

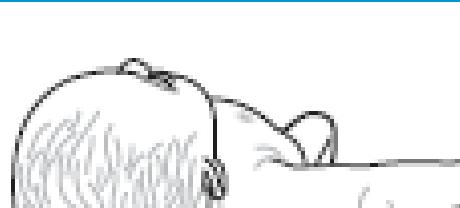
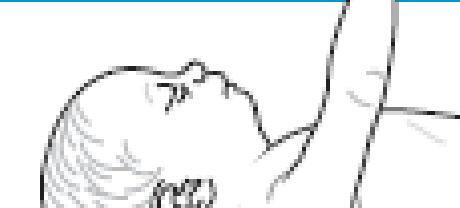
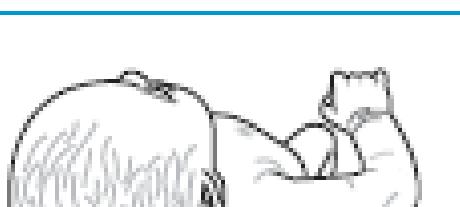
Improving Neonatal Posture and Positioning Using Developmental Aids

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Background

Proper infant positioning in the Neonatal Intensive Care Unit (NICU) is critical for ensuring optimal neurodevelopmental outcomes later in life for premature infants. Lack of supportive positioning in the NICU setting can affect the patient's physiological stability and sleep state, while also putting the patient at risk for muscle contractures, abnormal movement patterns, asymmetric head shaping and ultimately delayed developmental milestones after discharge. Traditional methods such as swaddling and fluidized positioners were used for many years. Alternative developmental aids were introduced to provide containment, flexion with recoil, and proprioceptive input.

Methods

Indicator	0	1	2	Score
Head				
Neck				
Shoulders				
Hands				
Hips/pelvis				
Knees/ankles/feet				

12 = ideal cumulative score. 9 – 11 = acceptable cumulative score. ≤ 8 = need for repositioning. Total cumulative score

Objectives

- Demonstrate appropriate use of alternative developmental aids to provide enhanced positioning support
- Evaluate positioning using the Infant Positioning Assessment Tool (IPAT) before and after alternative positioning aids are introduced
- Infants between 25 and 37 weeks adjusted gestational age were assessed using the IPAT prior to obtaining developmental aids on the unit.
- A learning module was created and disseminated regarding the use of these aids to over 500 nursing staff.
- After completion of the module, “rolling simulations” allowed validators (trained nurses and occupational and physical therapists) to come to the bedside to simulate proper positioning. Staff nurses then performed a return hands-on demonstration.



Figure 1: Dandle ROO2 positioner

References:

Dandelion Medical. (n.d.) Dandle ROO2. <https://dandelionmedical.com/dandle-roo2>

Infant Positioning Assessment Tool (IPAT). (2018)

https://images.philips.com/is/content/phillipsconsumer/campaigns/hc20140401_dg/documents/ipat_sheet.pdf

Results

Prior to dissemination of developmental positioning aids, 56 patients were assessed using IPAT. Pre-intervention mean IPAT score was 9.1. After the learning module and hands-on demonstrations were complete, 55 patients were assessed using IPAT. Post-intervention mean IPAT score was 9.5. Patients with developmental aids in place had a mean score of 10.2, and those without had a mean score of 9.2. Patients with fluidized positioners or gel pillows in place had a mean score of 8.7. 57% of patients had alternative developmental positioning aids in place.

