



MHA Lean Six Sigma Project Summary

INITIATIVE TITLE: *Reducing CLABSI Infection Rate*

ORGANIZATION NAME: *Phelps Health*

ELECTRONIC MED RECORD: *Epic*

PARTICIPANT / CONTACT INFORMATION

Team Leader Name: Brandy Parks BSN, RN	Title: Lean Quality Improvement Analyst	Preferred contact-type bparks@phelpshealth.org
Brandy Parks BSN, RN	Lean Quality Improvement Analyst	bparks@phelpshealth.org

DEFINE – Problem Statement & Goal

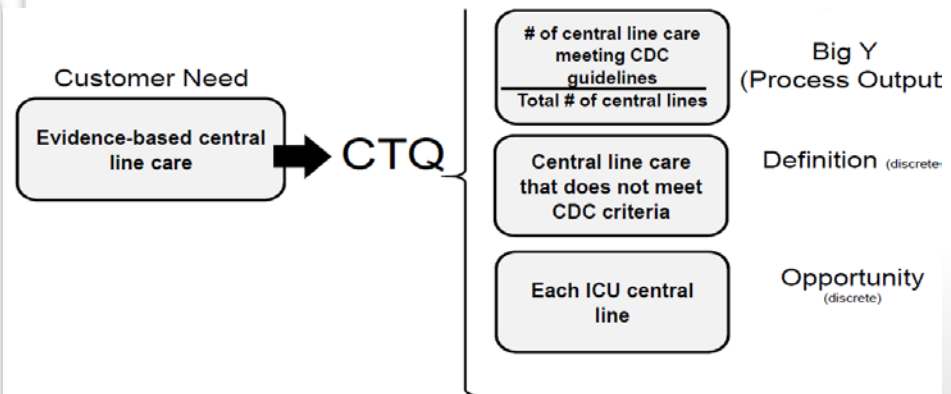
We have had an increase from 1.6 Central line associated bloodstream infections (CLABSIs) per 1,000 central line days in 2020 to 4.5 CLABSIs per 1,000 central line days as of September 30th, 2021. This has had a negative impact on patient length of stay, care costs, and the overall patient experience.

Improve dressing assessed and line necessity check by 90% reduction in defects by April 2022.

DEFINE - Initiative Scope

ICU patients
Patients who have a central line for at least 48 hours until removed

DEFINE –BIG Y



MEASURE - Data Collection / MSA

Our data collection included performing an MSA validation between nursing central line assessments and their charting. Ten observations were done of nurses assessing a central line and their subsequent charting audited to validate what was seen and done was what was charted. We were at 100% repeatability and accuracy. From there we collected 1,050 data points using retrospective chart auditing.

ANALYZE - Critical Xs / Root Causes Identified

- The nurse is only obtaining daily line necessity from the attending physician 70% of the time.
- Proper intervention is only taken 30% of the time for abnormal site assessments.
- Dressing assessed every 4 hours only 64% of the time.
- Consistent training not provided regarding policy and charting expectations.
- Central line policy outdated and not easy to reference.
- Physicians were not using EBP for maintaining central line placement.

IMPROVE - What was Implemented

- Changed central line EMR documentation flowsheet.
- Implemented daily line necessity checks during morning rounds.
- Created and posted Simple Step SOP.
- Peer physician education of evidence-based central line usage criteria.
- Educated staff on assessment and charting expectations regarding central lines.

IMPROVE – What was Implemented

Central Line Charting Reminders

- Catheter site assessment performed **each shift**.
- Catheter-skin junction assessed at least **every 4 hours**.
- Abnormal assessment (i.e. Drainage, swelling, redness, dressing peeling, etc.)
 - All interventions completed in response to abnormal assessment shall be charted on in intervention or in a note whichever is applicable.
- Physician Line Necessity check completed and **charted daily** during morning rounds.
- Routine dressing change to be completed and charted **every 7 days**.

