antibiotics were administered in the office for pre-procedure prophylaxis. To enhance antibiotic prescribing in these specialized clinics, interventions should focus on non-visit prescriptions and provide education for APPs, alongside adjustments to default durations in electronic orders. Further evaluation is essential to assess the appropriateness of single doses for pre-procedure prophylaxis.

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Presentation Type:
Poster Presentation - Top Poster Abstract
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Evaluation of Predictors Associated with Slow Clinical Response with Extension of Outpatient Parenteral Antimicrobial Therapy
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Background: Outpatient parenteral antimicrobial therapy (OPAT) provides a safe and effective alternative to prolonged hospitalization for patients with infectious diseases requiring elongated antimicrobial therapy. One study found that 35.6% of OPAT episodes met the composite definition for treatment failure, with unplanned extension of OPAT as the most common reason for treatment failure. Our study sought to identify factors predicting higher likelihood of extension of OPAT due to slow clinical response to treatment and determine how therapy extension relates to complications. **Method:** This retrospective cohort study included all patients aged ≥18 years discharged on OPAT between April 2022 and October 2022. Demographic, treatment, outcome, and complications data were extracted through chart review. The primary outcome was the proportion and predictors of OPAT extension due to slow clinical response to treatment. The secondary outcomes were OPAT complication rate, 30-day ED visit and 30-day readmission rates related to OPAT complications. We used univariable and multivariable logistic regression models for the primary outcome of slow clinical response requiring OPAT extension. Variables with $p < 0.1$ in the univariable analyses were included in the multivariable model. **Result:** 231 patients received OPAT during the six-month study. Among them, 40 (17.3%) patients required an extension of therapy. In univariable analysis, patients who had slow clinical response requiring extension of OPAT were more likely to have intraabdominal infection (odds ratio [OR], 2.435; 95% confidence interval[CI], 1.053–5.628), receipt of metronidazole (OR, 3.729; 95% CI, 1.413–9.842), and were more likely to be followed up through office visit (OR, 5.033; 95%CI, 1.164–21.759) or combination of office visit and telemedicine (OR, 2.223; 95%CI 1.041–4.747). Other variable comparisons are detailed in Figure 1. In the multivariable regression analysis, the independent predictor associated with extended of OPAT was follow-up via office visit (adjusted OR, 4.630; 95% CI, 1.024-20.694). Rates of complications related to intravenous access and antibiotic were similar between patients with and without extension; 15% vs. 11% (p=0.430) and 7.5% vs. 7.3% (p=1.000), respectively. There were no significant differences in 30-day ED visits and readmission rates between the 2 groups: 7.5% vs. 5.8%(p=0.715) and 12.5% vs. 7.3% (p=0.338). **Conclusion:** Our study highlights patient's office visit follow-up is associated with the OPAT extension due to slow clinical response. However, extended therapy did not result in a significant increase in complications or hospital readmissions. These findings suggest the importance of careful patient selection and monitoring for OPAT, potentially guiding more efficient and targeted healthcare practices.

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Figure 1. Characteristics and comparison of risk factors of Slow Clinical Response Requiring OPAT Extension

