

# AHRQ Program for MRSA Prevention

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## Introduction

In April of 2022, the MRSA Standard Infection Ratio was 1.707 which landed OLOLRMC at the bottom quartile of acute care hospitals. When comparing patients without a Hospital Acquired Infection (HAI) to those with similar Diagnosis Related Groups (DRG) and hospital acquired MRSA, we found that on average a patient will have an average length of stay that is 6 days longer, and a cost related to their stay was \$23,000 more on average (Inpatient for FY21).

The AHRQ program for MRSA prevention was joined in early 2022 with the goal of reducing hospital acquired MRSA infection, and transmission between patients.

## Participants

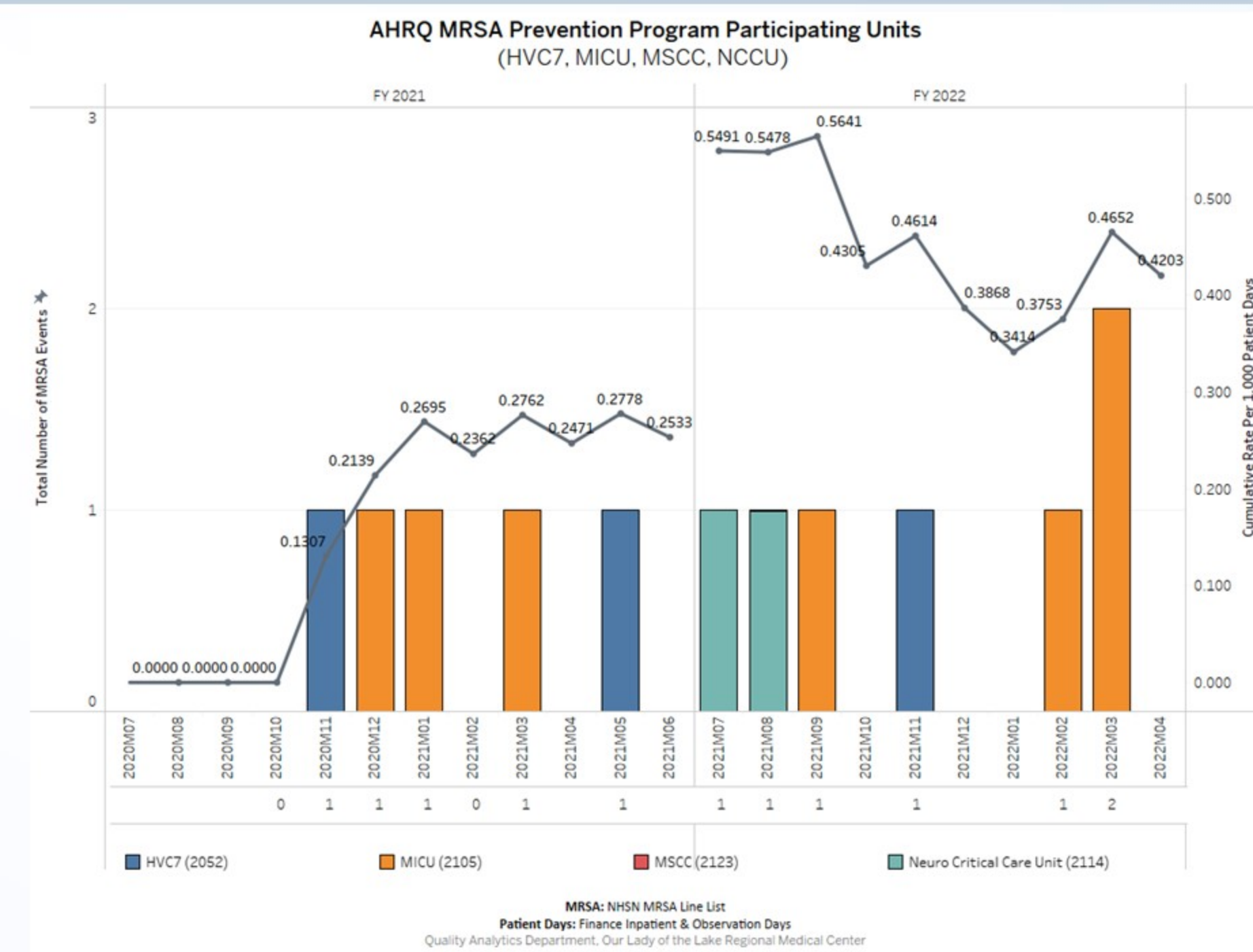
The project was scoped to the four units (HVC7, NCCU, MSCC, MICU) with the highest incidence of MRSA, 8 infections in the 12 months prior to May 2022.

