

Anne Arundel Medical Center

## Newborn Immersion Bathing at the Mother's Bedside

### Project Description

The first newborn bath serves to remove potentially harmful bodily fluids, plays an important cultural role for families, and puts the newborn at risk for temperature instability, which can lead to complications such as hypoglycemia and respiratory distress. Newborn skin is different from adult skin and requires special consideration. Two resources from the Association for Women's Health, Obstetric and Neonatal Nurses, (AWHONN) relate to newborn baths: the *Neonatal Skin Care Evidence-Based Practice Guideline, 3<sup>rd</sup> Edition* and the *Wait for Eight* initiative.

Additional research supports immersion bathing at the mother's bedside. The Mother/Baby Unit sought to determine whether implementation of the AWHONN skin care guideline, the *Wait for Eight* initiative, and bathing by immersion at the mother's bedside would decrease the incidence of hypothermia, reduce time and resources spent on the first bath, and increase parental satisfaction with the bathing process, as compared to the current sponge-bathing process.

### Process

#### Pre-intervention

In October, 2014 we started gathering information about our patient and family satisfaction with our current sponge-bathing process by completing patient surveys with our families. The current process is to take the baby to the holding nursery, place the baby under a radiant warmer, bathe the baby and let the baby re-warm under the radiant warmer before returning to the mother's room.

We collected 104 satisfaction surveys. In 24/104 baths (23%) at least one family member was present for the bath. In 80/104 (73%) no family members were present for the bath. Some of the comments included: "Dad videotaped the 1<sup>st</sup> bath – so glad!" "I was not offered the opportunity to be present." "It would have been nice to be there." "I would have loved to see the bath after delivery." Many mothers stated they were "too tired" or "couldn't get out of bed yet" or "had a c/section".

We asked how important it was for the mother to have been present for the bath (1 is the least important and 5 is the most important). None of the mothers had been present for the bath.

<b>1 (least important)</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5 (most important)</b>
<b>35</b>	<b>14</b>	<b>21</b>	<b>19</b>	<b>25</b>

During February, 2015 we collected the following data on 51 newborns who were bathed using our sponge-bathing process: birth weight, gestational age, hours of age at the first bath, pre-bath temperature, post-bath temperature, and exclusive breastfeeding at discharge. This included all of the babies on the Mother/Baby Unit born February 1-6<sup>th</sup>, who had temperatures documented pre- and post-bath within 30 minutes of the bath.

We found eight babies had the same temperature pre- and post-bath (16%).

Six babies had a higher temperature post-bath (12%). The average increase was .27° F.

Thirty-seven babies had a lower temperature post-bath (72%). The average decrease was .33°F.

The average age at the time of the bath was 8.8 hours.

Thirty of the 51 babies were exclusively breastfed (58%). Ten of the 51 mothers had already planned to formula-feed, so of mothers who wanted to exclusively breastfeed upon admission, 73% left the hospital doing so.

## Intervention

It took us ten months to develop a process for immersion bathing at the bedside that met infection control standards, was feasible to implement, and which we thought would be pleasing to our parents and families. We trialed several different commercial baby bath tubs, stainless steel surgical bowls, and even a very large stainless steel cafeteria bowl. We eventually paid a visit to a local fabricator to see if a suitable stainless steel tub could be made inexpensively. It could not. Next we tried a bathing system where a plastic bag fits over a rectangular plastic container with a sling that the baby fits in. It was too small for many of our babies, but that gave us the idea to purchase food-grade plastic bags (to be discarded after each bath) to place over a small commercial baby bath tub. We purchased a rolling cart so we could take the tub to the mother's bedside. Then we started our trial of 50 immersion baths.

