

Nosocomial infection rate by site of ECMO cannulation

	Local Cannulation (n=33)	Inter-hospital Transfer (n=76)	P-value
Male	25 (76%)	54 (71%)	0.61
Median age	43 (33-59)	39 (30-51.5)	0.11
Pre-ECMO Hospital Days	4 (0-12)	4 (2-9.25)	0.53
Median time on ECMO (days)	6.7 (3.9-13.4)	10.9 (5.0-23.7)	0.04
Hospital Length of Stay (days)	29 (16-50)	21 (13.75-44.25)	0.46
Survived to discharge	20 (61%)	60 (79%)	0.05
Admission Diagnosis			0.91
Cardiac Diagnosis	5 (15%)	8 (11%)	
Medical Diagnosis	16 (48%)	58 (76%)	
Trauma/Surgical Diagnosis	12 (36%)	10 (13%)	
Any Infection while on ECMO	9 (27%)	33 (44%)	0.10
Total Infections per 1000 ECMO days	33.1	30.5	0.74
Blood Stream Infections (BSI) per 1000 ECMO days	12.0	5.5	0.29
Respiratory Infections (RI) per 1000 ECMO days	13.5	19.3	0.41
Skin and Soft Tissue Infections per 1000 ECMO days	2.1	8.2	0.07
Urinary Tract Infections per 1000 ECMO days	0	2.1	0.38
Median days to BSI	6 (3-9)	20 (7-22)	0.23
Median days to RI	2 (1-4.5)	4 (1-17.5)	0.25
Any MDRO	4/8 (50%)	17/31 (55%)	1

All data expressed as number N (%), or median (interquartile range) unless otherwise stated

Conclusion. This study did not find a significant difference in nosocomial infection rate or recovery of MDROs between transported and non-transported patients on ECMO, regardless of transport modality. This study suggests that transportation is not the primary driver of nosocomial infections in this cohort.

Disclosures. All Authors: No reported disclosures

808. Evaluating the Incidence of Bacteriuria in Female Patients Before and After Implementation of External Catheter Devices

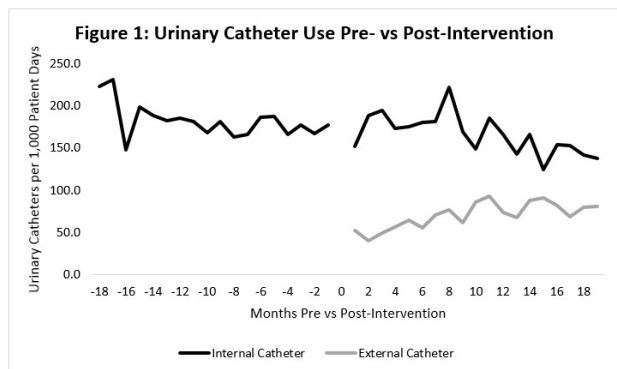
Mandee Noval, PharmD¹; Surbhi Leekha, MBBS, MPH²; Meghna Bhatt, PharmD Candidate¹; Michael Armhazizer, PharmD³; Abigale Celotto, CRNP³; Kimberly C. Claeys, PharmD¹; ¹University of Maryland School of Pharmacy, Boothwyn, Pennsylvania; ²University of Maryland, Baltimore, MD; ³University of Maryland Medical Center, Baltimore, Maryland

Session: P-33. HAI: Device-Associated (CLABSI, CAUTI, VAP)

Background. Bacteriuria associated with indwelling urinary catheters is commonly linked to inappropriate antibiotic use in hospitals. The use of external catheter devices (ECD) has increased in recent years to reduce bacteriuria risk in women, based on data in male patients. Currently no studies have shown a similar benefit in the female population.

Methods. This was a quasi-experimental study among adult female ICU patients with urinary catheters (indwelling or external) between 12/2015 – 5/2017 (pre-ECD) and 12/2017 – 6/2019 (post-ECD). The primary outcome was the incidence of positive urine cultures pre- vs post-intervention. An *a priori* subgroup patient-level analysis evaluated positive urine cultures and antibiotic use pre- vs post-intervention in medical and surgical ICU patients who had a urinalysis ordered in the presence of an indwelling or external urinary catheter. Antibiotic use was considered appropriate when prescribed in the presence of a positive urine culture, clinical signs and symptoms of UTI, and a UTI order indication.

Results. There were 4,640 patient ICU encounters during the study period; 2,201 pre- vs 2,439 post-intervention. Mean age was 59.2 (SD 15.4) years, median Elixhauser Score was 6 (IQR 4, 7), and there were no significant differences between groups. In the overall cohort, there was a decrease in the monthly rate of indwelling urinary catheter use pre- versus post- intervention (Figure 1) of 182/1,000 vs 166/1,000 patient days, P = 0.03. There was also a decrease in rate of positive urine cultures from pre- to post-intervention (38/1,000 vs 28/1,000 patient days, P = 0.004). Antibiotic days of therapy (DOTs) for UTI indication was similar in the pre- versus post-intervention groups with 1.9/1000 vs. 1.8 DOT/1,000 patient days (P = 0.7). In the subgroup of 210 patients (73 pre- vs 137 post-intervention) who underwent urinalysis, there was also a decrease in the proportion of positive urine cultures from pre- to post-intervention (42.5% vs. 24.3%; P = 0.007). Of patient receiving antibiotics for UTI indication, appropriateness was numerically higher post-intervention (9.1% vs. 31.6%; P = 0.21).