Nursing, CNA, Infection Prevention, and EVS teams were considered stakeholders in this work.

## Methods

As part of the define portion of the project, the team reviewed the evidence-based practices that could serve as mitigators to MRSA infections. The potential approaches included Chlorohexidine (CHG) applications every 24 hours which decrease colonization by 37% (Huang et al, 2013), and decolonizing the nares by use of Nozin, which did not have any significant studies associated with it, or mupirocin that showed a reduction of carriage of MRSA in nares by 80%.

## Methods (cont.)

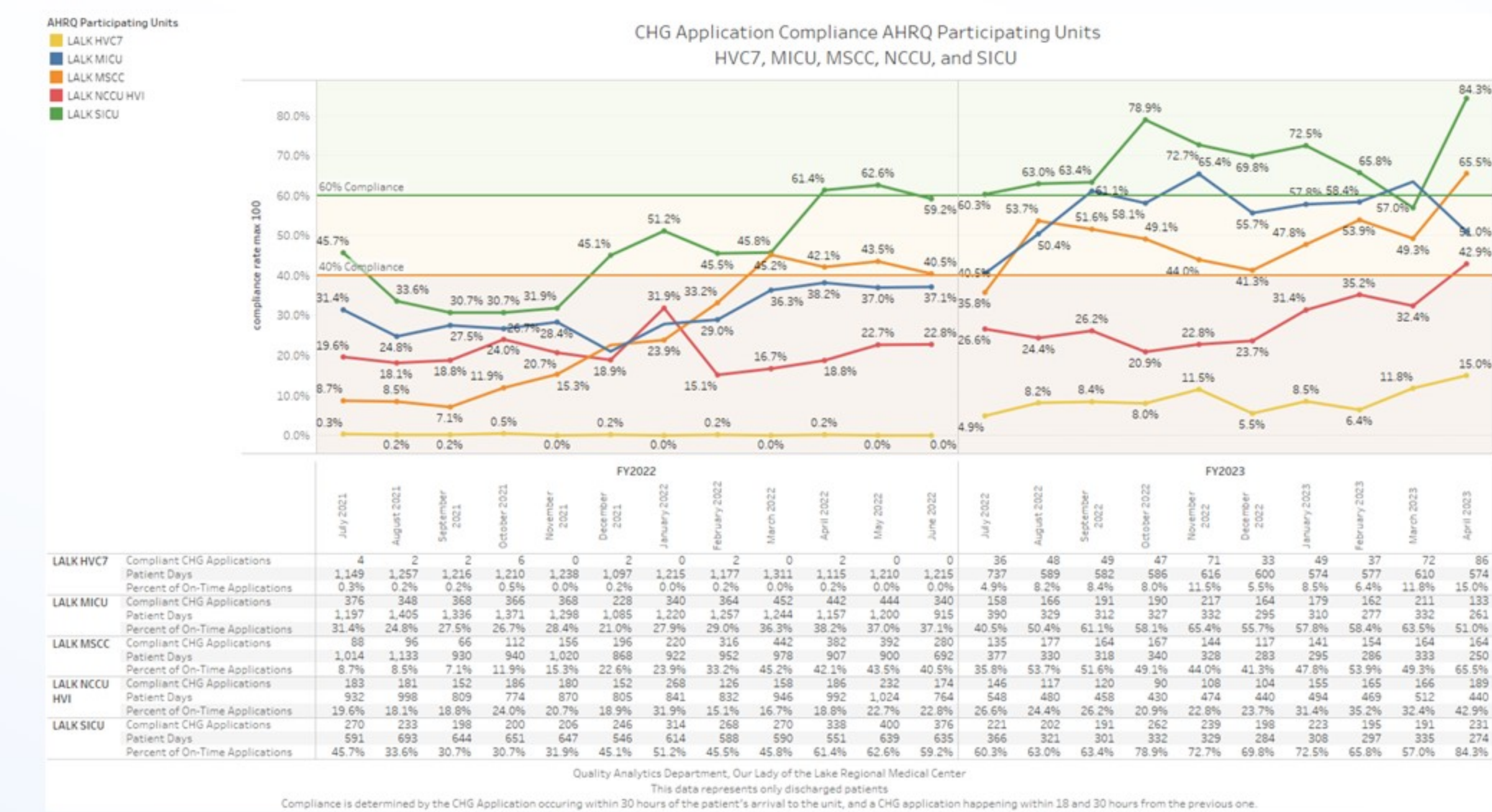


Three potential implementations were evaluated through an impact analysis: CHG and nasal decolonization, CHG application, and nasal decolonization only. The effect on average length of stay, financial impact, and reduction of MRSA, CLABSI, and other Primary Blood Stream Infections were considered. When comparing the reduction of average length of stay, and the reduction in cost CHG applications became the most viable option. In order to understand the current state a series of gembas were completed, to evaluate how CHG applications were being scheduled, completed, and documented.

Based on the gaps identified we implemented education aimed at the patient population and their family members, promoting CHG applications, and how to properly complete them. CHG applications were to be universal in the ICU and prioritized to those with an HLM of 3 or lower on HVC7. Live reports were created to improve the traceability of when applications were completed and improve scheduling.

## Results

An EPIC report was built to facilitate the analysis of the success of CHG applications in the participating units. An additional unit that was not in the original grouping, SICU, was included as part of the resulting analysis as a point of comparison to the other participating units. There has been a steady increase in the amount of CHG applications completed by the frontline teams, moving from a starting average rate for the participating units of 13.1% to an average