

FQ prescriptions (Fig. 1). Moreover, 92 patients (35%) were prescribed FQs for surgical prophylaxis prior to urological procedures. FQs were most commonly inappropriately prescribed for urinary tract infection (UTI,  $n=74$ , 84%) and upper respiratory tract infection (URI,  $n=27$ , 84%) (Fig. 2). Documented counseling on FDA black box warnings occurred in 82 cases (31%). **Conclusions:** In our MUE, outpatient prescribing of FQs was inappropriate nearly 50% of the time. The most commonly documented indications for FQs determined to be inappropriate included UTI and URI. Inappropriate prescriptions most commonly originated from primary care and the emergency department. Urology had the highest volume of FQ prescriptions, which were mostly appropriate surgical prophylaxis based on indication (though an alternative agent would be preferred based on local resistance rates). Documentation of patient counseling for FDA black-box warnings on FQs was uncommon.

**Funding:** None

**Disclosures:** None

Doi:10.1017/ice.2020.953

#### Presentation Type:

Poster Presentation

#### Parental Knowledge, Attitudes, and Practices Regarding Antibiotic Use: A Cross-Sectional Study in Bangladesh

Golam Dostogir Harun MD, Dept. of Public Health, Daffodil International University, Dhaka, Bangladesh; Romel Haider, Dept. of Public Health, Daffodil International University, Dhaka, Bangladesh; Imdadul Haque MD, Dept. of Public Health, Daffodil International University, Dhaka, Bangladesh; Alauddin Chowdhury ABM, Dept. of Public Health, Daffodil International University, Dhaka, Bangladesh; Saiful Islam MD, School of Public Health & Community Medicine, UNSW, Sydney, Australia

**Background:** Antibiotics play a vital role in reducing the morbidity and mortality associated with common infectious among children aged <5 years. **Objective:** We assessed the parental knowledge, attitudes, and practices regarding antibiotic use among a low-income urban population in Bangladesh. **Methods:** A cross-sectional study was conducted among the parents of 516 low-income urban children aged <5 years in Bangladesh from February 2018 to April 2019. A semi-structured questionnaire was developed and administered to explore parental knowledge, attitudes, and practice regarding antibiotic use. A logistic regression analysis and Spearman rank-order correlation was used to compare and evaluate possible associations regarding parental KAP on antibiotic use. **Results:** The mean age of the participants was 26.65 years (SD,  $\pm 6.38$ ) and average monthly income was US\$195.00. Most respondents (437 of 516) were women. One-third of the participants had no formal education, and 64% had only 5 years of education. We categorized the knowledge, attitudes, and practice regarding antibiotic use into 3 categories: poor, moderate, and good. More than half (52%) of these parents had poor knowledge of antibiotic use, and 32% had moderate knowledge of antibiotic use. Overall, 55% of parental attitudes were moderate and 70% of antibiotic practices were moderate. However, only 16% respondents had good knowledge, 14% had good attitudes, and 14% had good practices regarding antibiotic use for their children. The study revealed that 41% of parents thought that their child could be treated with antibiotics without advice from a qualified doctor, and 71% of parents thought that a child with flu-like symptoms got better faster if antibiotics were used. Also, 54% thought that the antibiotics could be stopped

as soon as the symptoms disappeared. In this study, only 40% of parents completed the full dose of antibiotics. Monthly family income ( $P = .005$ ), father's profession ( $P = .003$ ), and parents' education were significantly associated with antibiotic use to treat the child. **Conclusions:** Most participants' knowledge, attitude, and practices regarding rational antibiotic usage was very poor. Awareness campaigns and implementation of education on how to purchase, use, and sell antibiotics is crucial to optimum the use of antibiotics in Bangladesh.

