



Patient safety & hygiene practice

Prevention of necrotising enterocolitis (NEC)

Manzoni P, Hogeveen M, Schwindt E, Tissières P, Borghesi A

Statement of the standard

Neonatal services implement bundles of care designed to prevent necrotising enterocolitis (NEC).



For parents and family

- Parents are informed by healthcare professionals, prenatally and postnatally, about the benefits of human milk feeding.
- Where human milk-based fortification products are available, parents are informed by healthcare professionals about the benefits of human milk-based fortification over bovine milk-based fortification.
- Mothers are instructed about how to early initiate expressing breast milk.
- Parents are instructed by healthcare professionals about the need for hand hygiene to reduce the risk of nosocomial infections.



For healthcare professionals

- A written unit guideline on the implementation of bundles of care designed to prevent necrotising enterocolitis (NEC) is adhered to by all healthcare professionals.
- Own mother's milk is used where available, donor milk is substituted if necessary, and where available.
- Where human milk-based fortification products are available human milk-based fortifiers should be preferred over bovine milk-based fortifiers.
- Specific probiotic preparation (either *Lactobacillus rhamnosus* GG ATCC53103 or the combination of *Bifidobacterium infantis* Bb-02, *Bifidobacterium lactis* Bb-12, and *Streptococcus thermophilus* TH 4) are used following ESPGHAN.
- Inhibitors of gastric acidity (H2-blockers, proton pump inhibitors, etc.) and unnecessary antibiotics are avoided.
- Appropriate insertion and management of umbilical vein and artery catheters is ensured
- Education and training of all healthcare professionals for the rapid recognition of a developing NEC (early warning clinical signs) and the immediate initiation of the first diagnostic and treatment steps to avoid or reduce late sequelae is provided.

Benefits

Short-term benefits:

- Reduced risk of NEC and comorbidity
- Reduced mortality

Long-term benefits:

- Reduced risk of poor neurodevelopmental outcome
- Reduced risk of poor nutritional outcome including impaired growth and dependence on nutritional devices
- Reduced healthcare costs



For neonatal unit

- A unit guideline on the implementation of bundles of care designed to prevent NEC is available and regularly updated.
- Standardised feeding protocols are available and regularly updated.
- Healthcare professionals in the NICU are regularly educated, trained and updated by specifically trained staff members (parental counsellors) on the role of human milk and breastfeeding in preventing NEC.
- Antibiotic stewardship to reduce unnecessary antibiotics is adopted in each neonatal unit.
- Prenatal and postnatal counselling to the parents and to breastfeeding mothers is provided.
- The proportion of very preterm infants who develop NEC is audited regularly.



For health service

- A national guideline on the implementation of a bundle of care designed to prevent NEC is available and regularly updated.
- Human milk banks are available.

