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## Comparison of non-pharmacologic pain interventions for NICU infants

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Mira Cothran

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EBP project

### Comparison of non-pharmacologic pain interventions for NICU infants

Infants in the NICU unfortunately have to endure repeated procedures that cause pain. Over time, these painful experiences can compound into larger issues. Infants receiving repeated procedures with uncontrolled pain can develop neurological issues in the future. Because infants have no way of verbally expressing the pain that they experience, their pain can often be overlooked. Premature infants have underdeveloped kidneys and livers leaving them at risk for adverse outcomes to some pharmacological interventions, especially opioids if not given at the correct dose. This highlights the importance of non-pharmacologic interventions to reduce pain.

This proposed project would help to determine the best interventions to help decrease the pain that NICU infants experience. The purpose of this project is to compare different non-pharmacological pain interventions and evaluate their effectiveness in treating acute pain in premature NICU infants born between 28 and 40 weeks. Evaluation of the differences in pain experienced by infants during a heel lance while using sucrose, kangaroo care, non-nutritive sucking, facilitated tucking, breastfeeding, and a combination of some of these interventions will be conducted. While there is research literature indicating that these interventions are effective, there is a lack of research accurately comparing the effectiveness of each intervention.

An initial control PIPP-R score will be collected with no pain intervention used during the first heel lance. Each time a subsequent heel lance is needed, a different intervention or combination of interventions will be used. A PIPP-R score will be taken during each intervention. These scores will be averaged by intervention and compared with each other intervention. This will indicate a general most effective pain management technique to ideally control acute pain in all NICU infants.