

adverse effects. This has led to the use of adjusted body weight (AdjBW) for dosing in this population; however, this has not been evaluated clinically. The purpose of this study is to assess the impact of different dosing strategies of IV acyclovir in obese patients.

Methods: This retrospective observational chart review evaluated adult patients admitted to Long Island Jewish Medical Center with a body mass index greater than or equal to 30 kg/m² who received at least 48 hours of high-dose IV acyclovir therapy during the study period of January 2014 to August 2019. Patients were stratified to IBW, AdjBW, and TBW for analysis. The primary statistical tests utilized include descriptive statistics and logistic regression. The primary endpoint was the outcome of infection. The secondary endpoints included duration of therapy, length of stay, and adverse effects.

Results: 51 patients were included in the efficacy analysis and 84 patients were included in the safety analysis. Treatment failure occurred in 3 out of 51 patients (1 patient in IBW group, 2 patients in AdjBW group, p=0.445). There was no significant difference in median length of stay (p=0.977) or median duration of IV therapy (p=0.78). Nephrotoxicity occurred in 22.2%, 19.2%, and 22.7% of patients in the IBW, AdjBW, and TBW groups respectively (p=1).

Conclusion: When comparing different dosing modalities, there was no significant difference in the outcome of infection, duration of therapy, or length of stay. The results of this study were limited by small sample size. However, dosing patients according to AdjBW led to smaller doses of acyclovir, and therefore less drug exposure.

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197. Bridging the Divide Between Antimicrobial Stewardship and Surgical Services: Successful Use of Handshake Stewardship with Hepato-Pancreato-Biliary Surgical Services in Adult Patients at a Large Academic Medical Center

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Session: P-7. Antimicrobial Stewardship: Special Populations

Background: Handshake stewardship has displayed promise in engaging providers in the pediatric population but literature in adults are lacking. Face-to-face interactions are proposed to improve antibiotic stewardship (ASP) efforts in challenging services that have low ASP acceptance and commonly utilize broad-spectrum antibiotics (BSA) such as Hepato-Pancreato-Biliary surgical services (HPBSS).

Methods: Handshake stewardship was initiated by the Antimicrobial Support Network (ASN) with the HPBSS at the Carolinas Medical Center in January 2019. In-person rounding was completed. Treatment algorithms were created to assist in standardizing antibiotic selection and de-escalation for common HPB infections. To evaluate the impact of handshake stewardship, we assessed antimicrobial utilization of BSA by measuring days of therapy (DOT) per 1000 patient days (PD), comparing the pre- (Jan - Dec 2018) and post-intervention period (Jan - Dec 2019). ASN intervention acceptance rates and rates of hospital-acquired (HA) carbapenem-resistant *Enterobacteriales* (CRE) infections/colonization and *C. difficile* infections (CDI) were also collected.

Results: After implementation of handshake stewardship, antipseudomonal use decreased significantly by 32.5 DOT/1000 PD as compared to the pre-intervention period (174.4 vs 141.9 DOT/1000 PD, p = 0.04). A numeric decrease in carbapenem use was also observed (57.5 vs 21.7 DOT/1000 PD, p = 0.275). ASN intervention acceptance rates significantly increased by 31% (p < 0.01). HA-CRE infections, CRE colonization and CDI decreased by 87.7%, 66% and 38.8%, respectively (p = ns).

