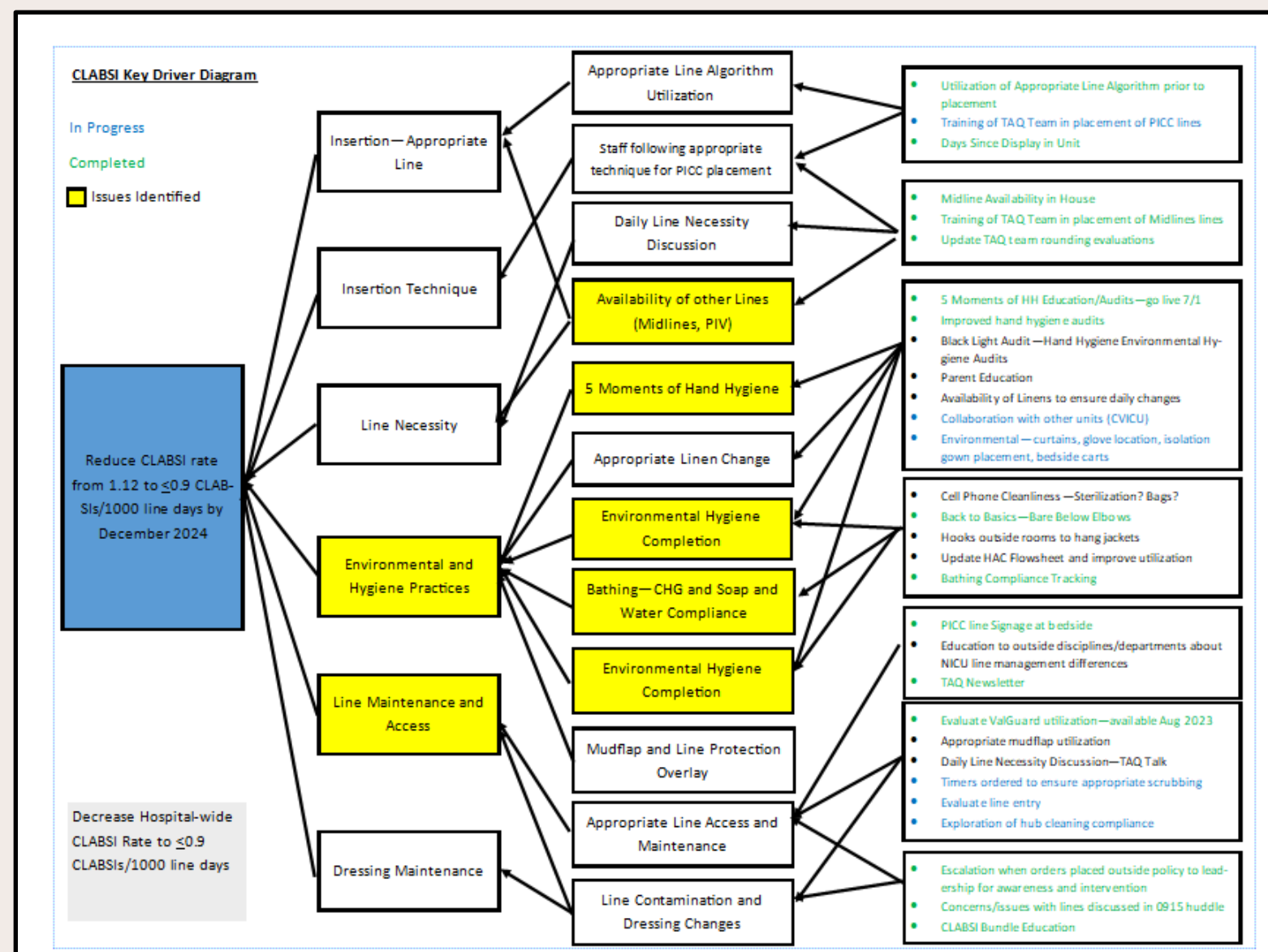
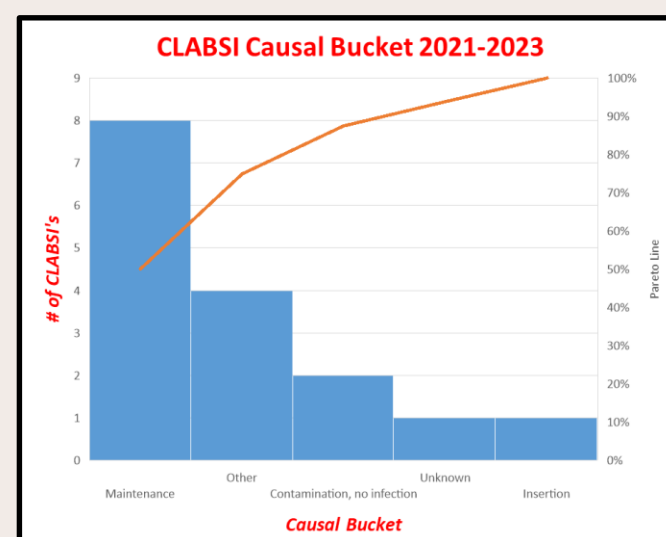
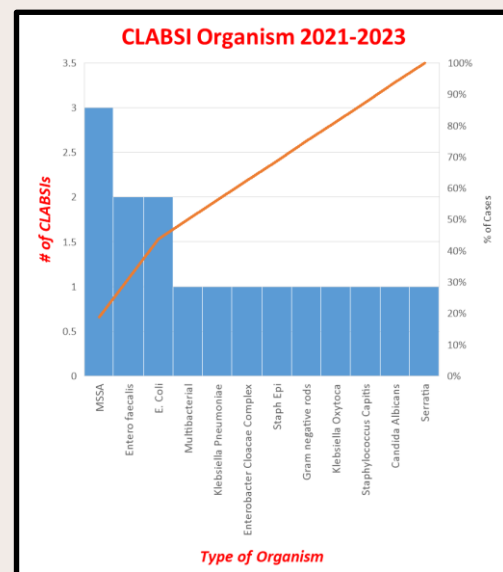


