

# The Impact of CHG Bathing on Healthcare Associated Infections Across a Rural Hospital System

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**BACKGROUND:** We aimed to examine the impact of daily bathing with chlorhexidine gluconate (CHG) on central line associated bloodstream infections (CLABSI), catheter associated urinary tract infections (CAUTI), and bloodstream infections with methicillin-resistant *Staphylococcus aureus* (LabID MRSA) across a large, rural healthcare system. This healthcare system encompasses 8 large community hospitals, one academic hospital, and 11 hospitals with 50 or fewer beds. Starting in August 2023, all facilities were required to adopt daily CHG bathing for patients with central lines and/or in intensive care units. Some facilities also chose to adopt CHG daily bathing for patients with foley catheters.

**METHODS:** We analyzed the hospital-wide monthly incidence of select healthcare associated infections (HAIs) in the year before and after implementation of CHG bathing across a large, decentralized, rural healthcare system. We conducted negative binomial regressions to examine the difference in HAIs before/after implementation of CHG bathing, and we used the National Healthcare Safety Network's (NHSN) predicted numbers of HAIs to adjust for confounding among hospitals.

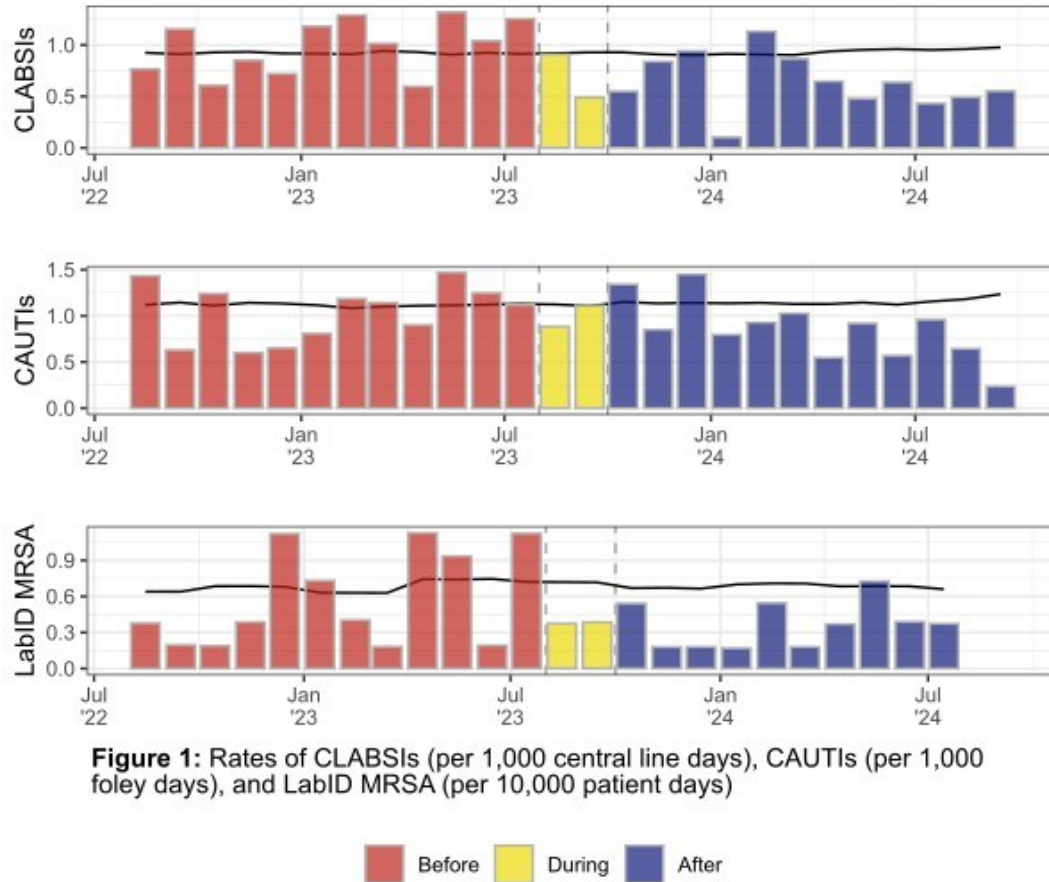
**RESULTS:** After adjusting for each hospital's predicted number of infections, we saw a 40.1% decrease in CLABSI ( $p=0.008$ ) and a 33.2% reduction in CAUTI ( $p=0.018$ , [Table 1](#)); we also observed a 34.3% reduction in LabID MRSA, although this was not statistically significant ( $p=0.105$ ).

**CONCLUSIONS:** System-wide implementation of CHG daily bathing in a large, decentralized, rural healthcare system was associated with a significant reduction in CLABSI and CAUTI.

Figure 1

### Observed vs predicted HAI rates over time

Black line solid is the predicted number of infections from NHSN



**Figure 1:** Rates of CLABSIs (per 1,000 central line days), CAUTIs (per 1,000 foley days), and LabID MRSA (per 10,000 patient days)

**Table 1:** Rates of Select HAIs After CHG Implementation

	Incident Rate Ratio	95% CI	P value
<b>CLABSI</b>	0.599	0.410–0.869	0.008
<b>CAUTI</b>	0.668	0.476–0.933	0.018
<b>LabID MRSA</b>	0.657	0.391–1.09	0.105