associated bloodstream infection (CLABSI), and HAIs. The best method for applying CHG remains unknown and hospitals continue to employ different methods of CHG bathing. **Methods:** This was a nursing led quality improvement project due to staff shortages to reduce the workload burden of a 36-bed bone marrow transplant (BMT) and medical oncology unit. Prior to October 2023, all patients on the unit received a daily CHG bath with 4% CHG solution, which was the standard of care in the rest of the hospital. Beginning in October 2023 patients who were admitted or transferred to the unit had an initial bath with a 2% CHG wipe. Patients would then receive a daily CHG bath with a 4% CHG solution. If a patient were to refuse a bath with the 4% CHG solution, they would be offered a bath with the 2% CHG wipes. The goal of the quality improvement project was to improve compliance with daily CHG bathing, and to reduce HAIs. A pre/post analysis was performed assessing daily bathing compliance and HAIs and MDROS on the BMT unit for the 9 months before and after the intervention. **Results:** From January 2023 through September 2023, there were 9187 patient days on the unit, with 26 documented mucosal barrier injury (MBI) CLABSI (2.83 per 1000 patient days), 2 MRSA bloodstream infections, and 3 VRE bloodstream infections. From October 2023 through June 2024, there were 9176 patient days on the unit with 19 documented MBI CLABSI (2.07 per 1000 patient days), no MRSA bloodstream infections, and no VRE bloodstream infections. Daily CHG bathing compliance increased from 75% in the 3 months prior to the intervention, to 82% after the intervention. **Conclusion:** Utilizing a mixed method daily CHG bathing regimen that includes 2% CHG wipes increases compliance of daily CHG bathing, and decreases HAIs and MDROs compared to a regimen with only 4% CHG solution. HAI reduction could be accomplished through reducing microbial colonization on the skin, or possibly simply by increasing overall compliance. Further study on this could evaluate the reduction in workload burden, cost-effectiveness, and reduction in HAIs.

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VAD or Bad? Implementing a Blood Culture Algorithm in Ventricular Assist Device Patients