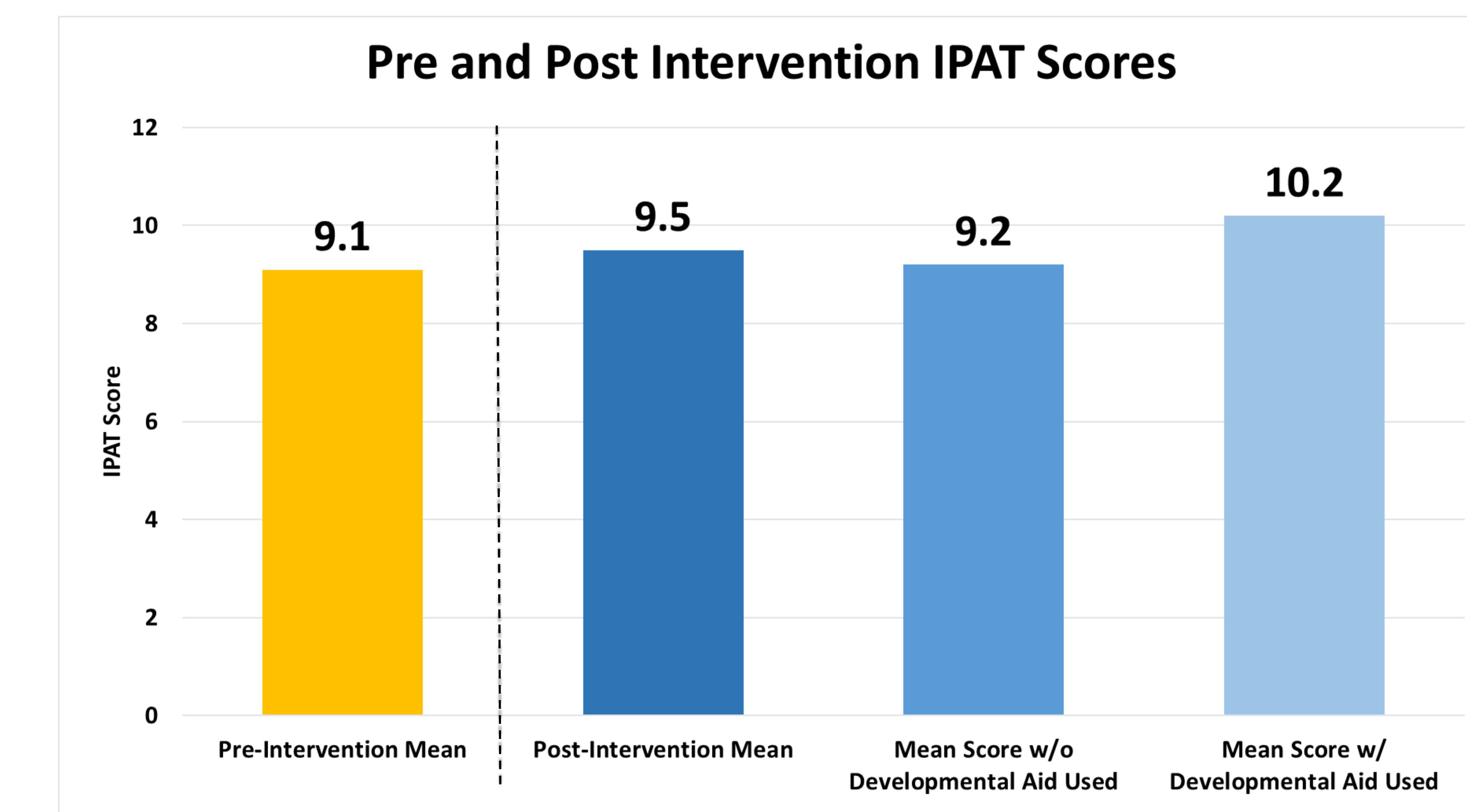


Figure 2: Pre and Post Intervention IPAT scores

Conclusions/Implications

Developmental aids in the NICU can improve overall positioning and posture in neonates. Patients that use these aids have better positioning and posture than those that do not use developmental aids. Limiting the scoring to only trained individuals ensures increased interrater reliability. Barriers included issues with laundering and maintaining stock of products. Providing the learning module and hands-on demonstration on a sustained cadence will ensure application on more patients and subsequent improved positioning and posture, with more patients scoring in the “ideal” cumulative IPAT score range.

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