ARI, UTI, or SSTI were in-person, and antibiotics were prescribed at 63%, 46%, and 65% of visits in either modality, respectively (Figure 1). From April through December 2020, only 33% of CBOC primary care visits for ARI, UTI, and SSTI were in person, and antibiotics were prescribed at 46%, 38%, and 47% of visits in either modality, respectively. Comparing April–December in 2019 and 2020, the number of CBOC visits for ARI fell by 76% (2,152 visits to 509 visits), with a more modest decline of 20% and 35% observed for UTI and SSTI visits. In-person visits for ARIs and SSTIs were more likely than telehealth visits to result in an antibiotic prescription (Figure 2). **Conclusions:** Among the CBOCs at our healthcare system, an increase in the proportion of telehealth visits and a reduction in ARI diagnoses occurred after the emergence of COVID-19. In this setting, we observed a reduction in the proportion of visits for ARIs, UTIs, and SSTIs that included an antibiotic prescription.

Presentation Type:
Poster Presentation
Subject Category: Antibiotic Stewardship
Antimicrobial Stewardship Standards and Patient Safety: A Case Study in Blood Culture Contamination
Connie Schaefer

Background: Blood culture is a crucial diagnostic tool for healthcare systems, but false-positive results drain clinical resources, imperil patients with an increased length of stay (and associated hospital-acquired infection risk), and undermine global health initiatives when broad-spectrum antibiotics are administered unnecessarily. Considering emerging technologies that mitigate human error factors, we questioned historically acceptable rates of blood culture contamination, which prompted a need to promote and trial these technologies further. In a 3-month trial, 3 emergency departments in a midwestern healthcare system utilized an initial specimen diversion device (ISDD) to draw blood cultures to bring their blood culture contamination rate (4.4% prior to intervention) below the 3% benchmark recommended by the Clinical & Laboratory Standards Institute. **Methods:** All emergency department nursing staff received operational training on the ISDD for blood culture sample acquisition. From June through August 2019, 1,847 blood cultures were drawn via the ISDD, and 862 were drawn via the standard method. **Results:** In total, 16 contamination events occurred when utilizing the ISDD (0.9%) and 37 contamination events occurred when utilizing the standard method (4.3%). ISDD utilization resulted in an 80% reduction in blood culture contamination from the rate of 4.4% rate held prior to intervention. **Conclusions:** A midwestern healthcare system experienced a dramatic reduction in blood culture contamina-

tion across 3 emergency departments while pilot testing an ISDD, conserving laboratory and therapeutic resources while minimizing patient exposure to unnecessary risks and procedures. If the results obtained here were sustained and the ISDD utilized for all blood culture draws, nearly 400 contamination events could be avoided annually in this system. Reducing unnecessary antibiotic use in this manner will lower rates of associated adverse events such as acute kidney injury and allergic reaction, which are possible topics for further investigation. The COVID-19 pandemic has recently highlighted both the importance of keeping hospital beds available and the rampant carelessness with which broad-spectrum antibiotics are administered (escalating the threat posed by multidrug-resistant organisms). As more ambitious healthcare benchmarks become attainable, promoting and adhering to higher standards for patient care will be critical to furthering an antimicrobial stewardship agenda and to reducing treatment inequity in the field.

Presentation Type:
Poster Presentation
Subject Category: Antibiotic Stewardship
Minimal Mortality Among Veterans with Urine Cultures Positive for Group B *Streptococcus*

Nicole Mongilardi; Robin Jump; Federico Perez; Taissa Bej; Janet M Briggs; Richard Banks; Brigid Wilson and Sunah Song

Background: Group B *Streptococcus* (GBS) can cause life-threating invasive infections, yet GBS is also a normal component of the intestinal and genitourinary tract. Although it is regarded as a potential urinary pathogen, the morbidity and mortality associated with recovery of GBS from urine cultures of nonpregnant adults is not well understood. We evaluated characteristics and mortality among nonpregnant adults with urine cultures that grew GBS. **Methods:** Using administrative data from the Veterans' Healthcare Administration (VHA), we conducted a retrospective cohort study of VA healthcare system users from January 1, 2008, through
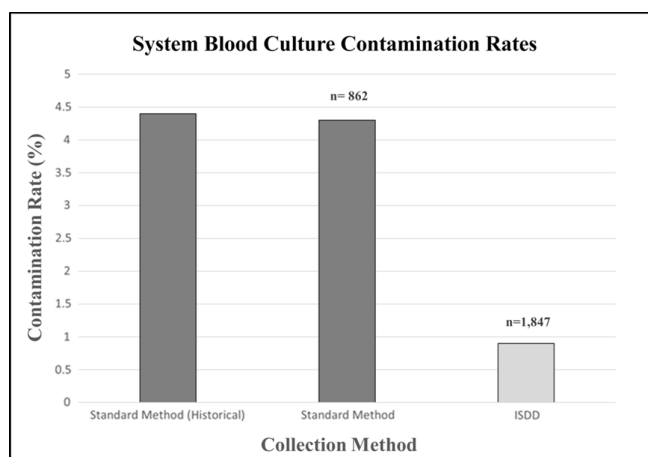
Table 1. Characteristics of VA Healthcare System Users with Monomicrobial Urine Cultures Growing GBS, Stratified by Infection Status.

