patients were included, with a mean age of 65.3 years. 146 (45.6%) were male, and 174 (54.4%) were female. 202 (63.1%) were classified as obese (BMI > 30). CXR was performed as first modality in 313 (97.8%) cases, while 7 (2.2%) underwent CT scan first. In the obese group the overall concordance between the 2 modalities for diagnosing pneumonia was 67.5%. In the non-obese group the concordance was 80.2% ($p < 0.001$). Among the obese patients who underwent CXR first, 11 (5%) had antibiotics discontinued after the CT scan results, while the number was 4 (3%) in the non-obese group. Additionally, 3 patients in the obese group had antibiotics initiated after the CT scan. **Conclusions:** Obesity poses unique challenges to healthcare facilities and imaging equipment. Diagnosing pneumonia in obese patients using CXR alone may result in over-diagnosis. This may lead to unnecessary antibiotic use and delayed diagnosis of alternate disease, or in some cases, missing a pneumonia and under-treatment. A chest CT scan is more sensitive and may be more helpful to identify a pneumonia accurately in these patients and thus facilitate appropriate antibiotic use.

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Presentation Type:
Poster Presentation - Poster Presentation
Subject Category: Quality Improvement
Going Commando as Part of a Multifaceted Intervention to Reduce CAUTIs in Critically Ill Children
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Background and Objectives: Catheter associated urinary tract infections (CAUTIs) are a source of preventable harm in children. Insertion and maintenance bundles have significantly reduced CAUTIs, but infections still occur. Starting in mid-2019, we experienced an increase in CAUTIs in our pediatric intensive care unit (PICU). The objective was to identify preventable causes of CAUTI and develop and test interventions to reduce them. **Methods:** This quality improvement project was initiated in the PICU of a large tertiary children's hospital. Interdisciplinary rounds led by the hospital epidemiologist and unit nursing leader with the bedside nurse occurred weekly (starting October 2019) for patients with urinary catheters in place for greater than three days. Discussions included strategies to optimize maintenance of the urinary catheter and identify catheters that could be removed. Additional interventions included no diapers for patients with a urinary catheter (starting March 2021) and use of a urine collection device that prevented both urine stasis in the drainage tube and retrograde flow of urine into the bladder (starting August 2021). Hand hygiene and CAUTI prevention bundle compliance was measured by direct observation of staff. CAUTIs were identified by prospective surveillance by infection prevention using standard definitions. The rate of CAUTIs over time was analyzed using statistical process control charts. **Results:** The baseline CAUTI rate (January 2017 - June 2019) was 0.5 infections/1000 catheter days with an average of 349 days between CAUTIs. Between July 2019 and February 2021, the CAUTI rate increased to 3.3 with an average of 88 days between CAUTIs. Annual compliance with hand hygiene and the CAUTI prevention bundle elements remained above 90% throughout all time periods. No improvement was seen after the institution of weekly interdisciplinary rounds. Starting in March 2021 after removal of diapers and implementation of the urine collection device that prevented retrograde flow, the CAUTI rate decreased to 0.9 and an average of 200 days between CAUTIs. Currently, it has been 512 days since the last CAUTI. **Conclusion:** CAUTIs decreased after removing diapers in children with urinary catheters and use of the urine collection device. Removal of diapers likely reduced stool contamination around the catheter and urethral opening. The urine collection device prevented inadvertent retrograde flow of urine into the bladder. These interventions could augment current CAUTI prevention strategies.

