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A Look into Surgical Site Infections: Impact of Collective Interventions

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Abstract: Background: Surgical site infections (SSIs) within the obstetric population pose a variety of complications, creating clinical and personal challenges for the new mother and her neonate during the postpartum period. Our journey to achieve compliance with the SSI core measure for cesarean sections revealed many opportunities to improve these outcomes. Objective: Achieve and sustain core measure compliance keeping surgical site infection rates below the national benchmark pooled mean of 1.8% in post-operative patients, who delivered via cesarean section at the Johns Hopkins Bayview Medical Center. Methods: A root cause analysis was performed and revealed several environmental, pharmacologic, and clinical practice opportunities for improvement. A multidisciplinary approach led by the OB Safety Nurse, OB Medical Director, and Infectious Disease Department resulted in the implementation of fourteen interventions over a twenty-month period. Interventions included: post-operative dressing changes, standardizing operating room attire, broadening pre-operative antibiotics, initiating vaginal preps, improving operating room terminal cleaning, testing air quality, and re-educating scrub technicians on technique. Results: Prior to the implementation of our interventions, the SSI quarterly rate in Obstetrics peaked at 6.10%. Although no single intervention resulted in dramatic improvement, after implementation of all fourteen interventions, the quarterly SSI rate has subsequently ranged from to 0.0% to 2.70%. Significance: Taking an introspective look at current practices can reveal opportunities for improvement which previously were not considered. Collectively the benefit of these interventions has shown a significant decrease in surgical site infection rates. The impact of this quality improvement project highlights the synergy created when members of the multidisciplinary team work in collaboration to improve patient safety, and achieve a high quality of care.

Keywords: cesarean section, surgical site infection, collaboration and teamwork, patient safety, quality improvement

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