IMPLEMENTATION OF GLUCOSE TO REDUCE INFANT ACUTE PAIN: A KNOWLEDGE TRANSLATION PILOT PROJECT IN BRAZIL

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INTRODUCTION / AIM

Despite growth of published evidence on infant capacity to feel pain and the availability of effective treatments modalities, there is no guarantee that clinicians will draw on these resources to relieve pain in infants in the NICU. To reduce this knowledge-practice gap, knowledge translation strategies can be implemented to promote clinical practice changes and improve pain management in the NICU. In our study we made the use of the Evidence-based Practice for Improving Quality (EPIC), a multidimensional knowledge translation intervention, to promote clinical use of glucose to reduce acute pain from routine invasive procedures in hospitalized infants from a Brazilian NICU. The EPIC intervention was guided by the Promoting Action on Research Implementation in Health Sciences (PARiHS) framework.

METHODS

This ongoing implementation study occurred in a 20 bed level III and II NICU in Brazil. 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 painful procedures, observed glucose administration); 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 EPIC; 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. In addition, data (e.g. frequency and type of painful procedures, prescription and observed administration of glucose) from all infants hospitalized in the NICU during 5 random days of observation (12 hours/day) and chart review in December/2015 to measure practice change.

RESULTS

Initially, first baseline from 18 infants hospitalized observed in May/2015 showed glucose was used only in 2.4% of performed painful procedures. After members of RPC received feedback of baseline data and a review of relevant evidence on infant pain management, they defined a measurable target goal: to administer 0.3mL of glucose 20% by syringe 2 minutes before 30% of all routine pain procedures in infants hospitalized in the NICU. To implement this goal, the RPC selected knowledge translation strategies (e.g. interactive small groups, reminders, educational materials, clinical practice protocol, posters, media campaign) to use in a 3-month cycle. At the end of the cycle, other 5 days observation and chart audit was performed with 24 hospitalized infants in December/2015. Infants were exposed to 84 painful procedures, which 67.7% had glucose prescribed and 22.7% administered.
DISCUSSION / CONCLUSIONS

Results show glucose administration increased about 20% after implementation of knowledge translation strategies, although it has yet to reach the target goal. The introduction of a glucose protocol and establishment of medical prescription of glucose is also an important practice change, since dosage and concentration of glucose should be based on best evidence for each gestational age. Next steps of the implementation will include parent’s education to increase their involvement in pain management and the application of additional knowledge translation strategies (e.g. audit and feedback, opinion leaders) to improve glucose use by health professionals.

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