**Background**

The FDA advised practitioners that repeated or lengthy exposure to anesthetics and sedatives has the potential to adversely affect neurodevelopment. Regional analgesia, for appropriate procedures, can control post-operative pain and minimize post-operative opioid exposure. Previous attempts to increase the use of epidural catheters in the NICU have been fraught with complications, including leaking, inadequate pain control, and perceived lack of support for epidural management.

**Purpose**

Increase the use of regional analgesia in the NICU for eligible patients from the current rate of 1% to 90% by June 30th 2019 and sustain it for 1 year. Ultimately, the goal is to reduce the opioid exposure of NICU patients.

**Methods**

**Key Drivers**

- Increase the use of regional analgesia in the NICU for eligible patients from the current rate of 1% to 90% by June 30th 2019 and sustain it for 1 year
- Reduce utilization of systemic opioids in NICU

**Interventions**

- Regional analgesia team
- Regional analgesia guidelines
- Education
- Post-operative systemic pain management guidelines

**Specific Aim**

1. Increase the use of regional analgesia in the NICU for eligible patients from the current rate of 1% to 90% by June 30th 2019 and sustain it for 1 year
2. Reduce utilization of systemic opioids in NICU

**Global Goal**

- Opioid Exposure Process Stage Mean Process Stages Control Limits

**Results**

- Opioid Exposure Process Stage Mean Process Stages Control Limits
- % of Eligible Surgical Procedures in the NICU that Receive Regional Analgesia in the OR

**Discussion**

- Developing the process map was critical in helping the team to identify, characterize and address multiple potential barriers, including:
  1. When and how to identify eligible patients
  2. How to ensure adequate time is available in OR for placing a regional catheter
  3. Management of patients with poor immediate post-operative pain control (in progress)
- Implementation of regional analgesia amongst NICU surgical patients significantly reduced opioid exposure.
- A multidisciplinary team is extremely valuable and necessary to sustain this program and included representatives from neonatology, pediatric surgery, anesthesia, pain team, pharmacy, quality improvement services and nursing.
- Next steps include expansion to additional procedures and same day surgeries.

**References**