prophylactic agents administered (Table 2). Patients with ventriculitis had a significantly longer duration of EVD placement (10 ± 3 vs. 7 ± 6 days, P = 0.03), hospital LOS (30 ± 19 days vs. 15 ± 12, P = 0.04), ICU LOS (22 ± 14 vs. 10 ± 7, P = 0.03). Two patients with ventriculitis (28%) died within 30 days of admission compared with 46 patients without ventriculitis (19%, P = 0.53) (Table 3).

Conclusion. The rate of ventriculitis in our study was similar to previous studies that did not utilize AP. All of the causative organisms were resistant to the prophylactic agent. Patients who had ventriculitis had a longer duration of EVD placement, hospital LOS, and ICU LOS; however, 30-day mortality was not impacted. Based on our findings, the use of AP to prevent EVD-related ventriculitis should be reconsidered.

Table 1. Demographics

| Demographic Category | Study Group (n = 269) |
|----------------------|----------------------|
| Age, mean (years)    | 59 ± 16              |
| Male (%)             | 159 (44)             |
| EVD Duration, median (days) | 6.1                 |
| Duration of Prophylaxis, median (days) | 6.1                |
| Reason for EVD       |                       |
| • Subarachnoid Hemorrhage (%) | 196 (76)             |
| • Tumor (%)          | 48 (19)               |
| • Acute Ischemic Stroke (%) | 7 (3)                |
| • Other (%)          | 0                    |

Table 2. Ventriculitis Causative Organisms

| Organism Cultured | Duration of EVD Prior to Positive Culture (days) | Susceptible to Prophylactic Agent (yes/no) | P-value |
|-------------------|-----------------------------------------------|------------------------------------------|---------|
| Acanthamoeba baumani         | 6                                             | No                                       |         |
| Coxiella-negative Shigellaceae | 26                                            | No                                       |         |
| Enterobacter cloacae          | 12                                            | No                                       |         |
| Enterobacter aerogenes        | 12                                            | No                                       |         |
| Klebsiella pneumonia           | 10                                            | No                                       |         |
| Pseudomonas aeruginosa         | 13                                            | No                                       |         |

Table 3. Secondary Outcomes

| Venticulitis (n=27) | No Venticulitis (n=242) | P-value |
|---------------------|------------------------|---------|
| Hospital LOS (mean (days) | 30.1 ± 18.9             | 15.2 ± 12.2 | 0.04       |
| ICU LOS (mean (days) | 22.3 ± 13.8             | 10.9 ± 7.3  | 0.03       |
| Duration of EVD (mean (days)) | 5.9 ± 3.1              | 6.7 ± 2.5  | 0.03       |
| 30-Day Mortality (%) | 2 (28.5)                | 48 (19)    | 0.33       |

Disclosures. All authors: No reported disclosures.

1152. Implementation of Enhanced Data Surveillance Methods to Reduce Catheter-Associated Urinary Tract Infections

Jordan Ehi, CIC, MPH1; Marie Moss, MPH, RN, CIC2; Brian Koll, MD2; Dana Mazo, MD, MSc2; Waheed Javid, MD, FACP, FIDSA, FSHEA4; Maria Latrache, MA, RN, NB-BC3; Christine D. Mahoney, MS, RN, AGACNP-BC, NEA-BC, CCRN4; Barbara Barnett, MD2;1 Mount Sinai Beth Israel, Brooklyn, New York; Mount Sinai Health System, Brooklyn, New York; Tisch School of Medicine at Mount Sinai, Brooklyn, New York; Mount Sinai Beth Israel Medical Center, New York, New York; Mount Sinai Downtown, New York, New York

Session: 141. HAI, Device-Associated: CAUTI
Friday, October 4, 2019: 12:15 PM

Background. Urinary tract infections (UTIs) continue to be one of the most common types of healthcare-associated infections (HAIs). Instrumentation of the urinary tract using devices such as indwelling urinary catheters (IUCs) is the leading cause of healthcare-associated UTIs. Every day that a patient has an IUC increases their risk of acquiring a UTI. After an increase in the number of catheter-associated urinary tract infections (CAUTIs), a mid-sized acute care hospital in the Northeast United States used an electronic surveillance system to monitor IUC order compliance and appropriateness in order to reduce IUC utilization and prevent CAUTIs.

Methods. Using an Infection Prevention (IP) electronic surveillance system, a line list was generated of patients who had an IUC documented in the urinary flow sheet of their electronic medical record. This list contained variables such as: catheter insert date, catheter order status, and catheter indication. IP staff sent this list in a daily e-mail to clinical leadership and front line staff over a 14 month period. The e-mail notified providers when their patients had an IUC without an order. Clinical staff was directed to discontinue the IUC if it was no longer indicated or to place a new IUC order if still indicated. The National Healthcare Safety Network (NHSN) CAUTI definition and data functions were used for the purposes of this study.

Results. A statistically significant (P = 0.017) reduction in the hospital CAUTI rate was found when a comparison was made between the 14-month pre-intervention baseline period (1.12 CAUTI per 1,000 catheter days) and the 14 month post-intervention period (0.29 CAUTI per 1,000 catheter days). A statistically significant decrease (P=0.001) in IUC utilization was also noted for the same time period, decreasing from 8.2 catheters per 100 patient-days to 7.8 catheters per 100 patient-days.