Figure 1: HPB Antibiotic Utilization

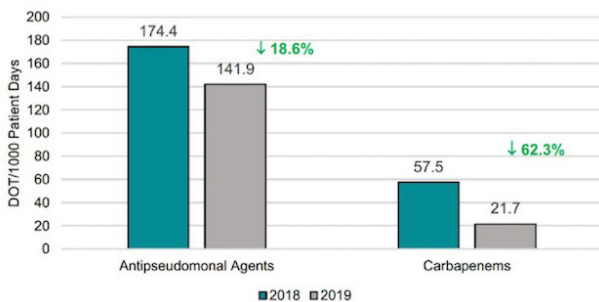


Figure 2: ASN Intervention Rates with HPB

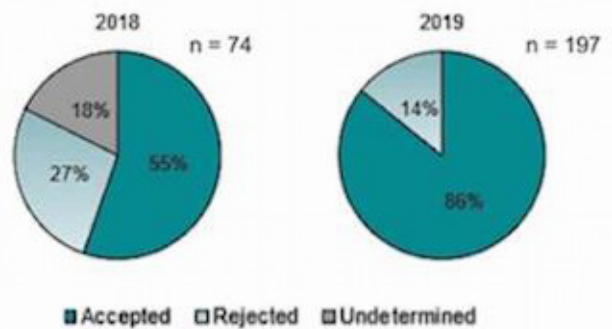


Table 1. Rates of CRE and C. difficile Infections

	2018	2019	% Change	p-value
CRE Rates per 10,000 PD				
HA-Infections	8.2	1.0	↓ 87.7%	0.104
HA-Colonization	14.7	5	↓ 66%	0.353
C. difficile Rates per 10,000 PD				
C. difficile Infections	4.9	3.0	↓ 38.8%	0.807

Conclusion: Use of handshake stewardship assisted in reducing BSA use, improving provider acceptance of ASN interventions and decreasing HA-infection rates. Based on these findings, handshake stewardship may be useful in services that display challenges in implementing ASP due to their complex patient populations, such as HPBSS.

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198. Clinical Prediction of Bacteremia and the Need for Early Antibiotic Therapy in Solid Tumor Cancer Patients

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Session: P-7. Antimicrobial Stewardship: Special Populations

Background: Cancer patients (pts) frequently receive empiric antibiotics without clear indication. This retrospective study investigated the relationship between the systemic inflammatory response syndrome (SIRS), early antibiotic (Anb) use, and bacteremia in solid tumor pts presenting to the emergency department (ED).

Methods: We extracted data from the electronic medical records of adults with solid tumors admitted to a tertiary care hospital through the ED for any reason over a 2 year period. Pts with neutropenic fever, organ transplant, trauma, or cardiopulmonary arrest were excluded. Rates of SIRS and bacteremia among pts receiving early Anb (eAnb, within 8 hours of admission) were compared to all others using χ^2 . Binomial regression and receiver operator curves assessed predictors of bacteremia.

Results: Of 3580 eligible pts, 1344 pts were SIRS positive (≥ 2 criteria) and 2236 were SIRS negative; 501 (37%) and 493 (22%), respectively, received eAnb (p < 0.001). eAnb use increased with additional SIRS criteria (Fig 1). Of SIRS positive pts, 860 (64%) had BCs drawn within 48 hrs of presentation, of which 19% were positive. Of SIRS negative pts, 826 (37%) had cultures drawn within 48 hrs of presentation, of which 14% were positive (19% vs 14%, p=0.004). Of pts who had BCs drawn, the proportion of positive BCs among those who received eAnb and those who did not was identical (16% in each group; p=1). Of 276 pts ultimately proven to have bacteremia within 48 hrs, only 59% were SIRS positive, and only 49% received eAnb in the ED. By regression, only two SIRS components predicted bacteremia, fever (OR 1.8 \pm 0.39, p=0.01) and tachycardia (1.4 \pm 0.22, p=0.03), and SIRS criteria as a whole were poorly predictive of bacteremia (AUC 0.57, Table 1). A more robust model, which included additional labs and vital signs, was only marginally better (AUC 0.61, Table 2).

