



Working together, The Power of Teamwork in Preventing C-section SSI's

Authors: Stacie Wood, RN Perinatal Safety Officer | Dr. Gina Connelly, MD Maternal Fetal Medicine Physician & Medical Director of Obstetrics

Introduction:

In September 2017, the way data for Centers for Medicare and Medicaid Services (CMS) was tracked to identify problem areas for infection changed. Simultaneously, our Surgical Site Infection (SSI) rate increased. We found cesarean section (C-section) surgical site infection (SSI) was significantly higher than the national benchmark.

Method/Implementation:

It is difficult to find infection reduction information specific to C- section. Association of Peri-Operative Registered Nurses (AORN), American College of Obstetricians and Gynecologists (ACOG), Association of Women's Health, Obstetric, and Neonatal Nurses (AWHONN) and the state education pool were used. Practices not already in place were targeted for addition.

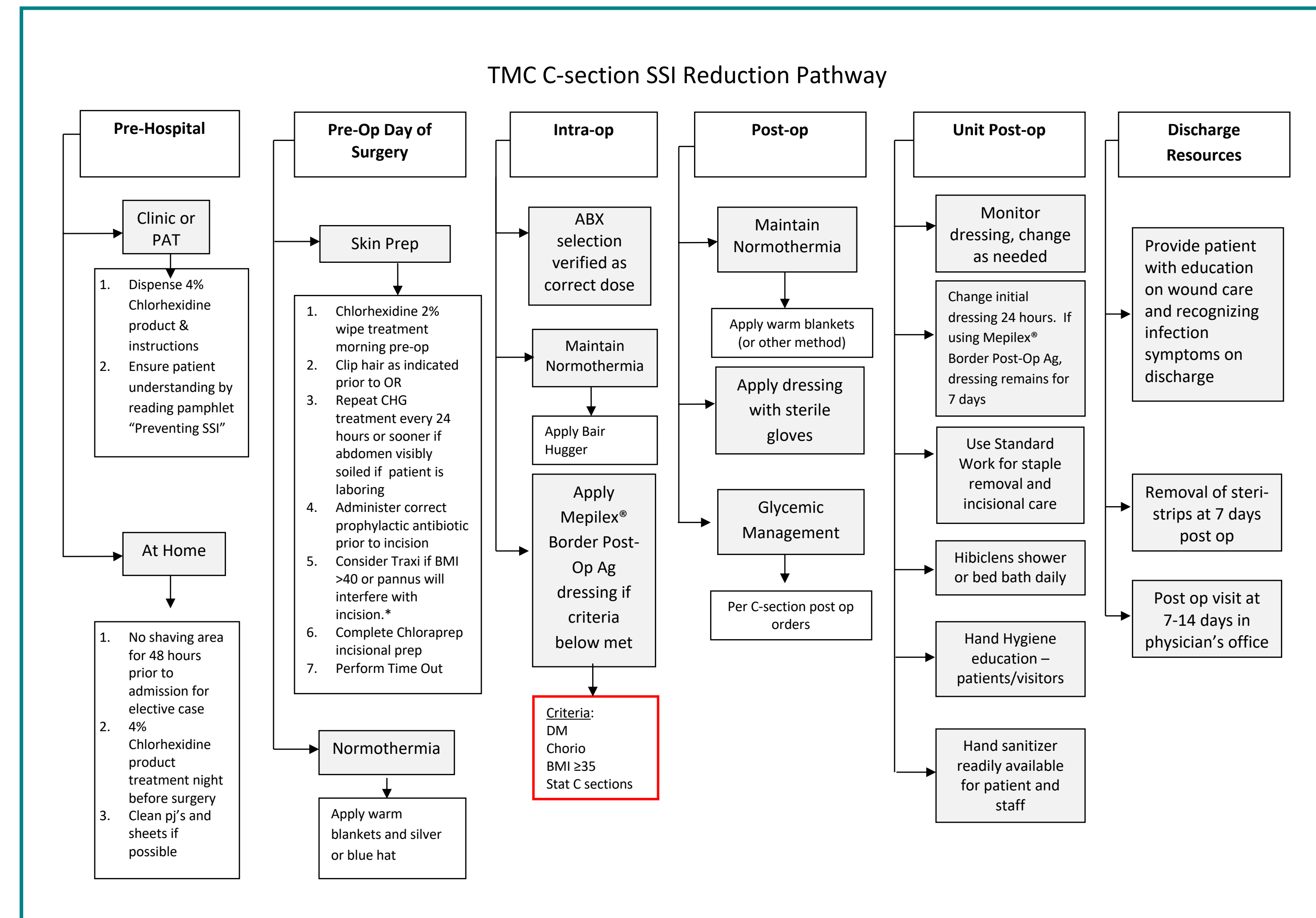
A multidisciplinary team comprised of Nursing leadership, OB Medical Director and Infection Control drilled down and looked at the entire spectrum of care, especially high- risk patients with elevated Body Mass Index (BMI), diabetics and Chorioamnionitis.

