

Mapping of BPNA NeoNATE and Distance Learning Neonatal Neurology Unit to General Paediatric, Neonatal Medicine and Paediatric Neurology Competencies

Based on: RCPCH Curriculum for Paediatric Training: General Paediatrics Level 1,2 and 3 Training, Revised July 2013
 RCPCH Curriculum for Paediatric Training: Neonatal Medicine Level 1,2 and 3 Training, September 2010
 RCPCH Curriculum for Paediatric Training: Paediatric Neurology Level 1,2 and 3 Training, September 2010

| Neonatology competencies | General Paediatric ST1-3 | General Paediatric ST4-5 | General Paediatric ST 6-8 | Neonatal GRID trainees | Neurology GRID trainees |
|--|--------------------------|--------------------------|---------------------------|------------------------|-------------------------|
| <i>General neonatology</i> | | | | | |
| Know and understand the effects of antenatal and perinatal events on outcome | X | X | | | |
| Understand the long term sequelae of prematurity and begin to recognise those at risk | X | X | | | |
| Know how to interpret radiological investigations including basic features of cranial ultrasound and discuss basic findings with parents | | | | | |
| <i>BIRTH DEPRESSION</i> | | | | | |
| Know the causes and possible outcomes | X | | | | |
| Know the criteria before perinatal asphyxia can be diagnosed | X | | | | |
| Understand the physiological effects of hypoxic-ischaemic insult | X | | | | |
| Understand the long-term implications of hypoxic-ischaemic damage | | X | | | |
| Be able to recognise management to prevent secondary damage | | X | | | |
| Be able to initiate management to prevent secondary damage | | | X | X | |
| Understand the long-term implications of hypoxic-ischaemic damage | | | | X | |

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|--|--------------------------|--------------------------|---------------------------|------------------------|-------------------------|
| <i>Neonatal seizures or abnormal neurological status including the floppy baby</i> | | | | | |
| Understand the aetiology and prognosis of abnormal neurological status | X | | | | |
| Know about periventricular haemorrhage and leucomalacia | X | | | | |
| Know about the management of post-ventricular hydrocephalus | X | | | | |
| Know the possible causes and effects of seizures | | X | | | |
| Know the possible causes of abnormal tone | | X | | | |
| Be able to perform a neurological assessment | X | | | | |
| Be able to recognise the basic features of cranial ultrasound scans | X | | | | |
| Be able to recognise and initiate management of seizures | X | | | | |
| Be able to manage the newborn infant with seizures using appropriate drug therapy | | | | | |
| Know the possible causes and effects of neonatal neuromuscular conditions | | | | X | |
| Be able to initiate management and investigation of neonatal neuromuscular conditions | | | | X | |
| How experience of how bad news is communicated to parents | | X | | | |
| Understand the use of antenatal diagnosis and the role of fetal medicine | X | | | | |
| Understand the impact on parents of the birth of a baby with serious congenital abnormalities or potential disabilities and the ensuing grief due to loss of the expected normal child | X | | | | |
| Known and understand how fetal anomaly is detected | | | X | X | |
| Understand the aetiology of IVH | | | | X | |

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| Understand the severity scoring system and the short and long-term implications of IVH | | | | X | |
| Understand the implications for and management of post-haemorrhagic ventricular dilatation | | | | X | |
| Understand the long-term outcome and be able to communicate effectively with staff and other parents | | | | X | |
| <i>Periventricular leukomalacia</i> | | | | | |
| Understand the pathophysiology of periventricular leukomalacia | | | | X | |
| Understand the long-term implications of PVL | | | | X | |
| Neurology and Neurodisability competencies | | | | | |
| <i>General</i> | | | | | |
| Be able to examine the nervous system of a newborn baby | X | | | | |
| Know and understand the pathophysiology of the effects of prematurity | X | | | | |
| Be able to perform a reliable assessment of the neuro-developmental status at key stages, including the newborn period | X | | | | |
| Have the knowledge and skills to be able to initiate management of children with neurological and neurodisabling conditions in acute settings and know when and whom to call for help (in newborns) | X | | | | |
| Be able to recognise, initiate diagnostic tests and outcome the management of common disorders (in newborns) | X | | | | |
| Understand the principles and use of neuro-radiological imaging (in neonates) | X | | | | |
| Have a basic understanding and experience of neurophysiological tests | X | | | | |

