventions was \$20,743.00.

Table 1. Interventions

Intervention type	N (%)
Duration	19 (35.4)
Incorrect dosing	16 (29.1)
• Underdosed	8
• Overdosed	7
• No directions	1
Antibiotic selection	9 (16.4)
• Organism resistant to prescribed antibiotic	3
o <i>E. coli</i>	2
o <i>S. aureus</i>	1
• Duplicate coverage	2
• Additional drug required	3
• Antibiotic streamlining	1
Lab required	4 (7.3)
No indication for antibiotics	4 (7.3)
Drug-drug interaction	3 (4.4)

Conclusion. Direct pharmacist review and intervention at discharge improved the prescribing of oral antibiotics within our institution during this pilot. Considering that this was conducted part-time in a subset of hospitalized patients during a limited time period, significant cost savings are possible with greater implementation.

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132. Standardized Antimicrobial Administration Ratios to Guide Antimicrobial Stewardship in the Neonatal Intensive Care Unit: a Single Center Experience

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Session: P-08. Antimicrobial Stewardship: Special Populations

Background. Antimicrobial stewardship (AMS) is particularly challenging in the neonatal population. Both under- and overuse can negatively impact outcomes. There are limited reports of strategies to improve AMS in the neonatal population. Standardized Antimicrobial Administration Ratios (SAARs) are novel metrics of antimicrobial use, recently introduced for neonatal populations by the National Healthcare Safety Network (NHSN). We describe our experience using SAARs to guide AMS in the neonatal intensive care unit (NICU).

Methods. This was a retrospective study conducted from January 2020 to April 2021. A team consisting of AMS and NICU department staff identified and implemented AMS strategies. Based on a review of NICU SAAR data, a goal was set to reduce third generation cephalosporin use by encouraging aminoglycoside use when appropriate. The pre-implementation period was January 2020 to May 2020 and the post-implementation period was July 2020 to April 2021. Antibiotic use was measured as SAARs and compared between study periods. The primary outcome was the neonatal SAAR for third generation cephalosporins. Secondary outcomes included SAARs