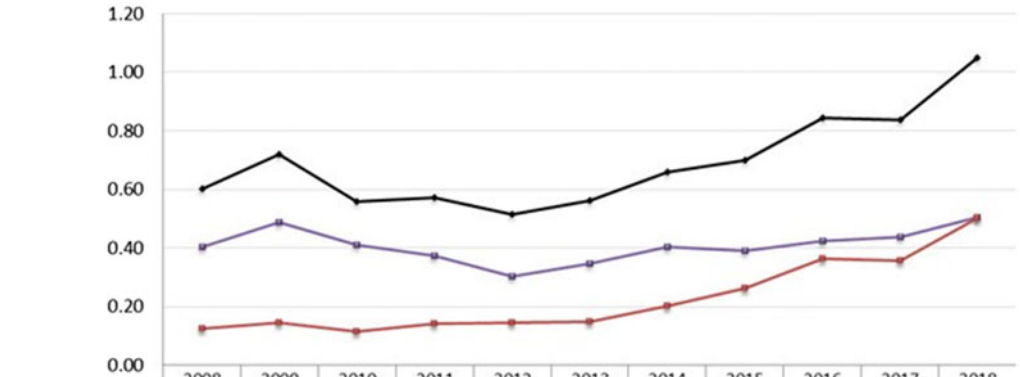

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
ALL MRSA BSI	0.60	0.72	0.56	0.57	0.52	0.56	0.66	0.70	0.84	0.84	1.05
HA-MRSA BSI	0.40	0.49	0.41	0.38	0.30	0.35	0.40	0.39	0.43	0.44	0.51
CA-MRSA BSI	0.13	0.15	0.11	0.14	0.14	0.15	0.20	0.26	0.36	0.36	0.50

Figure1. MRSA BSI rates per 10,000 patient days, 2008 – 2018

Fig. 1.

Presentation Type:
Top Rated Posters

No Device, No Problem? Healthcare-Associated Bloodstream and Urinary Tract Infections in a Children's Hospital

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Background: Central-line–associated bloodstream infection (CLABSI) and catheter-associated urinary tract infection (CAUTI) definitions continue to be refined to ensure accuracy. As facilities decrease CLABSI and CAUTI, and as midline catheters become more widely utilized, we sought to understand our non–central-line bloodstream infections (NCLBSI) and non–catheter-associated urinary tract infections (NCAUTI). Total healthcare-associated bloodstream infections (HABSIs) and urinary tract infections (HAUTIs) may provide more objective measures. **Methods:** The CHOC Children's Hospital is a 334-bed quaternary-care hospital in Orange, California, with 146 intensive care unit (ICU) beds. We retrospectively reviewed all HABSIs (CLABSIs + NCLBSIs) and HAUTIs (CAUTIs + NCAUTIs) from July 1, 2016, to June 30, 2019, for demographic and microbiologic data. Both HABSI and HAUTI were defined as healthcare-associated infection when the date of event occurs on or after the third calendar day of admission. CLABSI and CAUTI were both defined using CDC-NHSN criteria. Mucosal barrier injury laboratory-confirmed bloodstream infections were excluded. **Results:** In a 3-year period, there were 100 HABSIs, of which 26 (26%) were NCLBSIs. The mean age for HABSI was 81 months. Enteric gram-negative infections (42%) and *Staphylococcus aureus* (35%) were the most common etiology for NCLBSI. The most common etiologies for CLABSI were coagulase-negative staphylococci (23%), *Staphylococcus aureus* (22%), and enteric gram-negatives (22%). *Pseudomonas aeruginosa* accounted for 16% of CLABSIs, but no NCLBSIs (Fig. 1). There was 1 midline catheter NCLBSI. There were 49 HAUTIs, of which 39 (80%) were NCAUTIs. One asymptomatic bacteremic urinary tract infection was included with the CAUTIs. The mean age for HAUTI was 55 months. The most common etiology of CAUTI was *Pseudomonas aeruginosa* (50%), whereas for NCAUTI the most common etiology was enteric gram-negative organisms (69%) (Fig. 2). In total, 11 HAUTIs (22%) resulted in secondary sepsis. Most HABSIs and HAUTIs occurred in the ICU setting. There were 6 deaths (6%) among HABSI patients and 3 deaths (8%) among HAUTI patients within 2 weeks of infection (Fig. 3). **Conclusions:** A preponderance of HABSIs were CLABSIs, but most HAUTIs were NCAUTIs. Although patient demographic and microbiologic differences exist in CLABSIs and NCLBSIs as well as CAUTIs and NCAUTIs, *S. aureus* and *P. aeruginosa* are important pathogens, particularly in device-associated infections. Trending total numbers of

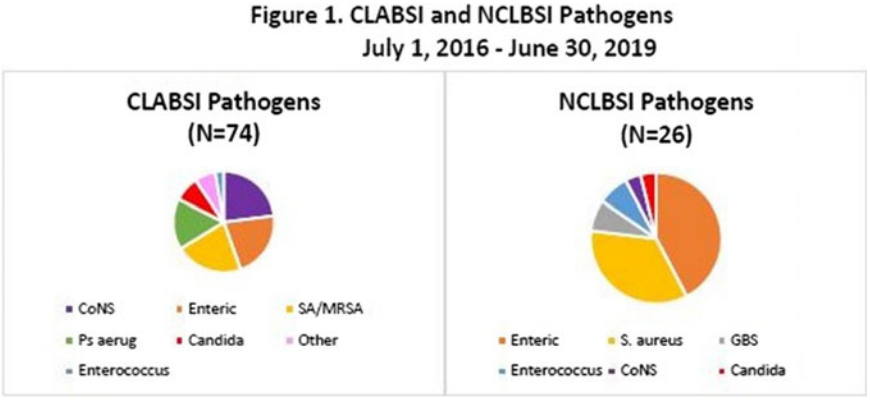

Fig. 1.

