

**Abstract Title:** The Relationship Between the Timing of the Initiation of Oral Feeding and the Achievement of Full Oral Feeding in the Preterm Infant

**Objectives:**

1. Discuss necessary components of achieving feeding milestones in the preterm infant.
2. Educate nurses on the relationship of oral (PO) feeding attempts and the relationship these attempts have on successful feeding.
3. Educate nurses on how to fully assess feeding readiness and progression needs in the preterm infant.

**Background:** The initiation of PO feedings in the preterm NICU patient is based on multiple factors, including gestational age (GA), medical stability, and behavioral cues. Once PO feeding is initiated, advancement to full PO feeding (i.e., gavage no longer needed) usually progresses in a stepwise fashion. Nurses are often the initiators of PO feeding and play a key role in assessing feeding behaviors and oral feeding readiness to assist these infants achieve feeding milestones.

**Purpose:** The purpose of this study was to determine if “early” initiation of PO feeding results in earlier achievement of full PO feeding.

**Design/Methods:** The database of a neonatal care management service was queried for all patients managed between January 2000-October 2002, whose GA at birth was 30-34 weeks, and who were in room air (RA) by day 7 of life. Exclusion criteria were: major surgery, grade 3 or 4 IVH or PVL, mechanical ventilation (MV) > 3 days, necrotizing enterocolitis, nosocomial infection, and length of stay (LOS) >150% or < 50% of baseline LOS. Any patient with apnea occurring at > 7 days of age was also excluded. For the remaining patients, the mean corrected gestational age (CGA) to start PO feeds for each GA at birth was calculated, and patients were then considered “early” PO feeders if PO feeding began earlier than the mean for the given GA, and “late” PO feeders if PO feeding began after that time.

**Results:** 1836 infants met inclusion criteria. There were no differences in GA at birth, % patients with apnea, days to RA or CGA at achievement of full enteral feeds. There were significant differences in MV days, birthweight, CGA to start PO feeds, CGA to reach full PO feeds, and LOS. Results are shown for both groups, and are expressed as mean ± standard deviation.

	Early PO	Late PO	p
# pts	1122	714	
GA at birth (weeks)	32.96±1.13	32.92±1.25	NS
Birthweight (gms)	2048±376	1880±457	p<0.01
Duration MV (days)	0.54±0.89	1.19±1.15	p<0.01
CGA at full enteral feeds	33.75±1.05	34.08±1.16	NS
CGA at start PO (weeks)	33.24±0.91	34.04±0.69	p<0.01
CGA at full PO (weeks)	34.03±0.90	34.91±0.87	p<0.01
LOS (days)	13.16±6.54	18.67±9.66	p<0.01

**Implications for Nurses:** Earlier initiation of PO feedings is associated with shorter time to reach full PO feeding, and shorter LOS. Though maturational variation may explain differences in time to start and reach full PO feeding, difference in practice may be inadvertently delaying PO feeding advancement. Practice to start PO feeds should not be based on CGA alone. Nursing consideration should be given to feeding behavioral cues for earlier attempts at PO feeding when medically stable.