

SPIN Module curriculum in

Neonatal Paediatrics

SPIN Version 1.0

Approved for use from November 2022

This document outlines the curriculum and assessment strategy to be used by paediatricians completing the RCPCH SPIN module in Neonatology.

This is Version 1.0. As the document is updated, version numbers will be changed, and content changes noted in the table below.

Version number	Date issued	Summary of changes

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Section 1

Introduction and purpose

Introduction to SPIN modules

Special Interest (SPIN) modules are the additional training/experience a practitioner completes so that they can be the local lead and part of the clinical network providing for children who need specialist paediatric care. They are designed to meet a specific service need, with possible roles suitable for those who have completed a SPIN module identified within the SPIN purpose statement.

Practitioners will be able to seek training in an area of special interest or in aspect(s) of sub-specialty care. This will involve training, assessment and supervised care. It will vary in breadth and depth, depending upon the specific SPIN syllabus. The SPIN can be completed before or after CCT; the indicative training time is 18 months (12 months tertiary Neonates, 6 months Local Neonatal Unit) full time, though this is purely based on usual training placements and rotations.

SPIN training does not have to be completed within one placement or over one continuous period. The assessment of whether the practitioner has attained the required learning outcomes will only examine evidence relating to a maximum of five calendar years prior to submission.

Please note that SPIN Modules are:

- NOT a route to GMC sub-specialty accreditation.
- NOT required for GMC accreditation in Paediatrics or any of its sub-specialties.
- NOT sub-specialty training and not equivalent to GRID training.

SPINs are undertaken and assessed within the working environment, under the guidance of a designated Supervisor, recording evidence within the ePortfolio. The RCPCH SPIN Lead, usually a member of the relevant College Specialty Advisory Committee (CSAC), is responsible for reviewing completed portfolios and confirming if the SPIN is to be awarded.

More information regarding SPIN Modules, including how to apply to undertake a SPIN and how to submit evidence against the competences, is contained in the SPIN module guidance on the RCPCH SPIN webpages: www.rcpch.ac.uk/spin

Purpose statement

This purpose statement demonstrates the need for clinicians to undertake a SPIN module in Neonatal Paediatrics, and the benefits to and expectations of a clinician undertaking training in this area.

The SPIN module supports flexibility and the transferability of learning, and provides a clearly defined professional role for clinicians who have completed a SPIN. The SPIN module sets out what patients and employers can expect from clinicians, who have gained the SPIN:

It is anticipated that practitioners who complete this SPIN will achieve the capabilities to deliver care to term and preterm babies who require the level of care that is delivered in a local neonatal unit setting. In addition, they will develop the skills to deliver neonatal care as part of a wider Regional Neonatal Specialty Network working collaboratively across Tertiary Centres, Local Neonatal Units (LNU's) and Special Care Units. It is possible to complete this SPIN module post-CCT.

It is expected that practitioners who have completed this SPIN will have a sound understanding of the clinical management of term and preterm babies cared for in an LNU, including acute care, planning and delivery of on-going care, discharge planning and post discharge developmental follow-up. The practitioner will have developed skills in leading the acute resuscitation and stabilisation of newborn babies, expertise in procedural skills, and expertise in the initial management of babies requiring mechanical ventilations and non-invasive ventilation strategies and delivery of high-quality safe care in a Neonatal Unit setting.

It is suggested that practitioners undertaking this SPIN module consider becoming Neonatal Life Support (NLS) trainers in order to teach NLS and resuscitation skills to members of the wider Neonatal team within their local trusts.

To continue their ongoing development following completion of the SPIN, it is recommended that practitioners:

- Actively participate in the activity of their regional Neonatal Operational Delivery Network / Managed Clinical Network
- Undertake regular continuing professional development related to neonatal medicine to maintain the knowledge and skills gained whilst undertaking the SPIN module, including keeping up to date with advances in neonatal clinical care.
- Participate in regular audit and quality improvement projects allied to the delivery of neonatal care
- Gain and/or maintain Instructor status on the Newborn Life Support (NLS)
- Gain provider status for Advanced Resuscitation of the Newborn Infant (ARNI)

Requirements to undertake this SPIN module

Applicant requirements

This SPIN module is available to Paediatric higher specialty practitioners, post-CCT paediatricians and SAS doctors, other paediatric staff not in training posts (eg clinical fellows) and health care professionals with an interest in Neonatal Paediatrics. All potential SPIN practitioners need to be able to access sufficient training opportunities to meet the requirements of the SPIN curriculum.