Figure 1: Proportion of patients receiving early antibiotics by SIRS score

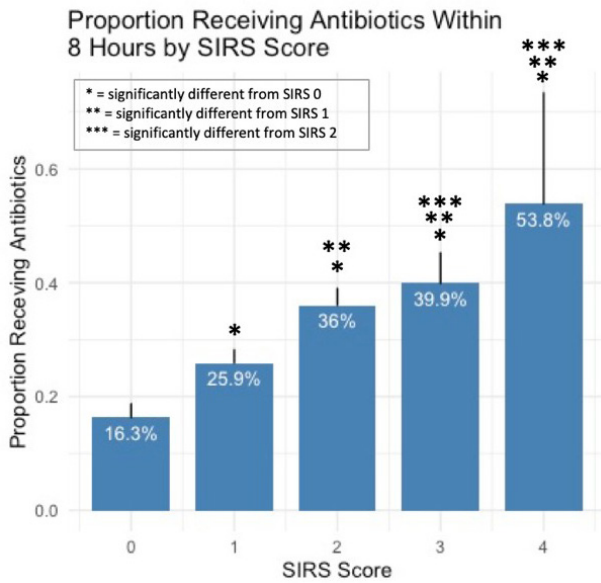


Table 1: SIRS as a predictor of bacteremia

Parameter	OR ± SE	P-value
As individual criteria (AUC=0.57):		
Fever	1.8 ± 0.29	0.01
Tachycardia	1.4 ± 0.22	0.03
Tachypnea	1.0 ± 0.15	0.77
Leukocytosis	1.2 ± 0.17	0.12
As composite score (AUC=0.55):		
SIRS positive (≥2)	1.5 ± 0.21	0.003

Table 2: Best predictive model of bacteremia

Parameter	OR ± SE	P-value
Temperature (continuous)	1.1 ± 0.06	0.01
Heart Rate (continuous)	1.01 ± 0.003	0.02
Systolic Blood Pressure (continuous)	1.0 ± 0.004	0.68
Diastolic Blood Pressure (continuous)	0.99 ± 0.007	0.09
Respiratory rate (continuous)	1.0 ± 0.01	0.49
Leukopenia	1.1 ± 0.33	0.80
Leukocytosis	0.88 ± 0.169	0.52
Severe Neutropenia	1.6 ± 0.82	0.37
Moderate Neutropenia	1.2 ± 0.47	0.76
Neutrophilia (ANC >8.0)	1.7 ± 0.33	0.008
Age	1.0 ± 0.01	0.86

AUC=0.61

Conclusion: Clinicians still use SIRS criteria to determine the need for eAnb. However, SIRS criteria are poor predictors of bacteremia in solid tumor pts, who frequently manifest them due to complications of cancer or cancer-directed therapy rather than infection. Furthermore, patients who are SIRS negative may be bacteremic. More reliable models are needed to guide judicious use of Anb in the solid tumor population.

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199. Evaluating long-term care pharmacy dispense data to monitor antibiotic use in U.S. nursing homes

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Session: P-7. Antimicrobial Stewardship: Special Populations

Background: Automated reporting of antibiotic use (AU) in nursing homes (NHs) may help to identify opportunities to improve antibiotic prescribing practices and inform implementation of stewardship activities. The majority of U.S. NHs contract with long-term care (LTC) pharmacies to dispense prescriptions and provide medication monitoring and reviews. We investigated the feasibility of leveraging LTC pharmacy electronic dispensing data to describe AU in NHs.

Methods: We analyzed all NH antibiotic dispenses and monthly resident-days in 2017 reported by a large LTC pharmacy. The dispense-level data included facility and resident identifiers, antibiotic class and agent, dispense date and days of therapy (DOT) dispensed. We identified NH antibiotic courses, inclusive of both antibiotic starts and continuations from hospital-initiated courses, by collapsing dispenses of the same drug to the same resident if the subsequent dispense was within three days of the preceding

end date. The course duration was the sum of DOT for all dispenses in the course. The AU rate was reported as DOT and courses per 1,000 resident-days.

