large quaternary children's health system in Georgia. Blood isolates positive for Candida spp. from 2019 through 2023 were included. The number and percentage of isolates for each Candida spp was recorded by year and then as the combined 5-year total. The Clinical and Laboratory Standards Institute (CLSI) antifungal interpretative criteria were used, and we only included one unique Candida spp isolate per patient. Due to the limited number of isolates, the combined 5 years of isolates were used to create the fungal antibiogram. Data are shown as percent susceptible using CLSI interpretative criteria and number of isolates. **Results:** Between 2019 and 2023 there were 124 unique blood isolates of Candida spp identified. The most common isolates were C. albicans (33%), C. parapsilosis (27%), C. glabrata (14%) and C. tropicalis (11%). Over the 5 years of the study, the percentage of C. albicans isolates decreased from 47% to 21%. The change in epidemiology was not driven by a single Candida species but varied from year to year. For C. albicans, susceptibility was 100% for fluconazole and micafungin. For C. parapsilosis, susceptibility to fluconazole and micafungin was 97% and 94%, respectively. Fluconazole susceptibility was lowest for C. glabrata (88%) and C. krusei (0%). Using CLSI epidemiological cutoff values (ECV) to evaluate the amphotericin B results, none of the isolates had results greater than the CLSI ECVs. Comparing 2019 and 2023, the percentage of Candida blood isolates resistant to fluconazole increased from 5% to 18.5%. **Conclusion:** C. albicans was the most frequently identified cause of candidemia in children, but there was a gradual increase in fungemia caused by other Candida spp. over the past 5 years including Candida with fluconazole resistance. Overall, our findings demonstrate high susceptibility rates to fluconazole and echinocandins in Candida spp. blood isolates. Further research is needed to identify risk factors for antifungal resistant candidemia in pediatric patients.
Disclosure: Mark Gonzalez: Honoria for a one time consulation with NaviDx consulting in May of 2022. Honoria from the American Society for Microbiology for writing of a chapter in the Clinical Microbiology Procedures Handbook.

Antimicrobial Stewardship & Healthcare Epidemiology 2024;4(Suppl. S1):s129–s130
doi:10.1017/ash.2024.293

Presentation Type:
Poster Presentation - Poster Presentation
Subject Category: Pediatrics
The Difference We Make at Home: Impact of Infection Prevention and Control in Pediatric Homecare Tracheitis Reduction
Sara Griffith, Nationwide Children's Hospital; Tom Javens, Nationwide Children's Hospital; King, Nationwide Children's Hospital; Christine Zepfel, Nationwide Children's Hospital; Carrie Spies, Nationwide Children's Hospital; Luke Vohsing, Nationwide Children's Hospital; Jessica Parsons, Nationwide Children's Hospital and Matthew Washam, Nationwide Children's Hospital

Background: Quality improvement (QI) efforts within Infection prevention and control (IP&C) programs to reduce risk of device-related infections in the acute care setting are well described. However, less focus has been placed on continued prevention in the homecare setting. This QI project illustrates the benefits of IP&C involvement in reducing tracheitis in pediatric homecare patients. **Methods:** The homecare multidisciplinary IP&C team implemented a series of QI initiatives aimed at reducing incidence of tracheitis beginning in 2016. Initial interventions included increasing oral care frequency to every four hours, inpatient training for new tracheostomy patients and families before discharge, and an optional inpatient simulation training resource to provide hands-on practice. Enhanced educational interventions included caregiver learning modules and competencies completed with their primary nurse in the home every ninety days and following a tracheitis infection. Practice changes and education efforts were further sustained with the creation and distribution of laminated tracheostomy care teaching sheets to patient homes. Quarterly tracheitis infection rates were tracked using a U-chart. Organism distribution in tracheitis cases were compared across the baseline (2015-2018) and post-intervention periods (2019-2023) using the Chi square test. Analyses

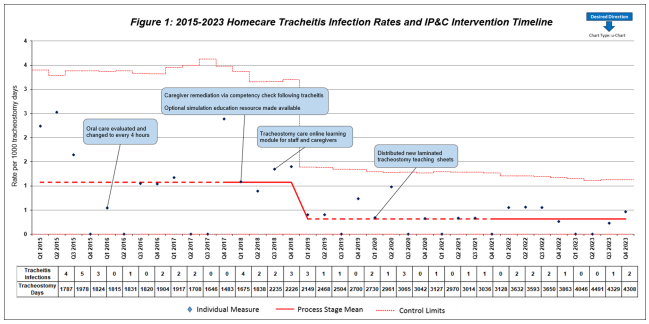


Table 1: 2015 - 2023 Tracheitis Infection Organisms

	Baseline (2015-18)		Intervention (2019-23)	
Total infections	**33**		**21**	
	n	**%**	***n***	**%**
Pseudomonas sp.	19	25%	13	28%
Stenotrophomonas sp.	12	16%	4	9%
Staphylococcus aureus	11	15%	4	9%
Serratia marcescens	9	12%	9	19%

