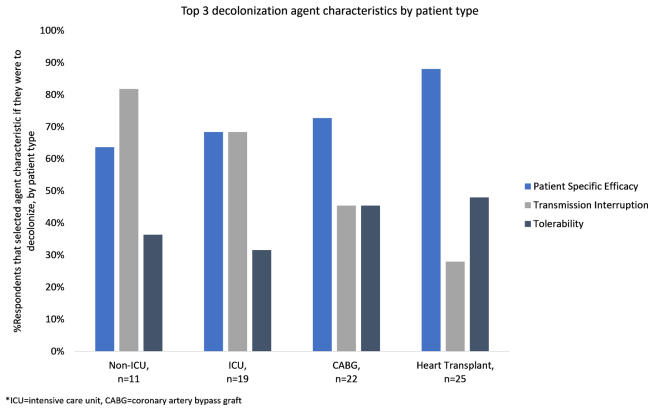
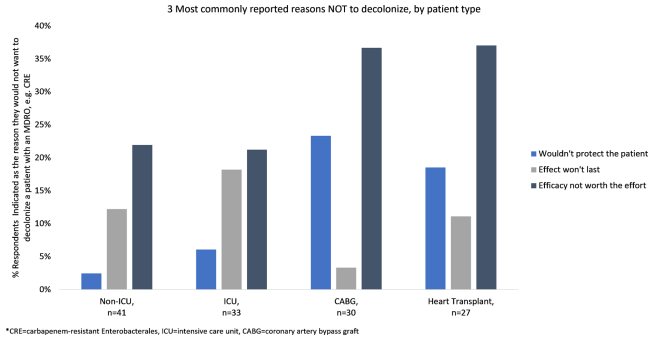




Product design should prioritize decolonization agents that are easy to administer, highly effective, and provide long-lasting impact. Evidence-based, standardized decolonization protocols, particularly for gram negative MDRO, are needed to address barriers and support decolonization in prevention of transmission as well as infection.

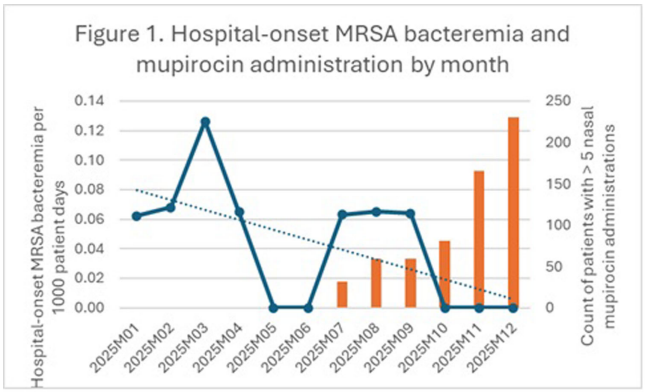
Antimicrobial Stewardship & Healthcare Epidemiology 2026;6(Suppl. S1):s92–s93
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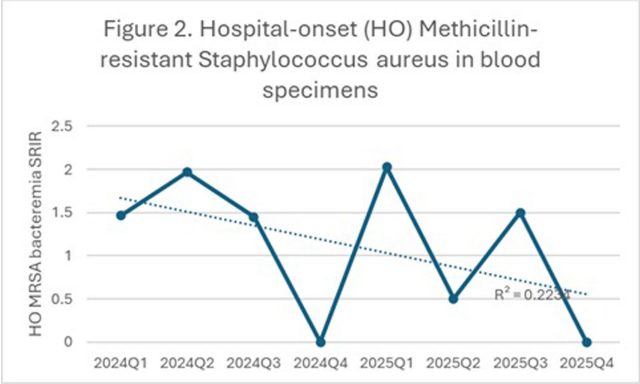
Presentation Type:
Poster Presentation
Subject Category: Decolonization Strategies

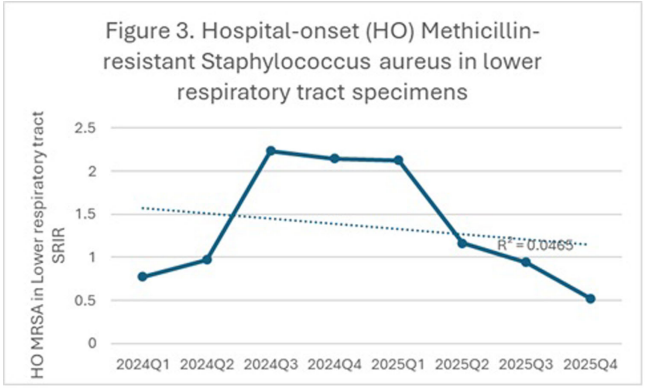
Clean Slate: Enhancing MRSA Decolonization Protocols‡

Jennifer Gutowski[1], Emil Lesho[1], Shari McDonald[2], Melissa Bronstein[1], Maryrose Laguio-Vila[1] and David Pierce
[1]Rochester Regional Health and [2]RGH

