

# **ESN**

THE EUROPEAN SOCIETY  
FOR NEONATOLOGY

## **Assessment Framework for Specialist Trainees in Neonatal Medicine**

**Version 1** Approved by the European Board of Paediatrics, January 2007

## **The use of the Curriculum, the Assessment Framework and completion of the Portfolio**

As a record of training, each trainee should prepare a Portfolio of achievement to include the details of the assessment framework.

The Curriculum defines in detail the knowledge, skills and attributes which define Specialty Training in Neonatal Medicine and the core competencies that are expected of a trainee. This syllabus and curriculum have been approved by the European Board of Paediatrics, now known as the Paediatric Section of UEMS. The trainee should use the Assessment Framework in consultation with his or her educational supervisor to plan an individualised training programme.

We have defined 13 competencies, which all Specialty Trainees will achieve. Each is divided into three levels. All trainees must achieve Level 3 for each key competency. The trainee's progression may be assessed by the level of achievement attained each year during the training period.

An individual may have already achieved level 3 competency in one or more areas at the commencement of specialty training. The assessor must ensure that these skills are maintained in further years whilst concentrating on improving skills in other areas.

The Assessment Framework comprises a minimal record of clinical progression. In addition the candidate's portfolio should provide:

- ❑ Evidence of completion of other key areas of the syllabus, in particular experience of neurological and developmental assessment, of neonatal surgical conditions and of fetal medicine.
- ❑ Reflective notes covering each of the defined key competency areas, suitably referenced, based on a single case for each area. These should not be longer than 2 sides of A4 (10 point Arial type, 2cm margins; exclusive of references) and be read by, discussed with and appraised by their supervisor.
- ❑ Evidence of attendance at a minimum of three regional/national/international academic meetings each year, with a description of the learning points attained.
- ❑ A record of continuing professional educational activities undertaken, other than the above, including locally organised educational opportunities.
- ❑ Copies of abstracts submitted and publications achievement during the trainee's career.
- ❑ Reports of three audits performed by the trainee (alone or as part of a team) during Higher Specialist Training (years 3-5).
- ❑ Evidence of certification for courses claimed in the Competency Assessment.

## Key Competencies

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### 1. Resuscitation

**Competency:** The trainee will be able to institute and lead neonatal resuscitation both of the term and preterm baby. The trainee must have demonstrated a full understanding of the physiology and treatments involved.

- Level 1**
- Certification of a suitable advanced life support course, which includes the care of the newborn (NLS; PALS; APLS or equivalent)
  - Can demonstrate ability to intubate successfully.
- Level 2**
- Has advanced resuscitation skills – has knowledge and skills to undertake the technically difficult resuscitation
  - Has demonstrated team leadership in resuscitation situations.
- Level 3**
- Able to take full decisions in ethically difficult situations (prematurity, malformation, failed resuscitation) (*essential*).
  - Reached instructor status on a suitable advanced life support course as above (*desirable*).

### Trainee and assessor must agree Level attained after each year of training

Year 1	1 / 2 / 3	Assessor	Year 2	1 / 2 / 3	Assessor	Year 3	1 / 2 / 3	Assessor
		Trainee			Trainee			Trainee

Comments:

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Skills acquired:

- Mask ventilation
- Intubation
- Chest compressions
- Umbilical venous catheterisation

Please list others you have acquired

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Formal training undertaken:

## 2. Neurology

**Competency: The trainee will demonstrate proficiency at clinical assessment. Investigation (including cerebral ultrasound scanning) and management of a range of neurological disorders, including preterm and term brain injury, congenital malformations, intracranial trauma and seizures**

- Level 1**
- Able to carry out a structured neurological examination
  - Can diagnose and initiate first line management for encephalopathy and seizures
- Level 2**
- Can formulate ongoing management plans for common neurological conditions (encephalopathy, seizures, IVH)
  - Able to perform neurological and developmental assessment of the newborn and of babies to 2 years of age
- Level 3**
- Can initiate investigation of rare and complex neurological and neuromuscular disorders.
  - Can discuss the use of MRI, CT scanning, EEG in the investigation of neurological disease
  - Able to perform and interpret a cerebral ultrasound examination (*essential*) and have attended a structured course (*desirable*)