were performed using Stata Statistical Software: Release 18 (College Station, TX: StataCorp, LLC) with two-tailed alpha level of 0.05. **Results:** Quarterly tracheitis infection rates from 2015 through 2023 are displayed in the Figure. Notably, the baseline period, established Q1 2015 through Q4 2017, revealed a consistent rate of 1.08 tracheitis infections per 1000 tracheostomy days. During this initial phase, changes in oral care frequency and enhanced educational resources were implemented to decrease rates. Following these interventions, a significant shift was observed in Q1 2019, with the new baseline rate drastically reduced to 0.32 infections per 1000 tracheostomy days. This denotes a remarkable 70% improvement from the prior average infection rate which has been sustained through Q4 2023 with the laminated teaching sheets. The most frequently identified organisms across both time periods are displayed in the Table. Pathogen distribution was similar following QI interventions ($p = 0.50$). **Conclusions:** Tracheitis infections were reduced by 70% through implementation of multidisciplinary homecare IP&C QI efforts. IP&C programs are integral to pediatric homecare.

Antimicrobial Stewardship & Healthcare Epidemiology 2024;4(Suppl. S1):s130
doi:10.1017/ash.2024.294

Presentation Type:
Poster Presentation - Poster Presentation
Subject Category: Pediatrics
Epidemiology of Neonatal Sepsis in Haiti
Mentor Lucien, Quisqueya University; Theline Cantave, Quisqueya University; Hudline Vilfrard, Quisqueya University; Pascale Pierre, Quisqueya University and Carla Nelson, Université Notre-Dame d'Haïti

Introduction: Neonatal sepsis (NS) is a global public health concern, particularly affecting developing countries. Challenges in diagnostics, more specifically, culture and antimicrobial susceptibility testing hinder effective management of the disease. **Objective:** This study aims to evaluate the burden, describe the management, and assess the evolution of NS in a hospitalized pediatric population in Haiti. **Methods:** A retrospective cohort study from January 2013 to December 2018 at La Paix University Hospital was conducted. All-cause hospitalizations and deaths were extracted from hospital's Neonatology Unit records and were used to derive data regarding hospitalization and death among patients under 28 days with NS. Clinical and laboratory data were extracted from the patients' medical records. **Results:** Out of 2,424 post-childbirth hospitalizations, 1,590 involved sepsis. The percentage of hospitalization due to NS was approximately 69% and the percentage of deaths, 65%. The mean

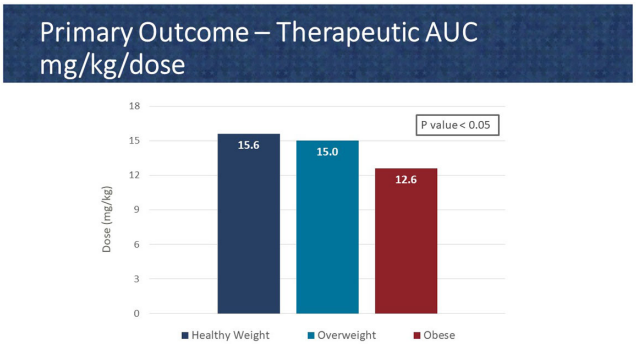
https://doi.org/10.1017/ash.2024.295 Published online by Cambridge University Press

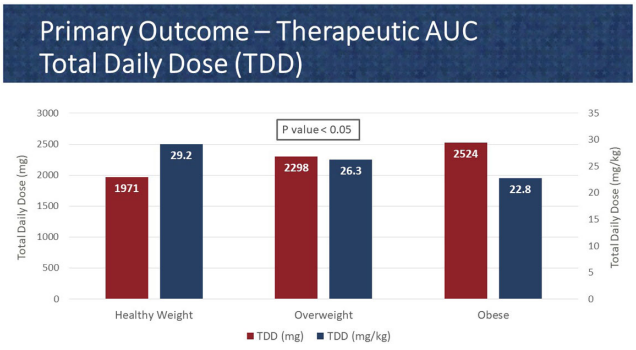
age of patients with NS was 3.75 days (0 - 22 days), with a slight male predominance (55%, $p < 0.001$). Peaks were observed from May to August ($p = 0.02$). Early NS cases (NS in patients aged less than 7 days) were most prevalent (86%, $p < 0.001$). Specimen culture and antimicrobial susceptibility testing was less frequent (7%) than complete blood count usage (65%). Findings regarding blood count included leukopenia (3%), thrombocytopenia (30%). A positive CRP and acute renal failure were noted in 76% and 21.7% of cases, respectively. The average hospital stay was 7.3 days. With regards to treatment, 73% of patients received a 2-drug antimicrobial therapy (ampicillin-gentamycin) and 22% received a 3-drug antimicrobial therapy (ampicillin-gentamycin-cefotaxime). Of all newborns hospitalized for NS, 49% received empirical antibiotic therapy within 3 hours of admission. **Conclusions:** This research highlights NS as a public health emergency in Haiti. The study advocates for improved access to culture and antibiotic susceptibility testing and emphasizes the impact of timely antibiotic administration. The findings of this study serve as a baseline for informing policymakers and medical practitioners dedicated to improving existing conditions of neonates in Haiti. Suggested targeted interventions include preventive measures during prenatal visits, strengthening laboratory capacities, improving infection prevention and control measures, and developing antimicrobial stewardship programs.