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| (aEEG and EEG) | | | | | |
| Make appropriate use of neurodiagnostic tools, seeking expert advice appropriately about proceeding with testing or not, including in the emergency setting and about interpretation of results (in newborns) | | | X | | |
| Be able to prescribe and monitor therapy for the breadth of neurological and developmental disorders, recognising the limits of their own expertise, showing awareness of guidelines and seeking expert advice appropriately | | | X | | |
| Be able to manage straightforward cases of common neurological and developmental disorders, recognising the limits of own expertise, showing awareness of guidelines and seeking advice appropriately | | | X | | |
| <i>Seizures</i> | | | | | |
| Know the important non-epileptic paroxysmal phenomena in neonates | | | | | x |
| Know the common causes of seizures in newborn babies | X | | | | |
| Be aware of epileptic syndromes (in newborns) | X | x | | | |
| Know about the long term implications of epilepsy (in newborns) | x | | | | |
| Know about the long term implications of epilepsy, including different epilepsy syndromes and the risk of learning difficulties, accident or sudden death | x | | | | |
| Understand the principles of initial and continuing anticonvulsant therapy in babies | x | | | | |
| Be able to initiate treatment for acute continuing seizures | X | x | | | |
| Be able to form a differential diagnosis | X | | | | |
| Understand the place and principles of the EEG and neuro-imaging in investigation | X | | | | |
| Understand the limitations of EEG in relation to establishing a diagnosis of epilepsy | | | | | x |

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| Understand the role of EEG in syndromic diagnosis of epilepsy | | | | | x |
| Be able to formulate a syndromic diagnosis of epilepsy (in newborns) | | | | | X |
| Be able to lead early treatment for acute continuing seizures (in newborns) | | | | | x |
| <i>Acute encephalopathy</i> | | | | | |
| Know the causes of encephalopathy (in newborns) | | | | | x |
| Know the clinical, neurophysiological and neuro-radiological indicator of prognosis after acquired brain injury (in newborns) | | | | | x |
| Be able to lead investigation for causes of acute non-traumatic encephalopathy in all age groups including neonates | | | | | X |

| <i>Acute focal neurological signs</i> | | | | | |
|--|---|---|---|---|--|
| Understand the implications of acute focal neurological signs (in newborn babies) | X | | | | |
| Understand the principles of investigation (in newborn babies) | X | | | | |
| Be able to demonstrate and interpret the signs | X | X | | | |
| Begin to gain experience of interpretation of MRI scans (in newborn babies) | X | X | | | |
| Be able to give diagnoses to parents, and be able to share difficult information effectively and compassionately | | | X | | |
| <i>Hypotonia, neuropathies and myopathies</i> | | | | | |
| Know the common possible causes of hypotonia | X | | | | |
| Know about the relevant neurophysiological and metabolic investigations | X | | | | |
| Be able to demonstrate the signs | X | | | | |
| Be able to form a likely differential diagnosis | X | | | | |
| Be able to interpret the signs | | X | | | |
| Be able to initiate the appropriate tests | | X | | | |
| Be able to initiate and interpret appropriate tests, seeking expert advice as appropriate | | | X | | |
| Know the genetic and electrophysiological investigation of spinal muscular atrophies, congenital muscular and myotonic dystrophies | | | | X | |
| Be able to distinguish central hypotonia from hypotonia associated with peripheral cause | | | | X | |
| Be able to initiate and appropriate investigation plan for a child with central hypotonia (including metabolic, genetic and radiological investigations) | | | | X | |

| <i>Neural tube defects and other congenital abnormalities</i> | | | | | |
|--|---|---|--|--|---|
| Known about antenatal diagnosis of neural tube defects, other congenital abnormalities and their prevention | X | X | | | |
| Know about the common associated features of neural tube defects and their management (including hydrocephalus and Chiari malformations) | | | | | X |
| Be able to advise on likely function and levels of disability based on level of defect and examination findings | | | | | X |
| Metabolic competencies | | | | | |
| Know when it is appropriate to perform metabolic investigations in neonates | X | | | | |
| Be aware of and understand the principles of vitamin responsive treatments of metabolic conditions | X | | | | |
| Be able to initiate metabolic investigations in neonates in urgent situations | | X | | | |