**Funding:** None

**Disclosures:** None

Doi:10.1017/ice.2020.954

#### Presentation Type:

Poster Presentation

#### Passive Engineering Controls Result in Sustained 66% Reduction in Blood Culture Contamination

Monica Baxter, Saint Mary's Regional Medical Center; Carolyn Cook, Saint Mary's Regional Medical Center; Angie James, Saint Mary's Regional Medical Center

**Background:** Blood culture testing is an important diagnostic tool in identifying the presence of microbes in the bloodstream. Tests are frequently contaminated, leading to false-positive results. Blood culture contamination can result in unnecessary antibiotic treatment, extended hospital length of stay, and patient exposure to hospital-acquired conditions. **Methods:** St. Mary's Regional Medical Center (SMRMC) in Russellville, Arkansas, struggled with blood-culture contamination rates, with an average of 6.8% from 2014 to 2018. Ongoing staff education yielded a reduction to an average of 5%. In an effort to reduce the contamination rates, our facility elected to try a novel specimen diversion device. Laboratory and emergency department (ED) staff were educated on the diversion device prior to the initiation of the trial period. Compliance with the diversion device averaged 70%–75% during the trial period. Monitoring of contaminations was added to our daily safety huddle to provide a quick turnaround time for false-positive education to specific clinical staff. **Results:** The results were significant, with a decrease in contamination rates from 4.93% to 1.66%—a 66% reduction. Improved blood culture testing has several advantages: best practice for patient care is first and

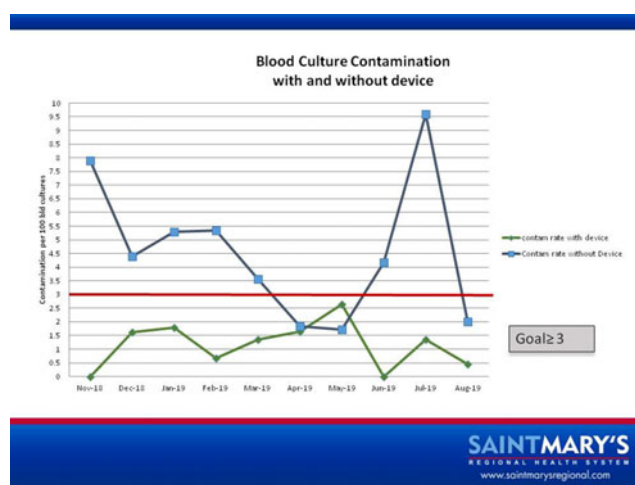


Fig. 1.

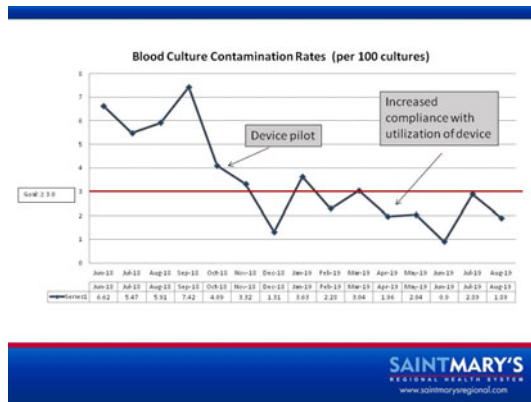


Fig. 2.

foremost, along with other financial benefits for the facility. Several articles have estimated the cost of a contaminated culture to be \$3,000–\$10,000 per event; SMRMC has adopting an estimated cost of \$4,000. The number of cultures at our hospital averages ~4,400 per year, and these results suggest a savings of >\$500,000 per year (as contaminations on an annual basis fell from 217 to 73). With this intervention, 144 patients were spared from receiving unnecessary antibiotics as a result of a false-positive blood culture testing. **Conclusions:** We conducted a brief analysis to determine whether there was any obvious change in length of stay for patients with a false-positive blood culture compared to those with true negative results. In analyzing data for 3 different months, patients with contaminated cultures spent an average of 3.97 additional days in the facility. In conclusion, the implementation of this specimen diversion device significantly lowered our contamination rates, was integrated into practice, and has provided clinical and financial benefits.

**Funding:** None

**Disclosures:** None

Doi:10.1017/ice.2020.955

### Presentation Type:

Poster Presentation

### Pathogens Associated With Repeat Versus Single Central-Line-Associated Bloodstream Infections, Acute-Care Hospitals, NHSN

Margaret A. Dudeck, Centers for Disease Control and Prevention; Katherine Allen-Bridson, Centers for Disease Control and Prevention; Jonathan R. Edwards, Centers for Disease Control and Prevention

**Background:** The NHSN is the nation's largest surveillance system for healthcare-associated infections. Since 2011, acute-care hospitals (ACHs) have been required to report intensive care unit (ICU) central-line-associated bloodstream infections (CLABSIs) to the NHSN pursuant to CMS requirements. In 2015, this requirement included general medical, surgical, and medical-surgical wards. Also in 2015, the NHSN implemented a repeat infection timeframe (RIT) that required repeat CLABSIs, in the same patient and admission, to be excluded if onset was within 14 days. This analysis is the first at the national level to describe repeat CLABSIs.