Conclusion. A significant reduction in CAUTIs and IUC utilization was seen over the 14-month IP-driven e-mail intervention. This study suggests that regular electronic communication of surveillance system information to providers may reduce CAUTIs.

Disclosures. All authors: No reported disclosures.

1153. National Trend of Urinary Catheter Device Utilization by Hospital Type, National Healthcare Safety Network (2015–2019)

Minn M. Soe, MBBS, MPH, MCTM, CDC, Atlanta, Georgia

Session: 141. HAI, Device-Associated: CAUTI
Friday, October 4, 2019: 12:15 PM

Background. Reducing unnecessary urinary catheter use and optimizing insertion techniques and catheter maintenance and care practices are the most important urinary tract infection (CAUTI) prevention strategies. To monitor device use (DU) as quality improvement activity, the Centers for Disease Control and Prevention's
National Healthcare Safety Network (NHSN) developed the risk adjusted, standardized urinary catheter device utilization ratio in 2015. This study aims to assess national trends of DU from the baseline year 2015 through 2019.

Methods. For our trend analysis, we analyzed DU data (catheter days per 100 inpatient-days) that acute care hospitals (ACHs), long-term acute care hospitals (LTACHs), and critical access hospitals (CAHs) reported to NHSN from 2015Q1 through 2019Q4. The ward and intensive care unit patient care locations included in our analysis are those that ACHs, LTACHs, and CAHs are required to report to CMS to comply with CMS Inpatient Quality Reporting program requirements. We regressed DU by quarterly period using generalized estimating equation modeling with the negative-binomial distribution, after adjusting for factors associated with corresponding SUR models of 2015 baseline and accounting for autocorrelation of error terms within a location. For graphic display, we also computed quarterly DU using marginal predictive models.

Results. The DU decreased over time (P < 0.05, average percent change per quarter (%change): −0.54 [95% CI: −0.54, −0.53]) among ACHs (Table 1, Figure 1), and −0.54 [95% CI: −0.58, −0.49] among LTACHs (Table 1, Figure 2). Among IRFs, quarterly DU in 2015Q2–2016Q4 were similar relative to 2015Q1, but decreased from 2016Q4 onward (P < 0.05, % change: −0.51 [95% CI: −0.61, −0.40]) (Table 1, Figure 3). Among CAHs, quarterly DU in 2015Q2–2016Q4 were similar relative to 2015Q1, but decreased from 2016Q4 onward (P < 0.05, % change: −0.22 [95% CI: −0.39, −0.04]) (Table 1, Figure 4).

Conclusion. There was a statistically significant decrease in National DU of urinary catheter during 2015–2019 across NHSN, although the magnitude of percent change per quarter was not large. Further research is needed to explore causal factors associated with such reduction.

Disclosures. All authors: No reported disclosures.

1155. CAUTI Path to Zero: A Triple-Pronged Approach to Minding Our Pees and Cues
Sharen Henry, MSN, RN; Doramarei Arocha, PhD; Dawn Brown, MS-MAS, BSN, RN, NE-BC; Hope Sutterfield, BSN, RN; Lee Fisher, RN; Sheila Fletcher, BSN, RN, CIC; University of Mississippi Medical Center, Jackson, Mississippi
Session: 141. HAI, Device-Associated: CAUTI
Friday, October 4, 2019: 12:15 PM

Background. Catheter-associated urinary tract infections (CAUTIs) account for nearly 30% of all hospital-acquired infections. From 2009 to 2013, the frequency of CAUTIs increased by 6% with associated increases in length of stay, antibiotic usage and mortality (2.3%); they are also a risk factor for secondary bloodstream infections. In 2017, the CAUTI SIR for the UT Southwestern University hospitals was 0.990 for Clements University Hospital (CUH) and 1.224 for Zale-Lipshy (ZL), placing UT Southwestern above the 50th percentile compared with similar academic medical centers. By the end of 2018, the aim of the quality improvement project was to reduce CAUTIs by 25% or improve the SIR to 0.78, which is at or below the 50th percentile.

Methods. Baseline data included identifying indications and duration of catheter placement as well as performing debriefings on all CAUTIs along with analysis of adherence to the CAUTI bundle. Using evidence-based guidelines, the three primary interventions were (1) streamlining indications for insertion, (2) ensuring prompt removal of catheters, and (3) providing alternative care pathways after removal. We observed insertion technique and catheter care; nursing services were engaged to understand barriers to catheter removal and subsequently informed of other options such as in-and-out catheters, bladder scanners and female external catheters. Nursing leadership also performed daily necessity audits of all patients with indwelling catheters.

Results. Urine output monitoring in acute/critical illness and urinary obstruction/retention were the top two indications for use. Catheter utilization rates have decreased since 2016. The average dwell time at CUH was 51 hours (excl. urology) and 40 hours at ZL. There was actually a 34% decrease in the total number of CAUTIs from 38 in 2017 to 25 in 2018, exceeding the goal of 25% reduction; the 2018 SIR for CUH was 0.818 and 0.496 for ZL. The prevention of 13 CAUTI events from 2017 to 2018 resulted in ~$180,000 savings.

Conclusion. Successful reduction of CAUTI is an interdisciplinary effort requiring consistent attention and support from infection prevention, nursing, education, quality improvement, IT and hospital administration. Empowering nursing staff, providing clear protocols post-removal and options for alternative external urinary devices is key.