

Surgical Site Infection Bundle for Babies – Preliminary Data

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Introduction & Background: Perioperative care bundles reduce surgical site infections (SSIs) in adults but are not used regularly in infant surgery. Infections in babies after surgery are less common but carry significant morbidity in a fragile patient.

Question & Significance/Aim: We aim to evaluate the effects of a perioperative care bundle in patients less than 6 months old undergoing abdominal or thoracic surgeries.

Methods & Design: The perioperative bundle was developed in a multi-disciplinary fashion and addressed several areas of care: standardized bowel preparation when appropriate, preoperative skin cleansing, antibiotic choice and timing, temperature control, intraoperative skin preparation, and closing protocols. Patient characteristics and outcomes were compared pre- and post-implementation of the bundle. An SSI bundle checklist was used to help confirm bundle adherence.

Results: After 6 months, 44 cases were reviewed with 26 pre- and 18 post-implementation. The median estimated gestational age at birth was 36.6 weeks (IQR 30.8, 37.6). The median weight at surgery was 3.3 kg (IQR 2.3, 4.0). After bundle implementation, we saw statistically significant increases in appropriate antibiotic timing (42.3% vs 77.8%, $p=0.03$), pre-operative skin cleansing (0.0% vs 61.1%, $p<0.001$), Chloraprep™ use (3.8% vs 61.1%, $p<0.001$), and closing protocols (0.0% vs 33.3%, $p=0.0026$). No difference in SSI was appreciated (Table 1). The bundle was used appropriately 83% of the time.

Discussion: A perioperative SSI bundle in babies can change the approach to infection control during surgery. The rate of SSI in both groups was low. Adoption of our bundle was good, but we expect its use requires more patients to appreciate benefits.