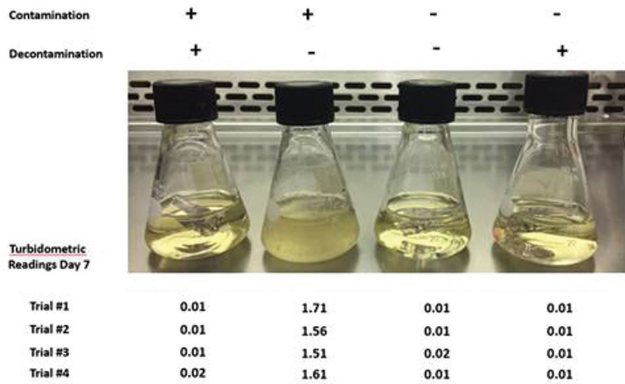**Methods.** *F. oxysporon* was grown on Sabouraud Dextrose (Sab Dex) agar. Two protocols were used: (1) aliquots of ~1 × 10^6 CFU were loaded to the surface of eight NAD's and allowed to air dry, and (2) the surface of 20 NAD's were contaminated via touching to a dense lawn of *Fusarium* on culture plates. Half of the NAD's were decontaminated with a port protector for one minute; the other half had no decontamination step (along with positive/negative controls). NAD's were then (1) placed whole in Sab Dex broth or (2) touched to a fresh Sab Dex agar plate, and growth observed for 7 days.

Results. In all cases, NAD's that had been decontaminated with the alcohol-impregnated port protector showed no growth after seven days in broth (Figure 2) or on plates (Figure 3). NAD's lacking the decontamination step invariably showed abundant growth.

Contamination	+	+	–	–
Decontamination	+	–	–	+

Turbidometric Readings Day 7				
Trial #1	0.01	1.71	0.01	0.01
Trial #2	0.01	1.56	0.01	0.01
Trial #3	0.01	1.51	0.02	0.01
Trial #4	0.02	1.61	0.01	0.01

Figure 2. Growth in broth after 7 days of decontaminated (+) vs. nondecontaminated (–) NAD's, with appropriate controls

Contamination	+	+	–	–
Decontamination	+	–	–	+
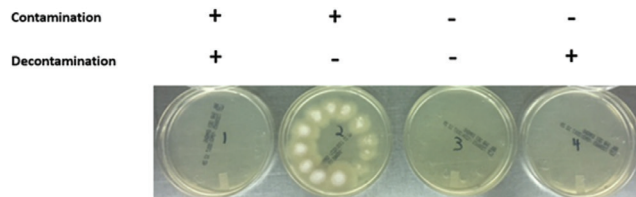
Figure 3. Growth on plates after 7 days of decontaminated (+) vs. nondecontaminated (–) NAD's, with appropriate controls. Ten replicates performed.

Conclusion. Use of two different techniques demonstrates that a 70% isopropyl alcohol impregnated port protector achieves decontamination of *F. oxysporon* from the surface of needleless access devices.

Disclosures. All authors: No reported disclosures.

2091. The Impact of Infection Control Cost Reimbursement Policy on Trends in Central Line-Associated Bloodstream Infections

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Background. In September 2016, the Korean National Health Insurance Service began reimbursing infection control (IC) costs on condition that dedicated doctors and nurses for IC should be allocated in the hospital. We assessed the Impact of IC cost reimbursement policy on trends in central line-associated bloodstream infections (CLABSI).

Methods. A before-and-after study between pre-intervention (January 2016 to February 2017) and intervention (March 2017 to December 2017) periods was performed in three intensive care units (ICU) at Daegu Fatima Hospital (a 750-bed, secondary care hospital in Daegu, Republic of Korea). The number of dedicated IC nurses increased from 2 to 5 in September 2016 and a first dedicated IC doctor was allocated in March 2017 according to the IC cost reimbursement policy. The enhanced IC team visited ICUs daily and monitor and educate the implementation of CLABSI prevention bundles. The trends between pre-intervention and intervention periods were analyzed by segmented autoregression analysis of an interrupted time series.