Characteristics	Slow Clinical Response with OPAT extension		Univariable regression		Multivariable regression	
	Yes n= 40	No n= 191	OR (95% CI)	*p* value	aOR (95% CI)	*p* value
Age in years, median (IQR)	63 (52, 78)	62 (52, 73)	1.005 (0.982 – 1.028)	0.679	-	-
Gender				0.969	-	-
• Female	15 (37.5)	71 (37.2)	Reference			
• Male	25 (62.5)	120 (62.8)	0.986 (0.488 – 1.994)			
Race				0.734	-	-
• White	30 (75.0)	148 (77.5)	Reference			
• Others	10 (25.0)	43 (22.5)	1.147 (0.550 – 2.533)			
Ethnicity						
• Non-Hispanic	38 (95.0)	173 (90.6)	Reference			
• Hispanic	2 (5.0)	18 (9.4)	0.506 (0.113 – 2.273)	0.374	-	-
Charlson comorbidity index						
• 0	5 (12.5)	21 (11.0)	Reference			
• 1-2	8 (20.0)	49 (25.7)	0.868 (0.201-2.343)	0.547	-	-
• 3-4	8 (20.0)	55 (28.8)	0.611 (0.179 – 2.080)	0.431	-	-
• >5	19 (47.5)	66 (34.6)	1.203 (0.402 – 3.635)	0.735		
SUD	2 (5.0)	16 (8.4)	0.576 (0.127 – 2.609)	0.474	-	-
IVDU	0	9 (4.7)	0	0.999	-	-
Insurance						
• Commercial	13 (32.5)	66 (34.6)	Reference			
• Medicare	22 (55.0)	93 (48.7)	1.201 (0.565 – 2.555)	0.634	-	-
• Medicaid	4 (10.0)	28 (14.7)	0.725 (0.217 – 2.419)	0.601	-	-
• Others	1 (2.5)	4 (2.1)	1.269 (0.131-12.292)	0.837	-	-
Primary language						
• English	36 (90.0)	1175 (91.6)	Reference			
• Non-English	4 (10.0)	16 (8.4)	1.215 (0.384 – 3.849)	0.740	-	-
Penicillin allergy	5 (12.5)	34 (17.8)	0.660 (0.241 – 1.807)	0.418	-	-
Discharge location						
• Home	29 (72.5)	123 (64.4)	Reference			
• SNF	11 (27.5)	68 (35.6)	0.686 (0.323 – 1.459)	0.328	-	-
Indications						
• B&J	14 (35.0)	76 (39.8)	0.815 (0.400 – 1.660)	0.573	-	-
• Primary PSI	9 (22.5)	63 (33.0)	0.590 (0.265 – 1.314)	0.197	-	-
• SSTI	8 (22.0)	29 (15.2)	1.397 (0.585 – 3.332)	0.452	-	-
• IAI	10 (25.0)	23 (12.0)	2.435 (1.053 – 5.628)	0.037	2.181 (0.865 – 5.500)	0.098
• IE/CIED infection	5 (12.5)	17 (8.9)	1.462 (0.506 – 4.225)	0.483	-	-
• Others	5 (12.5)	24 (12.6)	0.994 (0.355 – 2.785)	0.991	-	-
Access						
• Central	30 (75.0)	141 (73.8)	Reference			
• Peripheral	10 (25.0)	50 (26.2)	0.940 (0.429 – 2.061)	0.877	-	-
Antibiotic class						
• Penicillin	8 (20.0)	40 (20.9)	0.944 (0.404 – 2.207)	0.894	-	-
• Cephalosporin	22 (55.0)	93 (48.7)	1.288 (0.650 – 2.554)	0.469	-	-
• Carbapenems	7 (17.5)	24 (12.6)	1.475 (0.588 – 3.707)	0.407	-	-
• Glycopeptides	8 (20.0)	43 (22.5)	0.860 (0.369 – 2.005)	0.728	-	-
• Metronidazole	8 (20.0)	12 (6.3)	3.729 (1.413 – 9.842)	0.008	2.091 (0.605 – 7.230)	0.244
• Others	4 (10.0)	28 (14.7)	0.647 (0.214 – 1.959)	0.441	-	-
Number of Antibiotics						
• 1	21 (52.5)	131 (68.8)	Reference			
• 2	17 (42.5)	56 (29.3)	1.894 (0.929 – 3.859)	0.079	1.490 (0.651 – 3.411)	0.345
• 3	2 (5.0)	4 (2.1)	3.119 (0.537 – 18.107)	0.205	1.390 (0.170 – 11.350)	0.758
Frequency						
• <=2 /day	22 (55.0)	103 (53.9)	Reference			
• >2 /day	18 (45.0)	88 (46.1)	0.958 (0.483 – 1.899)	0.901	-	-
Office visit						
• No (n=42)	2 (4.8)	40 (95.2)	Reference			
• Yes (n=189)	38 (20.1)	151 (79.9)	5.033 (1.164 – 21.759)	0.031	4.630 (1.024 – 20.694)	0.047*
Telehealth visit						
• No (n=161)	25 (15.5)	136 (84.5)	Reference			
• Yes (n=70)	15 (21.4)	55 (78.6)	1.484 (0.728 – 3.026)	0.278	-	-
Both office and telehealth visit						
• No (n=184)	27 (14.7)	157 (85.3)	Reference			
• Yes (n=47)	13 (27.7)	34 (72.3)	2.223 (1.041 – 4.747)	0.039	1.462 (0.645 – 3.312)	0.363
Time from hospital discharge to first OPAT follow up, days, median (IQR)	10 (7, 15)	9 (7, 12)	1.023 (0.984 – 1.063)	0.251	-	-
Missed appointment						
• 0	32 (80.0)	155 (81.2)	Reference			
• 1	6 (15.0)	21 (11.0)	1.384 (0.517 – 3.702)	0.517	-	-
• >1	2 (5.0)	15 (7.9)	0.646 (0.141 – 2.964)	0.574	-	-
Missing OPAT labs	4 (10.0)	32 (16.8)	0.549 (0.128 – 1.649)	0.285	-	-

