

**Title of Abstract:**

The Collaboration: Our NICU's Journey to Improve Early Nutrition for ELBW Infants, and its Effect on Extrauterine Growth Restriction

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**Abstract Description:**

Background: Extrauterine growth restriction (EUGR) is a challenge faced by many NICUs across the country. Optimizing nutrition, however, should not only help reduce the incidence of EUGR, but has clearly shown to improve the risk of the morbidities faced by ELBWs.

Goal: To improve nutrition in the first week of life for extremely low birth weight (ELBW) infants through daily advancement in parenteral nutrition, and to determine if these strict advancement criteria resulted in improvement in EUGR based upon discharge weights.

Method: The NICU Nutrition Team developed TPN Initiation and Advancement Guidelines for infants <1000g (ELBW) during the first week of life starting June 2015. Daily recommendations were provided for TPN advancement in the first 7 days of life by our group of registered dietitians (RDs), including the initiation of Intralipids on DOL #0. All ELBW infants were included in the project starting from June 2015, except for those that developed NEC or Intestinal Perforation during their hospitalization. Data was tracked on a quarterly basis. Baseline data was obtained from a cohort of ELBW patients that were born prior to June 2015. Based upon quarterly review, it was determined that communication between RDs (who provided the recommendations) and MDs (who ordered the parenteral nutrition) required improvement. Therefore, several modalities were utilized, including direct contact by phone, in person; via progress notes and a hospital wide secure text-messaging system.

Results: Compared to the baseline patients whose EUGR rate upon discharge was 35.7%, improvement was seen in all quarters (18.2% to 30%). It was also found that for the most part,

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there was an improvement in EUGR rates for those babies who had optimized or reached their goal nutrition within that first week.

Conclusion: Improved communication between physicians and dietitians was the most important aspect in providing optimal nutrition. In addition, through this collaboration, variability amongst clinicians decreased allowing for improved consistency and EUGR outcomes.

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