

Title of Abstract:

Eating on Time: Evaluation of A Standardized Feeding Advancement Guideline in Preterm Neonates

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Abstract Description:

Background: Feeding advancement is a common conundrum in the NICU. Feeding intolerance is frequently observed and remains a common cause for prolonged hospitalizations in preterm infants. Moreover, the rate of feeding advancement requires striking a balance between the timely attainment of full enteral feeds and the prevention of complications such as necrotizing enterocolitis (NEC). Delayed enteral feeding can have profound consequences such as increased length of stay (LOS), prolonged exposure to TPN leading to cholestasis, increased central catheter days and costs of care. Adopting a standardized approach to feeding has been shown to decrease LOS and the complications associated with delayed feeding.

Objective: We aim to determine the effects of a standardized feeding advancement guideline on 1) length of stay, 2) time to full feeds (enteral and oral), 3) NEC rates, 4) ventilator days, and 5) central line days.

Design/Methods: This is a mixed retrospective and prospective cohort study conducted at 3 academically affiliated NICUs, consisting of 2 level 3 units and 1 level 4 unit. We analyzed infants born <37 weeks gestation admitted to the NICU during 2015-2016. Cohorts were delineated into two Epochs. In Epoch 1, data was collected retrospectively via chart review from January 2015 to December 2015, the time period prior to feeding guideline implementation. In Epoch 2, data was collected prospectively after feeding guideline implementation from April to December 2016. Non-parametric analyses were used to describe differences between cohorts.

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Results: A total of 591 preterm newborns were identified. Of these, 327 were admitted prior to the guideline implementation and 264 admitted thereafter. There were no significant differences in birth weight, or GA. Epoch 2 was associated with decreased time to full enteral and oral feeds, decreased central line days, and decreased length of stay in babies 32-37 weeks, as well as <32 weeks. There was no difference in the NEC rate in either group.

Conclusions: We showed that the implementation of a feeding guideline significantly lowered the time to full enteral and oral feeds, number of central line days, and overall length of stay without increasing the risk of NEC. This suggests that a standardized feeding guideline can help control hospital costs by decreasing length of stay without adversely affecting healthcare outcomes.

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