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Back to Basics: Blood Culture Contamination Reduction Across a Multicenter Academic Health System
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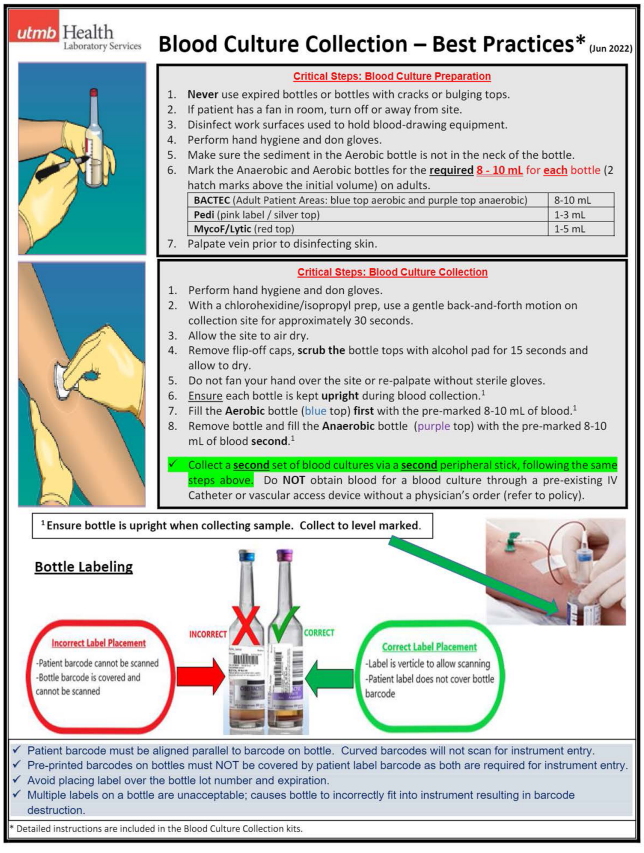
Background: Blood culture contamination is common in healthcare and contributes to diagnostic uncertainty, unnecessary treatments and follow-up testing, increased length of stay, higher rates of reportable healthcare-associated infections and events, over utilization of resources and staff including consultative care, and undue emotional stress to patients. The national benchmark for institutional blood culture contamination rates as recommended by The American Society for Microbiology (ASM) and the Clinical Laboratory Standards Institute (CLSI) is < 3 %. Our institution's overall rate was 8.9% with the highest burden being from our Emergency Department (ED) locations. We formed a multidisciplinary team aimed to reduce these rates through efforts centered around education and simplification of the collection process. **Method:** Working closely



with and gathering feedback from nursing staff, nurse educators, and supply chain, we developed a blood culture collection kit that included all items necessary for blood culture collection thus eliminating the need for nurses to gather these items individually prior to collection. Additionally, simple step-by-step educational materials (Fig. 1) detailing the collection technique were provided. Education was presented at nursing huddles and skills fairs prior to kit roll-out. Blood culture kits were then stocked in place of individual blood culture collection bottles in all ED stock rooms in August 2022. **Result:** The 12-week pre-intervention period found 249 contamination events from 4265 total collections deriving a contamination rate of 5.8% across our health system's four ED locations. During a 12-week post-intervention period following kit roll-out, 116 contamination events occurred from 3629 total collections deriving a contamination rate of 3.2% across our four ED locations. Given our results, we ultimately rolled this out to all units in all locations of our health system. When including all time from kit rollout to present (August 2022 to November 2023, 16 months), there were 1077 contamination events from 43379 total collections deriving an overall contamination rate of 2.5%. When compared to the 16 months prior to the kit rollout (April 2021 to July 2022) there were 1803 contamination events in 49335 total collections (3.7% contamination rate) deriving an overall percent reduction of 32.1%. **Conclusion:** We were able to decrease our health system's blood culture contamination rate through simple interventions aimed at reducing the mental burden on nursing staff by developing a blood culture collection kit and educational materials. Since implementation of the kits, we have continued to maintain lower contamination rates as evident by our 16 month follow up period.

