

Line of Defense- Nurse-driven Rounds to Reduce CLABSIs

Hannah Fridley, BSN, RN and Erin Jones, BSN, RN, CCRN, CMC

BACKGROUND

In 2023 the CVICU had 7 central line- associated bloodstream infections (CLABSIs), leading to increased patient morbidity, mortality, and healthcare costs.

From January-July 2024, 4 additional CLABSI cases in the CVICU were documents.

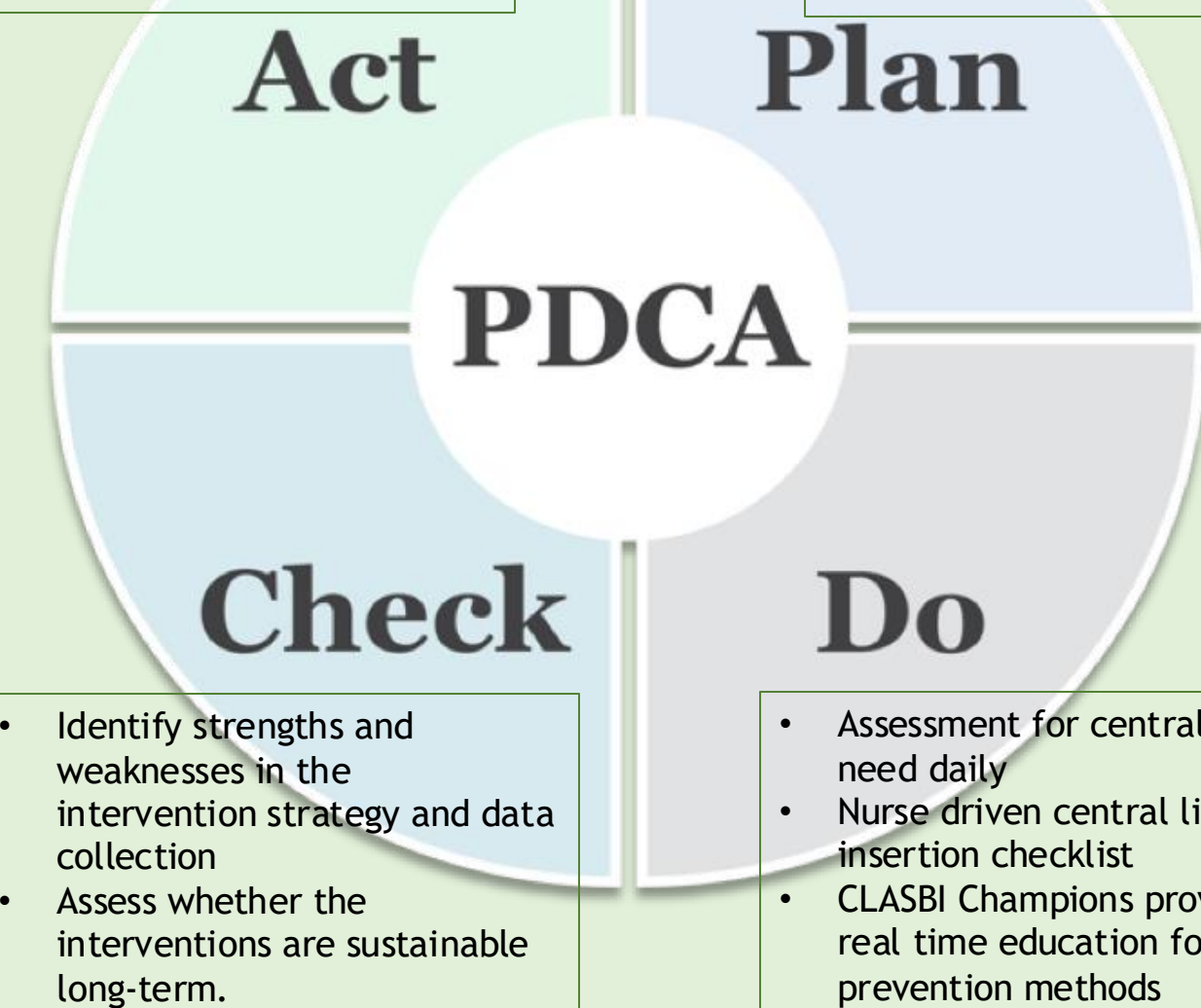
In Quarter 1 and 2 of 2024, CVICU was above the mean of Central Line Associated Blood Stream Infections per 1,000 Central Line Days at 2.64 and 1.41, compared to other NDNQI-Academic Medical Centers in quarter 1 of 2023 at 1.27 and quarter 2 at 1.19

OBJECTIVE

By increasing nurse-driven rounds, the CVICU will obtain a bundle compliance rate of 85% or better within the first 6 months, reducing the overall CLABSI rates to improve patient safety and align with WVU Medicine and PressGaney Central line compliance goals.