All nursing staff and techs were engaged. They audited processes and patient care throughout Antepartum, Labor & Delivery, and Postpartum.

The team developed a SSI reduction pathway for all patients covering pre-hospital to discharge.

- CHG use was expanded beyond OR skin prep
- Silver dressings were added to post-operative strategies
- CHG product and information were given to mothers for pre-operative showering at home. Pre-anesthesia testing and community physicians distributed CHG 4 oz. foam for patients who live remote from hospital

For C-section patients on the day of surgery, all elements such as skin prep, glycemic management and normothermia were called out to ensure compliance. Antibiotic prophylaxis now would include adding Azithromycin for laboring patients. All patients receive CHG application on admission to L&D and staff reapplied if laboring was greater than 24 hours.



Post-delivery elements:

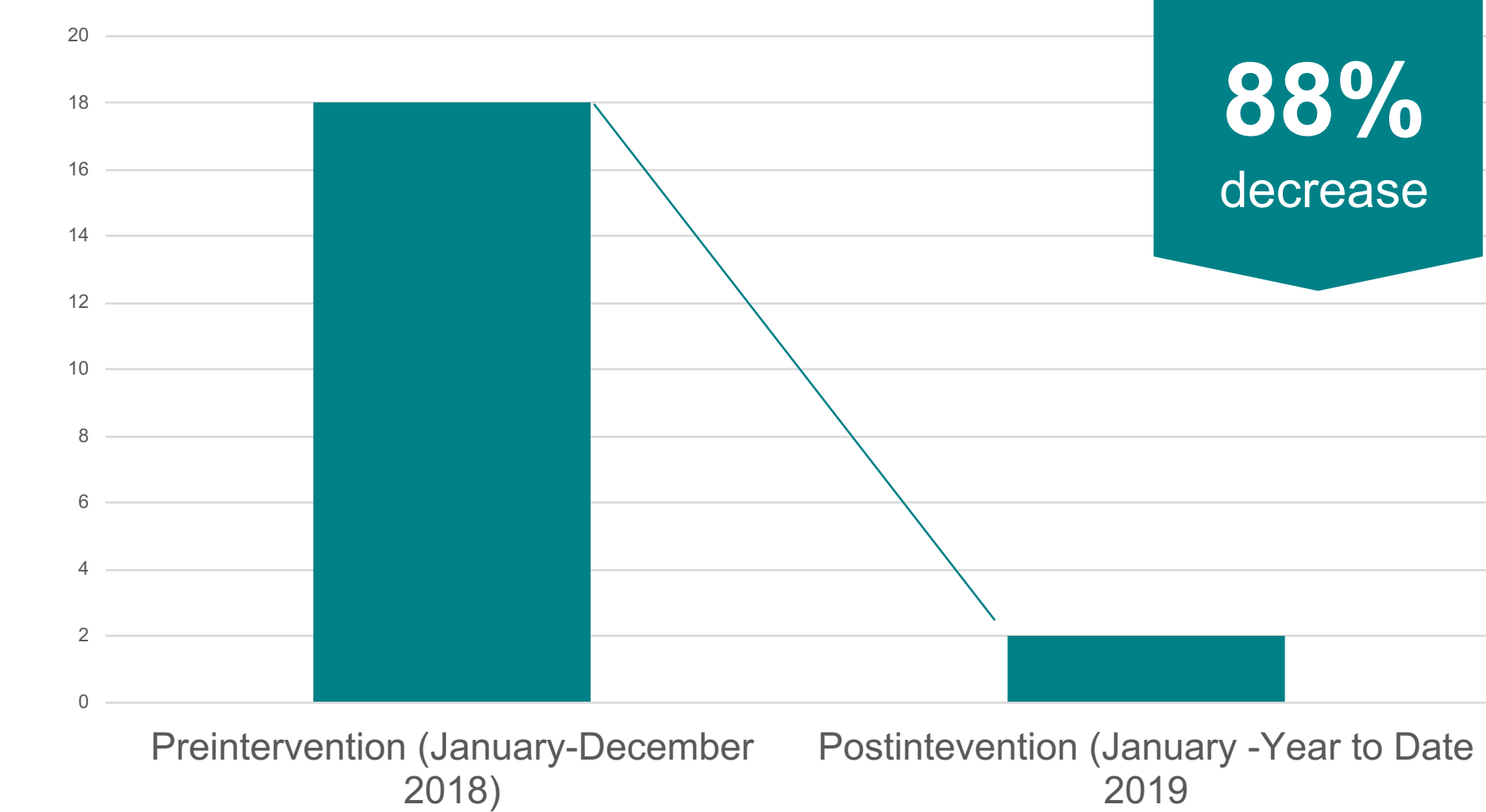
Incisional closures were evaluated. Education on advantages of suture v. staples for closure was provided to surgeons using evidenced based literature citing less wound complications.

