

Decreasing Central Line Associated Blood Stream Infections to Zero in the Burn Unit



Cheri Filewood RN, Emily Johnson MSN, RN, Megan Draney RN, Stacey Hunt RN, Lloyd Gamboa RN, CBRN, MarAnthony Basister BSN, RN, CBRN

BACKGROUND

All patients with a Central Line Catheter (CLC) access are at risk for a Central Line Blood Stream Infection (CLABSI). Patients with compromised skin integrity from a burn injury, and prolonged necessity of a central line, are at an increased risk of developing a CLABSI. Larger body percentage burns result in decreased non burn skin available to insert an IV, and therefore it has to be inserted through the burn tissue. The inflammatory response of the burn injury results in generalized edema and weeping of serous fluids making it difficult to keep the Central line dressings intact and not contaminated, and difficult to access and maintain a peripheral IV.

PURPOSE

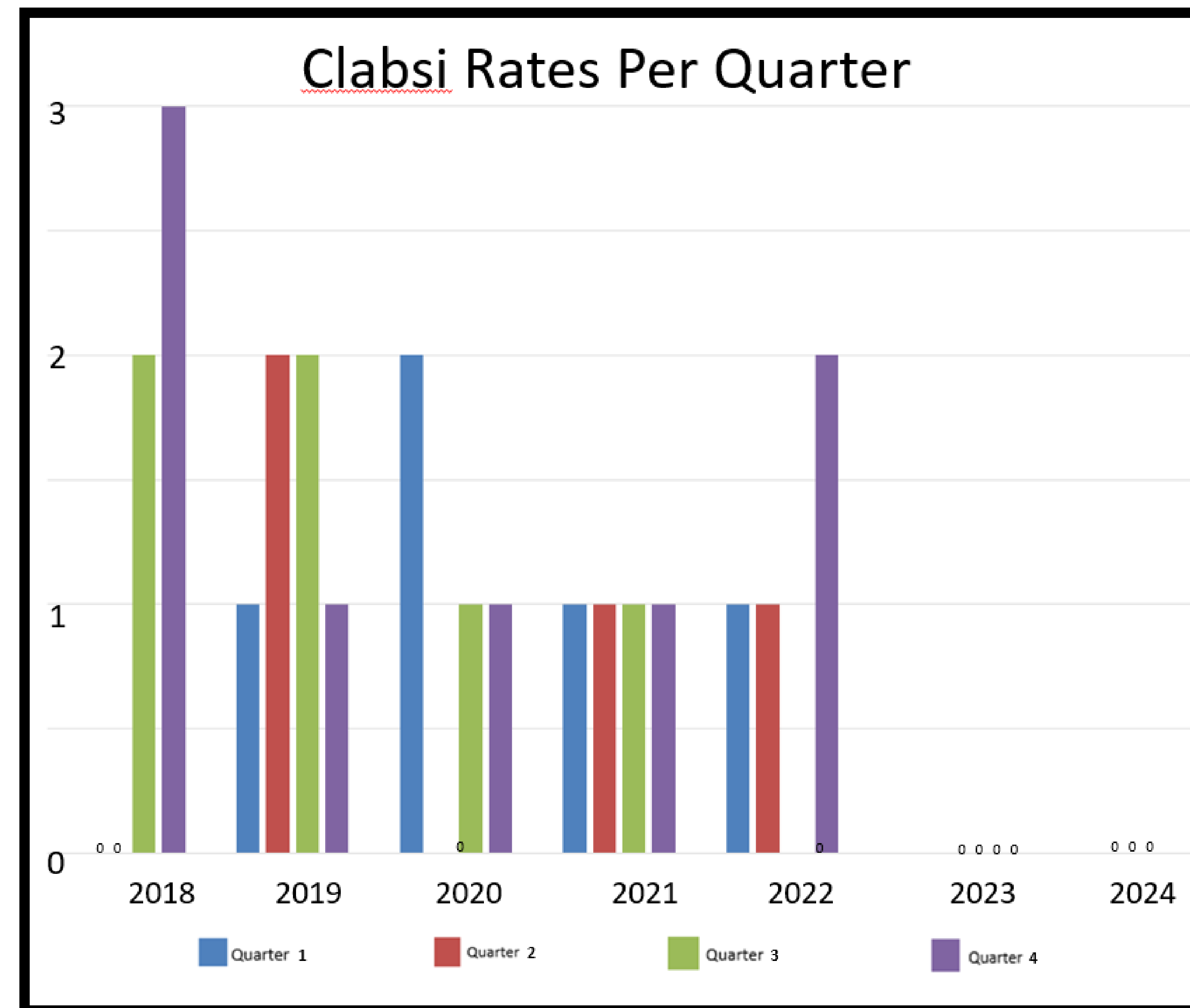
The purpose of this Quality Improvement project was to identify burn specific causes for developing a CLABSI, with the goal to decrease and maintain the burn unit CLABSI rate to zero.

METHODS

This is a Completed Clinical Quality Improvement Project using the method of PDSA, Plan-Do-Study-Act. All staff caring for the patient at the time of a CLABSI, participated in a Root Cause Analysis (RCA) and would frequently identify risk factors specific to the burn population. The Burn Unit-based council, and clinical nurses formed a work group to review the CLABSI rates and burn specific risks.

REFERENCES

References available upon request



Review of data:
Increased CLABSI during Winter and Summer months when higher TBSA% burn admissions occur.
Higher CLABSI on ICU burn unit vs Medical Burn unit.



IMPLEMENTATION

Implementation:

- Daily Bundle round discussion with clinical RN, Charge Nurse, and the Physician specific to removal of a CLC as soon as clinically feasible.
- Multidisciplinary round discussion every Monday and Thursday discussing the removal of a CLC as soon as clinically feasible.
- Change Central Line dressing over burn skin immediately if integrity is compromised, with each burn dressing change if soiled, or compromised integrity of the bio-patch or occlusive dressing.
- Change Central Line dressing after each hydrotherapy/shower table burn dressing change.
- Bring a Central Line dressing kit into the room with the burn dressing change so readily available.
- Insertion of ultrasound guided peripheral IV to remove Central Line as soon as possible.
- Education and reminder to staff of patients with CLC during each shift change Huddle, with the goal to remove as soon as clinically feasible.

RESULTS

After the implementation of the discussed strategies the CLABSI rates have fallen to ZERO for the last 7 Quarters. The last CLABSI was Nov 28, 2022.

CONCLUSIONS

The Burn unit has been CLABSI free for 23 months. The UBC and staff will continue implementing the interventions discussed, review quarterly CLABSI rates, with a goal to maintain a rate of ZERO CLABSI.

