Improving Reliability in Neonatal Abstinence Syndrome Scoring
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PROJECT BACKGROUND
Neonatal Abstinence Syndrome (NAS) is an increasingly common diagnosis among newborns in the United States, constituting 6-7% of our NICU admissions. Our team was charged with improving nurse reliability when using the Modified Finnegan Scoring Tool (the Finnegan) in order to reduce Length of Stay (LOS) and improve these infants’ care. We rely heavily on the Finnegan to guide initiation, advancement, weaning and cessation of pharmacological treatment of NAS.

PROJECT DESIGN
We established a multidisciplinary team comprised of neonatal and nursery nurses, nurse educators and physicians. We surveyed bedside nurses and identified the top 5 most ambiguous scoring parameters on The Finnegan: Moro Reflex, Crying, Sleep Pattern, Tone, and Tremors.

The Modified Finnegan

Our team brainstormed ways to clarify these items. We formulated specific, concrete instructions to improve consistency. We reorganized scoring parameters in order to improve nursing flow, to assess these measures in a more physiological manner, and to disturb the infant less frequently.

Our New UMMHC Scoring Tool

We developed a bedside reference guide with pointers to increase awareness of conditions affecting withdrawal symptoms. The guide also clearly delineates how to score an infant for the most ambiguous parameters on the Finnegan.

TEACHING SESSIONS
We developed a nurse training curriculum using a standardized patient video1.

1. Pre-test: nurses use the old Finnegan to score a standardized video-taped infant with signs and symptoms of withdrawal
2. Discussion: share areas of confusion when scoring the standardized patient
3. Small group learning: highlight changes made to the Finnegan & clarify areas of ambiguity
4. Post-test: nurses use the newly modified Finnegan to score the same standardized infant
5. Feedback: discussion about correctly scoring this infant & review points of contention

RESULTS
Teaching sessions were implemented from June to August. 97% of NICU nurses and 36% of well baby nurses have been educated. Among trained nurses, the mean NAS score decreased from 9 to 8.4, approaching the gold standard score of 8. The standard deviation also decreased from 1.7 to 1.3, indicating improved reliability. This difference was statistically significant by paired t-test at p<0.0001.

Nurses Scores Before and After Training

Areas of particular improvement were assessment of Moro, Tremors and Tone. We have received considerable positive feedback. Nurses report that they feel more knowledgeable about conditions unrelated to NAS that may alter infants’ scores and feel more confident in accurately scoring an infant.

FUTURE DIRECTIONS
Re-education will be performed 2 months after the initial training session to reinforce concepts and evaluate for longevity of this intervention.

RESOURCES