**Methods:** Index CLABSIs reported in ACH ICUs and select wards

Figure 1. Pathogen Distribution among Single and Repeat CLABSIs, NHSN, 2015-2018.

Pathogen/Pathogen group	Single CLABSI		Repeat CLABSI	
	Frequency	Percent	Frequency	Percent
<i>Staphylococcus aureus</i>	9,149	14.24	715	11.95
Coagulase-negative staphylococci	8,237	12.82	629	10.51
<i>Candida albicans</i>	5,573	8.68	357	5.97
<i>Klebsiella (pneumoniae/oxytoca)</i>	5,089	7.92	664	11.1
<i>Enterococcus faecalis</i>	5,039	7.85	618	10.33
<i>Escherichia coli</i>	4,145	6.45	331	5.53
<i>Candida spp</i>	4,118	6.41	431	7.2
<i>Enterococcus faecium</i>	3,447	5.37	338	5.65
<i>Candida glabrata</i>	3,240	5.04	226	3.78
<i>Enterobacter spp</i>	2,753	4.29	337	5.63
<i>Pseudomonas aeruginosa</i>	2,337	3.64	221	3.69
<i>Serratia spp</i>	1,441	2.24	188	3.14
<i>Enterococcus spp</i>	958	1.49	95	1.59
<i>Acinetobacter</i>	899	1.4	89	1.49
<i>Bacteroides</i>	619	0.96	34	0.57
Viridans group streptococci	533	0.83	85	1.42
<i>Proteus spp</i>	520	0.81	45	0.75
<i>Citrobacter spp</i>	312	0.49	34	0.57
<i>Morganella spp</i>	136	0.21	9	0.15
All Others	5,686	8.85	537	8.98
<b>TOTAL</b>	<b>64,231</b>	<b>100</b>	<b>5,983</b>	<b>100</b>

Fig. 1.

Figure 2. Percent of Single and Repeat CLABSIs by Associated Pathogen Group, NHSN, 2015-2018.

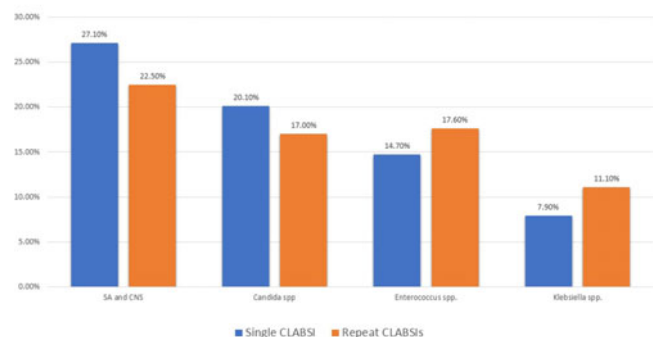


Fig. 2.

during 2015–2018 were included, in addition to repeat CLABSIs occurring at any location during the same period. CLABSIs were stratified into 2 groups: single and repeat CLABSIs. The repeat CLABSI group included the index CLABSI and subsequent CLABSI(s) reported for the same patient. Up to 5 CLABSIs were included for a single patient. Pathogen analyses were limited to the first pathogen reported for each CLABSI, which is considered to be the most important cause of the event. Likelihood ratio  $\chi^2$  tests were used to determine differences in proportions. **Results:** Of the 70,214 CLABSIs reported, 5,983 (8.5%) were repeat CLABSIs. Of 3,264 nonindex CLABSIs, 425 (13%) were identified in non-ICU or non-select ward locations. *Staphylococcus aureus* was the most common pathogen in both the single and repeat CLABSI groups (14.2% and 12%, respectively) (Fig. 1). Compared to all other pathogens, CLABSIs reported with *Candida spp* were less likely in a repeat CLABSI event than in a single CLABSI event ( $P < .0001$ ). Insertion-related organisms were more likely to be associated with single CLABSIs than repeat CLABSIs ( $P < .0001$ ) (Fig. 2). Alternatively, *Enterococcus spp* or *Klebsiella pneumoniae* and *K. oxytoca* were more likely to be