Increasing Staff Compliance with Preterm Neonatal Standardized Prone Positioning Tool

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BACKGROUND

- Prone positioning is beneficial for multiple reasons:
  - Decreases heart rate variability
  - Improves oxygenation
  - Improves lung mechanics
  - Decreases gastroesophageal reflux
- Important to properly prone position to ensure benefits are reached for the infant
- A standardized positioning tool can determine the accuracy of positioning by the nursing staff

P I C O

Amongst the NICU staff caring for preterm (<32 weeks) infants, will educating on proper prone positioning with the use of the IPAT assessment tool result in staff compliance with prone score card recommendations?

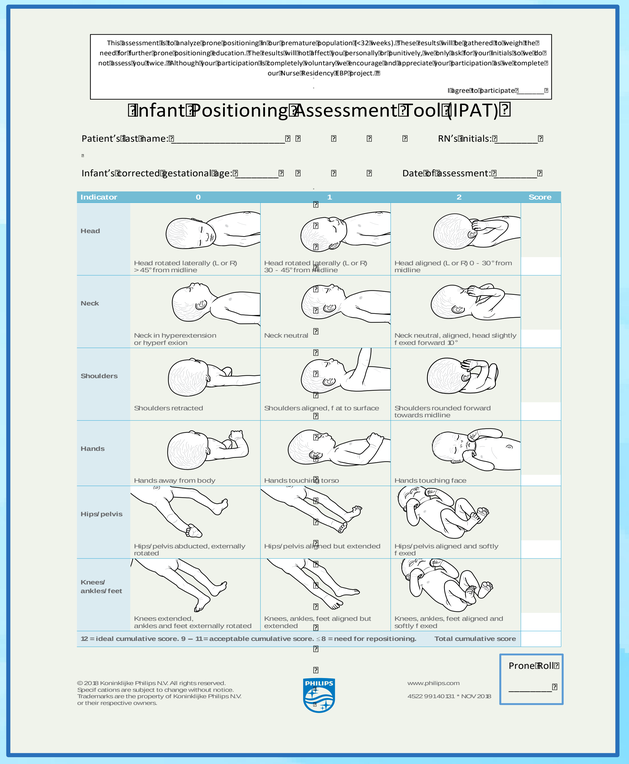
- P – NICU staff
- I – educating on proper prone positioning with the use of the IPAT assessment tool
- C – current practice
- O – staff compliance with prone score card recommendations

EVIDENCE

- A similar study found that following standardized positioning guidelines, helps to provide beneficial outcomes for preterm infants (Santos et al., 2017)
- Prone positioning focuses on the maintenance of correct head and neck position, stimulation of midline, flexion of upper and lower limbs, and rounding of shoulders (Santos et al., 2017)
- Use of a rolled cloth or gel pillow placed under the infant (from top of the head to the umbilicus) provides proper extremity and neck flexion and shoulder roundness (Gardner et al., 2016)
- The IPAT (Infant Positioning Assessment Tool) by Philips Electronics, is a measureable assessment, used to standardize best positioning practice (Philips Koninklijke N.V., 2014)

IMPLEMENTATION

IPAT
(Infant Positioning Assessment Tool)



This assessment is to analyze prone positioning in our premature population (<32 weeks). These results will be gathered to weigh the need for further prone positioning education. The results will not affect your personally or punitively, we only ask for your initials so we do not assess you twice. Although your participation is completely voluntary we encourage and appreciate your participation as we complete our Nurse Residency EBP project.

Agreed to participate? _____

Infant Positioning Assessment Tool (IPAT)

Patient's last name: _____ RN's initials: _____

Infant's corrected gestational age: _____ Date of assessment: _____

Indicator	0	1	2	Score
Head	Head rotated laterally (L or R) > 45° from midline	Head rotated laterally (L or R) 30 - 45° from midline	Head aligned (L or R) 0 - 30° from midline	
Neck	Neck in hyperextension or hyperf exion	Neck neutral	Neck neutral, aligned, head slightly f exed forward 31°	
Shoulders	Shoulders retracted	Shoulders aligned, f at to surface	Shoulders rounded forward towards midline	
Hands	Hands away from body	Hands touching torso	Hands touching face	
Hips/ pelvis	Hips/ pelvis abducted, externally rotated	Hips/ pelvis aligned but extended	Hips/ pelvis aligned and softly f exed	
Knees/ ankles/ feet	Knees extended, ankles and feet externally rotated	Knees, ankles, feet aligned but extended	Knees, ankles, feet aligned and softly f exed	

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

Prone Roll: _____

www.philips.com
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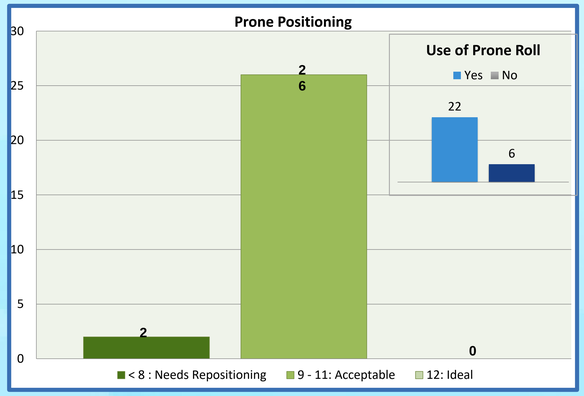
- Permission granted from Philips Healthcare to use IPAT
- Ethically inform staff that participation in assessment is voluntary and will not affect staff personally or punitively
- Sample size
  - 28 IPAT assessment tools over one month
- Data collection
  - IPAT score
  - Use of prone roll
- Interpretation
  - Score <8: Indicative for repositioning and further education
  - Score 9-12: Acceptable
  - Score 12: Indicative perfect positioning
- Limitations
  - Collection variability between day and night shifts
  - Infant's ability to be placed prone due to acuity/instability or venous/arterial access location
  - The ability to use prone roll due to mode of ventilation

OUTCOMES



- Findings show 93% (26/28) of the sample size has met an acceptable cumulative score to meet proper prone positioning

NEXT STEPS

- Although there is no need for formal education, there is a need to reinforce accurate positioning to standardize the practice across the unit
- Bedside education cards have been developed and placed at each bedside as a visual to continue the reinforcement of proper prone positioning

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