Background: Up to 33% of methicillin-resistant Staphylococcus aureus (MRSA) colonized patients will subsequently develop an invasive MRSA infection. Intranasal treatment is necessary to eliminate MRSA in the nose, which is recognized as a primary carriage site. In our 542 bed, community, teaching hospital, we had implemented CHG daily bathing for targeted patient populations (patients in ICU and with central lines), but struggled to reduce MRSA bacteremia rates. We proposed adding nasal decolonization and expanding the target population to include MRSA-positive patients, as a method of reducing MRSA bloodstream infections. **Methods:** On July 21, 2025, a formal MRSA decolonization protocol, including twice daily mupirocin for five days, and daily CHG bathing was recommended for all ICU patients, regardless of MRSA history, and MRSA positive patients, on any inpatient unit. A MRSA decolonization order set went live on October 27th, 2025, and was automatically added to pre-existing ICU admission and central line maintenance order sets. Pre-and post-intervention National Healthcare Safety Network (NHSN) hospital-onset MRSA bacteremia standardized infection ratios (SIR) were compared, in addition to a monthly review of MRSA bacteremia rates per 1000 patient days and mupirocin administration. NHSN antimicrobial resistance module standardized resistant infection ratios (SRIRs), were also compared between 2024 and 2025. **Result:** The pre-intervention (January-June 2025) MRSA bacteremia SIR was 0.853, compared to a post-intervention (August-December 2025) MRSA bacteremia SIR of 0.405. This represents a 53% reduction in SIR (p=0.398). The outpatient MRSA BSI prevalence rate from emergency department visits stayed steady between the pre and post-intervention periods, at 0.095 and 0.094. Figure 1 shows the inverse relationship between the increase in mupirocin administration (utilizing a threshold of < 5 administered doses) and decrease in hospital-onset MRSA bacteremia. Figures 2 and 3 show the prior years' variation and current decline in SRIRs for both MRSA bacteremia and lower respiratory tract specimens. A decreasing trendline was not observed for other organisms' SRIRs, including vancomycin-resistant Enterococcus. **Conclusion:** MRSA bacteremia contributes to significant morbidity,







‡The abstract titles in this supplement have been corrected since original publication. A notice detailing the changes has been published at https://doi.org/10.1017/ash.2026.10802.

https://doi.org/10.1017/ash.2026.10575 Published online by Cambridge University Press

mortality, and financial penalties for hospitals. CHG bathing alone for ICU and central line patients was inadequate to reduce MRSA bacteremia rates. A default order set for MRSA decolonization, including nasal mupirocin, added to all ICU admissions and central line maintenance orders, improved compliance with the recommended protocol. Our hospital experienced a reduction in MRSA bacteremia following the implementation of a standardized decolonization protocol, including the nares, for all ICU, central line, and MRSA positive patients.

Antimicrobial Stewardship & Healthcare Epidemiology 2026;6(Suppl. S1):s93–s94

doi:10.1017/ash.2026.10575

Presentation Type:
Poster Presentation
Subject Category: Diagnostic Stewardship

From Bottlenecks to Better Practices: Systemwide Electronic Clinical Decision Support for Blood Culture Stewardship‡

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[1]Duke University; [2]Duke University Medical Center and [3]Duke University Health System

Introduction: In the setting of the BACTEC BCx bottle shortage in 8/2024, we established a clinical standard for BCx stewardship using evidence-based best practices. Specifically, we implemented clinical decision support (CDS) within the electronic medical record (EMR) across the health system to prompt reflection on the indication for BCx collection and discourage low-yield testing. Our primary objective was to compare blood culture event (BCE) rates before (8/2022-7/2024) and after (8/2024-8/2025) CDS implementation. Secondary objectives included comparing all-cause mortality, 30-day readmission, BCx contamination rates, antimicrobial use, central line–associated bloodstream infection rates, and hospital-onset Clostridioides difficile infection rates before and after CDS implementation. **Methods:** This study was conducted within an academic health system comprising 3 inpatient hospitals. In 8/2024, we integrated CDS into the EMR (Epic Systems, Verona, WI). (Figure 1) CDS was displayed whenever a provider ordered a BCx set. Providers were prompted to document the clinical indication for the BCx, stratified as high-, medium-, or low-yield based on the algorithm developed by Fabre et al. in the DISTRIBUTE study. If the selected indication was categorized as low-yield, the CDS displayed a message noting the likelihood of low-diagnostic yield and required additional justification documentation. Providers retained discretion to proceed with the order. We used an interrupted time series (ITS) analysis to compare BCE rates in the pre- versus post-intervention periods. **Results:** The preintervention period had a rate of 52.8 BCE per 1000 inpatient days compared to 46.5 BCE per 1000 inpatient days in the postintervention period (0.88 95% CI 0.87-0.89 p< 0.01). (Figure 2) ITS analysis demonstrated a significant decrease in BCE rate by 17.5% (95% CI -20.7%, 014.2%, P-value < 0.01) at the time of the intervention, but a significant increase in BCE rate of 1.0%% (95% CI 0.6%, 1.4%, p-value <0.01) in the post-intervention period. (Figure 3) We also saw a significant increase in days of antibiotic therapy and BCx contamination rates. (Figure 2) 37,418 BCEs were placed when the CDS was active. Of these, 22,994 BCE (61.5%) were ordered for sepsis. Of the remaining 14,424 BCE, 3,127 (22.0%) occurred for low-risk clinical scenarios. (Figure 4) **Conclusions:** We implemented hospital systemwide CDS during a critical BCx bottle shortage. While we saw an initial decrease in BCE rates, BCE rates increased following implementation. Specifically, many BCE occurred for low-risk clinical scenarios. Thus, while electronic CDS can be helpful, additional feedback mechanisms are necessary for persistent change in BCx stewardship practices.