### Trainee and assessor must agree Level attained after each year of training

Year 1	1 / 2 / 3	Assessor	Year 2	1 / 2 / 3	Assessor	Year 3	1 / 2 / 3	Assessor
		Trainee			Trainee			Trainee

Comments:

Suggested skills to be acquired:

- Neurological assessment scheme
- Gestational age assessment
- Lumbar puncture
- Ventricular tap
- Measurement of CSF pressure
- Cerebral ultrasound scanning

Please list others:

Formal training undertaken:

### 3. Communication skills and counselling

**Competency:** The trainee will demonstrate increasing skills in communication with parents and staff, both individually and as part of a team, during their training. This includes experience at breaking bad news, handling perinatal death and discussing prognosis with parents

- Level 1**
- Can understand and have discussed principles behind counselling and communicating information to parents.
  - Is supportive in team working in neonatal intensive care
- Level 2**
- Has had experience of counselling parents anticipating an extremely preterm delivery
  - Has observed counselling of parents of babies who are dying or are at high risk of disability, the disclosure of antenatal diagnoses or the disclosure of diagnosis of cerebral palsy in outpatients.
- Level 3**
- Has counselled parents of a baby who is dying or at high risk of disability and requested permission for autopsy.
  - Has led a prenatal counselling session and undertaken bereavement counselling under supervision
  - Has demonstrated the necessary communication skills to make the concepts and mechanisms of genetic diseases understandable to parents, using non-technical language.

#### Trainee and assessor must agree Level attained after each year of training

Year 1	1 / 2 / 3	Assessor	Year 2	1 / 2 / 3	Assessor	Year 3	1 / 2 / 3	Assessor
		Trainee			Trainee			Trainee

Comments:

Please list skills acquired:

Formal training undertaken:

- Teaching Course (e.g. teaching the teachers course)
- Training in appraisal/educational supervision/mentoring
- Targeted courses (e.g. How to break bad news)

#### 4. Congenital anomalies and genetic disease

**Competency: The trainee will be able to recognise common congenital anomalies, to investigate babies with such lesions and to use literature and database searches to identify rare conditions and communicate such information to parents**

- Level 1**  Recognise common syndromes (e.g. trisomy 21, trisomy 18, VACTERL) and have observed counselling of parents by a Consultant.
- Level 2**  Able to use common texts and genetic/abnormality databases to identify rare disorders.
- Can obtain a genetic history and understands genetic investigations
- Level 3**  Able to plan diagnostic and clinical management of a baby born with a congenital anomaly with a multidisciplinary team
- Has undertaken counselling of parents whose baby has a genetic condition.

#### Trainee and assessor must agree Level attained after each year of training

Year 1	1 / 2 / 3	Assessor	Year 2	1 / 2 / 3	Assessor	Year 3	1 / 2 / 3	Assessor
		Trainee			Trainee			Trainee

Comments:

Please list skills acquired, e.g.:

- Use of common genetics and dysmorphology databases

Malformations encountered during training:

## 5. Cardiorespiratory intensive care

**Competency:** The trainee will be able to institute and maintain full cardiorespiratory intensive care for preterm and sick term newborn babies. This will include a full working knowledge of the principles and application of a range of ventilatory modalities, of circulatory support and the trainee must be able to manage complications. In addition the trainee must be able to plan care for the baby with chronic respiratory disease and be aware of the potential long-term complications.

