

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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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

utmb Health
Laboratory Services

Blood Culture Collection – Best Practices* (Jun 2022)

Critical Steps: Blood Culture Preparation

1. Never use expired bottles or bottles with cracks or bulging tops.
2. If patient has a fan in room, turn off or away from site.
3. Disinfect work surfaces used to hold blood-drawing equipment.
4. Perform hand hygiene and don gloves.
5. Make sure the sediment in the Aerobic bottle is not in the neck of the bottle.
6. Mark the Anaerobic and Aerobic bottles for the required 8–10 mL for each bottle (2 hatch marks above the initial volume) on adults.
7. Palpate vein prior to disinfecting skin.

BACTEC (Adult Patient Areas: blue top aerobic and purple top anaerobic)	8–10 mL
Pedi (pink label / silver top)	1–3 mL
Mycob/Lytic (red top)	1–5 mL

Critical Steps: Blood Culture Collection

1. Perform hand hygiene and don gloves.
2. With a chlorhexidine/isopropyl prep, use a gentle back-and-forth motion on collection site for approximately 30 seconds.
3. Allow the site to air dry.
4. Remove flip-off caps, scrub the bottle tops with alcohol pad for 15 seconds and allow to dry.
5. Do not fan your hand over the site or re-palpate without sterile gloves.
6. Ensure each bottle is kept upright during blood collection.¹
7. Fill the Aerobic bottle (blue top) first with the pre-marked 8–10 mL of blood.¹
8. Remove bottle and fill the Anaerobic bottle (purple top) with the pre-marked 8–10 mL of blood second.¹

✓ Collect a second set of blood cultures via a second peripheral stick, following the same steps above. Do NOT obtain blood for a blood culture through a pre-existing IV Catheter or vascular access device without a physician's order (refer to policy).

¹ Ensure bottle is upright when collecting sample. Collect to level marked.

Bottle Labeling

Incorrect Label Placement

- Patient barcode cannot be scanned
- Bottle barcode is covered and cannot be scanned

Correct Label Placement

- Label is verticle to allow scanning
- Patient label does not cover bottle barcode

✓ Patient barcode must be aligned parallel to barcode on bottle. Curved barcodes will not scan for instrument entry.
 ✓ Pre-printed barcodes on bottles must NOT be covered by patient label barcode as both are required for instrument entry.
 ✓ Avoid placing label over the bottle lot number and expiration.
 ✓ Multiple labels on a bottle are unacceptable; causes bottle to incorrectly fit into instrument resulting in barcode destruction.

* Detailed instructions are included in the Blood Culture Collection kits.