Conclusion. The use of external urinary catheters may be beneficial in reducing bacteriuria and related antibiotic use among female ICU patients.

Disclosures. All Authors: No reported disclosures

809. Modified Laboratory Reporting to Prevent Catheter-Associated Urinary Tract Infections (CAUTIs)

Cherie Faith Monsalud, MPH, CIC¹; Kamaljit Singh, MD¹; Erin McElvania, PhD, D(ABMM)¹; Donna Schora, ASCP¹; Jennifer Grant, MD¹; Mary Alice Lavin, RN, MJ, CIC, FAPIC¹; Rachel Lim, RN, MPH, CIC¹; Shane Zelencik, MPH, CIC, FAPIC¹; ¹NorthShore University HealthSystem, Evanston, IL

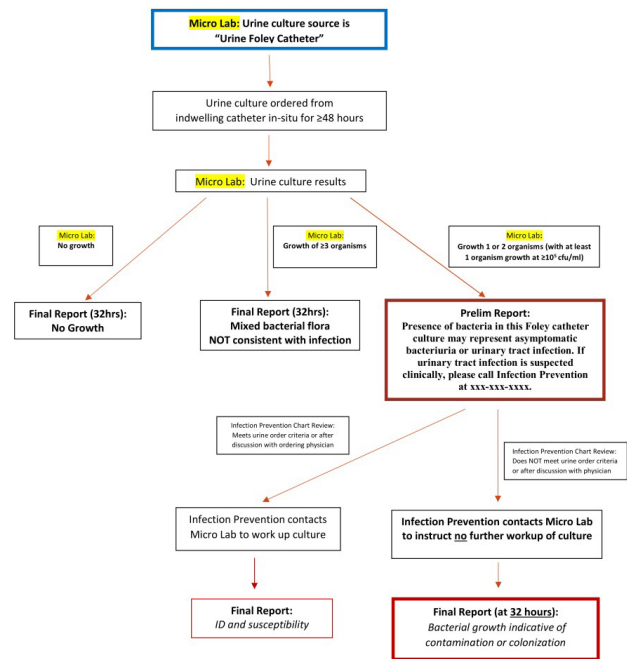
Session: P-33. HAI: Device-Associated (CLABSI, CAUTI, VAP)

Background. Catheter-associated urinary tract infections (CAUTIs) are among the most common healthcare-associated infections. Many patients at our institution with a CAUTI do not have signs or symptoms of infection and bacterial growth likely represents asymptomatic bacteriuria (ASB). As a result, we implemented a Modified Lab Workflow (MLW) focused on diagnostic stewardship to improve urine culture (UCx) reporting and prevent misclassification and unnecessary treatment of CAUTIs.

Methods. On Sep. 1, 2019, laboratory reporting of Foley UCx was modified according to the protocol in Figure 1. UCx results were divided into 3 groups: (1) no growth, (2) mixed bacterial flora (≥3 organisms) not consistent with infection or (3) growth of ≤2 organisms with at least 1 organism ≥10⁵ cfu/ml per National Healthcare Safety Network (NHSN) CAUTI definition. Group 3 UCx were resulted with instructions to the clinician (see Figure 1.). When requested, group 3 results were reviewed by Infection Prevention and released with organism identification and antibiotic susceptibility if it met Infectious Diseases Society of America (IDSA) CAUTI criteria. Otherwise they were resulted as: "Bacterial growth indicative of contamination or colonization."

Figure 1. Modified Laboratory Workflow for Reporting Urine Cultures from Foley Catheters

Figure 1. Modified Laboratory Workflow for Reporting Urine Cultures from Foley Catheters



Results. Between Sep. 1, 2019 to Mar. 1, 2020, a total of 134 UCx from catheterized patients were reviewed. Forty-two (31%) of UCx were from patients with a Foley in-situ ≥48 hours and processed through MLW; 92 UCx were from a Foley in place < 48 hours and excluded from the study. Of the 42 UCx processed via MLW, 16 (38%) were no growth and 7 (17%) had bacterial growth suggestive of contamination. For group 3, 19/42 (45%) had growth of significant bacteria but only 1 (5%) met IDSA criteria for reporting. During the study, 6 additional CAUTIs were reported due to incorrect specimen labeling causing Foley urine specimens to subvert MLW.

Conclusion. During our study, we identified 1 CAUTI through apt MLW use. Seven total CAUTIs occurred (SIR=0.66); a majority due to incorrect UCx source labeling, resulting in missed MLW screening. Ten CAUTIs (SIR=0.97) were reported in the preceding 6 months. As part of a comprehensive CAUTI prevention program, a MLW can help reduce classification of ASB as a CAUTI. Education to providers on precise labeling of UCx source is a key component of a successful MLW.

Disclosures. All Authors: No reported disclosures