- Nurse driven rounds
- Identify areas for improvement and adjust protocols accordingly
- CHG dressing compliance with all central lines

- Implement CLASBI reduction strategies with gathered data in the CVICU
- Empower nurses to take an active part in prevention of CLABSIs



- Identify strengths and weaknesses in the intervention strategy and data collection
- Assess whether the interventions are sustainable long-term.

- Assessment for central line need daily
- Nurse driven central line insertion checklist
- CLASBI Champions provide real time education for prevention methods

ACTION PLAN WITH ACTIONS TAKEN

In July 2024, the CVICU re-established a bedside nurse-driven CLABSI champion team to conduct biweekly rounds.

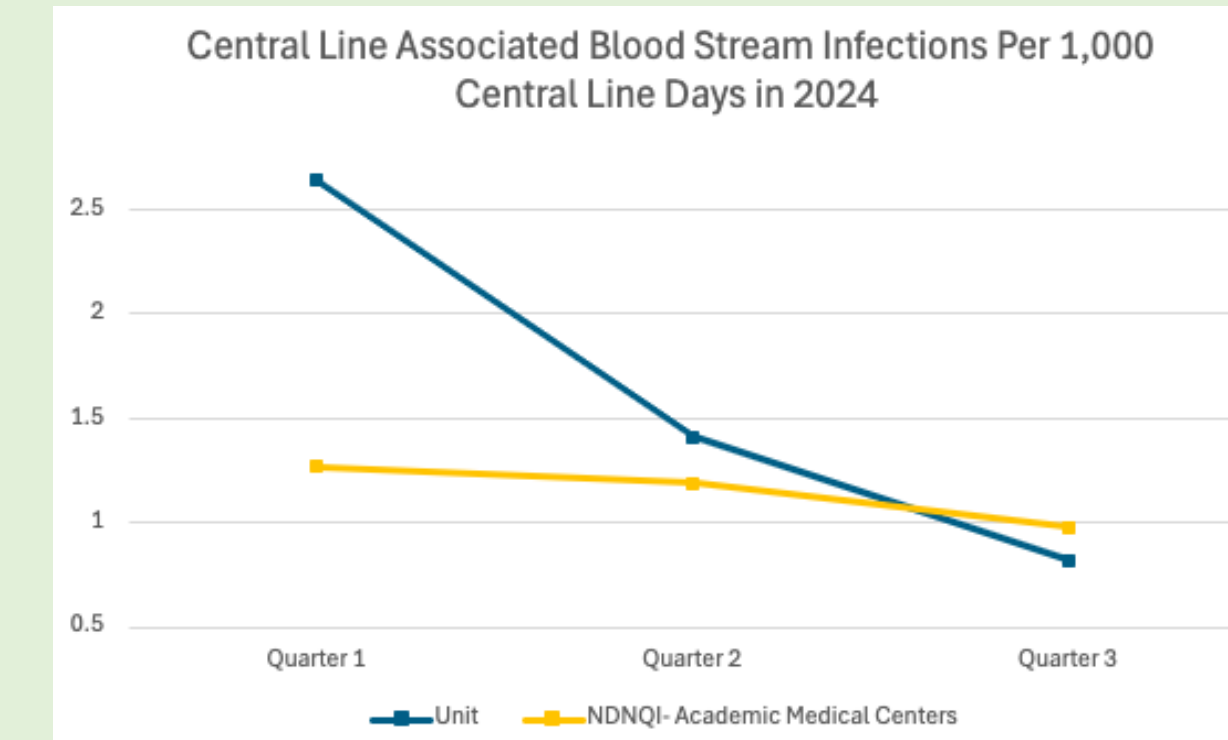
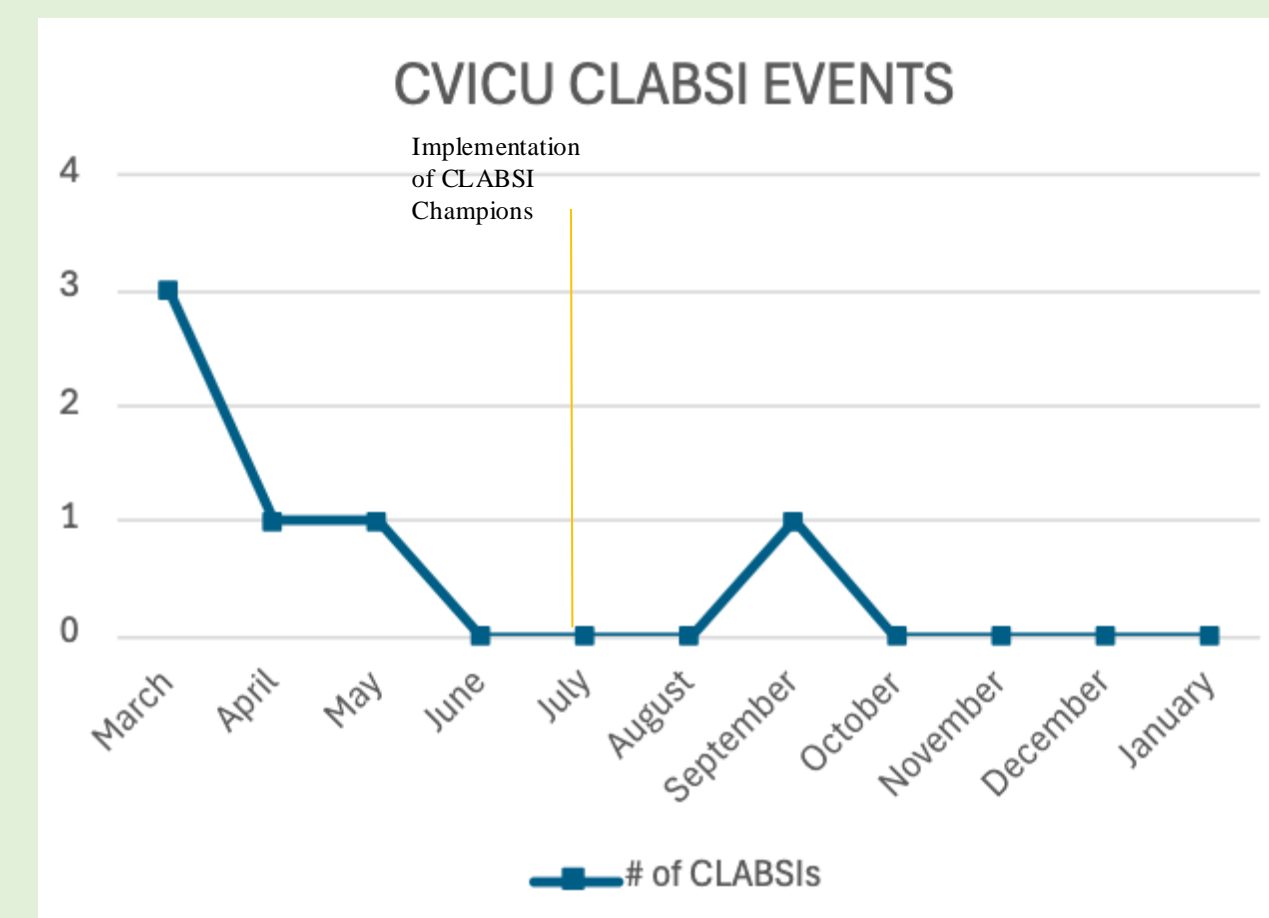
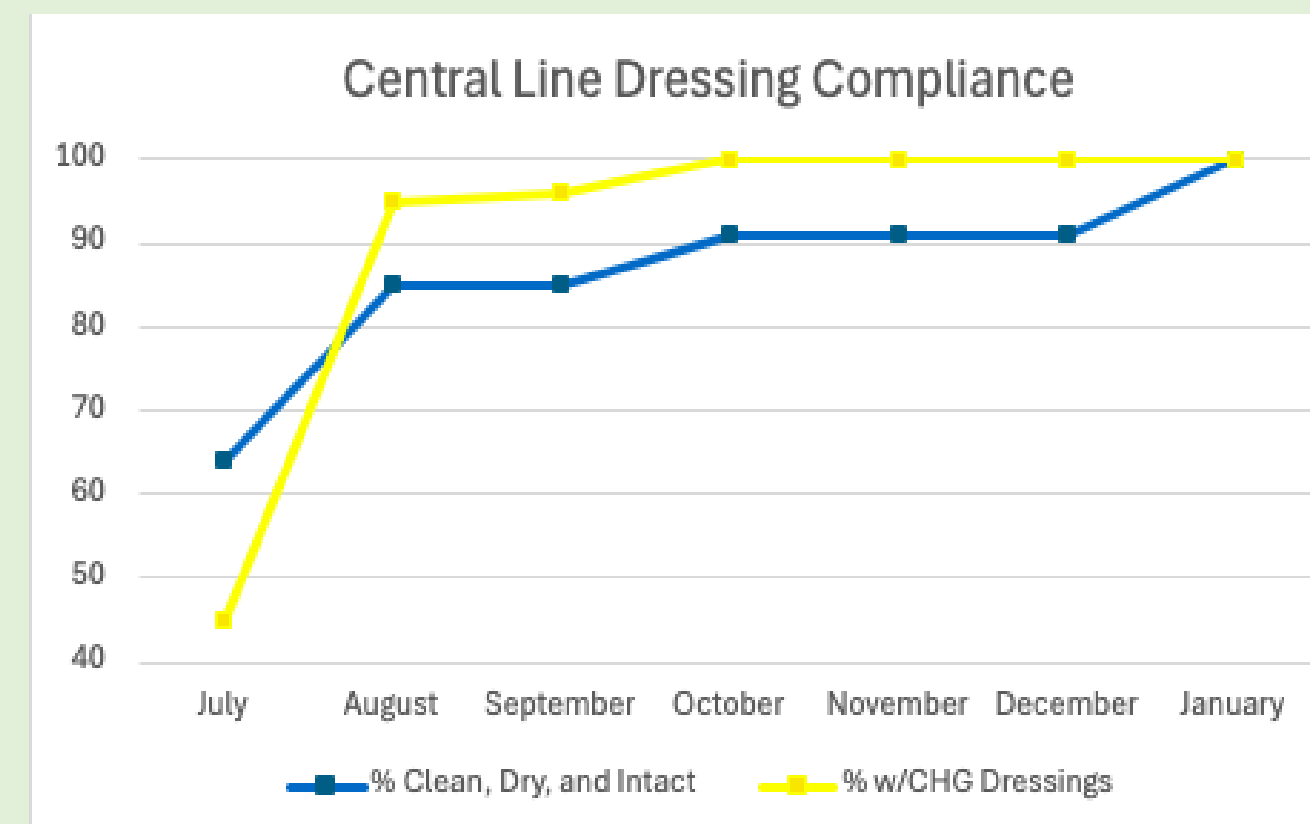
- Assessing proper aseptic technique, dressings and maintenance of the central lines.
- Nurses were empowered to take an active part in prevention of CLABSIs
- CLASBI champions educated the bedside nurses by:
 - showing them the proper line maintenance techniques and correcting any errors
 - the bedside nurse involved in making changes as needed
- This approach fostered a culture of accountability and vigilance, empowering bedside nurses to take an active role in infection prevention