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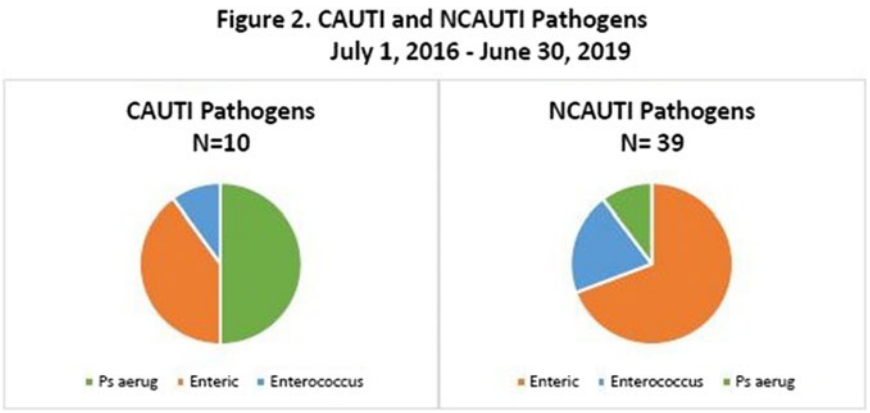

Fig. 2.

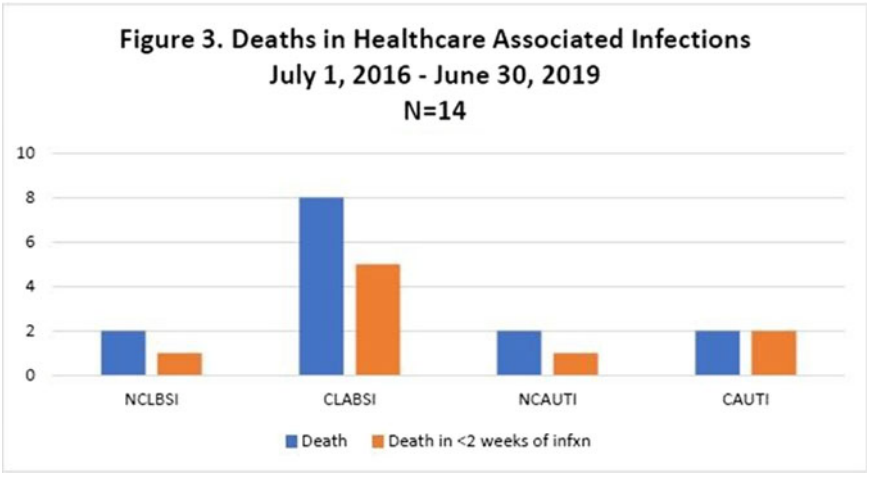

Fig. 1.

HABSIs and HAUTIs may be less subjective and may avert the shifting of categories seen with increased use of midline catheters. In addition, non–device-associated infections are potential causes of morbidity and mortality.

Funding: None
Disclosures: None
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Presentation Type:
Top Rated Posters

Pilot Program for Aztreonam-Avibactam Susceptibility Testing of Metallo-Beta-Lactamase-Producing Enterobacteriaceae

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Background: Carbapenemase-producing Enterobacteriaceae (CPE) are a major public health concern because they typically display multidrug resistance and they cause hard-to-treat infections. Organisms harboring metallo-β-lactamases (MBLs) pose a critical challenge in clinical practice because they confer resistance to nearly all β-lactams, including recently approved β-lactam combination agents. A promising new β-lactam-β-lactamase inhibitor combination for treating infections caused by MBL-producing CPE is aztreonam–avibactam. Although clinical trials using aztreonam–avibactam are ongoing, clinicians can administer this combination using 2 US Food and Drug Administration (FDA)–approved drugs: aztreonam and ceftazidime–avibactam. In 2019, the Centers for Disease Control and Prevention (CDC) initiated a pilot program in the Antibiotic Resistance Laboratory Network (AR Lab Network) to address the lack of commercially available antimicrobial susceptibility tests (ASTs) for aztreonam-avibactam by performing broth microdilution (BMD) for this drug combination. We describe the isolates submitted for aztreonam-avibactam AST during the AR Lab Network pilot in 2019.
Methods: The AR Lab Network regional laboratories adopted the HP D300e Digital Dispenser to create customized BMD panels for aztreonam–avibactam ASTs. To qualify for aztreonam–avibactam AST, isolates had to be an Enterobacteriaceae displaying non-susceptibility to all tested β-lactams (including either ceftazidime-avibactam or meropenem-vaborbactam) or confirmed to harbor at least 1 MBL gene (*bla*VIM, *bla*NDM, or *bla*IMP). Regional