	All patients (n = 26848)	Colonized (n = 8789)	Infected (n = 2807)	Unclassified (n = 15252)
Age, mean (± SD)[a]	61.8 (±15.3)	59.6 (±15.3)	65.8 (±14.8)	62.4 (±15.1)
Male sex, No. (%)[b]	20199 (75%)	6819 (78%)	2223 (79%)	11157 (73%)
Race, No. (%)				
White	16963 (63%)	5273 (60%)	1871 (67%)	9819 (64%)
Black	6834 (25%)	2512 (29%)	664 (24%)	3658 (24%)
Other[c]	3051 (11%)	1004 (11%)	272 (10%)	1775 (11%)
Ethnicity, No. (%)				
Not Hispanic	22738 (85%)	7278 (83%)	2464 (88%)	12996 (85%)
Hispanic	2703 (10%)	1094 (12%)	231 (8%)	1378 (9%)
Other[c]	1407 (5%)	417 (5%)	112 (4%)	878 (6%)%
Charlson Comorbidity Index, mean (± SD)[a]	2.51 (± 2.7)	2.28 (± 2.6)	3.09 (± 3.0)	2.53 (± 2.7)
Comorbidities				
Diabetes Mellitus	11476 (43%)	3634 (41%)	1279 (46%)	6563 (43%)
Chronic Pulmonary Disease	6544 (24%)	1922 (22%)	835 (30%)	3787 (25%)
Chronic Heart Disease	6134 (23%)	1707 (20%)	871 (31%)	3556 (23%)
Cancer	4757 (18%)	1519 (17%)	552 (19%)	2686 (18%)
Renal Disease	3906 (15%)	1010 (11%)	603 (21%)	2293 (15%)
Peripheral Vascular Disease	3359 (13%)	995 (11%)	480 (17%)	1884 (12%)
Liver Disease	2993 (11%)	817 (9%)	418 (15%)	1758 (12%)
HIV	2794 (10%)	931 (10%)	332 (12%)	1531 (10%)
Status at time of urine culture				
Inpatient	2186 (8%)	613 (28%)	407 (19%)	1166 (53%)
Outpatient	24662 (92%)	8176 (33%)	2400 (10%)	14086 (57%)

[a]SD, standard deviation
[b]All values written as No. (%) unless otherwise indicated
[c]For Race includes American Indian, Alaska Native, Asian, Native Hawaiian or Pacific Islander and unknown; for Ethnicity includes unknown
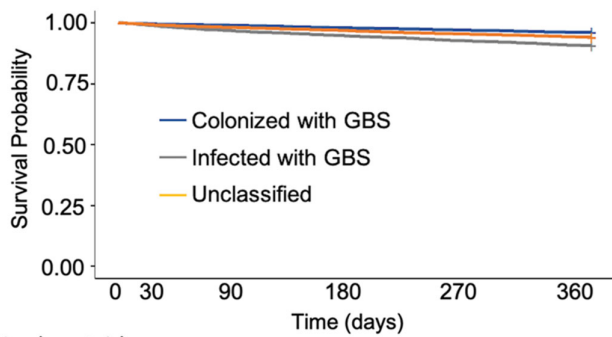
Figure 1.

Figure 1.

December 31, 2017, with monomicrobial urine cultures growing ≥100,000 colony-forming units of GBS. Urinary tract infection (UTI) cases were defined as urinalysis positive for leukocyte esterase and pyuria (≥10 white blood cells), an *International Classification of Diseases* (ICD) code for UTI, and an antibiotic prescription. Cases with colonization were defined as negative for leukocyte esterase and pyuria, no ICD code for UTI, and no antibiotic prescription. Cases not meeting either definition were deemed unclassifiable. We compared demographics, comorbidities, and all-cause mortality among these 3 groups. **Results:** Over the 10-year study period, 26,848 veterans had 30,740 urine cultures positive for GBS. Applying the definitions above, there were 2,807 cases of infection, 8,789 cases of colonization, and 15,252 cases that were unclassifiable. Patients with a GBS UTI were slightly older compared to those who were colonized, with a higher Charlson comorbidity index and greater burden of chronic renal disease (Table 1). Individuals with infection versus colonization had 30-day mortality rates of 1% and 0%, respectively, and 1-year mortality rates of 9% and 4%, respectively (Figure 1). **Conclusions:** The association of a greater burden of illness among veterans who met our definition of UTI compared to colonization might be more reflective of providers' responses to patients with chronic medical conditions rather than a difference in GBS as a cause of UTI. Overall, the prospect of a urine culture that grows GBS does not appear to be associated with adverse long-term outcomes.