CLASBI Champions conducted thorough checks of:

- All invasive lines
- Ensuring that tubing was clean, dated properly, and that unused lines were flushed, clamped, and capped.
- Dressings
 - To ensure they were clean, dry, intact, and properly dated.
- Champions were able to identify potential risks early and ensure adherence to infection prevention protocols.
 - 1st risk identified: improper dressing on central lines for patients admitted from the operating room (OR).
 - The team implemented a policy requiring that incorrect dressings be changed to the proper CHG dressing upon admission.
 - In collaboration with CVICU management and WVU Medicine infection preventionists, the appropriate dressings were stocked in the OR.
 - 2nd risk identified: IJ central line dressings were not adhering to the patient's skin due to the weight of the lines.
 - Champions worked with WVU Medicine infection preventionists and a third-party vendor to trial a securement device to better stabilize the central lines under the dressings.
- Jan. 2025, implementation of DNP student's line insertion observation checklist

RESULTS

- As of January 31, 2025, only one CLABSI had been recorded since July 2024.
- Central line bundle compliance among bedside RNs improved
 - CHG dressing compliance rose from 45% in July to 100% by October through January.
 - Dressing maintenance compliance increased from 64% in July to 85% in August, to 91% by October through December, and 100% in January.
- PressGaney Central Line Associated Blood Stream Infections per 1000 Central Line Days for the CVICU in quarter 3's mean was .82.compared to other academic medical centers in quarter 3 at .98



SCALE UP PLAN

- Presented work to other CLABSI Champions and WVU Medicine's BSI/CLABSI Task Force Team
 - Expand the CLABSI champion model to other areas of the hospital
- Continued Education and Staff Engagement
- Strengthen OR to ICU hand off to procedures to ensure post-op dressings meet CLABSI prevention standards

SUSTAINABILITY PLAN

- CLABSI champions will continue to round biweekly, increase the frequency of nurse-driven rounds to maintain high compliance and prevent CLABSIs.
- Expand practices to other areas within the CVICU, fostering better communication, accountability, and early detection of potential patient complications.
- Ongoing rounds = long-term infection prevention & reduced CLABSI rates
- Full Implementation of DNP student's project to further assess other potential risk factors and line insertion techniques

LESSONS LEARNED

- Nurse-driven rounds:
 - positions nurses as leaders in infection control and patient safety
 - enhances their professional accountability and confidence
 - allows Nurses to take ownership of daily line assessments, ensuring central lines are necessary, and maintained properly.
 - provide real-time opportunities to address issues and reinforces nurses value as patient safety champions
 - fosters a culture of vigilance and accountability, and sustainability