Results. The average CLABSI rates and total central-line days in the pre-intervention and intervention periods were 3.41 and 2.34 per 1,000 catheter-days; 7,326 and 5,978 days, respectively. Autoregressive analysis revealed that the CLABSI rates per 1,000 catheter days per month in the pre-intervention and intervention periods were

-0.256 (95% confidence interval (CI), −0.593, 0.081; P = 0.148) and −0.602 (95% CI, −0.935, −0.268; P = 0.008). The rates of compliance with maximal barrier precaution significantly improved from pre-intervention (55.1%) to intervention (89.4%) period (chi-square test, P < 0.001). The rates of compliance with maintenance bundles also significantly improved from pre-intervention (48.4%) to intervention (69.7%) period (chi-square test, P < 0.001)

Conclusion. The reimbursement policy for IC cost accelerates the decline in CLABSI rates by increasing the number of IC professionals and improving monitoring, education and implementation of CLABSI prevention bundles.

Disclosures. All authors: No reported disclosures.

2092. How Long Should You Delay Insertion of a Long-Term Central Venous Catheter (LTCVC) in Patients with Candida Bloodstream Infection (CBSI)?

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Background. Guidelines suggest that among patients with candidemia, placement of an LTCVC, often needed for treatment, can proceed when "additional blood cultures show no growth" but the timeframe is not well defined. There is theoretical risk of relapsed CBSI after therapy if yeast are still circulating in the blood and adhere to the LTCVC. We sought to determine the blood culture time to detection (TTD) for candida to identify a timeframe for LTCVC insertion that would mitigate risk for relapsed CBSI.

Methods. We conducted a retrospective cohort study of all positive (+) blood cultures for *Candida species (albicans, glabrata, tropicalis, parapsilosis, dubliniensis, krusei, and lusitaniae)* isolated from August 1, 2013–December 31, 2017. Data were retrieved from the microbiology laboratory and the BD BACTEC™ blood culture system was used. TTD was recorded for each (+) blood culture in hours and the mean TTD was calculated by species.

Results. One hundred and twenty-eight blood cultures were (+) for *Candida species*. *C. glabrata* was the most common species isolated, followed by *C. albicans* and *C. parapsilosis*. Overall, the mean TTD was 43 hours (range 7.1–117.7 hours); 19.5% were positive within 24 hours, 67.2% within 48 hours, and 86.7% within 72 hours, and none required more than 120 hours (table).

Conclusion. Among patients with candidemia, the majority of blood cultures were positive within 72 hours after inoculation and all were positive within 120 hours; however, among the three most common species, 16.3% required more than 72 hours. Waiting 120 hours before insertion of a LTVC should mitigate risk for relapsed CBSI

Table. TTD for Candida Species Isolated from Blood Culture

	# (%)	TTD (Hours)		# (+) Within 24 Hours (%)	# (+) Within 48 Hours (%)	# (+) Within 72 Hours (%)	# (+) Between >72–120 Hours (%)
		Mean	Median				
C. glabrata	52 (40.6)	44	33	8 (15.4)	27 (51.9)	8 (15.4)	9 (17.3)
C. albicans	27 (21.1)	48	49	3 (11.1)	10 (37)	10 (37)	4 (14.8)
C. parapsilosis	25 (19.5)	45	38	5 (20)	12 (48)	4 (16)	4 (16)
C. tropicalis	14 (10.9)	34	34	5 (35.7)	6 (42.8)	3 (21.4)	0
C. krusei	6 (4.7)	31	29	2 (33.3)	4 (66.7)	0	0
C. dubliniensis	3 (2.3)	23	19	2 (66.7)	1 (33.3)	0	0
C. lusitaniae	1 (0.8)	30	30	0	1 (100)	0	0
Total	128	43	37	25 (19.5)	61 (47.7)	25 (19.5)	17 (13.3)

Disclosures. All authors: No reported disclosures.

2093. Chlorhexidine Gluconate Bathing to Prevent Central Line Associated Infections: What to Do When the Patient Can Bathe Themselves

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Background. Bathing with pre-medicated 2% chlorhexidine gluconate (CHG) impregnated cloths is for prevention of central line associated blood stream infections (CLABSI). The use of CHG on patients outside of intensive care units has not been well studied. In our bone marrow and stem cell transplant unit (BMTU) we found compliance with CHG bathing to be lacking.

