

The Benefits of Swaddle Bathing in Family-Centered Care

In this feature, Neonatal Intensive Care interviews clinicians and healthcare providers about the actual application of specific products and therapies. This interview is with Rachel Frazetti, BSN, RNC-NIC, who works as a Core Charge nurse at Anne Arundel Medical Center's Level III NICU located in Annapolis, Maryland. She is actively involved in the unit's Developmental Committee, Quality Committee, hospital based Informatics Committee, and recently won an award for Exemplary Professional Practice.

Neonatal Intensive Care: What prompted you to implement a study on swaddle bathing?

Rachel Frazetti: There were a couple of factors prompting this study. First being our unit is very conscience of developmental care and our bathing method before implementing swaddle bathing was not developmental friendly. Secondly, bathing was not prioritized; I found that infants were not being bathed regularly. Research has shown that swaddle bathing supports family-centered care, decreases physiologic and motor stress, conserves energy, improves state control, enhances ability to feed after bath, decreases temperature loss, causes less crying, and facilitates social interaction.

NIC: What was your previous method for bathing?

RF: Before we implemented swaddle bathing in the Turtle Tub we would either sponge bathe or use an emesis basin for submerged bathing.

NIC: How did infants respond to the previous bathing method?

RF: Infants were stressed and upset with the sponge bathing and using an emesis basin was very cumbersome and only could be done if the infant was small enough to fit.

NIC: What were the results of the swaddle bathing study?

RF: With the initiation of swaddled immersion bathing, the NIPS scores were found to be significantly lower in comparison to sponge bathing or basin bathing; pre-intervention NIPS average of 4.33 to post intervention and the use of the swaddle bathing the overall average was 0.73. There also was a decrease in the number of infants who were hypothermic post swaddled bathing; 26.7% pre-intervention and 5.1% post intervention.

NIC: Could you please describe the NIPS tool used to quantify infant stress? What is the test and what behaviors are included in the scoring?

RF: NIPS is used in children less than one year of age, typically for pain but we felt it applied to stress as well. This scale (0 to 7) uses body language: facial expression (relaxed or grimacing), cry (quiet, whimper, or vigorous cry), breathing pattern, arm and leg movement (extended, tense, or relaxed), and state of arousal

(quiet, sleeping, or fussy). We found with sponge bathing infants were grimacing, crying, and quite fussy. Our average NIPS before we started swaddle bathing was 4.33 the average score and with implementing swaddle bathing it dropped to 0.73. Most infants were completely relaxed with swaddle bathing, some were actually sleeping during the bath.

NIC: Could you please describe in more detail how the nurses were educated to swaddle bathe? What training materials did you use? How much time did it require? Who did the education?

RF: Every nurse and tech on the unit were required to watch a video on how to swaddle bathe and then took a quiz. We used the information provided with the Turtle Tubs to use to educate. I recruited a few nurses to be Swaddle Bath Champions along with our educator and myself. The four of us performed demonstrations to staff of how to swaddle bathe and promoted swaddle bathing on the unit.

NIC: Do families bathe infants on your unit? If so, how has the response been? If not, what prevents families from participating in bathing?

RF: We attempt to involved parents in as much care of their infant as possible, which includes bathing. The parents have loved swaddle bathing in the Turtle Tub! I have had many families purchase the tub online to use after discharge.

NIC: The amount of time for bathing was not included in your study; however, do you perceive that there has been a change in the amount of time required for bathing since converting to swaddle bathing?

RF: While the time to bathe was not measured during the study I do think the time is the same or shorter than before. Part of implementing swaddle bathing was creating bath carts that have all of the needed supplies to bathe. This makes it easier and faster for the nurses to get everything they need for the bath. Another huge perk is that the families are now more comfortable bathing so the task can be performed independently by them with the nurse in the room.

NIC: Did you encounter resistance in changing to swaddle bathing? If so, how did you overcome the resistance? If not, what helped smooth the transition?

RF: As with any change, there was a little resistance to the new process. It helped to create the bath carts which made

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the process easier for the nurses. Additionally, I created cute laminated signs in the shape of a turtle that said "I like to be bathed in the Turtle Tub". These were placed on the isolette/crib of infants that qualified to be bathed in the Turtle Tub. This was a great visual reminder for the nurse and also spurred the family to ask questions and be involved in bathing.

NIC: What bathtub did you use for the study? How do you think the tub contributed to the success of the study?

RF: We used the Turtle Tub and found it be to be perfect for swaddle bathing. The tub allows for immersion and cradles the infant well. Another perk is the thermometer at the bottom so nurses and parents know the water temperature is correct. Our unit loves the tubs so much that our Mother-Baby unit decided to purchase them as well to replace the tubs they were using for immersion bathing.

Swaddle Bathing in the NICU to Improve Thermoregulation and Decrease Stress

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Background/Introduction

Bathing is one of the most common routine nursing procedures performed on newborns, historically done without regard to the infant's stress response or developmental care. Within the NICU, it is of the upmost importance to attempt to limit and control these stressors. Research has shown that swaddled immersion bathing supports family-centered care, decreases stress, conserves energy, improves state control, enhances the ability to feed after bathing, decreases temperature loss, causes less crying, and facilitates social interaction. Pre-intervention, the NICU bathed infants by either using an emesis basin for immersion bathing or by administering a sponge bath. Both of these bathing methods can be stressful for NICU infants. Our average NIPS was 4.33 and 26.7% of the infants were hypothermic (less than 97.7 axillary) post bath.



Purpose/Objectives

The purpose was to implement swaddled immersion bathing in the NICU to decrease stress and increase thermoregulation.

Methods

We focused our study on infants who were either born or adjusted to 30 weeks; 157 baths performed, sample size 77. We excluded infants who had IV access, required respiratory support higher than 3L of high flow nasal cannula, had an umbilical cord or had recently been circumcised. The effectiveness was measured by obtaining pre and post bath axillary temperatures to track thermoregulation and a NIPS score to measure the infants' stress response. Steps included: collecting data for two months before implementation using the data collection sheet; educating NICU staff (video, quiz, and sign off on the new bathing method); implementation of swaddled immersion bathing using the Turtle Tub; and post-implementation data collection.



Results

With the initiation of swaddled immersion bathing, the NIPS scores were found to be significantly lower in comparison to sponge bathing or basin bathing; pre-intervention NIPS average of 4.33 to post overall average of 0.73. There also was a decrease in the number of infants who were hypothermic post swaddled bathing; 26.7% pre-intervention and 5.1% post.



Conclusions and Implications/Lessons Learned

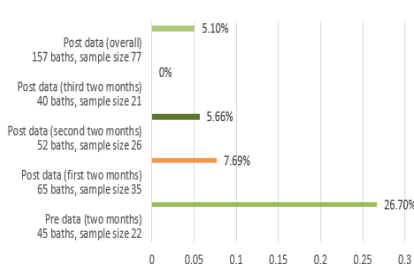
The goal was achieved as the NICU had a significantly lower percentage of hypothermic infants after the bath and our NIPS score decreased significantly. We recommend adopting swaddled immersion bathing in NICUs and on Mother Baby units, as well as teaching families to swaddle bathe at home.



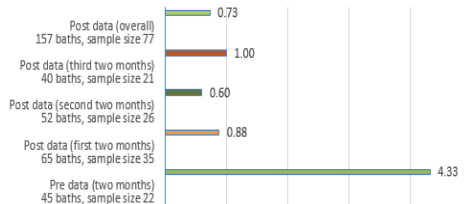
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Thermoregulation Measure by Percent Hypothermic



Stress Measured by NIPS



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