

Title of Abstract:

Achieving Consistent Feeding Practice in a Level IV Neonatal Intensive Care Unit

Name of Abstract Submitter:

Millie R. Chang, MD - MD

Organization:

CHLA

Co-Author / Co-Investigators:

Thao T. Dang, M.D.; Alexandra Mihalek, M.D.; Navin S. Bhopal, M.D.; Thomas Chavez; Michael Luu, M.D.; Arlene D.; Garingo, M.D.; Srikumar Nair, M.D.; Steven Chin, M.D.; Ting-Yi Lin, M.D.

Abstract Description:

Background: Feeding, growth and nutrition are essential components of caring for premature infants in the Neonatal Intensive Care Unit (NICU). Adoption of a standardized feeding guideline can lead to less practice variability and an earlier achievement of full enteral feeds, thereby reducing hospital stays and decreasing the risk of complications from central lines or total parenteral nutrition. There are many barriers to achieving full compliance with a feeding protocol in the NICU. Based on a survey conducted among medical staffs, knowledge remains one of the biggest barriers.

Objectives: Identify barriers to utilizing a standardized feeding guideline and increase compliance with the feeding protocol through quality improvement interventions.

Design: The revised feeding guideline and an electronic feeding advancement calculator were introduced in July 2016. The calculator is web-based and usage of this site was monitored to evaluate compliance with the feeding protocol. Starting mid-September 2016, Plan-Do-Study-Act cycles (PDSA) were begun to increase usage of the feeding protocol.

Setting: Level IV NICU in a large free-standing urban children's hospital

Study Population: Physicians, nurse practitioners and nurses who are involved in the feeding advancement of infants in the NICU.

Interventions: Emailing NICU residents to encourage compliance (1st intervention), placing reminder posters in the workrooms of residents, fellows, and nurse practitioners in addition to a monthly email with instructions on how to access the feeding guideline and advancement calculator via the EMR (2nd intervention).

CAN: Cool Topics in Neonatology

March 3-5, 2017

Measurements: Pre and post intervention surveys will be used to assess effectiveness of the interventions. Calculator usage was monitored to assess the impact of each PDSA cycle, and univariate analyses were used to measure the calculator usage by month.

Results: Analysis of the feeding advancement calculator usage showed an average monthly increase of 7.98 hours post-interventions. The highest increase in usage was seen after the second intervention. The total monthly usage increased by 215% from August to December 2016.

Limitations: Not having a perfect tracking system and underestimation of calculator usage due to minimum timeframe (>5minutes) per usage.

Conclusions: Awareness of the NICU feeding guideline among medical staff remains one of the biggest barriers to achieving compliance. Through multiple interventions, we were able to improve compliance as evidenced by a significant increase in feeding calculator usage. Further studies are needed to assess the impact of a standardized feeding protocol on outcomes of patients in a level IV NICU.

Funding Acknowledgement (if applicable):

None