## Background

- Central Line Associated Blood Stream Infections (CLABSIs) place patients at high risk for mortality and morbidity, increasing length of stay, and additional costly and detrimental therapeutic interventions
- Our NICU historically had a better than national average CLABSI rate, however, since 2022, our CLABSI rate spike to above average
- During this timeframe, the unit experienced higher census and acuity leading to increased workload and needs of the patients
- In 2022, the CLABSI rate spike from 0.53 in 2021 to 1.04 and 1.12 CLABSIs/1000 line days in 2022 and 2023, respectively



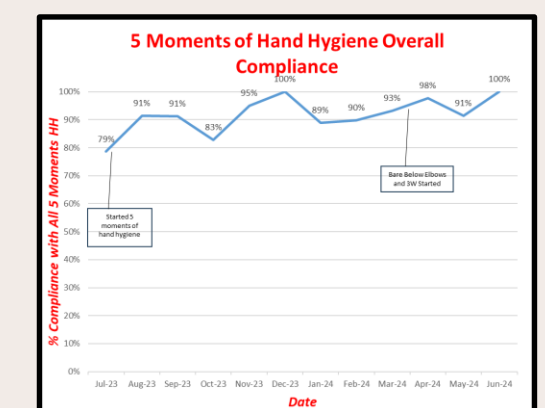
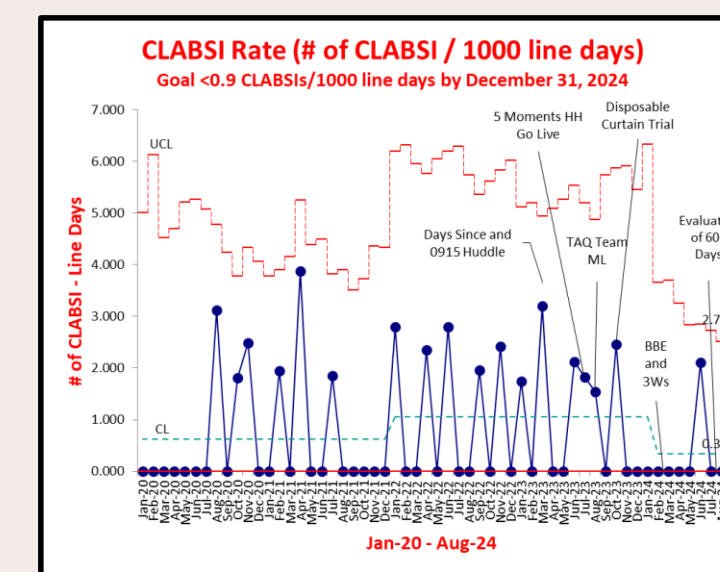
## Methodology

- Utilizing quality improvement methodology allowed identification of the root cause of the increase in CLABSIs within our unit
- After each CLABSI a bedside review was completed identifying cause of infection
- After evaluating trends, the majority of CLABSIs were due to skin or GI bacteria, with no perceived gaps in bundle compliance
- Due to the nature of the infection, likely the infection was due to a lapse in hygienic practices, either through inadequate hand washing, unidentified contamination of the line, or reduction in adequate maintenance of the environment
- SMART Aim: decrease CLABSI rate to 0.9 CLABSIs/1000 line days by December 2024
- Interventions were put into place to improve cleanliness and awareness in our unit including:
  - Highlighting “Days Since” last CLABSI in multidisciplinary daily huddle and True North Board
  - Transition to Five Moments of Daily Hand Hygiene
  - Availability of hand sanitizer on bedside carts
  - Disposable curtain trial
  - Bare Below the Elbows (BBW) and Wash, Wear, Wipe (3Ws) campaign



## Outcomes

- After implementation of interventions identified, intentional auditing, and Just in Time Training, hand hygiene compliance increased from 73% to 95% for all moments of hand hygiene.
- Identifying gaps and barriers in cleanliness allowed interventions to be implemented and PDSA cycles allowed for improvement in compliance
- The NICU went 230 days without a CLABSI starting November 2023
- Currently for 2024, the rate is 0.30 CLABSIs / 1000 line days (1 CLABSI)



## Clinical Implications

- Evaluating of root cause for hospital acquired conditions helps to identify potential interventions to improve overall rates and outcomes of patients
- Engagement of front line staff to ensure buy-in and compliance is key
- Intentional auditing to ensure accuracy of data is imperative, as prior to 5 moments of hand hygiene, we were reporting 100% compliance, but when switching to 5 Moments, compliance was actually 73%

## Recommendations

- Increased number of Hand Hygiene Auditors to ten to improve number of audits completed per month
- Engage frontline staff to audit for BBE and 3Ws compliance to improve awareness and buy-in
- Last 2 CLABSIs have been on patients who have long term lines in place (>60 days) – evaluate options of line removal or replacement