



Topic Expert Group: Nutrition

Written standards of nutritional practice

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Target group

Preterm and ill term infants, and parents

User group

Healthcare professionals, neonatal units, hospitals, and health services

Statement of standard

All units treating preterm and ill term infants develop and implement guidelines on nutritional care and aim at establishing nutrition support teams, inform and train all healthcare professionals regarding the use of these guidelines on nutritional care, and monitor implementation.

Rationale

The goal is to promote consistent, good quality nutritional care for all preterm and ill term infants to improve clinical outcomes.

Even in the situation where experts agree on optimal nutritional care for very preterm infants (1,2), this may not be translated into practice for many reasons, including different interpretations or opinions, and different levels of understanding or experience amongst healthcare professionals. Recommendations may also not be considered locally applicable or feasible. Often, less nutrition is provided to the sickest infants, who might benefit from it the most, contributing to adverse clinical outcomes. (3)

Practice variation within individual neonatal units can be reduced by the use of standardised feeding protocols. Implementation of a standardised feeding guideline can lead to more rapid attainment of full enteral feeds, reduced requirement for parenteral nutrition, reduced risk of sepsis, necrotising enterocolitis (NEC) and chronic lung disease, and improved growth velocity. (3–9)

Having written standards of practice, based on the other standards of the Topic Expert Group Nutrition, which are adhered to by all staff caring for preterm and ill term infants will promote a more consistent approach and maximise the delivery of optimal nutritional care. It will also allow the care delivered to be monitored in relation to the standards.

The delivery of nutritional care can be facilitated and improved by nutrition support teams. (10) In the neonatal unit, neonatal nutritionists are vital members of the neonatal care team and can supervise the implementation of standardised nutritional guidelines.

Benefits

Short-term benefits

- Increased consistency and quality of nutritional care (4)
- Facilitated care in the neonatal unit (4)



- Improved delivery of nutritional support, meeting a greater proportion of nutrient needs (5,6)
- Improved growth, reduced growth faltering (4–6)
- Reduced requirement for parenteral nutrition (4,5)
- Reduced risk of sepsis, NEC, chronic lung disease (5–9)

Long-term benefits

- Increased rate of growth and better growth measures at discharge (4,5)
- Expected benefits for neurodevelopmental outcomes and other health outcomes (5–9)

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 unit policy and the importance of nutrition.	A (Low quality) B (High quality)	Patient information sheet ¹
For healthcare professionals		
2. A unit guideline on nutritional standards is adhered to by all healthcare professionals.	B (High quality)	Audit report
3. Training on infant nutrition is attended by all responsible healthcare professionals.	A (Low quality) B (High quality)	Training documentation
For neonatal unit		
4. A unit guideline for nutritional care of preterm and ill term infants, involving all groups of healthcare professionals involved in care, is available and regularly updated. (5)	A (Moderate quality) B (High quality)	Guideline
5. Adherence to the guideline is monitored. (4)	A (Moderate quality)	Audit report
6. A nutrition support team is established. (10)	A (Moderate quality)	Audit report

¹ The TEG Nutrition very much supports the need of good communication with families and regular sharing of key information, but it is not in favour of sharing information on each standard by a „parent information sheet“, which is term chosen by the Chair Committee. In our view, sharing multiple parent information sheets bears the risk of overloading families with a plethora of written information during a stressful time period, which may not be very helpful. We suggest to consider other means of sharing information.



For hospital

7. Training on infant nutrition is ensured.	B (High quality)	Training documentation
8. A nutrition support team is proactively supported.	A (Low quality)	Audit report

For health service

9. A national guideline for nutritional care of preterm and ill term infants is available and regularly updated.	B (Moderate quality)	Guideline
10. Compliance of each neonatal unit with their unit guideline is monitored as a quality of care indicator.	A (Low quality)	Audit report

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 unit N/A	
For hospital N/A	
For health service	
<ul style="list-style-type: none">Benchmark nutritional outcomes against similar services. (5)	A (High quality)

Getting started

Initial steps
For parents and family <ul style="list-style-type: none">Parents are verbally informed by healthcare professionals about unit policy and the importance of nutrition.
For healthcare professionals <ul style="list-style-type: none">Attend training on infant nutrition.
For neonatal unit <ul style="list-style-type: none">Develop and implement a unit guideline on infant nutrition.Develop information material on nutrition for parents.Develop a nutrition support team.
For hospital <ul style="list-style-type: none">Support healthcare professionals to participate in training on infant nutrition.Support the development of a nutrition support team.



For health service

- Develop and implement a national guideline for nutritional care of preterm and ill term infants.

Description

Studies have shown that the provision of nutrition support is influenced in practice by the clinical status of a preterm infant. Newborn infants who were perceived to be more critically ill, based on their ventilation status at day seven, received significantly less nutritional support in the first three weeks than their counterparts, who were perceived to be more medically stable. The risks of adverse outcomes including poorer growth velocity, increased rates of late-onset sepsis, death, moderate or severe bronchopulmonary dysplasia, longer hospital stays, and worse neurodevelopmental outcomes at 18-22 months among the sicker infants were associated with the total daily energy intake during the first seven days. (3)

Differences exist between neonatal centres in terms of weight gain related to processes that are unique to the centres where higher weight gains are achieved. In one study, these "meaningful differences" were then provided to the centres where weight gains were lower, resulting in improvements in outcomes at 76% of the sites. (11)

Source

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3. Ehrenkranz RA, Das A, Wrage LA, Poindexter BB, Higgins RD, Stoll BJ, et al. Early nutrition mediates the influence of severity of illness on extremely LBW infants. *Pediatr Res.* 2011 Jun;69(6):522–9.
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9. Senterre T. Practice of enteral nutrition in very low birth weight and extremely low birth weight infants. *World Rev Nutr Diet*. 2014;110:201–14.
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11. Bloom BT, Mulligan J, Arnold C, Ellis S, Moffitt S, Rivera A, et al. Improving growth of very low birth weight infants in the first 28 days. *Pediatrics*. 2003 Jul;112(1 Pt 1):8–14.

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Lifecycle

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