THAMES VALLEY & WESSEX NEONATAL OPERATIONAL DELIVERY NETWORK

Umbilical Cord Care Guideline

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	Gras-Le Guen et al (2017) Dry Care Versus Antiseptics for Umbilical Cord Care: A Cluster Randomized Trial. **Pediatrics**, Jan 139(1) pii: e20161857. doi: 10.1542/peds.2016-1857. Found at; https://www.ncbi.nlm.nih.gov/pubmed/28008096 Imdad.A et al (2013) Cochrane database of systematic reviews, Umbilical cord antiseptics for preventing sepsis and death among newborns. May 31;5:CD008635. doi: 10.1002/14651858.CD008635.pub2. Karumbi et al (2013) Pediatric Infectious Diseases Journal. Topical Umbilical Cord Care for Prevention of Infection and Neonatal Mortality. Vol 32, No 1pp78-83 Lund.C, et al (2001) Neonatal skin care: Clinical outcomes of the AWHONN/NANN Evidence-based clinical practice guideline JOGNN Jan/Feb pp41-51 Nathan AT (2020). The umbilicus. In: Kliegman RM, St. Geme JW, Blum NJ, Shah SS, Tasker RC, Wilson KM, eds. Nelson Textbook of Pediatrics. 21st ed. Philadelphia, PA: Elsevier; 2020:chap 125. McConnell.T, Lee.C, Couillard.M, Westbrook.W (2004) Trends in umbilical cord care: Scientific evidence for practice, Newborn and infant nursing reviews, Vol 4, No 4, December pp211-22 Parsons.H (2017) Umbilical Care. Great Ormond Street Hospital for Children NHS Foudation trust. Web site address. http://www.gosh.nhs.uk/health-professionals/clinical-guidelines/umbilical-care/ Vural.G, and Kisa.S (2006) Umbilical cord care: A pilot study comparing topical human milk, povidone-iodine and dry care, JOGNN Jan/Feb, pp123-8
Implications of race, equality & other diversity duties for this document	**This guideline must be implemented fairly and without prejudice whether on the grounds of race, gender, sexual orientation or religion**

Umbilical Cord Care Guideline

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1.0 Aim of Guideline

To provide a framework to ensure that all infants on the neonatal unit receive optimal umbilical cordcare.

2.0 Scope of Guidelines

The guideline applies to all neonates who are born in neonatal units and maternity units covered by Thames Valley & Wessex Neonatal ODN. This includes the following hospitals:

Thames Valley		
TRUST	**Hospital**	**Designation**
Oxford University Hospitals NHS Foundation Trust	- John Radcliffe Hospital, Oxford	NICU
Buckinghamshire Healthcare NHS Trust	- Stoke Mandeville Hospital, Aylesbury	LNU
Frimley Health NHS Foundation Trust	- Wexham Park Hospital, Slough	LNU
Milton Keynes University Hospital NHS Foundation Trust	- Milton Keynes General Hospital	LNU
Royal Berkshire NHS Foundation Trust	- Reading	LNU

Wessex		
TRUST	**Hospital**	**Designation**
University Hospital Southampton NHS Foundation Trust	- Princess Anne Hospital	NICU
Portsmouth Hospitals University NHS Trust	- Queen Alexandra Hospital	NICU
Dorset County Hospital NHS Foundation Trust	- Dorset County Hospital, Dorchester	SCU
Hampshire Hospitals NHS Foundation Trust	- Basingstoke and North Hampshire Hospital	LNU
Hampshire Hospitals NHS Foundation Trust	- Royal Hampshire County Hospital, Winchester	LNU
Isle of Wight NHS Trust	- St Mary's Hospital	SCU
University Hospitals Dorset NHS Foundation Trust	- Poole Hospital	LNU
Salisbury NHS Foundation Trust	- Salisbury District Hospital	LNU
University Hospitals Sussex NHS Foundation Trust	- St Richard's Hospital, Chichester	SCU

3.0 Guideline Summary

- Carers should perform hand hygiene (wash hands and/or alcohol gel) before and after touching the baby’s umbilical cord.
- The cord should be kept clean and dry by exposing to the air as much as is practical
- When appropriate, the cord should be positioned outside the baby’s nappy.
- If the cord is contaminated with urine or faeces it should be gently cleaned using water and clean cotton swabs (non-fibre shedding).
- Care that differs from the cord care protocol outlined should only occur under medical direction. direction.
- Skin to skin care should be encouraged if the baby’s condition allows. It promotes the transfer of non-pathogenic bacteria from the parent’s normal skin flora and their colonisation on the baby and its cord.
- Staff and parents should observe the umbilicus and surrounding area for signs of infection.
- Staff should document observations and any care given.
- Parents who are providing care to their baby should be taught the principles of cord care and signs of concern.
- Parents whose baby will be discharged with an umbilical cord still in place should be given written information to reinforce the teaching they should have received on the neonatal unit.