Training duration

SPIN training in Neonatal Paediatrics may be feasible within 18 months for full time practitioners, or pro-rata for Less Than Full Time (LTFT) practitioners. However, all practitioners will be afforded 5 years to demonstrate their capabilities to take account of any OOPE or life events. It is expected that to achieve the necessary learning outcomes, a practitioner will need to train in the following clinical settings:

- **Neonatal Intensive Care Unit (suitable training centre):** Indicative 12 months
- **Local Neonatal Unit:** Indicative 6 months (whole time equivalent) ideally within a busy DGH LNU, this may include cross cover for the General Paediatrics service out of hours.

Practitioners who have not completed these placements may require up to an additional 12 months of experience. However, TPDs are not obliged to provide further training posts for these practitioners and will need to agree further experience with the practitioner.

A suitable training centre is one which is currently approved for higher specialist training (see sub-specialist training section of the RCPCH website for more detail).

Out of Programme (OOP) training

Practitioners should not need to take out of programme (OOP) to complete a SPIN module. Undertaking a SPIN will NOT be considered as a basis for an OOP except in exceptional circumstances and where both deaneries/LETBs agree and approve the SPIN module programme. These exceptional circumstances include applications from practitioners where approved training in a particular special interest is not available in their current deanery/LETB. Permitting OOP for these exceptional circumstances provides a positive contribution to workforce planning in regions where limited approved SPIN modules are available.

Post requirements

Practitioners in RCPCH Training posts should approach their local Training Programme Director in the first instance to confirm if the necessary posts would be available and request support in undertaking this extra training. SPIN applicants are required to demonstrate that they have an appropriate educational supervisor/mentor and Clinical Supervisor in place.

All practitioners not in RCPCH training posts should discuss undertaking the SPIN with their employer in the first instance. The local Head of School or College Tutor may be able to offer further advice. Applications must be signed by a Trust figure, who has the authority to approve

time spent away from their paid employment. This signatory is required to demonstrate that the applicant is suitable, that a suitable Supervisor will be in place, and that the programme will enable the applicant to receive the required experience. This will be reviewed by the CSAC SPIN lead who holds overall accountability for ensuring the quality of the educational programme. Applicants with relevant experience can request to use some retrospective evidence (normally limited to 3-6months). Practitioners are expected to undertake the majority of the SPIN module prospectively.

For post CCT applicants it is unlikely that evidence older than 1yr will be considered current enough, however, earlier evidence may be cited at the discretion of the CSAC SPIN lead. Please see the applicant guidance at www.rcpch.ac.uk/spin for more details on how to apply to undertake a SPIN module.

Additional requirements for delivering this SPIN module are provided in the checklist in Appendix B. This addresses any specific requirements; for example, the human or physical resource experiences the practitioner will need to be able to access in order for the curriculum to be delivered successfully. Please contact the CSAC SPIN Lead if further guidance is required.

Section 2

Neonatal Paediatrics SPIN curriculum

How to use the RCPCH SPIN curriculum

This curriculum provides a framework for training, articulating the standard required to achieve the SPIN module and progress as indicated within the purpose statement. The curriculum ensures the quality and consistency of training and assessment and encourages the pursuit of excellence in all aspects of clinical and wider practice. It must be referred to throughout training, as the practitioner records evidence demonstrating their developing skills and knowledge.

The curriculum should be used to help design training programmes locally that ensure all practitioners can develop the necessary skills and knowledge, in a variety of settings and situations. The curriculum is designed to ensure it can be applied in a flexible manner, meeting service needs as well as supporting each practitioner's own tailored Learning and Development Plan.

The curriculum comprises a number of Learning Outcomes which specify the standard that practitioners must demonstrate to attain this SPIN module. Practitioners are encouraged to consider innovative ways of demonstrating how they have met the Learning Outcome.