Results: AU was described in 326,713 residents admitted to 1,348 NHs (9% of U.S. NHs), covering 38.1 million resident-days. There were 576,228 dispenses for a total of 3.3 million antibiotic DOT at a rate of 86 DOT/1,000 resident-days. After collapsing dispenses, 324,306 antibiotic courses were defined at a rate of 9 courses/1,000 resident-days. During the year, 45% of residents received an antibiotic. The most frequently prescribed classes by DOT and courses were cephalosporins, penicillins, urinary anti-infectives and quinolones (Fig. 1). The top agents by DOT were levofloxacin (12%), sulfamethoxazole/trimethoprim (12%) and cephalexin (11%). Most course durations were 1–7 days (54%) or 8–14 days (35%) (Fig. 2). Long-term antibiotic courses (> 30 days) contributed to 5% of courses and 30% of overall DOT. The mean duration per course was 7.5 days when courses > 30 days were excluded.

Figure 1. Distribution of antibiotic courses and days of therapy by antibiotic class for 324,306 antibiotic courses and 3.3 million days of antibiotic therapy dispensed to 1,348 nursing homes from a long-term care pharmacy in 2017

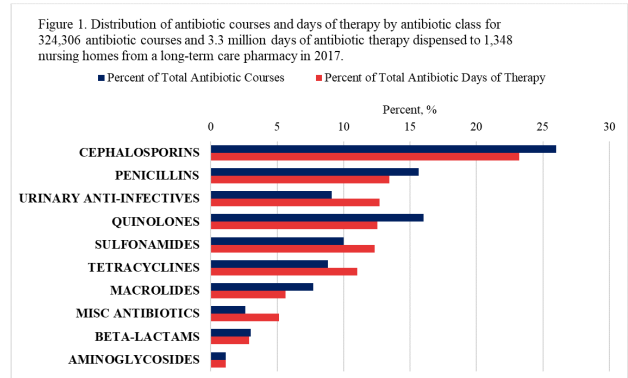
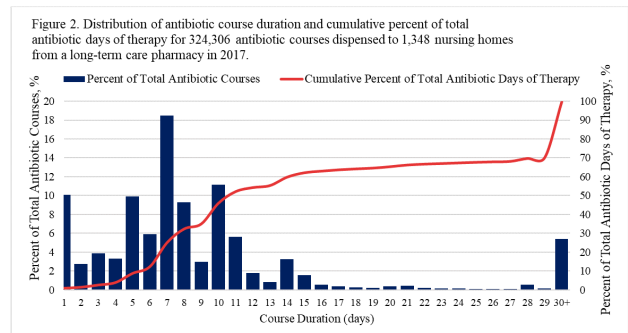


Figure 2. Distribution of antibiotic course duration and cumulative percent of total antibiotic days of therapy for 324,306 antibiotic courses dispensed to 1,348 nursing homes from a long-term care pharmacy in 2017



Conclusion: LTC pharmacy dispenses may be an accessible data source to report NH AU rates and prescribing patterns by antibiotic class and agent. Further evaluation of data sources for facility- and national-level AU reporting in NHs is needed to support stewardship implementation.

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200. Frequency and Characteristics of Patients Switched from Intravenous to Oral Antibiotic Therapy on Discharge to Nursing Homes

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Session: P-7. Antimicrobial Stewardship: Special Populations

Background: Determining eligibility for intravenous (IV) to oral (PO) antibiotic conversion is challenging in patients transitioning to nursing homes (NHs) due to atypical infection presentation, increased diagnostic uncertainty, and multimorbidity. Understanding current practice and patient characteristics influencing prescriber behavior is necessary to provide effective antibiotic stewardship in this vulnerable population. We compared the frequency and characteristics of patients discharged with IV antibiotics to those switched from IV to PO therapy.

Methods: This was a retrospective cohort study of Oregon Health & Science University Hospital patients treated with IV antibiotics and discharged to a NH from 1/1/2016-12/31/2018. We focused on IV to PO antibiotic switch within 48 hours of