4.0 Guideline Framework

4.1 Background information:

The umbilical cord is the baby's lifeline during pregnancy, but it is no longer needed when the baby is born. Within a few minutes after birth, the cord is clamped and cut close to the navel. The clamp helps to stop bleeding from the three blood vessels in the umbilical cord, two arteries and one vein.' (Cincinnati Children's, 2007) The umbilical cord stump that remains attached to the baby is deprived of its blood supply and will soon start to dry, turn black and stiff. The cord stump will separate in normal circumstances 5 to 15 days after birth.

However, the devitalised tissue of the cord stump can be an excellent medium for bacterial growth, and has been found to be a common route of entry of systemic infection onto the newborn. (British Columbia, 2001) With this knowledge, it has been routine practice for hospitals to advocate the use of cord cleaning regimes and the application of various topical agents to the cord, as attempts to prevent infection. There is however, considerable debate amongst the healthcare professions, about the most effective treatment of newborn umbilical cords, indeed whether any treatment is actually required. It is with this background that we come to write this benchmark.

These guidelines have been produced to direct nursing staff in their care of neonates with an umbilical cord stump attached and are based on research findings and agreed current best practice. For accessibility, the guidelines have been collated under distinct subheadings. However, the reader is strongly advised to read the guidelines in full and to seek the advice and support of more senior or experienced colleagues in the practice setting.

4.2 General Care

For each baby, observation of their umbilical cord should be carried out for all neonates at the point that they require 'cares', and the protocol outlined below, should be followed. 'Cares', is a term used in neonatal units to refer to the clustering of mouth care, nappy change, and repositioning, and is likely to occur between 3 and 12 hours apart, depending on the condition of the baby.

- Before and after contact with the umbilical cord, carers should wash their hands (according to local policy) with soap and water, and after drying their hands should apply alcohol hand rub or put on gloves dependent on local policy.
- The cord should be kept clean and dry by exposing to the air as much as is practical and NOT applying products to it.
- Carers should where possible keep the cord outside the nappy, to encourage drying.
- Carers should be aware that efforts to expose the umbilical cord by folding down the front of a baby's nappy can cause problems where the 'bulked out' front of the nappy then presses onto the umbilical cord, causing abrasion.
- If the cord is contaminated with faeces or urine, it should be gently cleaned using water and clean cotton swabs (non-fibre shedding).
- If the base of the cord requires cleaning, it should be gently cleaned using water and clean cotton swabs (non-fibre shedding).
- Observe the umbilicus and surrounding area for signs of infection, these may include;
  - inflammation and redness of the skin
  - offensive smell
  - discharge or pus
  - distended abdomen
  - change in appearance from this baby's 'normal'
- Care that differs from the protocol outlined above, should only occur under medical direction.
- Report any concerns to the medical team, who should review the umbilicus and recommend any action required. The most common forms of 'treatment' likely to implemented are;
  - thorough cleaning of the area and continued observation
  - swab for MC&S and await results

        - commence oral antibiotics
        - commence intravenous antibiotics
- If carers are directed to apply topical agents to the umbilicus, the product used should be single patient use, to prevent cross contamination.
- Skin to skin care should be encouraged if the baby's condition allows, as such contact between baby and parent promotes the transfer of non-pathogenic bacteria from the parent's normal skin flora and their colonisation on the baby.
- Carers should document observations and any care given. Documentation should be according to local policy and the NMC record keeping guidelines.
- There has been no research found which indicates that removal of the cord clamp has any positive or negative effect upon umbilical cord infection or separation. Therefore the choice to remove the cord clamp prior to separation of the cord will be dictated by local policy or the comfort or clinical needs of the baby (for example, a need for the baby to be positioned prone).
- Having made the choice to remove the cord clamp staff should;
    - Only remove the clamp on a cord that is fully dry, or there is a risk that the cord vessels (vein or artery) will still be viable and the baby could haemorrhage significantly.
    - Use an cord clamp remover, designed for the purpose
    - Use a sterile cord clamp remover
    - Retain the clamp to offer to the baby's parents as a keepsake

