

Preventing CLABSIs in the Oncology/BMT Population

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Introduction/Problem

Patients with Central Line Associated Bloodstream Infections (CLABSIs) can have increased morbidity, mortality and length of stay. The Hematology-Oncology/BMT patient is at increased risk for a CLABSI due to the unique nature of malignant disease, immunosuppressive therapy, risk of mucosal barrier injury, and the length of time the central line is in place. In FY17Q1, a spike in CLABSIs occurred in Hematology-Oncology/BMT patients with temporary central lines. Through collaboration with the PEVA staff, Infection Control, and leadership on 7Feldberg/BMT, the decision was made to trial the IV Clear dressing. IV Clear is an antimicrobial clear silicone adhesive dressing impregnated with chlorhexidine and silver for patients with temporary central lines. Eighteen patients with temporary central lines were followed during the four month trial from April, 2017 – August, 2017. None of the eighteen patients on the trial developed a CLABSI. Based on that data, the trial was gradually expanded to include tunneled central lines, indwelling chest ports, and peripherally inserted central catheters (PICCs). IV Clear is a new product on the market that has an antimicrobial effect against a variety of pathogens. The IV Clear dressing also allows continual inspection of the central line site. The silicone dressing is known to be more gentle on the skin for a population that has skin sensitivity issues along with possible graft vs host disease of the skin. Patients admitted for Immunotherapy on 11 Reisman experience skin integrity changes and skin sensitivity issues related to treatment. The IV Clear dressings are also being used on Immunotherapy patients and overflow BMT patients on 11 Reisman.

Aim/Goal

- Decrease CLABSIs in the Oncology/BMT population.
- Assess the efficacy of the antimicrobial clear silicone adhesive dressing impregnated with chlorhexidine and silver dressings for prevention of CLABSIs.
- Decrease patient's skin sensitivity and skin injury that occurs with frequent central line dressing changes.
- Educate front line staff on the use of the dressing.

The Team

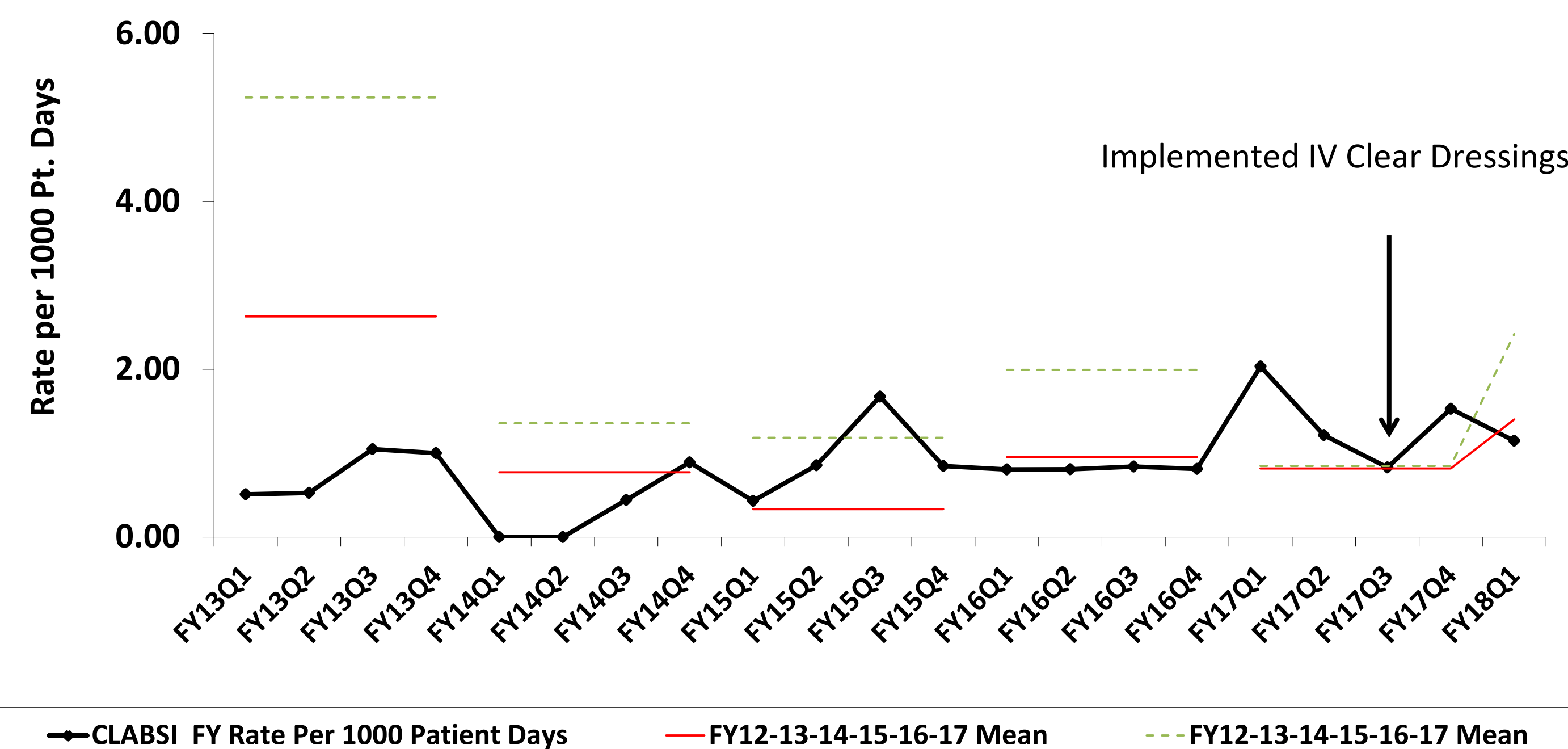
- Bridget Sammon, MSN, RN, OCN, UBE – 7 Feldberg/Hematology-Oncology/BMT
- Blanche Murphy, BSN, RN, CN-IV, VA-BC, PEVA RN
- Aleah King, BSN, RN, CIC - Infection Control
- Chris Garabedian, RN, Nurse Director - 7 Feldberg/Hematology-Oncology/BMT
- Jill Dooley, BSN, RN, UBE – 11 Reisman/Oncology
- Staff of 7 Feldberg/Hematology-Oncology/BMT and 11 Reisman/Oncology