	Level 1	Level 2	Level 3
<b>Mechanical Ventilation</b>	<input type="checkbox"/> Able to institute ventilatory support and administer surfactant	<input type="checkbox"/> Understand and use different ventilatory modalities	<input type="checkbox"/> Supervise whole respiratory course of sick baby with RDS, including weaning from ventilator, use of sedation and muscle relaxants
<b>Circulation</b>	<input type="checkbox"/> Able to make clinical assessment of adequacy of neonatal circulation and institute support for hypotension	<input type="checkbox"/> Understand the different pharmacological effects of inotropic drugs and their use.	<input type="checkbox"/> Diagnose and manage complex circulatory problems, including PPHN and cardiac tamponade; understands indications for ECMO.
<b>Patent arterial duct</b>	<input type="checkbox"/> Able to make clinical diagnosis	<input type="checkbox"/> Able to select and monitor appropriate medical or surgical management	<input type="checkbox"/> Able to identify patent arterial duct using ultrasound ( <i>desirable</i> )
<b>Complications</b>	<input type="checkbox"/> Able to diagnose and treat common complications of mechanical ventilation (e.g. pneumothorax, displaced or obstructed tracheal tube)	<input type="checkbox"/> Understands the principles of management of the difficult airway (e.g. Pierre Robin anomaly)	<input type="checkbox"/> Able to manage complex respiratory problems including PIE, sub-glottic stenosis, pulmonary hypoplasia, chylothorax, diaphragmatic hernia.
<b>Chronic lung disease</b>	<input type="checkbox"/> Understand the aetiology and progression of baby with CLD	<input type="checkbox"/> Understands and able to plan respiratory, nutritional and pharmacological support for CLD.	<input type="checkbox"/> Be able to manage long term ventilatory support, home oxygen treatment and ongoing outpatient management of babies with CLD

### Trainee and assessor must agree Level attained after each year of training

Year 1	1 / 2 / 3	Assessor	Year 2	1 / 2 / 3	Assessor	Year 3	1 / 2 / 3	Assessor
		Trainee			Trainee			Trainee

Comments:

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Suggested skills to be acquired:

- |   |   |                                   |
|---|---|-----------------------------------|
| <input type="checkbox"/> Intubation   | <input type="checkbox"/> Use of patient triggered ventilation | Please list other skills acquired |
| <input type="checkbox"/> Identification of pneumothorax using transillumination | <input type="checkbox"/> Use of high frequency ventilation    |                                   |
| <input type="checkbox"/> Chest tube placement                                   | <input type="checkbox"/> Use of nitric oxide                  |                                   |
| <input type="checkbox"/> Umbilical arterial and venous catheterisation          | <input type="checkbox"/> Use of tidal volume ventilation      |                                   |
| <input type="checkbox"/> Peripheral arterial cannulation                        |   |                                   |
| <input type="checkbox"/> Interpretation of the chest X-ray                      |   |                                   |

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Formal training undertaken

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## 6. Fluid balance, thermoregulation and renal failure

**Competency:** The trainee will be able to initiate and manage the thermal environment of preterm and term babies, and manage fluid balance in such babies, demonstrating a full understanding and knowledge of the underlying physiology - with special reference to the rapid postnatal changes in body water distribution and transepidermal water loss. The trainee will be able to diagnose and initiate treatment of renal failure.

- Level 1**
- Interpret blood and urine test results in context of normal values, postnatal age and gestation
  - Prescribe appropriate fluid maintenance for babies who require intravenous therapy, and adjust the prescription according to the thermal environment; be able to define and diagnose renal failure in babies. Understand the thermo-neutral environment.
- Level 2**
- Supervise the entire fluid balance regimen in a complex case, arranging and interpreting the appropriate laboratory investigations.
- Level 3**
- Able to manage complex fluid balance problems in very preterm babies; able to manage renal failure including deciding when dialysis is indicated.

### Trainee and assessor must agree Level attained after each year of training

Year 1	1 / 2 / 3	Assessor	Year 2	1 / 2 / 3	Assessor	Year 3	1 / 2 / 3	Assessor
		Trainee			Trainee			Trainee

Comments:

Suggested skills to be acquired:

- Intravenous cannulation
- Percutaneous long line insertion

Please list other skills acquired:

## 7. Haematology and transfusion

**Competency: To be able to diagnose and manage the range of haematological disorders found in newborn babies. To be conversant with the full range of blood products available for transfusion and the appropriate use of each.**

- Level 1**  Has knowledge of the normal range of haematological values in the newborn, including coagulation values. To be able to prescribe blood transfusion appropriately and discuss the potential complications.
- Level 2**  Can describe and discuss cases of haematological disorders diagnosed and treated by the trainee.
- Level 3**  Has experience of management of the range of haematological disorders of babies.  
 Can use blood products appropriately and effectively, including exchange transfusion.

