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Beyond the Bundles: A Pilot to Evaluate a Silver Based Bathing Product to Reduce Central Line-Associated Bloodstream Infections

Lisa Pinner, RN, MSN, CNS, CPON,BMTCN, Rachel Frisch, BSN, BMTCN, Jenna Kruger, MPH, CPHQ and Lianna Marks, MD.

Purpose

To complete a six-month trial to compare Theraworx, a silver-based bath wipe, to the conventional Chlorohexidine (CHG) wipes used to clean the skin of Hematology/ Oncology and Stem Cell Transplant patients with tunneled central lines.

Background

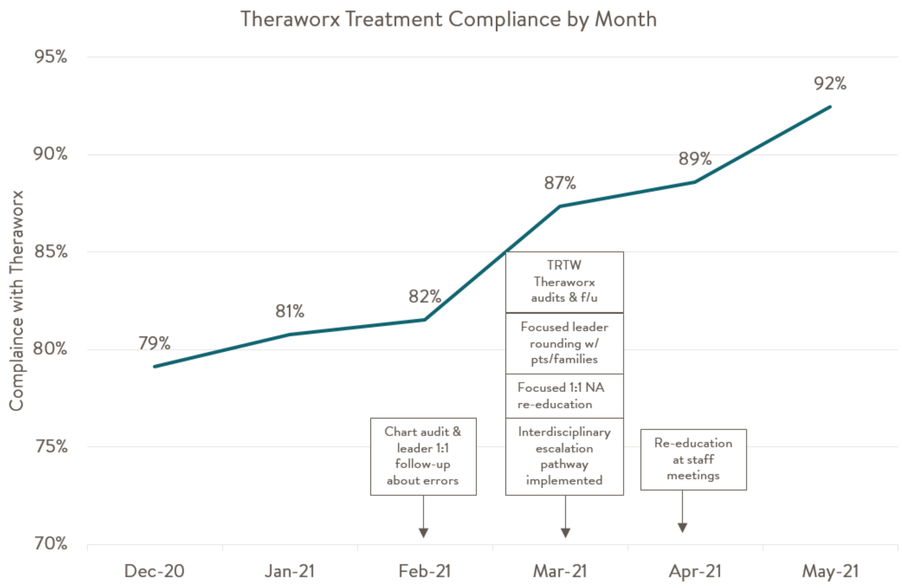
Central Line Associated Bloodstream Infection (CLABSI) is associated with poor outcomes in Hematology/Oncology and Stem Cell Transplant patients.
Despite adopting multiple initiates:

1. In 2012 we initiated CHG wipes for patients with central lines.
2. In 2015 we instituted CLABSI bundle prevention rounds.
3. In 2019 we trialed a Hibiclens 4% CHG solution for patients old enough to shower.

Our unit's non-mucosal barrier injury (non-MBI) CLABSIs continued to be a significant problem. Adherence to CHG daily bathing has been challenging to achieve with an average rate of 75% despite the multiple improvement efforts. Therefore, alternative strategies were needed to help achieve our goal of reducing CLABSI rates.

Methods

Results



CLABSI Type	Number of CLABSIs for historical 6-month period*	Number of CLABSIs during 6-month trial
Non-MBI CLABSI	N=4	N=1
MBI CLABSI	N=8	N=7

*Number of CLABSIs determined by evaluation of baseline data for the past 2 years in 6-month intervals.

Conclusion

- Bathing compliance increased by 23% by the end of the trial (75% w/ CHG compared to 92% with Theraworx).
- Of the 322 unique patients receiving the new bathing product, only 1 had a documented allergy.
- The non-CLABSI rate during the trial decreased by 75% compared to the historical 6-month data (n=1 vs. n=4).
- 86% of patients and families were satisfied/very satisfied with Theraworx.
- The cost of the silver-based wipes is projected to save approximately $15,000 a year compared to CHG.
- The estimated cost avoidance for CLABSIs during the trial is $135,000 (approximately $45,000 for each CLABSI eliminated).

Discussion

A multi-disciplinary approach for patient education and care team engagement were key to increasing compliance with daily Theraworx treatment and decreasing non-MBI CLABSIs. Future efforts will focus on sustaining Theraworx compliance and monitoring for continued trends in CLABSI reduction.

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