

ICEA Position Paper

By Elizabeth Smith and Terriann Shell

Delayed Bathing

Background

With the move to hospitalized birth, the first bath became standard practice soon after birth. Baby would be taken from mom for newborn cares, bathed and brought back swaddled up and ready to sleep. This practice allowed for the pediatric team to complete the tasks and the OB team to finish up the post-delivery care. This became the “vision of birth” but the impact on mom and baby wasn’t considered for many years. In 1990, an article was published in the Lancet looking at removal of baby for newborn care and the impact on breastfeeding. At that same time the push from United Nations International Children’s Emergency Fund (UNICEF) and the World Health Organization (WHO) were forming the Baby Friendly Initiative; looking at birth practices and the effect on breastfeeding began to be studied in depth. As practices changed for the better, the bath still remained an early procedure. Whether it was a lack of insight on the effects, or the family’s unfamiliarity with characteristics of the newborn, the bath was expected to be done right away. And yet, as early as 1998, The Association of Women’s Obstetric, Health, and Neonatal Nurses (AWOHNN), the National Association of Neonatal Nurses (NANN), and WHO recommended that “removal of all vernix is not necessary for hygienic reasons.”

With only preliminary data on the effects of the newborn bath at an early stage, it was dismissed as having little impact, and continued to be the standard practice in most hospitals. Meanwhile, skin to skin care immediately after birth was being studied in depth. The

recommendation to place baby skin to skin immediately after birth and to remain there at least one hour or until the first breastfeed is accomplished seems to be what began the practice of delaying in the newborn bath.

Delay the Bath

It was in 2012 that thinking changed from the newborn bath as a standard care to really looking at when that bath should be done emerged. The WHO came out with a statement and time parameters stating “bathing should be delayed until after 24 hours of birth. If this is not possible due to cultural reasons, bathing should be delayed for at least six hours.” Appropriate clothing of the baby for temperature maintenance is recommended. The mother and baby should not be separated and should stay in the same room 24 hours a day. Around that same time, AWHONN announced their “Wait for Eight” campaign stating that delaying the bath by at least 8 hours would reduce the instability associated with cold stress.

In 2015, AWHONN marketed this campaign again, encouraging the delay not only for cold stress but also for better stability overall. The presentation at the annual conference stated that delayed bathing and leaving vernix on the skin would lead to decreases in hypoglycemia, weight loss, and jaundice along with better temperature stability. Other positive effects noted were skin protection from the antibacterial and antimicrobial properties of vernix and early seeding of the newborn microbiome.

Vernix Caseosa

At birth a baby may be completely covered in vernix caseosa or may just have some remaining in the creases of the neck and between fingers and toes. Gestational age has an impact on the amount of vernix with shorter gestational age typically showing more visible vernix. This substance comes from the Latin origin, vernix meaning varnish and caseos meaning cheesy. A cheesy varnish is a very descriptive way to describe vernix. But the bigger question is, “what is it and why is it there?” Vernix is a coating on the skin that consists of fatty secretions from the sebaceous glands and dead epidermal cells. Its purpose is to protect the skin of the developing fetus. Skin begins to form at 3 weeks of gestation. After many divisions and changes, the epidermis begins formation by the 4th month of gestation. The periderm continues to form and by 21 weeks the periderm sheds and combines with sebum secretions to form the vernix. Vernix is 81% water, 9% protein containing lipids and 10% other fat. Thirty-nine percent of the vernix proteins have components of innate immunity and 29% have direct antimicrobial properties.

Purpose of Vernix

While the baby is still in the uterus, vernix forms a hydrophobic barrier. It protects against the loss of fluids and electrolytes. Along with amniotic fluid, vernix is frequently swallowed where it coats the gut and aids in its development.

During labor and birth, vernix acts as a bio-film that minimizes friction through the birth process. Additionally, it acts as an antimicrobial barrier to protect the baby as he or she passes through the birth canal. After the birth of the baby, the vernix still plays a role in protection. The newborn skin goes through some dramatic changes in the first few days. In particular, there is a decrease in PH and surface hydration. If vernix is left in place the skin stays more hydrated and has less cracking and peeling.

There is some evidence that vernix acts a thermoregulator and, although this was the function

used to drive practice change for delaying bath (AWOHNN 2012), it is not thought to be its primary function.