Methods. This was a quality improvement quasi-experimental pre-post intervention project to improve the use of CHG bathing for prevention of CLABSI in BMTU patients with central venous catheters (CVC). Review of CLABSI data identified high rates in BMTU compared with other units and significant numbers of Gram-positive organisms, suggesting needed increase in interventions directed at CVC maintenance.

Review of cases, identified barriers to CHG bathing compliance. Audits of compliance with CHG bathing was performed pre-intervention. Interviews of staff and patients identified key barriers to compliance, which included, education on the benefit of CHG bathing in prevention of CLABSI, education of the potential for "sticky" feeling after bathing, education of staff on benefits and risk, and patient self-bathing education. Our implementation began in July 2016, and included, patient and staff education, a patient contract for use of CHG, daily patient signatures after bathing, signage in patient rooms with bathing instructions, and improved compliance parameters.

Results. Compliance with CHG bathing pre-intervention was 81%, and post was 93%. Definitions for compliance changed as part of implementation, to include patient signature, and reasons for noncompliance. CLABSI rate for the BMTU pre-intervention was 2.2/1,000 device days in 2015, post intervention 1.0/1000 device days in 2017 for a 55% reduction in CLABSI. Figure 1 illustrates the decline in CLABSI rate over time after the intervention. No concomitant interventions were implement during this period.

Conclusion. Patients outside of the ICU are typically nonventilated, awake and capable of self-bathing. Many interventions have been implemented to decrease CLABSI; however, the need for patient engagement and education in the implementation is a critical step that needs to be addressed to ensure fidelity and success of the intervention.

Unit Rolling 12 month CLABSI Rate
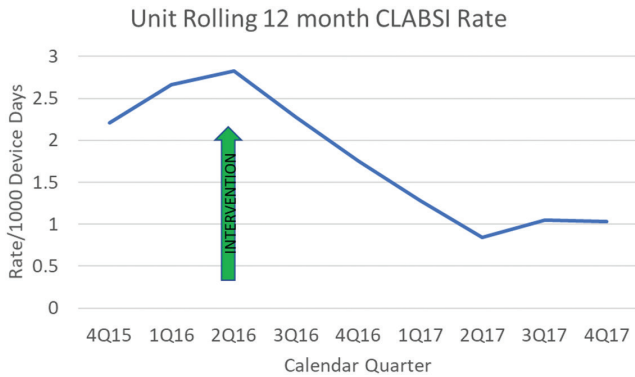
Disclosures. **All authors:** No reported disclosures.

2094. Pulmonary Artery Catheter Epidemiology of Risk (PACER) Study
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Background. Central line-associated bloodstream infections (CLABSI) are a known complication of central venous access. Pulmonary artery catheters (PAC) are frequently used in status 1A pre-heart transplant patients, at the top of the heart transplant waiting list. These patients often have a PAC in place for extended periods of time and are thus at risk for CLABSI. Our institution's practice includes routine PAC exchange after 21 days of use. We sought to estimate the risk of CLABSI and determine whether factors influenced infection rate.

Methods. We conducted a retrospective, descriptive study from January 2013 to December 2016 identifying characteristics of PAC use and infection rate in adult status 1A pre-heart transplant patients. Time to CLABSI was analyzed with Kaplan–Meier estimates. The effect of CLABSI on time to transplant and death were analyzed in time-dependent Cox models.

Results. We identified 61 status 1A pre-heart transplant patients with PACs during this time period with 219 PACs and 2566 line-days. Median duration of PAC was 11 days. There were 14 CLABSIs for an infection rate of 5.46/1,000 line-days (95% CI: 2.98–9.15), compared with 1.06/1,000 line-days for our institution's intensive care unit rate. Causative organisms were coagulase-negative *Staphylococcus* (79%), *Enterobacter* (7%), *E. coli* (7%), and *Klebsiella* (7%). There was a trend toward higher infection rate per 1,000 line-days with longer duration of PACs. Lines in place for 0–10 days resulted in an infection rate of 3.14 (1.02–7.32); 11–20 days with a rate of 8.70 (3.19–18.94); and >20 days with a rate of 32.61 (6.72–95.30). There was a trend toward higher infection rate with more concomitant non-PAC lines used (0 other lines, 4.57; 1 line, 6.21; 2 or more, 11.56). Median time to infection diagnosis from PAC placement was 29 days (23–49). Line infection was associated with shorter time to transplant (hazard ratio 2.49; $P = 0.027$), but no effect on mortality (hazard ratio 1.79; $P = 0.355$).