Practitioners are strongly encouraged to record evidence against the Learning Outcomes throughout their SPIN training, including engaging in active reflective practice to support their own development. The supervisor will review whether the practitioner is on target to achieve or has achieved the Learning Outcome(s) and will suggest specific areas of focus to ensure that the practitioner achieves the Learning Outcome(s) by the end of their SPIN training period. The Illustrations may be a useful prompt for this.

Components of the SPIN curriculum

The **Learning Outcomes** are the outcomes which the trainee must demonstrate they have met to be awarded this SPIN module. Progress towards achievement of the Learning Outcomes is reviewed at regular meetings with a designated supervisor. Learning Outcomes are mapped to the GMC's Generic Professional Capabilities framework.

The **Key Capabilities** are linked to specific Learning Outcomes and are mandatory capabilities which must be evidenced by the trainee, in their ePortfolio, to meet the Learning Outcome.

The **Illustrations** are examples of evidence and give the range of clinical contexts that the trainee may use to support their achievement of the Key Capabilities. These are intended to provide a prompt to the trainee and trainer as to how the overall outcomes might be achieved. They are not intended to be exhaustive, and excellent trainees may produce a broader portfolio or include evidence that demonstrates deeper learning. It is not expected that trainees provide ePortfolio evidence against every individual illustration (or a set quota); the aim of assessment is to provide evidence against every Key Capability.

The **Assessment Grid** indicates suggested assessment methods, which may be used to demonstrate the Key Capabilities. Trainees may use differing assessment methods to demonstrate each capability (as indicated in each Assessment Grid), but there must be evidence of the trainee having achieved all Key Capabilities.

SPIN Learning Outcomes

This table contains the generic Learning Outcomes required for all practitioners undertaking the RCPCH SPIN in Neonatology. Within the curriculum and throughout the syllabi they are mapped to the GMC's Generic Professional Capabilities (GPCs). More information on the GPC framework is available from the GMC website: <https://www.gmc-uk.org/education/postgraduate/GPC.asp>

Please note, paediatric practitioners will also be required to complete their generic and General Paediatric Level 3 Learning Outcomes in order to gain their Certificate of Completion of Training (CCT) or CESR. Consultants undertaking a SPIN will already have demonstrated the required generic skills, knowledge, and behaviours prior to having obtained their CCT. This SPIN curriculum only defines the specific Learning Outcomes for the stated focus, purpose and extent of remit stated for this SPIN module and cannot be used to indicate competence in any other aspect of paediatrics.

SPIN Learning Outcome		GPCs
1	Recognises, assesses, and manages a range of medical and surgical neonatal presentations requiring immediate intensive care or high dependency support within the setting of a local neonatal unit.	1, 2, 3, 5, 8
2	Provides ongoing care to sick and preterm infants requiring neonatal intensive and high dependency care in the local neonatal unit setting.	1, 2, 3, 4, 5, 6
3	Develops expertise in delivering, supporting, and optimising short and long-term management of nutrition, growth, and neurodevelopment.	1, 2, 3, 4, 5, 7
4	Leads the wider neonatal multidisciplinary team to deliver care over the whole neonatal journey including antenatal counselling, resuscitation, stabilisation and inpatient management of premature and term neonates and post-discharge care.	1, 2, 3, 4, 5, 6, 7, 8, 9
5	Performs high-level technical skills & procedures utilising the appropriate equipment and medications necessary in the neonatal unit, with an ability to troubleshoot and teach.	2

The syllabus supporting these Learning Outcomes is provided on the following pages.

SPIN Learning Outcome 1

Actual Neonatal Care

Recognises, assesses and manages a range of medical and surgical neonatal presentations requiring immediate intensive care or high dependency support within the setting of a local neonatal unit.	GPC 1, 2, 3, 5, 8
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Key Capabilities

Proficient in the leadership and delivery of neonatal resuscitation and stabilisation.	GPC 1, 2, 3, 8
Stabilises and manages infants requiring short-term (up to 48 hours) intensive care in a local neonatal unit including infants born with congenital abnormalities.	GPC 1, 2, 3
Recognises infants requiring transfer to an intensive care unit and liaises with a transport team.	GPC 2, 5
Supports, guides, and provides training for the multidisciplinary team in providing short-term intensive care at the local neonatal unit.	GPC 2, 5, 8