A silver dressing application decision tree for high risk patients was created and post op instructions for wound care standardized. The silver dressing was available for all surgeons to utilize, but mandatory if the patient met criteria.

All patients showered with CHG post op prior to discharge.

Education was completed by the Perinatal Safety Nurse and OB Medical Director and included simulations, daily staff huddles, mandatory staff meetings, one on one physician education, daily patient rounding and OB Clinical Practice Team report out. SSI workflow was included in quarterly obstetric simulations.

Figure 1. Surgical Site Infections



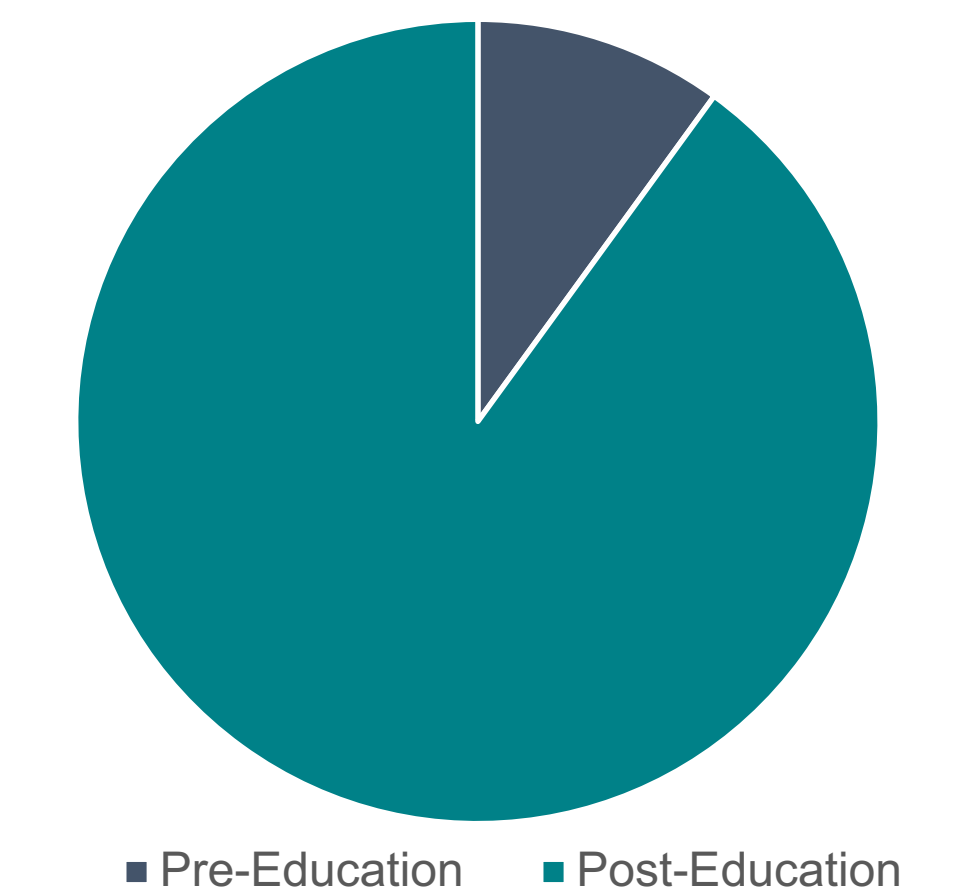
Results:

Following implementation, SSIs reduced from 18 in 2018 to 2 SSIs year to date (YTD) in 2019: an 88% decrease. (Figure 1) Compliance with components ranged between 92 and 100%. Staff feedback was positive on having a pathway to reinforce bundle elements. Surgeons suture use increased from 10% to 90% after physician education. (Figure 2) One flaw in our results were not explicitly tracking the role this may have played in our infection decrease.

Conclusion:

The perfect combination of best practice, evidence- based product placement and thorough education played roles to increase patient safety and decrease infections. A multidisciplinary team was crucial to make sure all spectrums of care were considered from home to home again.

Figure 2. Surgeon Incisional Closure 90% Suture, 10% Staples



References: Suture Compared With Staple Skin Closure After Cesarean Delivery, A. Dhanya Mackeen, MD, MPH, et al, Obstetrics & Gynecology, June 2014