

Every Line, Every Time: A CLABSI Prevention Protocol

Carolyn Scott, DNP, MPA, RN, NEA-BC, Comprehensive Cancer Center, Wake Forest Baptist Health

PROBLEM STATEMENT:

A Hematology/Oncology unit with a large population of patients with acute leukemia continued to struggle with a high rate of central line associated bloodstream infections (CLABSIs), despite concerted efforts with CLABSI care bundle initiatives. Nursing leadership convened a multidisciplinary team including bedside nurses, attending physicians, pharmacists, infection preventionists, and performance improvement professionals to develop and implement an access restriction protocol. The team used the IHI Model for Improvement to develop PDSA cycles to test changes prior to adoption and spread to other units.

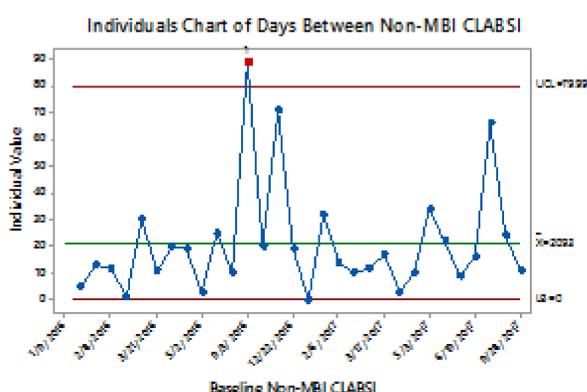
AIM:

Reduce the (non-MBI) CLABSI rate from a baseline of 2.069 per 1,000 days to <1.49 per 1,000 central line days, and increase the days between CLABSIs from 21 days to >28 days by August, 2018.

TIMELINE:

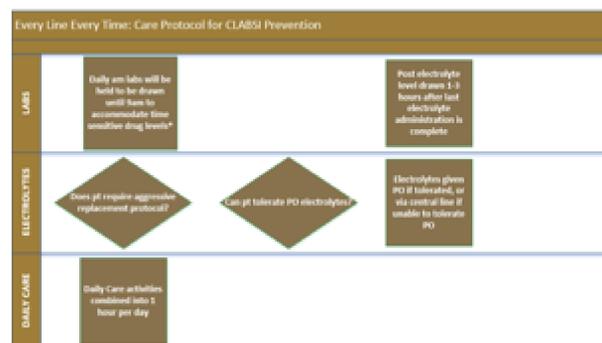
Every Line, Every Time: A CLABSI Prevention Project		2017-2018										
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
I. Pre-Plan	Assemble Working Group/Info. Gathering											
II. Plan	Gather Baseline Data (# times accessed) Determine opportunities for access reduction											
III. Do	Pilot Care Protocol for Central Line Access											
IV. Study	Review data											
V. Act	Reconvene entire team, determine long-term adoption of protocol and spread											

BASELINE METRICS:

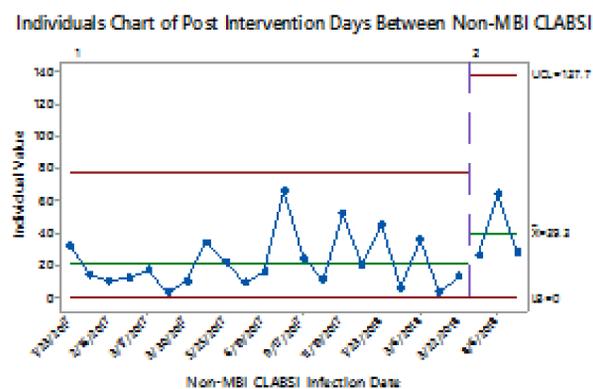


ACTIONS TAKEN:

Development of a care protocol to decrease the number of times central lines were accessed by combining daily lab draw times, performing only urgent follow-up labs, utilizing a PO electrolyte protocol, and introducing a once a day "holiday time" combining daily care activities such as showering.



OUTCOME METRICS:



SUMMARY OF RESULTS:

The rate of CLABSI infections decreased from 2.089 to 1.140 per 1,000 central line days. The number of days between infections increased from 20.92 to 39.3. A two-sample T-test for a statistically significant increase in the number of days between infections resulted in a p-value of 0.037 with 95% confidence. Additionally, the number of times central lines were accessed over a 24 hour period decreased from 18x per day at baseline to 10x per day post intervention. A 2-Sample T test for the reduction in number of times lines were accessed resulted in a p-value of <0.01 with 95% confidence.

KEY LEARNINGS:

Identification and engagement of key-stakeholders from multiple disciplines is essential to there is consistent implementation of the pilot across staff members. Taking time during the planning stages of a project to discuss potential barriers and solutions is necessary to maintain momentum during the pilot.

NEXT STEPS:

Evaluate other units to determine where there are opportunities to reduce the number of times central lines are accessed and bring together a multidisciplinary team from those areas to develop a spread plan.

TEAM MEMBERS:

- Amy Braden- Infection Preventionist
- Joni Chilson- Nurse Manager
- Leslie Ellis- Attending Physician
- Beth Fisher- Performance Improvement
- Giniann Forrester- Bedside Nurse
- Jennifer Hernandez-Infection Preventionist
- Maho Hibino- Pharmacist
- Dianna Howard- Attending Physician
- Hannah Beth Johnson- Bedside Nurse
- Glenn Lesser- Attending Physician
- Pamela Muetzel- Vascular Access RN
- David O'Brien-Charge Nurse
- Lindsay Poremba- Bedside Nurse
- Bayard Powell-Attending Physician
- Carolyn Scott- Chief Nursing Officer
- Brandy Strickland Snyder-Pharmacist