Conclusion. Our study demonstrated a high rate of CLABSI with PAC, with a trend toward increased risk with longer use, and presence of concomitant lines. Infection was associated with a shorter time to transplant, though not with time to death. Prolonged PAC use in the status 1A population should be revisited.

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2095. Infections in Burn Patients Receiving Extracorporeal Membrane Oxygenation (ECMO) at a Tertiary Military Medical Center
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Background. Patients on ECMO are at higher risk for nosocomial infections. While several studies report on infections in ECMO patients, the epidemiology of infections in burn patients on ECMO has not been previously described.

Methods. A retrospective chart review was performed on all patients on ECMO for >48 hours at Brooke Army Medical Center and the U.S. Army Institute of Surgical Research Burn Center between 2012 and 2017. Patient demographics, burn status, ECMO characteristics, and infection incidence during ECMO were captured. Statistical analyses comparing burn vs. nonburn patients were performed using chi-squared, Fisher's exact and Mann–Whitney *U* tests.

Results. In comparison with those without diagnosed infections, infected patients had more days on ECMO (median [IQR] 16 [12–20] vs. 6.5 [5–10], $P < 0.01$) and longer hospitalization (median [IQR] 35 [24–54] vs. 23.5 days [8–45], $P = 0.06$), however survival to hospital discharge was no different (64% vs. 58%, $P = 0.77$). Burn patients trended toward more infections in their ECMO course (table).

	Burn ($n = 14$)	Nonburn ($n = 38$)	*P*-Value
Median age (years)	29.5 (25–39)	39 (29.5–55.5)	0.05
Gender, male	9 (64%)	25 (74%)	1
Median days on ECMO	14 (8–18)	9 (5–14)	0.26
Survival to discharge	9 (64%)	23 (72%)	1
Median length of stay (days)	34 (25–47)	24 (11–50)	0.23
Median burn % total body surface area (%TBSA)	25 (21–40)	n/a	n/a
Infections on ECMO			
Any infection	10 (71%)	18 (47%)	0.21
Multiple infections	7 (50%)	9 (24%)	0.07
Respiratory infection (RI)	9 (64%)	13 (34%)	0.07
Blood stream infection (BSI)	4 (28.6%)	7 (18.4%)	0.46
Other infection	5 (35.7%)	9 (24%)	0.49
Median time to RI diagnosis (days)	3 (1–9)	2 (1–6.5)	0.79
Median time to BSI diagnosis (days)	2.5 (2–5)	5 (1–2)	0.74
Total infections per 1000 ECMO days	99.7	50.6	0.02
RI per 1,000 ECMO days	49.9	22.7	0.12
BSI per 1,000 ECMO days	22.1	12.2	0.52

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

Conclusion. Infection is a common complication of ECMO and is associated with longer duration on ECMO and longer hospitalizations. Burn patients in this cohort were observed to have higher rates of infection compared with nonburn patients.

Disclosures. **All authors:** No reported disclosures.

2096. Evaluation of a Midline Catheter Program and Effect on Central Line-Associated Blood Stream Infections
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Background. Central line-associated blood stream infections (CLABSI) result in increased patient morbidity. Guidelines recommend against peripheral venous catheters when access is required for longer than 6 days, often leading to central venous catheter (CVCs) placement. To improve vascular access device choice and reduce the potential risk of CLABSIs, we implemented a quality improvement initiative compromised of a new vascular access algorithm with introduction of midline utilization and sought to evaluate the impact of midline use on CLABSI rates.

Methods. A prospective quality improvement assessment from October 2017 through March 2018 analyzed the infection rates of midline catheters and CVCs. When a consult was placed for a peripherally inserted central catheter (PICC) that the patient would be evaluated via the vascular access algorithm (Figure 1) for whether they should receive a midline catheter, a PICC or a traditional CVC. The midline catheters, PICCs, and CVCs were monitored for duration of indwell and bloodstream infections consistent with reportable CLABSI definitions.

Results. In the month prior to implementation, the institutional CLABSI rate was 1.36 per 1,000 CVC (including PICC) days. Since October 2017, there have been