rate of 33.8% of applications completed on time per patient day. With only two units falling below the 40% threshold. Compliant baths were defined as those occurring within half a shift (6 hours) before or after the 24-hour mark (18-30 hours after the previous application). This was done to account for variations in the patient's scheduled procedures while in the unit, allowing for some flexibility in completing the application, and the units were given a goal of 60% compliance on CHG application. With the increase of CHG applications the Standard Infection Rate (SIR) for OLOL Regional Medical Center went from 2.157 on FY21 to 1.569 on FY22 to a current SIR of 0.723 for year to date on FY23. This shows a significant impact on the reduction of MRSA cases with a reduction in 19 hospital acquired MRSA cases when comparing July 21 – March 22 to July 22 – March 23.



## Discussion

With the implementation of regularly reported data some additional gaps were identified, namely the consistency in documentation in EPIC. After initially reporting the results from the analysis of CHG applications completed we obtained voice of the customer that stated that the CHG applications were occurring in the units, because of the nature of this report we are only able to show success on the applications that were accurately documented. Since highlighting these results there has been a noticeable increase in compliant applications, attributable to the efforts of the units' leaders in driving documentation forward.

## Conclusion

Since the onset of the AHRQ program for MRSA prevention, there has been a significant decrease in MRSA cases within the participating units going from seven cases in FY 22 to two cases in FY23. There is additional opportunities surrounding the language in EPIC for recording CHG applications accurately, as well as improved scheduling provided to the CNAs to better guide them on when to complete an application. There are also significant challenges surrounding the higher mobility patient population, that cause a gap in documentation or reception of a CHG application.

