AUDIT AND FEEDBACK OF NEONATAL PAIN SCALES USE IN A BRAZILIAN NICU

Juliana Calatayud Carvalho, RN, Master student
Federal University of Goias, Faculty of Nursing

Student/Trainee

INTRODUCTION / AIM

Infants from high and lower income countries are exposed to 7.5 to 17.3 invasive procedures per day while hospitalized in a NICU. Global effort has been made to reduce infant exposure to pain and to improve pain assessment and treatment. There are various infant pain assessment tools that have been validated for use in the clinical setting. Yet, despite this availability, there is no guarantee that clinicians will draw on these resources to assess pain in the hospitalized infant. The implementation of knowledge translation interventions and frameworks have been shown to have a powerful effect on promoting the grass root engagement of clinicians and bringing about changes in the NICU setting for improving infant pain management practices that are sustainable. Thus, our study made use of knowledge translation intervention and strategies to improve pain assessment in infants from a Brazilian NICU.

METHODS

The Evidence-based Practice for Improving Quality (EPIC), a multidimensional knowledge translation intervention, was implemented in a 20 bed level III and II NICU in Brazil. The EPIQ intervention was guided by the Promoting Action on Research Implementation in Health Sciences (PARiHS) framework. The implementation processes occurred over a 10 month period (February 2015 to November 2015) and included 5 steps: 1) baseline data collection (e.g. frequency and type of routine infant pain procedures and documentation of any pain assessment); 2) establishment of a research-practice council (RPC) composed of six multidisciplinary health care professional volunteers from the unit and two researchers to facilitate and promote practice changes; 3) training of the RPC to implement EPIQ; 4) planning, development and implementation of a targeted practice change by members of the PRC using proven knowledge translation strategies; and 5) monitoring changes of the targeted practice change via cyclical audit and feedback processes. At the conclusion of the study, data (e.g. frequency and type of painful procedures, any pain assessment) from all infants hospitalized in the NICU during 5 random days in December 2015 were collected from the medical charts to measure practice change.

RESULTS

First chart audit of baseline data from 18 hospitalized infants in May 2015 showed that prior to implementation of the KT strategies there was no documentation of any pain assessment or pain score. Once the RPC was formed, members met 13 times during the implementation process. They targeted two defined measurable goals for practice change: 1) to introduce and increase the clinical use and documentation of the PIPP-R pain assessment score on the unit to 30% of
routine infant painful procedures (oral suctioning, catheter insertion and blood collection); and 2) to introduce and increase the use and documentation of the EDIN pain score three times per shift to measure persistent pain in 30% of the infants. The knowledge translation strategies that were implemented by the RPC on the unit included, interactive small groups, educational outreach, reminders, educational materials, clinical practice protocols, posters, didactic conference, media campaign. The second chart audit showed that a total of 24 infants in hospitalized in December 2015 were exposed to 106 invasive procedures (65 oral aspirations, 22 blood collections, 19 peripheral catheter insertions) during 5 days of data collection. It also showed that health professionals documented the PIPP-R score and the EDIN score for 36.8% (39/106) of these procedures and for 46.3% (132/285) of the hospitalized infants, respectively.

**DISCUSSION / CONCLUSIONS**

In our study there was a significant change in neonatal pain practice. Chart audit revealed a 36.8-46.3% increase in neonatal pain assessment with documentation of a validated pain scale for invasive procedures by health professionals on the unit. Our findings are similar to those reported for a multicenter study from Canada that reported implementation of the EPIC intervention to increase pain assessment practices in 16 pediatric and neonatal units by 60% compared with 2% in 16 control units. Together, these results show that the EPIC intervention can be applied in different cultural and income contexts to promote best practices in neonatal pain. Sustainability of these changes should be evaluated.

**OTHER AUTHORS**

Thaíla Corrêa Castral  
Fay Warnock  
Bonnie Stevens  
Mariana Bueno  
Laiane Medeiros Ribeiro  
Thaynara Gonçalves Fernandes  
Lorrany Jasmire Neres Araujo da Hora