Antimicrobial Stewardship & Healthcare Epidemiology 2026;6(Suppl. S1):s94

doi:10.1017/ash.2026.10576

Figure 1: Clinical Decision Support Screenshot

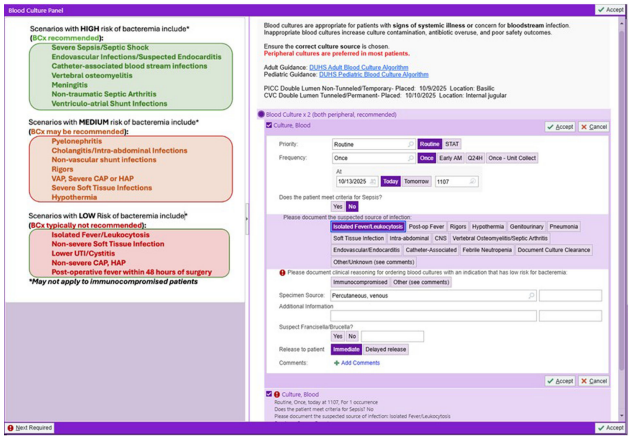
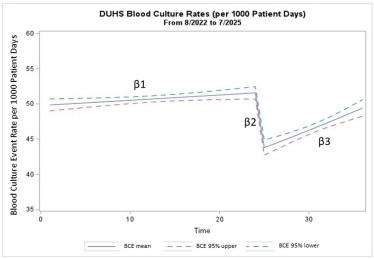


Figure 2: Pre (8/2022-7/2024) vs. Post-Intervention (8/2024-7/2025) variable comparisons.

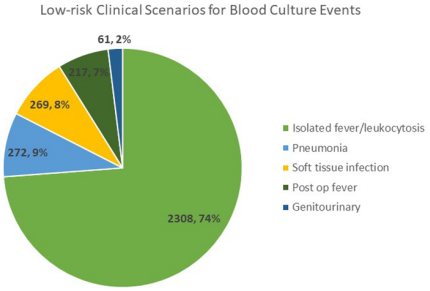
	Pre-Intervention	Post-Intervention	p-value
Blood culture rate (per 1000 inpatient days)	52.8	46.5	0.88 95% CI 0.87-0.89 p<0.01
In-hospital mortality rate (per 1000 inpatient days) (mean, std)	3.10 (0.52)	1.87 (0.36)	RR 0.60 (0.56, 0.65) p < 0.01
30-day readmission rate (per 1000 inpatient days) (mean, std)	3.02 (0.24)	2.87 (0.24)	RR 0.95 (0.89, 1.01) p=0.11
Blood culture contamination incidence	1.83% (0.3%)	2.36% (1.42%)	RR 1.28 (1.15, 1.42) p < 0.01
Days of antibiotic use per 1000 inpatient days	889.1	925.7	RR 1.05 (1.04, 1.06) p < 0.01
Central-line-associated bloodstream infection rate (per 1000 device days)	1.19	1.02	RR 0.82 (0.67, 1.01) p= 0.06
Hospital-onset Clostridium difficile infection rate (per 1000 inpatient days)	0.20	0.18	RR 0.82 (0.63, 1.06) p = 0.12

Figure 3: Interrupted time series of before and after clinical decision support implementation looking at blood culture event (BCE) rates



β1 indicates a 0.2% increase (95% 0.02%, 0.3%, =-0.22) in BCE rates in the pre-intervention stage. Following the intervention, β2 shows that the BCE rate dropped by 17.5% (95% CI -20.7%, 014.2%, p-value < 0.01). after that β3 demonstrates that the BCE rate increased by 1.0%% (95% CI 0.6%, 1.4%, p-value <0.01). Incidence rate ratio comparing pre- versus post-intervention BCE rates is 0.94 (95% 0.92, 0.96), p-value <0.01).

Figure 4: Reasons for low-risk clinical scenario blood culture events



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https://doi.org/10.1017/ash.2026.10575 Published online by Cambridge University Press