Funding: No
Disclosures: None

Presentation Type:
Poster Presentation
Subject Category: Antibiotic Stewardship
Assessing Baccalaureate Nursing Students' Antibiotic Stewardship Knowledge Using Virtual Standardized Patient Simulations
Mary Lou Manning; Monika Pogorzelska-Maziarz; David Jack and Lori Wheeler

Background: According to the Centers for Disease Control and Prevention, the single most important factor leading to the development of antibiotic resistance (AMR) is the use of antibiotics. Studies indicate that up to 50% of hospitalized patients receive at least 1 antibiotic, half of which are inappropriate. The outpatient setting accounts for >60% of antibiotic use and over half of these prescriptions are inappropriate. Antibiotic stewardship programs improve appropriate antibiotic use, reduce AMR, decrease complications of antibiotic use, and improve patient outcomes. Building a nursing workforce with necessary AMR and antibiotic stewardship knowledge and skill is critical. Nursing graduates can translate knowledge into practice, promoting the judicious use of antibiotics to keep

patients safe from antibiotic harm. **Methods:** Third-year baccalaureate nursing students enrolled in a fall 2020 health promotion course at an urban university affiliated with an academic medical center participated. Students received a 3-hour lecture on antibiotics, AMR and antibiotic stewardship nursing practices and actively engaged in antibiotic stewardship simulations using standardized patient (SP) encounters. The SP participants were specifically trained for these activities. Simulations included a 30-minute brief before and a 60-minute briefing after the activities. All activities occurred via video conferencing. Case scenarios, developed by the authors, focused on penicillin-allergy delabeling of an adolescent prior to elective surgery and appropriate use of antibiotics in managing pediatric urinary tract infections and acute otitis media (AOM). Before-and-after tests were used to assess the impact on AMR and antibiotic stewardship knowledge. **Results:** Over a period of 4 days, all enrolled students (n = 165) participated in 1 three-hour virtual simulation session. Using Zoom video conferencing with multiple breakout rooms, the activities were easily managed. During the simulations, students often struggled with reading an antibiogram and applying the concept of "watchful waiting" in AOM management. Significant differences were found in before-and-after test results, with significant improvement in students' general and specific knowledge and awareness of antibiotics ($P < .01$). During the debriefing sessions, students reported increased awareness related to their role in advancing the judicious use of antibiotics. **Conclusions:** Initially, we planned to conduct in-person SP simulations. Due to the COVID-19 pandemic, faculty and students demonstrated remarkable flexibility and resilience as we successfully converted to a virtual format. Virtual lecture and SP simulations, followed by debriefing, was an effective approach to educate baccalaureate nursing students about AMR and their role in antibiotic stewardship. Areas for course content improvement were identified.

Funding: No
Disclosures: None

Presentation Type:
Poster Presentation
Subject Category: Antibiotic Stewardship
How the COVID-19 Pandemic Affected Antimicrobial Prescribing Practices at a Tertiary-Care Healthcare System in Detroit, Michigan
Angela Beatriz Cruz; Jennifer LeRose; Avnish Sandhu and Teena Chopra

Background: Inappropriate antimicrobial use continues to threaten modern medicine. The ongoing pandemic likely exacerbated this problem because COVID-19 presents similarly to bacterial pneumonia, confusion exists regarding treatment guidelines, and testing turnaround times (TATs) are slow. Our primary object was to quantify antimicrobial use changes during the pandemic to rates before the crisis. A subanalysis within the COVID-19 cohort was completed based on SARS-CoV-2 status. **Methods:** The pre–COVID-19 period was January–May 2019 and the COVID-19 period was January–May 2020. Subanalyses were used to explore differences in antibiotics use between persons not under investigation (non-PUIs), SARS-CoV-2–negative PUIs, and SARS-CoV-2–positive PUIs. Non-PUI patients were those without respiratory symptoms and/or fever. The χ^2 and Wilcoxon signed rank-sum tests were used for analysis. **Results:** During the 2019 and 2020 study periods, 7,909 and 7,283 patients received >1 antimicrobial, respectively (Figure 1). Overall, antibiotic therapy per 1,000 patient days increased from 633.1 before COVID-19 to 678.5 during COVID-19, a 7.2% increase (Table 1). Notably, broad-spectrum respiratory antibiotics demonstrated a significant increase between pre–COVID-19 and COVID-19 cohorts (p < 0.001). Of the 7,283 patients within the COVID-19 cohort, 34.7% (n = 2,532) were PUI and 13.8% (n = 1,002) of these patients tested SARS-CoV-2 positive. Again, broad-spectrum respiratory antibiotics use was significantly increased for COVID-19 patients (p < 0.001). Of note, the proportion of patients receiving respiratory antibiotics steadily decreased over time ($R^2 = 0.99$). **Conclusions:** There was a significant increase in antibiotic use during the COVID-19 pandemic. Encouragingly, antimicrobial use