Presentation Type:
Poster Presentation - Top Poster Abstract
Subject Category: Antibiotic Stewardship
Implementing an Antimicrobial Stewardship Lecture Series for Family Medicine Residency Programs in South Carolina
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Background: Family medicine physicians are one of the leading prescribers of antimicrobials in both the inpatient and ambulatory setting, however appropriate education on antimicrobial stewardship (AS) is lacking. The Antimicrobial Stewardship Collaborative of South Carolina (ASC-SC)

created a family medicine AS lecture series to increase awareness of stewardship, improve antimicrobial prescribing throughout the state, and ultimately combat antimicrobial resistance. **Methods:** All family medicine residency programs in South Carolina (n=17) were contacted to determine interest in a four 1-hour long lecture series regarding various AS topics provided by infectious diseases physicians and pharmacists. The introductory AS lecture included topics such as interpreting minimal inhibitory concentrations, utilizing antibiograms, guidelines for diagnosing and treating common infections, and antibiotic essentials. Lectures were given on-site, and eight identical pre- and post-lecture questions were asked to assess baseline knowledge and efficacy of the introductory lecture. Not all the attendees answered all the pre- and post-lecture questions. A Chi-square analysis was used to determine statistical significance. **Results:** To date, 7 family medicine residency programs were given the introductory antimicrobial stewardship lecture and were included in the total analysis. Respondents included 1st year (25 of 99 responses, 25%) and 2nd year family medicine residents (17 of 99 responses 17%). When asked "How familiar are you with the concept of antimicrobial stewardship?", 43 of 106 (41%) respondents were at least familiar or very familiar prior to the lecture compared to 81 of 93 (87%) after the lecture ($p < 0.001$). When asked "How confident are you in using antibiograms for antimicrobial decisions?", 41 of 107 (38%) were confident or very confident pre-lecture and 83 of 101 (82%) post-lecture ($p < 0.001$). When given a case-based question on using an antibiogram to determine an appropriate empiric agent for inpatient pyelonephritis, 59 of 107 (55%) respondents were able to answer the question correctly pre-lecture compared to 85 of 99 (86%) post-lecture ($p < 0.001$). Among those who answered the question incorrectly, 60% selected the agent with the highest percentage susceptible rate in the antibiogram, despite it being an inappropriate agent for pyelonephritis. **Conclusion:** The ASC-SC lecture series was an effective tool to increase awareness and knowledge of antimicrobial stewardship to family medicine providers. This lecture series survey data helps determine what family medicine residents commonly misunderstood in AS concepts and helps guide future initiatives.

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Infectious Diseases Consultation Reduces Antibiotic Duration for Uncomplicated Gram-Negative Bacteremia

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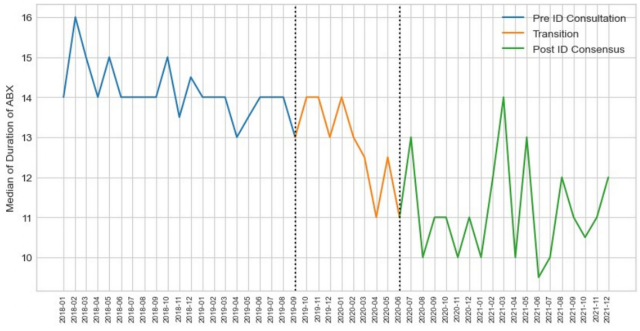
Background: Unlike Staphylococcus aureus bacteremia, the impact of ID consultation for gram negative bacteremia (GNB) has not been well studied. Recent literature has supported shorter courses of antibiotics in adults with uncomplicated GNB. We examined duration of therapy for adult patients with uncomplicated GNB over a period of time during which ID consultation for GNB was made mandatory. **Method:** NorthShore University HealthSystem is a 4 hospital, 828 bed hospital system located in the northern suburbs of Chicago. Data were collected retrospectively from 1/1/2018 through 12/31/2021 for patients 18 years or older hospitalized with an uncomplicated bloodstream infection due to Escherichia coli, Klebsiella species or Proteus species. This study was approved by the Institutional Review Board. All sources of infection were included. Days of effective antibiotic therapy were extracted manually by two pharmacists and an infectious diseases physician. During the study period, two major changes occurred: 1) the Physician Practice Council of NorthShore University Healthsystem voted in favor of a mandatory ID consultation for GNB and 2) the ID division developed a treatment algorithm for GNB management with an emphasis on shorter antibiotic duration in uncomplicated cases. This study was divided into three time periods:

	Overall n=1026	Pre ID Consultation n=399	Transition n=236	Post ID Consensus n=391	P-Value
Age in yrs	77.9 [66.8,85.9]	76.6 [65.8,85.8]	78.3 [66.1,84.9]	78.5 [67.4,86.4]	0.534
Gender					
F	566 (55.2)	220 (55.1)	136 (57.6)	210 (53.7)	0.633
M	460 (44.8)	179 (44.9)	100 (42.4)	181 (46.3)	
Race					
African American	57 (5.6)	27 (6.8)	9 (3.8)	21 (5.4)	0.472
Asian	74 (7.2)	26 (6.5)	23 (9.7)	25 (6.4)	
Caucasian	690 (67.3)	266 (66.7)	148 (62.7)	276 (70.6)	
Declined/Unknown	4 (0.4)	2 (0.5)	1 (0.4)	1 (0.3)	
Hispanic/Latino	78 (7.6)	31 (7.8)	20 (8.5)	27 (6.9)	
Other	123 (12.0)	47 (11.8)	35 (14.8)	41 (10.5)	
BMI	26.6 [23.0,31.1]	25.9 [22.7,31.2]	26.6 [23.1,30.8]	27.0 [23.3,31.2]	0.472
Organism Name					
Escherichia coli	681 (66.4)	281 (70.4)	147 (62.3)	253 (64.7)	0.578
Escherichia coli, ESBL-producing strain	92 (9.0)	30 (7.5)	25 (10.6)	37 (9.5)	
Klebsiella aerogenes	7 (0.7)	2 (0.5)	1 (0.4)	4 (1.0)	
Klebsiella oxytoca	27 (2.6)	7 (1.8)	11 (4.7)	9 (2.3)	
Klebsiella pneumoniae	141 (13.7)	51 (12.8)	35 (14.8)	55 (14.1)	
Klebsiella pneumoniae - ESBL-producing strain	10 (1.0)	4 (1.0)	2 (0.8)	4 (1.0)	
Klebsiella pneumoniae CRE	2 (0.2)		1 (0.4)	1 (0.3)	
Klebsiella variicola	6 (0.6)	3 (0.8)	2 (0.8)	1 (0.3)	
Proteus hauseri	1 (0.1)		1 (0.4)		
Proteus mirabilis	46 (4.5)	16 (4.0)	8 (3.4)	22 (5.6)	
Proteus species	13 (1.3)	5 (1.3)	3 (1.3)	5 (1.3)	
Outcomes					
LOS	4.0 [3.0,7.0]	4.0 [3.0,6.0]	5.0 [3.0,7.0]	5.0 [3.0,7.0]	0.098
Readmission	161 (15.7)	60 (15.0)	38 (16.1)	63 (16.1)	0.9
Mortality	3 (0.3)	1 (0.3)	1 (0.4)	1 (0.3)	0.913
Duration Days	14.0 [10.0,15.0]	14.0 [13.0, 15.0]	13.0 [8.0, 14.0]	11.0 [10.0,14.0]	<0.001

Figure 1:



Pre-ID consultation – 1/1/2018 – 8/31/2019; Transition – 9/1/2019 – 5/31/2020 (after mandatory ID consultation, before ID division consensus achieved); Post-ID Consensus – 6/1/2020 – 12/31/21. Primary outcome was duration of antibiotic therapy. Secondary outcomes included in-hospital all-cause mortality and 30 day readmission. Continuous variables were described using median and interquartile range, and categorical data using frequency and prevalence. Kruskal-Wallis rank sum test for continuous and $\chi 2$ for categorical variables was used to verify similarity among the pre-ID consultation, transition and post-ID consensus periods. The analysis was performed using Python. **Result:** 1026 patients were included in the study. Pathogens included 773 E. coli (75.4%), 193 Klebsiella species (18.8%) and 60 Proteus species (5.9%). Length of stay, 30 day readmission and in-hospital mortality were not statistically significantly different when comparing pre-ID consultation and post-ID consensus time periods. Total duration of therapy was statistically significantly shorter in the post-ID consensus period ($p < 0.001$). **Conclusion:** Mandatory ID consultation and development of an ID consensus approach can shorten antibiotic duration in uncomplicated GNB. Further analysis will explore timing of transition to oral therapy and syndromic differences.

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