The Interventions

- April 28, 2017 – present: Trial of IV Clear dressings on temporary central lines.
- October 4, 2017 – present: Trial of IV Clear dressings on tunneled central lines.
- January 15, 2018 – present: Trial of IV Clear dressings on indwelling chest ports and PICCs.

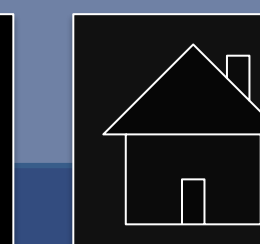
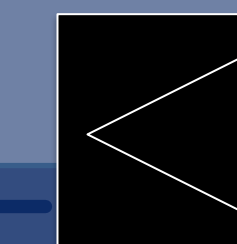
Results/Progress to Date

BIDMC Infection Control/Hospital Epidemiology 7 Feldberg CLABSI



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More Results/Progress to Date

Fiscal Quarter	Intervention	CLABSI Counts
FY17Q1 (Oct-Dec)	Routine CLABSI prevention measures	5 [Total]
FY17Q2 (Jan-Mar)	Multidisciplinary meeting to discuss FY17Q1 data and potential interventions	3 [Total]
FY17Q3 (Apr-Jun)	IV Clear Dressings on Temporary Catheters [5/1/17]	0 attributed to lines where IV Clear dressing was used 2 [Total]
FY17Q4 (Jul-Sep)	Continued use of IV Clear Dressings on Temporary Catheters	0 attributed to lines where IV Clear dressing was used [4 Total]
FY18Q1 (Oct-Dec)	IV Clear Dressings on Tunneled Catheters [10/4/17]	0 attributed to lines where IV Clear dressing was used [3 Total]
FY18Q2 (Jan-Mar)	IV Clear Dressings on Port-a-Caths and peripherally inserted central catheters [1/15/18]	Infection Control surveillance is ongoing at this time for FY18Q2 data

The above table reveals that since May, 2017, zero CLABSIs were attributed to the central lines that had the IV Clear dressing applied.

Lessons Learned

- Patients verbalized that the IV Clear dressing felt better on their skin and noted decreased irritation. The IV Clear dressing stays intact on patient's skin longer than the previously used dressing. This benefit decreases the need to frequently change the dressing thereby offsetting the cost.

Next Steps

- Stock IV Clear dressings on 7F and 11R to use on all central line dressings, as appropriate.
- Stock and trial IV Clear dressings on all central lines in Critical Care areas (approved by CQVA with a look back at the data in six months).
- Continue routine Infection Control surveillance for CLABSIs and notification to unit leadership and care teams when infections occur.

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