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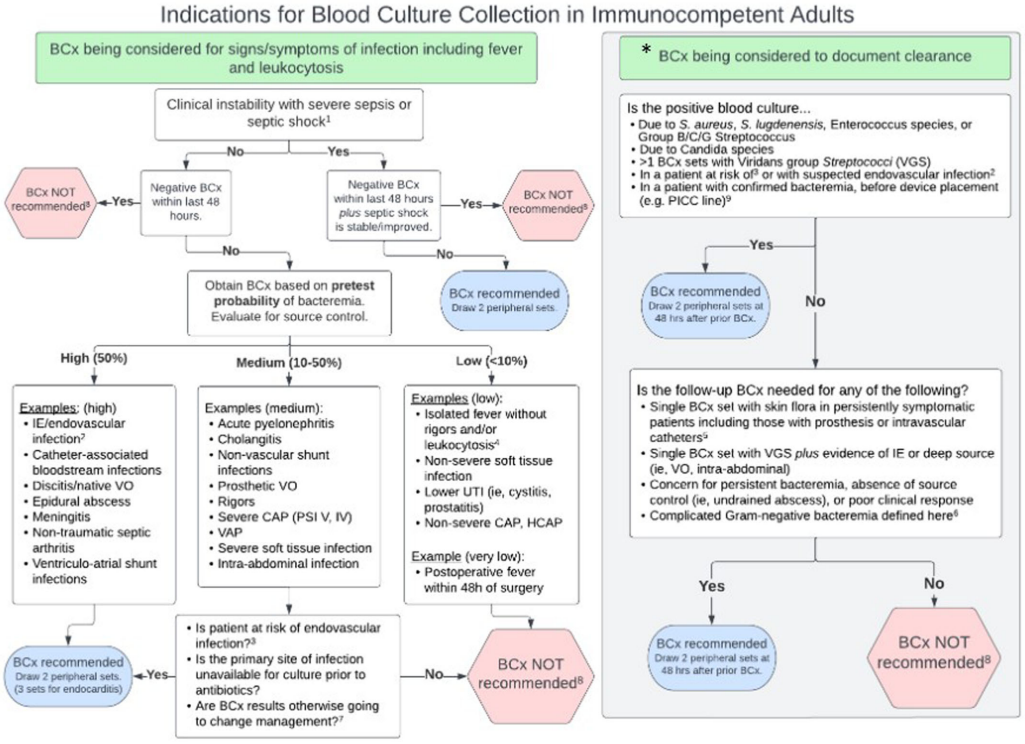
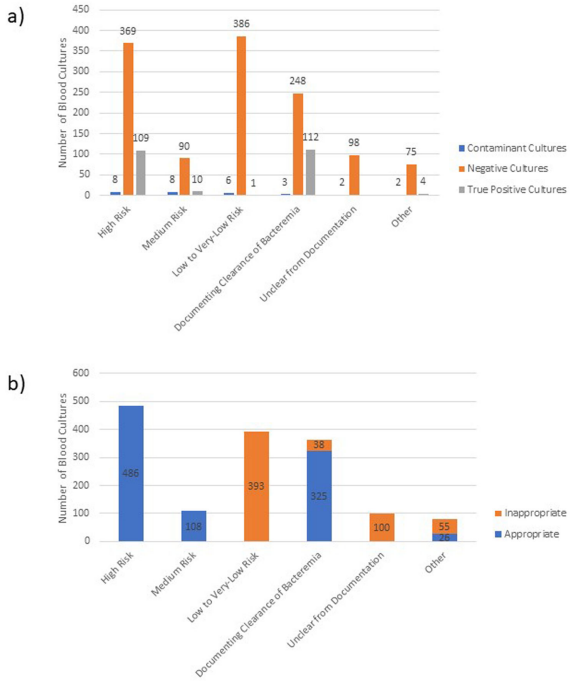
Introduction: Blood culture (BCx) diagnostic stewardship is crucial for optimizing health resources and ensuring appropriate clinical testing while minimizing unnecessary cultures that could lead to increased false positives and subsequent antibiotic overuse. BCx algorithms have effectively lowered BCx rates across various patient populations without compromising patient safety. However, patients with a durable left ventricular assist device (LVAD) represent a unique group where the safety and applicability of these algorithms remain underexplored. **Methods:** We adapted the BCx algorithm from the DISTRIBUTE study by Fabre et al (Figure 1) and retrospectively applied it to HeartMate 3 LVAD recipients with BCx testing performed between July 1, 2019, and April 30, 2024. Each BCx was reviewed and adjudicated according to the algorithm to determine the appropriateness of BCx indication. We also assessed the incidence of true positives, contaminants, and negative cultures among BCx testing deemed as inappropriate to evaluate the algorithm's potential impact on clinical decision-making in this specialized patient population. We used the Centers for Disease Control and Prevention's standard definition of a contaminated BCx. **Results:** We reviewed 1531 blood cultures in 121 unique LVAD recipients. The most common clinical indications for BCx collection were for documenting bloodstream clearance (363, 23.7%), suspected infective endocarditis or endovascular infection (260, 17.0%), and isolated fever and/or leukocytosis (217, 14.2%). We adjudicated 945 (61.7%) BCx collections as appropriate and 586 (38.3%) as inappropriate. Out of the 586 inappropriate BCx collections, 577 (98.5%) were negative and 8 (1.4%) resulted in a contaminant (Figure 2). Only 1 (0.2%) BCx adjudicated as



*If the patient is unchanged clinically and already has 1 or 2 sets of blood cultures that are currently no-growth to date, please do not proceed down this pathway.

Figure 2. (a) Clinical scenario risk of bloodstream infection stratified by blood culture results as either a true positive, contaminant or negative culture. (b). Clinical scenario risk of bloodstream infection stratified by appropriate or inappropriate culture.



High-risk clinical scenarios included severe sepsis or septic shock, infection endocarditis/endovascular infection, catheter-associated bloodstream infections, discitis/native vertebral osteomyelitis, epidural abscess, meningitis, non-traumatic septic arthritis, ventriculo-atrial shunt infection. ***Medium-risk clinical scenarios*** included acute pyelonephritis, cholangitis, non-vascular shunt infections, prosthetic vertebra osteomyelitis, rigors, severe community acquired pneumonia (pneumonia severity index V or IV), ventilator-associated pneumonia, severe soft tissue infection, or intra-abdominal infection. ***Low- or very-low-risk clinical scenarios*** included isolated fever without rigors and/or leukocytosis, non-severe sot tissue infection, lower urinary tract infection, non-severe community-acquired pneumonia or healthcare-associated pneumonia, and post-operative fever within 48 hours of surgery.

inappropriate resulted in a true positive, which isolated Streptococcus infantarius in an LVAD patient receiving active chemotherapy for colorectal cancer and was felt to represent gastrointestinal translocation. **Discussion:** We retrospectively applied a BCx algorithm to LVAD recipients to determine the clinical impact of applying such an algorithm to a high-risk patient population. We found that the BCx algorithm missed only 1 true positive bloodstream infection in a patient with additional risk factors. This study provides preliminary support that a BCx algorithm could reduce BCx testing in LVAD recipients without compromising clinical safety. Future studies on BCx diagnostic stewardship in this population should prospectively collect data and monitor for additional adverse events, such as readmission, mortality, length of stay, and antibiotic days of therapy.

