



Topic Expert Group: Care procedures

Skin care of hospitalised infants

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Target group

Infants and parents

User group

Healthcare professionals, neonatal and paediatric units, hospitals, and health services

Statement of standard

Skin is protected, injuries are minimised, infections are prevented and comfort is promoted during skin care and other routine procedures, with regard to the individual needs of the infant.

Rationale

The immature skin of the preterm infant and particularly the skin of the ill infant may lead to inefficient barrier function. Interference with the development of the stratum corneum and associated barrier function may be a risk factor for nosocomial infections. (1) Many routine practices in the neonatal unit can interfere with the normal barrier function and skin pH: topical exposure to irritants, as antiseptics and cleansers, application and exposure to tapes and devices, such as dressings, monitor leads, probes and masks, and the removal of tapes and dressings. (2–4)

Preterm infants have immature skin with a thinner epidermis, an immature stratum corneum and a more permeable skin. They are at higher risk of infections, water loss, electrolyte imbalance, thermal instability and skin injuries. This is much more problematic for infants born before 32 weeks of gestational age. The skin of the preterm infant can take from two to nine weeks postnatal age to mature. The use of skin film barriers, adequate antiseptics and cleansers, humidity and tapes can protect the skin integrity and promote the stratum corneum development. (1,4,5)

Benefits

Short-term benefits

- Protected skin barrier (1)
- Reduced risk of skin damage (e.g. reduced risk for water and heat loss) (1)
- Reduced risk of infections (1)
- Improved comfort and reduced physiologic instability and stress responses (6)
- Improved parent-infant bonding when skin care is performed by parents (7–9) (see TEG Infant- & family-centred developmental care)
- Reduced stress for parents (7,9,10)

Long-term benefits

- Reduced potential for future skin sensitisation due to cleaning agents (1–3,5)
- Improved development of the skin barrier (1)



Components of the standard

Component	Grading of evidence	Indicator of meeting the standard
For parents and family		
1. Parents are informed by healthcare professionals about skin care. (1–3,5,6,10)	A (Moderate quality) B (High quality)	Patient information sheet
2. Parents are engaged in the skin care of their infant. (9,10) (see TEG Infant- & family-centred developmental care)	A (Moderate quality)	Parent feedback
3. Parents are present when their infant is bathed. (9–11)	A (Moderate quality) B (High quality)	Parent feedback
For healthcare professionals		
4. A unit guideline on skin care is adhered to by all healthcare professionals.	B (High quality)	Guideline
5. Training on skin function and development, skin care and protection, and skin risk assessment tools is attended by all responsible healthcare professionals. (12–14)	A (High quality) B (High quality)	Training documentation
6. A skin risk assessment tool is available and used on a daily basis. (13,15)	A (High quality)	Guideline, audit report
For neonatal and paediatric unit		
7. A unit guideline on skin care strategies and products is available and regularly updated. (4,5)	A (Moderate quality) B (Moderate quality)	Guideline
For hospital		
8. Training on skin function and development, skin care and protection, and skin risk assessment tools is ensured.	B (High quality)	Training documentation
9. Sufficient and adequate materials for skin care are provided. (4,5,16)	A (Moderate quality) B (High quality)	Audit report
For health service		
10. A national guideline on skin care is available and regularly updated.	B (High quality)	Guideline



Where to go – further development of care

Further development	Grading of evidence
For parents and family N/A	
For healthcare professionals N/A	
For neonatal and paediatric unit	
• Compare and review unit protocols for general skin care with international guidelines. (14)	A (Low quality)
• Monitor the number of skin injuries.	A (Low quality)
For hospital	
• Facilitate skin cleaning, protection products and skin and sensory friendly tapes and devices. (4,5,16)	A (Moderate quality) B (High quality)
For health service N/A	

Getting started

Initial steps

For parents and family

- Parents are verbally informed by healthcare professionals about skin care.

For healthcare professionals

- Attend training on skin function and development, skin care and protection, and skin risk assessment tools.

For neonatal and paediatric unit

- Develop and implement a unit guideline on skin care strategies and products. (14)
- Develop information material on skin care for parents.

For hospital

- Support healthcare professionals to participate in training on skin function and development, skin care and protection, and skin risk assessment tools.

For health service

- Develop and implement a national guideline on skin care.

Description

For sensitive and fragile newborn infants keeping the skin cleaned can be very demanding leading to physiological instability, discomfort and skin damage. Cleaning or bathing a preterm infant needs to take into account the immaturity and fragility of the skin and the sensitiveness of the infant. (17)

The intrauterine protection of the skin, vernix caseosa should not be removed, except where there is visible blood or other contamination, because it is a natural barrier to water loss, temperature regulation and innate immunity. (18)

In very immature preterm infants, bathing should be discouraged in the first 3-5 days and subsequently only undertaken infrequently, due to its potential to adversely



affect maturation of the acid mantle, causing irritation and drying of the skin, and inducing irritability and stress responses. (11)

The removal of monitoring and clinical devices (e.g. urine bags), dressings and tapes can disrupt the surface of the skin. Barrier films and specific strategies to remove straps must be considered. (4) Adhesive removals have a very strong smell that can disturb the infants smelling development. (16) Observation and monitoring of skin condition is important to improve the awareness of healthcare professionals and parents, and to improve good quality of care.

The skin has an important role in the development of humans. The earlier close contact between parents and child the better for future outcomes of their relationship and emotional and social development. (2)

The main recommendations regarding skin care are (14):

1. Leave vernix caseosa to absorb into the skin – do not rub it off.
2. Only bath a preterm infant or an infant who has been ill when he/she is physiologically stable.
3. If necessary, bath a “well” newborn infant when his/her temperature has been within an acceptable range for 2-4 hours after delivery, but preferably delay the first bath until the second or third day of life to assist with skin maturation.
4. Ensure temperature of bath water is maintained at 37°C. Use a bath thermometer.
5. Avoid toiletries and other cleansing products until the infant is at least a month old – use plain water to cleanse the infant’s skin.
6. Only bath a newborn infant 2-3 times a week – “top and tail” in-between bathing.
7. Use the best quality nappy available to the infant – change soiled nappies frequently and cleanse nappy area with plain water or unperfumed, alcohol-free infant wipes.
8. Expose the nappy area as often as possible and consider using a thin layer of barrier ointment in nappy area to protect the stratum corneum – ensure ointments is preservative-free and does not contain antiseptic, fragrance or colourings.
9. Avoid the use of ointments/lotions to improve the appearance of a newborn infant’s skin.
10. Ensure the umbilical cord is kept clean and dry, allowing it to be exposed to air as frequently as possible.

Source

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Lifecycle

5 years/next revision: 2023

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