The immersion bath process follows. The cart is taken to the mother's bedside, the tub is filled with water between 100°F and 103.9°F, (per AWHONN guidelines), the baby is placed in the tub and bathed, the baby's hair is shampooed and rinsed over the tub, the baby is dried and placed skin-to-skin with the mother. Often the father or grandmother will help us rinse the baby's hair. Key points are discussed during the bath so the parents know how to do the immersion bath once the baby's cord falls off.

## Measureable Outcomes

During our intervention, we found three babies had the same temperature pre- and post-bath (6%).

Seventeen babies had a higher temperature post-bath (34%). The average increase was .6° F.

Thirty babies had a lower temperature post-bath (60%). The average decrease was .08°F.

The average age at the time of the bath was 8.8 hours.

	Number (percentage) of babies whose temperatures remained the same pre- and post-bath	Number (percentage) of babies whose temperatures increased post-bath	Number (percentage) of babies whose temperatures decreased post-bath
Sponge Bath (Total=51)	8 (16%)	6 (12%)  Average increase .27°F	37 (72%)  Average decrease .33°F
Immersion Bath (Total =50)	3 (6%)	17 (34%)  Average increase .6°F	30 (60%)  Average decrease .08°F

There was an increase in the percentage of mothers who planned to exclusively breastfeed and were exclusively breastfeeding at discharge from the hospital (from 73% to 75%). The timing of the bath, which averaged 8.82 hours after birth for the sponge-bathed infants, was 12.82 hours after birth for the babies bathed by immersion

Parents whose babies were bathed by immersion at the bedside felt it was very important for them to be able to be in attendance for the baby’s first bath (4.4 out of 5).

During our trial, we evaluated our equipment and made changes to our cart and bought inserts to be placed in the tub.

#### Solution (Post-Intervention)

We will share this data with our Mother/Baby quality council next week and plan to make immersion bathing our standard. We will have more data within the next month comparing our time/motion study done pre-intervention to our post-intervention process. Our plan for implementation involves sharing our data with our staff members to help them see the important difference immersion bathing at the mother’s bedside makes for newborns and for families. Our patient care technicians do most of our baby baths, so it is essential that we get their buy-in. We will be presenting this information and our plans for immersion bathing at the next patient care technician staff meeting on November 18<sup>th</sup>.

## Sustainability

Our plans are to make immersion bathing our standard practice. This will be audited by a medical record review. Our electronic medical record indicates the method of bathing. If a baby is sponge-bathed, the nurse or patient care technician will be contacted and a discussion will take place to determine the reason immersion bathing was not performed. Several of our new patient care technicians have already incorporated immersion bathing into their daily practice. They get instant positive feedback from the families, who overwhelmingly love it! They will help us gain support for immersion bathing. Once our patient care technicians on Mother/Baby make it the standard practice, we plan to buy another cart and tub and make immersion bathing the standard throughout all postpartum areas.

## Role of Collaboration and Leadership

Our immersion bathing project has been supported by Anne Arundel Medical Center's Bedside Scientist Grant, which provides \$1000 in funding, as well as guidance from our Director of Nursing Quality and Research, Cathaleen Ley. Our Mother/Baby clinical director, Joyce Bragg, supported our efforts by paying for attendance at task force meetings and by helping to develop a video showing our staff members how to do an immersion bath. Our unit charge nurse, June Brouse, garnered support for immersion baths at our daily huddles. Members of the task force helped people learn about the benefits of immersion bathing and helped with our trial. Our infection control department steered us clear of potential issues with our initial ideas for suitable tubs and cleaning methods.

## Innovation

What makes our solution so innovative is its simplicity! Other institutions have given up on the idea of immersion bathing because they could not find a safe and inexpensive process. After trying so many other methods, the idea of covering the bath tub with food-grade plastic was the brain child of a group of nurses sitting around talking about all the things we had tried and just believing a solution had to be possible.

Our solution is inexpensive and actually saves time and resources. (We will have data to confirm this within the next month.) It meshes perfectly with our hospital's focus on patient and family centered care, is evidence-based, and promotes the health of our newborns.