### Trainee and assessor must agree Level attained after each year of training

Year 1	1 / 2 / 3	Assessor	Year 2	1 / 2 / 3	Assessor	Year 3	1 / 2 / 3	Assessor
		Trainee			Trainee			Trainee

Comments:

Suggested skills to be acquired:

- Exchange transfusion
- Dilutional exchange transfusion

## 8. Metabolism and endocrine disorders

**Competency:** The trainee will demonstrate proficiency in the recognition, assessment, investigation and management of the more common and important metabolic and endocrine disorders, including :-

- Level 1**  Is able to manage common metabolic disturbances including hypoglycaemia, neonatal jaundice and electrolyte abnormalities.
- Level 2**  Is able to recognise and institute emergency treatment for inborn errors of metabolism and endocrine abnormalities, including recognition, investigation and management of babies with ambiguous genitalia.
- Level 3**  Can develop a multidisciplinary management plan for babies with metabolic and endocrine disorders.

### Trainee and assessor must agree Level attained after each year of training

Year 1	1 / 2 / 3	Assessor	Year 2	1 / 2 / 3	Assessor	Year 3	1 / 2 / 3	Assessor
		Trainee			Trainee			Trainee

Comments:

Please list skills acquired:

## 9. Nutrition, feeding and gastro-intestinal disease

**Competency: The trainee will understand the importance of neonatal nutrition and be able to provide comprehensive nutritional support to well and sick newborn babies, including the recognition and treatment of common complications**

- Level 1**
- Understands the importance of breast milk and is able to discuss feeding problems with the parents,
  - Can establish nutritional support, including prescription of intravenous nutrition
  - Able to diagnose & initiate treatment of necrotising enterocolitis.
- Level 2**
- Able to prescribe and manage intravenous nutrition, to be aware of the likely complications of intravenous nutrition and manage problems of feed intolerance.
  - Can manage the medical course of a child with necrotising enterocolitis.
- Level 3**
- Able to formulate a management plan for nutritional support for a sick newborn baby throughout their clinical course and can discuss the role of early nutrition in determining long term outcome.
  - Able to manage pre- and post-operative care for a child with congenital gastrointestinal anomalies and those with hepatobiliary disease

### Trainee and assessor must agree Level attained after each year of training

Year 1	1 / 2 / 3	Assessor	Year 2	1 / 2 / 3	Assessor	Year 3	1 / 2 / 3	Assessor
		Trainee			Trainee			Trainee

Comments:

Please list skills acquired:

## 10. Immunity and infection

### Competency: Understand the development of immunity and the vulnerability of the newborn to infection

- Level 1**
- Understand perinatal risk factors and signs and symptoms of early and late onset infections.
  - Able to manage surveillance and preventative measures in infection control.
  - Able to counsel parents regarding immunisation following neonatal intensive care .
- Level 2**
- Has detailed understanding of the mode of action and regimens of antibiotics and of investigation and management of common perinatal and neonatal infections.
- Level 3**
- Can recognise and manage complex infections such as fungal infections, HIV and intrauterine infection.
  - Understands the multidisciplinary approach and can manage a nursery epidemic.

