

## **EScaping Morphine in the Newborn Nursery Across Academic and Community Settings**

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**Faculty Disclosure:** Nothing to disclose

**Introduction:** Neonatal abstinence syndrome (NAS) is a growing epidemic across nurseries nationwide. Standardization of practice and emphasis on nonpharmacologic care has demonstrated improved patient outcomes.

**Objectives, purpose, goals:** To improve care of infants affected by NAS within our diverse hospital system by implementing the “Eat, Sleep, Console™” (ESC) approach using quality improvement (QI) methodology.

**Intervention/practice:** A multidisciplinary team aimed to improve quality of care for infants at risk of NAS by implementing the ESC approach across three hospital nurseries with the goal of reducing patient length of stay (LOS) and total morphine exposure by 30% in one year. QI analysis assessed outcomes system-wide as well within academic versus community settings. Outcome measures included LOS, percent infants treated pharmacologically, highest morphine dose received and number of morphine doses received per patient. Process measures included frequency of prenatal counseling regarding NAS, parental/volunteer presence for nonpharmacologic management and compliance with ESC protocol. Balancing measures included adverse medication-related events, transfers to a higher level of care and 30-day readmission for NAS. Infants at risk of NAS were identified via systemwide retrospective database analysis. All infants at risk of NAS and admitted to a non-NICU setting during their birth hospitalization from Jan 2016 to Sept 2019 within our hospital system were included for study. Infants were excluded if NAS scores were not documented or if the infant was transferred to another institution. ESC was implemented Aug 2018. Outcomes were tracked using control charts.

**Results:** 118 infants were managed with Finnegan scoring (PDSA0) and 40 infants were managed with ESC methodology (PDSA1). Demographic characteristics of infant-mother dyads were similar in PDSA0 and PDSA1 and between academic and community settings. All primary outcomes demonstrated improvement systemwide and at academic and community sites (Table 1). Analysis of control charts demonstrated impact of site on special cause variation (Figure 1&2). Process measures revealed site-specific variability and opportunities for improvement. Balancing measures were rare and did not increase systemwide (Table 2).

**Conclusions/implications:** Implementation of ESC management of NAS improved quality outcomes across diverse hospital settings. Standardization of practice was more quickly achieved in academic vs community settings. QI methodology allowed for system-wide change alongside identification of site-specific opportunities for improvement.