If that isn't enough, there are other purposes for this substance. Vernix has antioxidant properties. Birth is a time of high oxidative stress and the vitamin E and Melanin are thought to offset this stress. Vernix contains antibiotic properties that can protect against meconium, inter and extra-uterine infections and bacterial pathogens. The high water count is moisturizing to the skin; better than the best moisturizing products in stores. Finally, vernix helps with both wound healing and skin cleansing.

Vernix and Breastfeeding

One study, (Preer et al. 2013) looked at the correlation between delayed bathing and increased hospital breastfeeding rates. In this Boston hospital, 702 qualified babies were included in the study. Before the study, the average time after birth until the first bath was 2.4 hrs. With the study the average time of the first bath was 13.5 hrs. They found that with the delay in time to first bath there was an increase from 32.7% exclusive breastfeeding to 40.2% exclusivity rate ($p < .05$) and concluded that there was a significant likelihood of increased breastfeeding if the bath was delayed.

Numerous studies have found that skin to skin from birth until the first breastfeed is critical for successful breastfeeding. Patting the baby dry but not washing and leaving the amniotic fluid on the hands increases the baby's ability to make the neural connections for breastfeeding. By keeping mom and baby together, many hormonal and neurobiological changes will occur. All of these help with newborn transition, regulation and brain synapsis. Taking baby for a bath; separating him or her from their mom interferes with the natural post birth process and puts the baby in a state of fight or flight increasing catecholamine release in the system.

So when should the bath occur?

There is no set time that it should happen. Many parents are delaying that first bath past the hospital stay and doing it at home when they feel ready. The minimum time recommended falls between 6-8 hours after birth (WHO, AWHONN, Save the Children). It is suggested that the bath be done with the parents involved so that they can learn the process and limit separation. Additionally, it is important to get baby back in a skin to skin position immediately after to minimize effects from the cold.

Contraindications

There are times when the newborn bath is recommended immediately. If the mom is HIV positive or has a hepatitis a bath is done to limit transmission to others who come in contact with the baby. In some facilities a bath is also done with chorioamnionitis or significant meconium staining. It is recommended that health care providers use gloves when handling an unbathed baby.

In Summary

Delaying bathing for at least 8 hours after birth protects the newborn's skin from bacterial invasion, keeps their skin conditioned, keeps their blood sugar stable and often causes the baby to cry, both of which can promote hypoglycemia. Delaying the first bath encourages successful breastfeeding, enhances bonding, and facilitates early skin-to-skin care.

References

1. Akinbi, H. T., Narendran, V., Pass, A. K., Markart, P., & Hoath, S. B. (2004). Host defense proteins in vernix caseosa and amniotic fluid. *American Journal of Obstetrics and Gynecology* Delay Diana V. Lipka, RN, BA, MPA, RNC-OB, "Wait for Eight": Improvement of Newborn Outcomes by the Implementation of Newborn Bath Mother/Baby and Lactation, Baycare/ Saint Joseph's Women's Hospital, Tampa, FL Marcia K. Schulz, RNC, MS , Mother/Baby and Lactation, Baycare/ Saint Joseph's Women's Hospital, Tampa, FL (2012) AWOHNN Convention DPreer G1, Pisegna JM, Cook JT, Henri AM, Philipp BL. *Breastfeed Med*. Delaying the bath and in-hospital breastfeeding rates. Dec;8(6):485-90. doi: 10.1089/bfm.2012.0158. Epub 2013 May 2.
2. Narendran V. Hoath SB. The Biology of Vernix Caseosa. *J Neonatol*. > 2002;16:9-17
3. Righard L1, Alade MO. *Lancet*. Effect of delivery room routines on success of first breast-feed. 1990 Nov 3;336(8723):1105-7.
4. Smith, E. Delaying the First Bath 2013 Perinatal Professionals Conference
5. Visscher, M. O., Utturkar, R., Pickens, W. L., LaRuffa, A. A., Robinson, M., Wickett, R. R., Hoath, S. B. (2011). Neonatal skin maturation--vernix caseosa and free amino acids. *Pediatr Dermatol*, 28(2), 122-132. doi: 10.1111/j.1525-1470.2011.01309."
6. WHO Maternal, Newborn, Child and Adolescent Health Review Committee