

Creating Awareness of the Impact of Neurodevelopmental Care in a Level 4 Multicultural Greenfield NICU: A Quality Improvement Project Implementing FINE

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Introduction

Sidra Medicine is the only 4 Neonatal Intensive Care Unit (NICU) in Qatar and was opened in 2018. Eastern and Western practices of neonatal care converge in this NICU. A multidisciplinary team was formed to identify the challenges of the NICU and address areas where incremental changes would have a significant impact on neurodevelopmental care.

Aim

The aim is to improve and promote awareness and implementation of neurodevelopmental care.

Methods

A plan-do-study-act cycle (PDSA) was used (Figure 1) by a core multidisciplinary team known as the Managing Infant Neurodevelopment (MIND). An initial survey was carried out in the NICU to get a baseline understanding of the overall knowledge and awareness of neurodevelopmental care. Based on the results, the team was divided into subgroups to address the individual issues identified. A key intervention was Family and Infant Neurodevelopmental Education (FINE 1) training for all NICU staff with a selected team (n=10) to continue on FINE 2 training. Weekly education sessions on various topics related to neurodevelopmental and family centered care were implemented to the wider multidisciplinary team followed by a follow-up survey aimed at understanding changes in awareness of neurodevelopmental care.

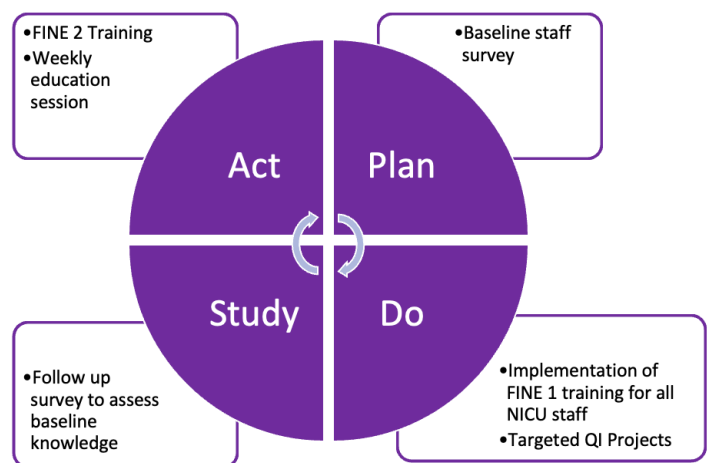
Results

In the initial survey, 89% of staff acknowledged the importance of neurodevelopmental care, but only 4.6% of staff had completed any formal training. All staff were mandated to complete FINE 1 training during a four-month period (n= 250). In the follow-up survey, 93% of staff acknowledged the importance of neurodevelopmental care, 64% could identify that the baby was stressed and needed a break and 73% could identify the baby's strategies to self-regulate.

Discussion/ Relevance to NIDCAP

Implementing FINE training in the NICU improved the

Figure 1: PDSA cycle



knowledge around developmental care and observation of the newborn. Response rates were low in the two surveys [68% response rate (n=179) versus a 30% response rate (n=49)]. It may be reflective of the high turnover encountered as a response to the Covid-19 pandemic and subsequent lockdown. During the pandemic, there has also been an influx of quality improvement projects within the NICU. While having the commitment to change is encouraging, it can also be overwhelming and mentally exhausting to continually overcome challenges to facilitate positive change.

Protecting dedicated time for the core group to be able to educate the wider team was challenging and this was addressed by a proposal from the core group to the leadership team emphasizing the importance of implementing neurodevelopmental care. Weekly protected education time was granted and such training for the professional healthcare team and managing resources is also a part of the NIDCAP philosophy.

Implementation of the FINE program which focuses on an understanding of the interconnection of the autonomic, motor, and state subsystems and reading the subtle cues of the baby's communication through their behavior and self-regulation

before, during, and after caregiving procedures will enable caregivers to maximize comfort during caregiving, alleviate pain and support infant's organization, which are components of NIDCAP's philosophy for infant care.

Conclusion

This quality improvement project has succeeded in creating

awareness of the importance of neurodevelopmental care and its lasting impact, opening the door for targeted education sessions and further bedside learning. Each member of the multidisciplinary NICU team has a responsibility to ensure they follow standards of practice and understand its implications.

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