Antimicrobial Stewardship & Healthcare Epidemiology 2024;4(Suppl. S1):s130–s131
doi:10.1017/ash.2024.295

Presentation Type:
Poster Presentation - Poster Presentation
Subject Category: Pharmacokinetic
Optimal Weight-Based Dosing of Vancomycin to Achieve an Area Under the Curve of 400 to 600 Stratified by Body Mass Index
Caroline Williams, Lt. Col. Luke J. Weathers, Jr. VA Medical Center; Anna Mitchell, Department of Veterans Affairs; Jessica Bennett, Lt. Col. Luke J. Weathers, Jr. VA Medical Center and Ally Ponder, Lt. Col. Luke J. Weathers, Jr. VA Medical Center

Background: In 2020, the American Society of Health System Pharmacist (ASHP) and Infectious Diseases Society of America (IDSA) published a consensus guideline for vancomycin management, recommending area under the curve (AUC) as the preferred monitoring strategy. These guidelines recommend doses of 15-20 mg/kg every 8 to 12 hours for most patients with normal renal function. However, in extreme body weights, standard dosing may deviate to provide a therapeutic AUC. The primary objective of this pharmacokinetic study is to evaluate the optimal vancomycin weight-based dosing strategy that achieves a therapeutic AUC of 400-600 stratified by body mass index (BMI). The secondary objective is to evaluate the incidence of acute kidney injury (AKI) based on BMI. **Methods:** Patients were identified from two sites within the Department of Veterans Affairs who received vancomycin for at least 48 hours and had at least one steady-state level from January 2015 through July 2022. Regimens with a frequency of ≤8 hours or patients with baseline creatine clearance of < 5 0 ml/min were excluded. Patients were categorized based on the Center for Disease Control BMI groups: healthy weight, overweight, or obese. The online vancomycin calculator, VancoPK©, was utilized to calculate AUC. Renal function at baseline and during vancomycin therapy was collected. Descriptive statistics were used for data analysis. Continuous outcomes were summarized using mean and standard deviation. The primary and secondary endpoints were analyzed using the analysis of variance and Fisher's exact tests, respectively. Statistical significance was established at a p-value of < 0 .05. **Results:** A total of 347 unique vancomycin regimens were included: 120 in the healthy weight group, 101 in the overweight group, and 126 in the obese group. The average total daily doses that achieved a therapeutic AUC were 1971mg (15.6mg/kg/dose), 2298mg (15mg/kg/dose), and 2524mg (12.6mg/kg/dose) for the healthy weight, overweight, and obese groups, respectively. There was a statistically significant difference among these groups. AKI occurred in 10/254 (3.9%) unique patients: 2/89 (2.2%) in the healthy weight group, 3/71 (4.2%) in the overweight group, and 5/94 (5.3%) in the obese group. This did not reach statistical significance.





Conclusions: Vancomycin dosing regimens largely followed guideline recommendations. However, the average vancomycin mg/kg/dose that achieved a therapeutic AUC decreased as BMI increased, which was a statistically significant trend. While further research is needed to draw clinically impactful conclusions, these findings suggest that a lower mg/kg vancomycin dose in obesity may be needed to achieve therapeutic targets.

Antimicrobial Stewardship & Healthcare Epidemiology 2024;4(Suppl. S1):s131
doi:10.1017/ash.2024.296

Presentation Type:
Poster Presentation - Poster Presentation
Subject Category: Public Health
Trends of Early Onset Group B Streptococcus infections and Observed Racial and Geographic Disparities Associated with GBS Infections in Tennessee, 2005-2021
Jordan Morris, Tennessee Department of Health; Erika Kirtz, Tennessee Department of Health and Daniel Muleta, Tennessee Department of Health

Background: Group B Streptococcus (GBS) is one of the most common causes of bacterial sepsis in newborns. In 2002, the Center for Disease Control and Prevention (CDC) recommended universal screening of all pregnant women for GBS colonization and administering intrapartum prophylaxis to colonized pregnant women to prevent GBS infection in newborns. To identify racial disparities in GBS infections in Tennessee, we compared the incidence of early-onset GBS infection among Black and White infants from 2005-2021. **Methods:** GBS infections identified from normally sterile sites are reportable in Tennessee. We analyzed GBS data reported to surveillance systems from 2005 to 2021. We linked the surveillance data with the population data to calculate incidence rates. We excluded cases with unknown race status (9%) and other races (0.2%) as we do not have denominator data to calculate the incidence rate. Database linkage and data analyses were performed in SAS V.9.4. **Results:** A total of 399 early-onset GBS cases were reported from 2005–2021; 150 (37.59%) were Black, 212 (53.13%) were White, and 36 (9.02%) were of unknown race, and one (0.20%) reported as Other for race. While the incidence rates of early-onset GBS for all races declined from

https://doi.org/10.1017/ash.2024.295 Published online by Cambridge University Press