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Optimizing Urine Culture Utilization in the Emergency Department, a Study from South India

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Background: Inappropriate urine culture can lead to unnecessary antibiotic use, antimicrobial resistance, increased healthcare costs, and resource strain. Ensuring the appropriate use of urine cultures aligns with principles of diagnostic stewardship. **Methods:** Urine cultures ordered from ED in our hospital, for patients who were admitted during July and August 2024 were retrieved from the electronic medical records. Symptoms score based on IDSA guideline (Figure 1) and BLADDER score (Figure 2) were correlated with urine analysis (URE) and cultures for appropriateness. **Results:** Among 267 urine culture orders that were reviewed, 61 patients were excluded due to indwelling catheter, high-risk neutropenia, recent urological procedures, pregnancy, or recent renal transplantation. The median age of study population (n=206) was 64 years. 50.50% were women. 97 (47.3%) had significant pyuria, and 105 (50.97%) had a positive leukocyte esterase (LE), nitrite positivity was low 13 (6.3%). LE had better correlation with pyuria and culture positivity when compared to urine nitrites. Only 46 patients (22.3%) had culture positivity. Imaging evidence supportive of urinary tract infection was noted in 18 patients. Among 206, only 102 cultures (50.48%) were appropriate as per IDSA guidelines. Inappropriate cultures were ordered for fever (59.6%) without localisation, abdominal discomfort (8.6%), urinary frequency (2.8%), haematuria (1.9%), incontinence (0.9%). 10% were sent as part of order sets, who were asymptomatic and had no significant pyuria or cultures positivity. Among 87 patients with a BLADDER score ≥2, 95.4% of cultures were appropriate, 64.3% had significant pyuria, 36.8% had culture positivity. Among 119 patients with a score < 2, 15.9% of cultures were appropriate, 34.5% had significant pyuria, 11.8% had culture positivity. Positive predictive value (PPV) of BLADDER score for UTI was 77.0%, 89.3% along with pyuria and 88.23 % when combined with pyuria and positive LE. Negative predictive value (NPV) of BLADDER score for UTI was 88.2%, 100% along with absence of pyuria and 100% when combined with absence of pyuria and negative LE (Table 1). Based on our study the proposed algorithm for ordering urine culture, after excluding the high risk group is depicted in the Figure 3. **Conclusion:** Our study showed 50% of urine culture as inappropriate. BLADDER score can be a useful bedside screening tool for deciding urine culture, PPV and NPV increase when combined with presence or absence of pyuria and LE. Implementing a diagnostic stewardship protocol

APPROPRIATE USES OF URINE CULTURE	INAPPROPRIATE USES OF URINE CULTURE
• Dysuria, urgency, frequent urination, flank pain, hematuria, pelvic discomfort.	• Odorous, cloudy, or discolored urine without other symptoms
• New or worsening sepsis with no identifiable source.	• Reflex cultures based solely on urinalysis (e.g., pyuria)
• Fever or altered mental status without another obvious cause.	• Monitoring therapy response unless symptoms persist
• Special populations (e.g., spinal cord injuries, severe burns, kidney transplant failure).	• Routine screening for asymptomatic bacteriuria in most cases
• Screening for asymptomatic bacteriuria: Early pregnancy, before urology procedures	• Preoperative evaluation in most groups

Nicolle LE, et al. Infectious Diseases Society of America guidelines for the diagnosis and treatment of asymptomatic bacteriuria in adults, Clin Infect Dis. 2005 Mar 1; 40 (5): 643-54

Fig 1. IDSA guidelines on urine culture appropriateness

'BLADDER' SCORE		
B	Blood in urine	1 point
L	Loss of urinary contol	1 point
A	Abdominal or suprapubic pain	1 point
D2	Dysuria	2 points
E	Elevated temperature	1 point
R	Repeated urination	1 point

Loeb M, et al. Development of minimum criteria for the initiation of antibiotics in residents of long-term care facilities: results of a consensus conference. Infection control and hospital epidemiology. 2001 Feb 1;22(2):120-4

Fig 2. 'BLADDER' Score: A bedside clinical tool for UTI risk assessment