Use of a Modified Eat, Sleep, Console Protocol in the Neonatal Intensive Care Unit
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Problem
• Eat, Sleep, Console (ESC) protocol for care of infants with neonatal abstinence syndrome (NAS) is becoming widely employed with reduced morphine and/or methadone use, and decreased length of hospitalization
• One main component of the ESC protocol is assessment of infant’s ability to tolerate on demand breastfeeds (or bottle feeds)
• Opioid exposed infants requiring Neonatal Intensive Care Unit (NICU) admission often have medical issues which prevent the opportunity to provide on demand feeds
• Loyola NICU cares for infants with a variety of medical conditions, often requiring NPO status, nasogastric/orogastric (NG/OG) feeds, and/or transition from NG/OG feeds to breast/bottle feeds
• Multidisciplinary team collaborated to implement a modified ESC protocol for NICU opioid exposed infants born ≥35 weeks gestation

Project Implementation
• Our quality improvement (QI) clinical practice change involved transition from the Neonatal Withdrawal Inventory (NWI) to a modified ESC protocol for opioid exposed infants born at ≥35 weeks gestation, with medically indicated NICU admission
• An established ESC order set (for newborn nursery use) was utilized, with the additional option to eliminate the assessment of infant’s ability to tolerate on demand feeds from the specific orders
• All other components of the ESC protocol were applied in care of these opiate exposed infants requiring NPO status, NG/OG feeds, and/or transition from NG/OG feeds to breast/bottle feeds
• Education of NICU health care providers occurred prior to implementation of the practice change
• Buy-in of key nursing and medicine stakeholders supported provision of one-to-one nursing care in a low stimulation environment
• Family participation encouraged, as available
• Volunteer “cuddlers” assisted with consoling infants, as available

Results
• Beginning January 2019, the NWI was replaced by a modified ESC protocol for opioid exposed infants ≥35 weeks gestation requiring NICU admission
• 12 NICU admissions with NAS, 75% with primary or secondary diagnoses other than NAS
• No infants required scheduled morphine and only single morphine doses were administered, based upon multidisciplinary team huddle decisions
• There were no complications or harm to any NICU infants
• Safe discharge plan for all infants

Conclusions
• Sole utilization of the modified ESC protocol with the option to eliminate assessment of on demand feeds has led to decreased morphine use and decreased length of stay
• Ongoing education of new health care providers will ensure sustainability of this successful QI clinical practice change in the care of NICU opioid exposed infants born at ≥35 weeks gestation
• Modified ESC protocol can be successfully utilized in care of opioid exposed infants ≥35 weeks requiring NICU admission

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 NICU Medical Diagnoses other than NAS

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<th>Diagnosis</th>
<th>Days</th>
<th>Doses</th>
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<tr>
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PRN Morphine Administration (Total Days and Total Doses)

Length of Stay (LOS) in Days

- LOS prior to ESC (based on 4 infants): 22.5 days
- LOS with ESC (based on 12 infants): 12.4 days