Implementing and Evaluating Developmental Positioning in the Neonatal Intensive Care Unit

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Problem Statement

- Prematurity is the leading cause of long-term neurodevelopmental disabilities
- Roughly 500,000 infants are born preterm, prior to 37 weeks gestation
- Positional deformities are preventable and if not prevented they can lead to neurodevelopmental deficits, increased doctor visits, and increased costs to families and insurance companies.
- The goals of implementing developmental positioners are to decrease neuromotor development alterations in preterm infants and to standardize developmental positioning in the Neonatal Intensive Care Unit.
- The National Association of Neonatal Nursing is supportive of standardizing developmental positioning in the NICU to optimize skeletal development, biomechanical alignment, self-regulation, and decrease stress behaviors.
- In November 2020, a convenience sample of the current NICU census resulted in 28% of the infants exhibiting a positional deformity

Purpose of Project/Goals

The purpose of this quality improvement project is to implement and evaluate developmental positioning guidelines and positioning devices in infants born ≤ 32 weeks in the Neonatal Intensive Care Unit

Structure & Process Goals:

- Amend developmental positioning policy to include the Infant Position Assessment Tool, Positioning algorithm, and approved positioning devices.
- Acquisition of positioning devices: Phillips products: Bendy Bumpers, Snuggle up, Prone Plus, Frederick T Frogs
- 100% of the Neonatal Intensive Care Unit nurses, developmental staff, and medical providers will be trained in appropriate developmental positioning and will be familiar with the Infant Position Assessment Tool.
- 100% of unit champions will be trained and properly conduct three consecutive scorings using the Infant Positioning Assessment Tool.
- 100% of eligible infants will be adhering to positioning policy, have bedside signage displayed, and scoring 9 or greater on the IPAT tool for all eligible neonates born ≤ 32 weeks in the Neonatal Intensive Care Unit.

Outcome Goal:

- 100% of eligible discharged infants would have participated in the appropriate developmental positioning and exhibit symmetrical musculoskeletal development with the absence of positional deformities.

Methods

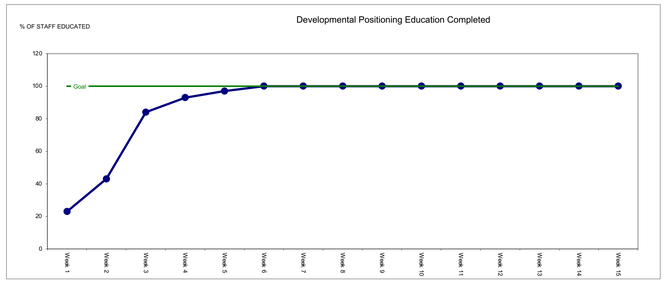
Setting: 28-bed level III Neonatal Intensive Care Unit at a local hospital in a metropolitan area

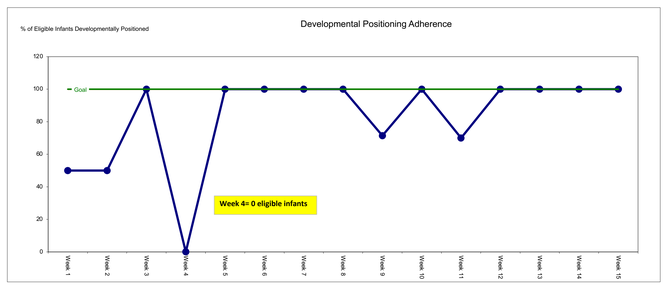
Population: Infants born ≤ 32 weeks in the Neonatal Intensive Care Unit

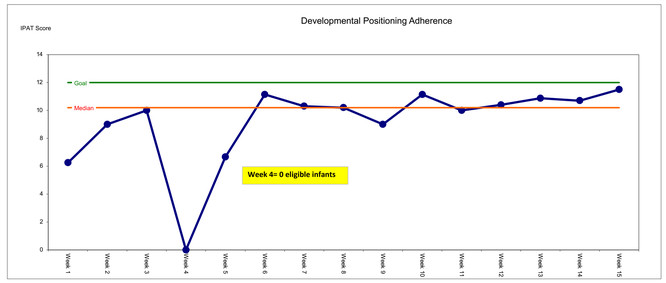
Intervention: A developmentally appropriate care policy was developed to include positioning guidelines, Position reference guides and Phillip's Infant Positioning Assessment Tool were placed in each of the 4 pods on the unit. A developmental positioning checklist and crib card were placed at the bedside of each eligible infant. The following Phillips positioning products were utilized: Bendy Bumper, Snuggle up, Prone plus, Gel Pillow, & Full Body Gel Mattress.

Implementation Strategies and Tactics:
Strategies to facilitate project implementation: Educational in-services, Competency demonstrations and checkoffs, Unit champions, visual cue reminders, integration into unit policy, and staff briefings.
Pre implementation infant positioning audits, and positioning audits throughout the duration of implementation.

Results







Infant Positioning Assessment Tool

Discussion

- Unit nursing staff, developmental staff, and providers were receptive to project education. All staff members of the unit were educated by week 6.
- Feedback and identification of the barriers and facilitators were addressed through out the implementation process.
- During the project implementation, there was a decrease in the patient census resulting in a small sample size.
- Consistency with developmentally positioning eligible infants improved during the project implementation.
- Phillip's Infant Positioning Assessment Tool was completed with each shift

Conclusions

- Implementing developmental positioning in infants less than 32 weeks is feasible and was successfully implemented in the neonatal intensive care unit.
- The implementation of developmental positioning guidelines was effective in increasing the infant positioning assessment score and improving the consistency of developmental positioning in the NICU.
- To promote sustainability developmental positioning bundle should be integrated as part of the formal unit policies/procedures and both new hire and annual staff competencies.
- Implementing developmental positioning as part of the admission order set can help reinforce practice change.
- Keeping developmental positioning nurse driven can empower autonomy and garnish nursing support
- **Limitations:** Budget Deadlines, Product Distribution Changes, Staffing changes
- **Future recommendations:** incorporating developmental positioning into annual competencies, integrating the IPAT tool into the EMR flowsheet, expanding positioning options on the EMR, and the utilization of computer prompts to remind staff to developmentally position infants less than 32 weeks.

References

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