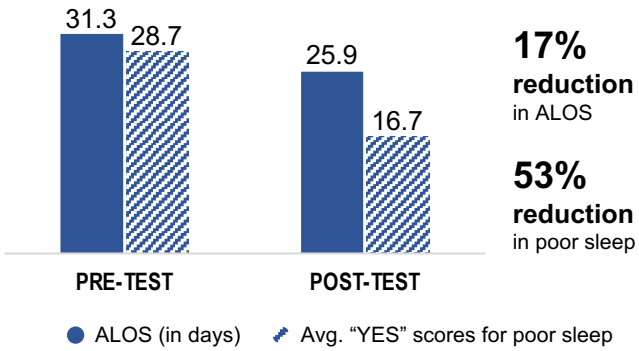
PROJECT AUGUST: A Quality Improvement Project for Neonatal Abstinence Syndrome

University of Vermont Medical Center (UVMMC) is a 562-bed hospital located in Burlington, Vermont. The medical center's 29-bed Level III NICU treats 650-660 infants each year. Up to 100 infants admitted to the hospital annually are monitored for signs of neonatal abstinence syndrome (NAS) due to exposure of opiates and other substances in utero.

BACKGROUND: UVMMC NICU policy requires infants undergoing treatment for NAS and receiving Methadone to remain in the hospital until weaning is complete, contributing to extended hospital stays exceeding 20 days. Infants with NAS additionally require extensive soothing due to increased irritability and poor sleep, which can be highly time-consuming for nursing staff.

EVALUATION: A pre/post test was used to assess changes in average length of stay (ALOS) and poor sleep (avg. number of "YES" scores on Eat, Sleep, Console) for infants receiving scheduled Methadone dosing before and after implementing SNOO Smart Sleeper™. From November 2021 to September 2022, SNOO was provided to term infants admitted to the NICU with primary diagnosis of NAS. Qualitative surveys evaluated nurse satisfaction and time savings at 6-months post-SNOO.

CLINICAL OUTCOMES



17% **reduction** in ALOS

53% **reduction** in poor sleep

RESULTS: Data was collected from 13 participating infants (6 pre-test; 7 post-test). ALOS decreased by 17% (31.3 days pre; 25.9 days post). Poor sleep measured by average "YES" scores decreased by 53% (28.7 pre; 16.7 post).

As an exploratory outcome, among the 13 term infants in the post-test group, only 46% (6 of 13 infants) required scheduled Methadone dosing while using SNOO.

Survey data demonstrated 84% of nurses at 6-months post-SNOO identified a time savings of 1-2 hours per shift or more. On average, nurses report SNOO saves them 2.4 hours per shift.

CONCLUSION: Although the analysis was not sufficiently powered to measure statistical significance, outcomes across all measures trended toward improvements in ALOS and "YES" scores for poor sleep. Impact of SNOO on nurse time savings has the potential to improve care, efficiency, and satisfaction.

SURVEY AGREEMENT SCALES

100% OF NURSES AGREE, SNOO…*

- Enhances quality of infant care
- Keeps babies safely on their back
- Reduces fussing
- Reduces staff stress
- Shows the hospital trials innovative technologies

**4-point Likert responses of "Strongly agree," "Somewhat agree."*