4.3 Parents

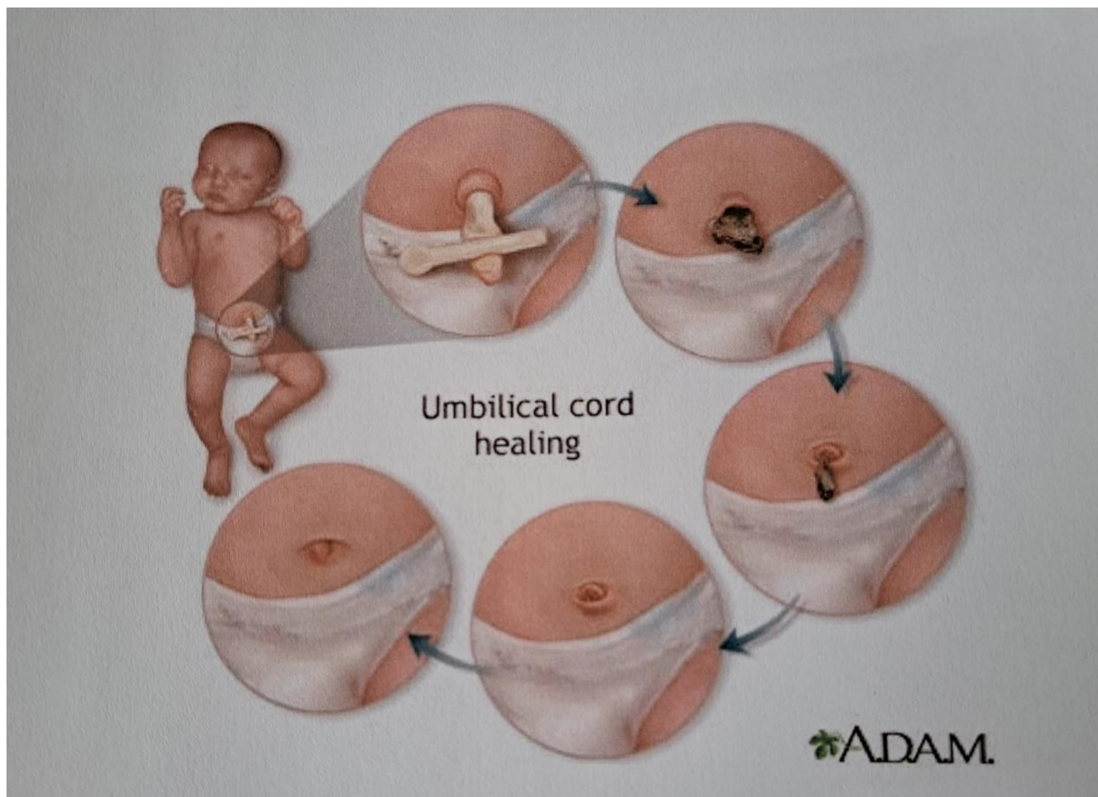
- Parents who are providing care to their baby should be taught the principles of cord care and signs of concerns.
- Parents whose baby will be discharged with an umbilical cord still in place should be given written information to reinforce the teaching they should have received on the neonatal unit.
- Parents should be encouraged to be involved and informed about their baby's umbilical cord care.
- Parents should receive consistent information from staff about umbilical cord care, both on the neonatal unit and after discharge.
- Research has identified that a significant proportion of parents find their baby's umbilical cord a source of revulsion and fear. Staff will need to be understanding and supportive to parents who display these concerns.
- See parents information leaflet in appendix on page 6.

5.0 Appendices

5.1 Cord care information leaflet for parents/ carers
See page 7-8 below.

Umbilical care : a parents' guide

- After the birth of your baby, the umbilical cord is no longer required. It quickly starts to dry out, becoming hard and turning black.
- The cord has no nerves and therefore your baby will not feel any discomfort whilst these changes happen to their umbilical cord.
- The stages of this cord healing process can be seen in the illustration below.



- In order for the remaining cord stump to heal properly please follow the simple instructions below;

Care of the cord

- Wash your hands before and after all baby cares and try not to touch the cord as this will reduce the risk of cross infection.
- Expose the cord stump to the open air as much as possible, and do not cover with bandages or anything else that may restrict the airflow.
- After nappy changes, fold down the nappy under the cord to encourage drying.
- Clothes should be clean and loose to encourage air circulation.

- The cord clamp may be left on, as the weight of it encourages separation.
- If you are bathing your baby, do not immerse the cord in water. Just give them a shallow bath.
- Only clean the cord if it has been contaminated with urine or stools, and use plain water to do this.

Separation

- Separation of the cord stump from baby's tummy occurs between 5-15 days. It may be delayed if your baby has received antibiotics or if the area has become infected.
- During separation small amounts of sticky discharge may be at the junction of the cord and the skin, this is normal.
- Allow the stump to fall off by itself, never pull on the stump in an attempt to remove it. This will allow it to heal without any scar tissue.
- After the cord had separated there may still be a small amount of sticky discharge for a few days. This is normal.

Signs of infection

- Redness around the tummy button area, swelling and tenderness are all signs of infection.
- There may also be bleeding from the area. A yellow/green discharge may be present along with an unpleasant smell.
- Your baby may not feed well, become floppy and less responsive, or may feel very warm- due to a raised temperature.

If you notice any of these symptoms let your midwife, neonatal nurse, health visitor or GP know. Your baby may need antibiotic medicine.

Version Control:

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