Examining the Impact of Standardization of Central Line Nursing Care

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INTRODUCTION

Healthcare associated infections (HAIs) are a leading cause of preventable patient harm in the United States. Central Line Associated Bloodstream Infections (CLABSI) are one of the top four causes of HAIs. Although central lines are a vital part of many patients’ care, they do present serious infection risks. There have been significant advancements made in CLABSI reduction rates; however, this ‘never event’ still occurs and can be problematic for hospitals because of the result in adverse outcomes for patients.

Our institution has had a multidisciplinary CLABSI Prevention best practice team since 2007 to review evidence based practices to decrease CLABSIs with an ultimate goal of zero. Despite implementation of insertion bundles and continuous education, the institutional CLABSI rate was still above ideal range. The best practice team decided to dedicate a group of nurses solely to the purpose of CLABSI Prevention.

- GOAL: To standardize maintenance care of central lines and decrease CLABSI Rates at Baylor Scott & White Temple Memorial Hospital.

METHODS

The standardized approach taken is a dedicated group of registered nurses to daily assess every inpatient with a central line and to perform all central line dressing changes.

A pre/post intervention study utilizing retrospective chart reviews was conducted to examine the impact that a standardized approach to central line care has on CLABSI rates.

CLABSI is defined by the CDC as a primary laboratory confirmed bloodstream infection where a central line was in place for >2 calendar days on the date of event and was in place either the day before or the day of event, and the infection is not related to an infection from another site.

RESULTS

There was not a significant decrease in CLABSI rates as a result of implementation of the CLABSI Prevention Nurse Program. Unintended consequences were incurred which lead to reevaluation of processes and ultimately helped drive the change of patient care in a positive direction. Figure 1 depicts a timeline of interventions and overall CLABSI rates throughout the time period evaluated.

DISCUSSION

After implementation of the CLABSI PREVENTION NURSE (CPN) Program, unintended consequences were experienced.

- Perception that patient care was taken away from primary nurse
- Central line dressings were not assessed by primary nurse as often because it was perceived to be the responsibility of the CLABSI Prevention Nurse
- Confusion regarding the chain of command of who to contact when dressings needed to be changed
- Variances in individual practices of dressing changes

Each unintended consequence was evaluated and addressed by the CLABSI Prevention best practice team and nursing leadership.

- All CPN were retrained to ensure standardization and remove variances of practice
- The role of the CPN was altered and some of the responsibility was shifted back to the primary nurse
  - CPN continue to daily assess all inpatients with central line
  - CPN to change all scheduled 7 day dressings
  - Trained Super Users to change all PRN dressings
  - “Don’t wait or it could be too late” educational push to nursing
- Additional designation and training of super users
- Encouragement to primary nurse as a vital piece of this program and thorough central line assessment necessary to communicate any needs to the CPN or super user

These unintended consequences and barriers were instrumental in process improvement. Lessons learned included:

- Establishing a focus on CLABSI Prevention for nursing staff at all levels (primary nurse all the way to Chief Nursing Officer)
- Facilitating daily discussions to identify important trends
- Re-education of nursing to improve practices & outcomes
- Conducting root cause analyses of every CLABSI to enable a safe culture for patients and staff

CONCLUSIONS

In conclusion, the process for improvement and the quest to zero CLABSIs continues for our institution. However, through implementation of this program we have successfully begun a shift in culture towards empowering collaboration across all disciplines and leading to an environment of utmost patient safety.