### Trainee and assessor must agree Level attained after each year of training

Year 1	1 / 2 / 3	Assessor	Year 2	1 / 2 / 3	Assessor	Year 3	1 / 2 / 3	Assessor
		Trainee			Trainee			Trainee

Comments:

### Suggested skills to be acquired:

- Venepuncture
- Lumbar puncture
- Suprapubic aspiration
- Ventricular tap

Please list other skills acquired

## 11. Family care and care of the well newborn baby

**Competency: The trainee should have a wide knowledge of normal development, common minor problems and morphological variation and the importance of communication with other health care professionals and the parents**

- Level 1**
- Demonstrate examination of the normal baby including psychosocial aspects and able to provide parental advice on feeding.
  - Able to manage common neonatal problems, e.g. jaundice, hip dysplasia.
  - Able to discuss the role of neonatal screening tests (PKU, Thyroid, Hearing) with parents
- Level 2**
- Able to teach and supervise midwives, nurses and doctors providing routine postnatal family support
  - Able to teach parents basic life support
- Level 3**
- Knowledge of legal procedures in child protection, social services, fostering and adoption

### Trainee and assessor must agree Level attained after each year of training

Year 1	1 / 2 / 3	Assessor	Year 2	1 / 2 / 3	Assessor	Year 3	1 / 2 / 3	Assessor
		Trainee			Trainee			Trainee

Comments:

Please list skills acquired, e.g.:

- Examination of the newborn baby

Formal Courses Attended

- Child Protection Course

## 12. Ward Organisation / Management Skills / Clinical Governance

**Competency:** The trainee will have demonstrated skills at leading clinical rounds, be able to carry out the administrative duties required to run a neonatal unit and will have organised and attended perinatal meetings, unit meetings and clinical governance meetings.

- Level 1**
- Has experience of organising duty rotas, annual leave and study leave
  - Shows an understanding of the issues and importance of clinical governance
- Level 2**
- Has organised perinatal and unit meetings
  - Able to conduct ward rounds and delegate tasks appropriately
- Level 3**
- Has attended clinical governance meetings (*essential*) and taken a lead role in such meetings (*desirable*)
  - Has attended a recognised management course (*essential*)
  - Has taken part in the investigation of an clinical incident.

### Trainee and assessor must agree Level attained after each year of training

Year 1	1 / 2 / 3	Assessor	Year 2	1 / 2 / 3	Assessor	Year 3	1 / 2 / 3	Assessor
		Trainee			Trainee			Trainee

Comments:

Please list skills acquired:

Formal Courses Attended

List Audit projects undertaken (include summaries in portfolio)

- Management course

### 13. Transport of the newborn baby

**Competency: The trainee will be competent at retrieval and transport of the sick newborn baby and will be able to teach others to carry out transfers.**

- Level 1**
- Has thorough knowledge of equipment used during neonatal transport and of the team approach to transfer/safety aspects
  - Has been on a neonatal transport as an observer
- Level 2**
- Able to perform transfer of sick medical or surgical newborn baby, including ability to deal with emergencies arising during the journey (e.g. extubation, loss of primary oxygen source)
  - Aware of the need to be sensitive to the needs and efforts of the referring hospital
- Level 3**
- Able to take full decisions about clinical suitability for transfer and placement of the baby, and to supervise a transfer remotely (e.g. able to provide telephone advice)
  - Assessment of clinical competency of staff to perform transfer

#### Trainee and assessor must agree Level attained after each year of training

Year 1	1 / 2 / 3	Assessor	Year 2	1 / 2 / 3	Assessor	Year 3	1 / 2 / 3	Assessor
		Trainee			Trainee			Trainee

Comments:

Suggested skills to be acquired:

- Set-up of the locally available transport equipment (ventilator, incubator, monitoring equipment)

Please list other skills and keep a log of experience at transfer



**Evidence of Other Experience: (expand as necessary)****Fetal Medicine:**

Dates experience obtained	
Supervisor	
Summary of experience obtained	

**Neurological and developmental follow up:**

Dates experience obtained	
Supervisor	
Summary of experience obtained	

**Other relevant experience (repeat as necessary):**

<b>Subject:</b>	
Dates experience obtained	
Supervisor	
Summary of experience obtained	

**Please add further pages to portfolio to record other aspects of training, e.g.:**

- Reflective notes
- Regional/supra-regional meetings attended and learning points
- Log of local education opportunities
- Audit projects
- Publications, etc