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Contributing Factors to Central Line-associated Bloodstream Infections and Catheter-associated Urinary Tract Infections

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Background: Central line-associated bloodstream infections (CLABSI) and catheter-associated urinary tract infections (CAUTI) are key healthcare-associated infection (HAI) quality metrics. In this qualitative analysis, we aimed to identify common issues contributing to CLABSIs and CAUTIs occurring during the COVID-19 pandemic. **Methods:** In an academic healthcare network in Atlanta, GA, four hospitals perform real-time, apparent cause analyses (ACAs) for all CLABSIs and CAUTIs. Contributing factors are entered as free text into an electronic database. We analyzed data from 8/2020–8/2022. We first performed a qualitative open card sort of all reported contributing factors to CLABSI and created a novel framework based on mutually defined critical tasks (e.g., line insertion) and cross-cutting issues (e.g., communication breakdown). Contributing factors could describe ≥1 critical task and/or ≥1 cross-cutting issue. After establishing interrater reliability, a multidisciplinary group applied this framework to classify each contributing factor. For CAUTI, we used the same set of cross-cutting issues but identified new critical tasks via open card sorting. We then used the framework to classify each CAUTI contributing factor. We used descriptive statistics to identify frequent critical tasks and cross-cutting issues. **Results:** We reviewed 350 CLABSI ACAs with 602 contributing factors and 240 CAUTI ACAs with 405 contributing factors (Figure 1). Our classification framework comprised 11 cross-cutting issues and 9 critical tasks for CLABSI and 7 critical tasks for CAUTI (Figure 2). CLABSI: The critical tasks most often reported were bathing (19%), central line dressing maintenance (15%), and assessing central line indication (8%; Figure 3). Within these tasks, the most frequent issues described for bathing were the task not being performed (20%) and unclear documentation (18%); for dressing maintenance, the task was not performed (15%), not documented (15%), or poorly performed due to lack of competency (15%); and for assessing line indication, there was frequent communication breakdown (33%). CAUTI: The critical tasks most often reported were urinary catheter care (26%) and assessing the indication for urinary catheter (22%; Figure 4). Within these tasks, urinary catheter care was frequently not documented (38%) or not performed (16%); assessing urinary catheter necessity was often not documented (29%) or involved breakdown of communication (19%). **Conclusion:** We created a novel framework to evaluate common causes of HAIs in an academic healthcare network. This framework can be used to identify and track gaps over time and to develop quality improvement initiatives targeting key tasks and

Characteristics of CLABSIs and CAUTIs

CLABSI	**N = 350**
Days CVC in place prior to CLABSI,[1] median (IQR)	10 (6, 17)
Type of CVC[2]	
Multi-lumen CVC (excluding dialysis CVC and PICC)	148 (42)
PICC	94 (27)
Dialysis/apheresis CVC	80 (23)
Port	28 (8)
CVC insertion location[2]	
Internal jugular	195 (56)
Arm	71 (20)
Subclavian	52 (15)
Femoral	28 (8)
Unknown	4 (1)
Role of person inserting CVC[2]	
Advanced practice provider	85 (24)
Trainee (resident or fellow)	85 (24)
Vascular access team member	57 (16)
Attending physician	48 (14)
Unknown	75 (21)
Central line indication[2]	
Medication requiring central venous access	194 (55)
Clinical instability	95 (27)
Dialysis/CRRT/apheresis	78 (22)
Other	73 (21)
Hemodynamic monitoring	57 (16)
Difficult venous access	48 (14)
CAUTI	**N = 240**
Days catheter in place prior to CAUTI, median (IQR)	15 (4, 17)
Role of person inserting urinary catheter	
Nurse	172 (72)
Resident	4 (2)
Attending physician	2 (1)
Student (medical or nursing)	2 (1)
Other	60 (25)
Urine culture order indication	
Fever	187 (78)
Suprapubic pain or dysuria	18 (8)
Other	50 (21)

Values are reported as N (%) unless otherwise stated.
1. Defined as number of days between CVC insertion and first positive qualifying blood culture
2. The analysis was performed for the first line inserted that was in place at the time the CLABSI occurred. 84 patients had an additional CVC in place at the time of the CLABSI

Abbreviations: CAUTI, catheter-associated urinary tract infection; CLABSI, central line-associated bloodstream infection; CRRT, continuous renal replacement therapy; CVC, central venous catheter; IQR, interquartile range; PICC, peripherally inserted central catheter