Reassess CVC Triple Lumen 02/06/22 Right Internal jugular
 Time taken: 2/16/2022 0933

OTHER

Site Assessment
 Clean, Dry, Intact taken 2/16/2022 0919 by Erin Moore, RN

<input type="checkbox"/> Clean	<input type="checkbox"/> Dry	<input type="checkbox"/> Intact	<input type="checkbox"/> Bleeding
<input type="checkbox"/> Draining	<input type="checkbox"/> Ecchymotic	<input type="checkbox"/> Edematous	<input type="checkbox"/> Extravas...
<input type="checkbox"/> Leaking	<input type="checkbox"/> Painful	<input type="checkbox"/> Pink	<input type="checkbox"/> Positional
<input type="checkbox"/> Red	<input type="checkbox"/> Tender	<input type="checkbox"/> Not asse...	<input type="checkbox"/> Other (C...

Dressing Status
 Clean, Dry, Intact taken 2/16/2022 0127 by Bonita Brown, RN

<input type="checkbox"/> Clean	<input type="checkbox"/> Dry	<input type="checkbox"/> Intact	<input type="checkbox"/> New drainage
<input type="checkbox"/> Old drainage	<input type="checkbox"/> Removed	<input type="checkbox"/> Remoistened	<input type="checkbox"/> Other (Com...

Dressing Intervention
 New dressing taken 2/13/2022 1300 by Andrew Jones, RN

<input type="checkbox"/> New dressing	<input type="checkbox"/> Dressing changed	<input type="checkbox"/> Dressing reinforced
<input type="checkbox"/> Removed	<input type="checkbox"/> Other (Comment)	

Accept Cancel

Dressing Status

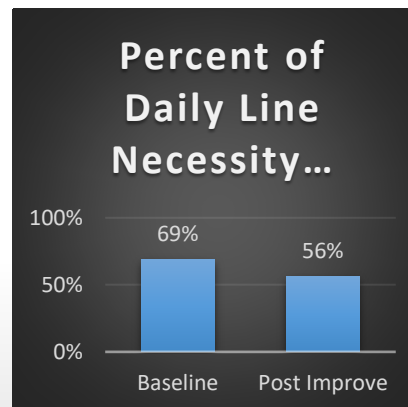
☐ Clean ☐ Dry ☐ Intact ☐ New drainage ☐ Old drainage ☐ Removed ☐ Remoistened ☐ Other (Com...

**** If any dressing assessment findings are abnormal, please ensure that you document a dressing intervention in the row below ****

Dressing Intervention

☐ New dressing ☐ Dressing changed ☐ Dressing reinforced ☐ Removed ☐ Other (Comment)

IMPROVE – Results to Date



CONTROL – Next Steps

How do you plan to keep momentum going to prevent critical x from reverting? Shift Manager Daily Audits, we would like to see a daily automated report once we have drilled down exactly what it needs to include

Have you calculated the project benefits to date? There have been no new CLABSI's in 2022

What is your rollout plan and project "Close" timelines? May 15th

Who are you "handing-off" to? Shelby Hood BSN, RN- ICU Nursing Director

Please include any "ah-ha" moments We found out that the nurses did not know that they had to complete a daily line necessity check with the attending physician, and our EMR did not include any alerts that this needed to be completed.

OVERALL LESSONS LEARNED

Summarize findings that you learned about a) yourself- We learned that while this project was very large and had many moving parts, breaking it down into sections making the overall process less intimidating making the overall project more manageable **b) your organization-** Phelps Health is very supportive and excited in maintain our LEAN principles.

c) process improvement or LEAN Six Sigma in general, etc.

Processes need to be evaluated and updated on a regular basis.

Did anything surprise you? Pleasantly surprised by all of the nurse excitement and feedback in tackling the CLABSI issue. Another surprise we faced were the obstacles in keeping the project on task.

What would you do differently? Take more control in deciding the phase rollout times.

NEXT PROJECT(S)

- External Physician Orders/Billing
- Billing Complaints Process
- IV Pump Tracking
- Home Care Coding Process
- Mass Transfusion Protocol

REWARD AND RECOGNITION

Linde Merrow RN, MSN
Gregory Gibbs, DO
Jodie Sapaugh MHSM,
MBA

Debbie Halinar RN CIC
Shelby Hood RN, BSN

Victoria Lowe RN
Brandy Beasley RN
Hannah Garrity RN