

Topic Expert Group: Education and training of the multidisciplinary team working in neonatology

A common neonatal medical training curriculum

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Target group

All doctors working in neonatal care

User group

Parents, healthcare professionals, professional societies, education providers, health services, and regulators of the profession

Statement of standard

All doctors providing care to infants and their families receive training using a competency based curriculum and assessment framework.

Rationale

Neonatal outcomes have been shown to be associated with the level of training of medical and nursing staff, as well as adequate staffing levels. It has clearly been shown that healthcare professionals' education and consistent evidence-based practice shorten the duration of hospitalisation. (1,2)

In 1988, the European Society of Paediatric Research (ESPR) Working Group on Neonatology recognised the immediate need to specify minimum training requirements for the accreditation of neonatologists throughout Europe. (3) To ensure that infants and families receive standardised, and evidence-based quality of care, the European Database of 30 member countries from the Union of European Medical Specialties (UEMS) has shown a very high degree of consensus on key skills and competencies necessary to practice neonatology. (3) Consequently, the European Board of Neonatology (EBN), developed a Curriculum and Assessment Framework (3), which was endorsed by the European Board of Paediatrics (EBP) in 2020. The curriculum supports the harmonisation of national programmes for subspecialist training in neonatology throughout Europe, aiming to establish unified training in neonatology by clearly defined standards. (4)

Benefits

- Reduced mortality and morbidity (2)
- Decreased rates of cerebral palsy and retinopathy of prematurity (5)
- Consistency in quality of care delivery in neonatology (consensus)
- Improved communication skills between medical teams and families and other members of the multi-disciplinary NICU teams (6–8)
- Harmonised standards of education and training for doctors practising neonatal intensive care through a common European curriculum (consensus)

Components of the standard

Component	Grading of evidence	Indicator of meeting the standard
For parents and family		
1. Parents contribute to the medical education programmes.	B (Low quality)	Training documentation
For healthcare professionals		
2. Neonatologists are qualified in the sub-specialty as evidenced by the following criteria: Registered trainees have completed a period of at least three years with a formal mentor, responsible for assessing and recording the competence level of the trainee within the sub-specialty. Completion of education links the following theory and practice elements: <ul style="list-style-type: none"> • Theory modules relating to the neonate and their family within neonatology at all levels of care (Level 1-3). • Management of resuscitation, cardiorespiratory intensive care, thermoregulation, neurology, haematology and blood product transfusion, genetics, metabolism and endocrine disorders, pharmacology, nutrition, feeding, gastro-intestinal and hepatic disease, immunity and infection, transport of the infant (NB: List is not exclusive and may be extended to suit national standards). • Clinical decision-making skills, ward organisation, advanced parent counselling and communication skills on congenital anomalies and genetic disorders, family-centred developmental care and care of the well newborn infant, as well as end-of-life care. • A record of tuition and teaching in form of portfolio allows provision of evidence of attended educational activities. 	B (Moderate quality)	Certificates of award, professional portfolio
For neonatal unit		
3. Infrastructure for educational programmes is provided (see NICU design).	B (Moderate quality)	Audit report

4. Leadership in every neonatal unit should strive to ensure that there is a culture of teaching and learning in the unit.	B (Low quality)	Healthcare professional feedback
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For hospitals

5. Appropriate policies and standards for the human resources departments are in place to ensure staff recruitment focusses only on appropriately educated and trained physicians.	B (Low quality)	Healthcare professional feedback
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For professional societies

6. Standards of care, including competencies at the local level are developed and regularly updated, disseminated and promoted. (3)	B (Moderate quality)	Guideline
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For education providers

7. A (post) graduate programme focused on neonatal medicine, including the following domains is provided: neonatal physiology and pathophysiology, family-centred care, clinical practice, leadership and teamwork, professional development and research. (3)	B (Moderate quality)	Training documentation
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8. Core elements of training in neonatal medicine are included in educational curriculum of physicians taking care of infants. (3)	B (Moderate quality)	Training documentation
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Health service and regulators of the profession

9. Common national training frameworks aligned with the relevant European Qualification Framework are available and regularly updated.	B (High quality)	Training documentation
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Where to go – further development of care

Further development

Grading of evidence

For parents & family

<ul style="list-style-type: none"> • Parents are given the opportunity to review and revise neonatal medical curricula. 	B (Very low quality)
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For healthcare professionals	
<ul style="list-style-type: none"> Undertake continuous professional development (CPD) to remain up-to-date and sustain expertise (maintenance of competence) (see Education & training). (9) 	B (High quality)
<ul style="list-style-type: none"> Acquire new or expanded skills and abilities so that practice can evolve over time in response to practice needs and interests (advanced expertise). (9) 	B (High quality)
<ul style="list-style-type: none"> Provide opportunities to maintain competence in procedural, communication, and other professional skills. (9) 	B (High quality)
<ul style="list-style-type: none"> Provide a train-the-trainer framework for team members to act as supervisors and mentors. 	B (High quality)
For neonatal unit	
<ul style="list-style-type: none"> Help build a culture of regular teaching and training throughout all professions. 	B (Moderate quality)
<ul style="list-style-type: none"> Nurture a collaborative approach for teamwork. 	B (Moderate quality)
For hospital	
<ul style="list-style-type: none"> Support healthcare professionals to undertake continuous professional development (CPD). 	B (High quality)
For professional societies	
<ul style="list-style-type: none"> Develop, disseminate and promote care competencies at regional, national, and international level. (9) 	B (High quality)
For education providers	
<ul style="list-style-type: none"> Provide specialty national training programmes in line with agreed subspecialist neonatal training in Europe, as outlined by the ESPR/EBN assessment framework. (10) 	B (High quality)
<ul style="list-style-type: none"> Offer access to professional development programmes which foster the development of personal skills and competencies in leadership, such as counselling and managerial, leadership, and teaching roles. (9) 	B (High quality)
For health service and regulators of the profession	
<ul style="list-style-type: none"> International mutual recognition of specialty qualifications in neonatal medicine is facilitated. 	B (Moderate quality)

Getting started

Initial steps

For parents and family

- Parents are involved in the delivery of medical education programmes.

For healthcare professionals

- Attend broader specialty training through a university administered neonatal online training and education programme. (11)

For neonatal unit

N/A

For hospital

- Support healthcare professionals to participate in broader specialty training.

For education providers

- Promote and offer access to professional development programmes.
- Include neonatal care content in undergraduate curricula.

For health service

- Provide opportunities for neonatal placements during clinical training.

- Develop and implement common training frameworks aligned with the relevant European Qualifications Framework. (10)

Source

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5. Horbar JD, Plsek PE, Leahy K, NIC/Q 2000. NIC/Q 2000: establishing habits for improvement in neonatal intensive care units. Pediatrics. 2003 Apr;111(4 Pt 2):e397-410.
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11. Neonatal Online Training & Education [Internet]. NOTE. [cited 2018 May 15]. Available from: <https://moodle.neonataltraining.eu/>

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Lifecycle

3 years/next revision: 2025

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