Illustrations

1. Leads the stabilisation at birth of an extremely preterm infant.
2. Leads the stabilisation at birth of an infant born without a heart rate.
3. Leads a team debrief after a difficult resuscitation.
4. Manage an infant born with severe hypoxic ischaemic encephalopathy including initiation of therapeutic hypothermia, and management of multi-organ dysfunction.
5. Manages an infant with persistent pulmonary hypertension.
6. Manages an infant born with postnatally diagnosed or suspected duct dependent congenital heart disease.
7. Manages an infant acutely unwell with NEC, including the need for cardiac and respiratory support, and indications for urgent surgical review and intervention.
8. Manages an infant with postnatally diagnosed or suspected congenital abnormalities of the gastrointestinal tract including intestinal atresia, Hirschprung's disease, tracheo-oesophageal fistula with oesophageal atresia and malrotation.
9. Manages an infant with a postnatally diagnosed or suspected genetic condition.
10. Leads the multidisciplinary team in providing short term ventilation for an infant at a local neonatal unit.
11. Leads the multidisciplinary team in providing care to an infant requiring treatment with a chest drain at a local neonatal unit.
12. Takes part in a conference call for an infant requiring transfer from a local neonatal unit to an intensive care unit.
13. Delivers training for the multidisciplinary team in delivering intensive care at the local neonatal unit.

SPIN Learning Outcome 2

Provides ongoing care to sick and preterm infants requiring neonatal intensive and high dependency care in the local neonatal unit setting.	GPC 1, 2, 3, 4, 5, 6
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Key Capabilities

Appropriately diagnoses and treats common neonatal disorders using a variety of diagnostic skills	GPC 1, 2, 3
Leads the neonatal intensive care and high dependency ward round providing holistic review and making immediate, medium and long-term management plans	GPC 2, 5
Understands which conditions need referral to other specialists including escalation and repatriation.	GPC 2, 5, 6
Demonstrates expertise in the ongoing clinical management of infants with complex/long term needs.	GPC 2, 4

Illustrations

1. Manages a neonate with respiratory distress syndrome, including escalation and weaning of respiratory support.
2. Manages an infant with an air leak syndrome requiring a chest drain.
3. Understands the pathophysiology and management of acute massive pulmonary haemorrhage.
4. Applies understanding of the management of infants with chronic lung disease.
5. Is able to diagnose of, and decide an appropriate treatment option for, persistent ductus arteriosus.
6. Manages neonate acutely unwell with NEC, understanding the role of cardiac and respiratory support and indications for urgent surgical review and intervention.
7. Performs a structured neurological assessment and initial investigations of an infant with abnormal neurology/HIE.
8. Manages an infant with haemolytic jaundice requiring treatment including consideration of exchange transfusion.
9. Interprets cranial ultrasound findings, plan ongoing management and counsel families with results.
10. Understands the role of enteral and parenteral nutrition in sick and preterm infants and is able to prescribe parenteral nutrition when appropriate.
11. Recognises and refers common surgical problems in the term infant, including abdominal distension and bile-stained vomiting.

SPIN Learning Outcome 3

Develops expertise in delivering, supporting, and optimising short and long-term management of nutrition, growth and neurodevelopment.	GPC 1, 2, 3, 4, 7
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Key Capabilities

Skilled in supporting infant feeding, respecting parental feeding choices.	GPC 1, 2, 3
Can appropriately assess and manage growth, nutrition and development.	GPC 2, 4
Is skilled in assessment and management of infants with complex needs.	GPC 2, 4, 7
Leads and co-ordinates plans of multidisciplinary discharge pathways for neonates with complex needs.	GPC 2, 5, 7
Performs appropriate follow up for low, medium and high-risk infants to an appropriate age.	GPC 1, 2, 3

Illustrations

1. Undertakes Unicef Baby-Friendly training.
2. Refers parents to infant feeding advisor for breast feeding support.
3. Promotes parental involvement in optimising outcomes e.g shows parents appropriate positioning for development.
4. Manages gastro-oesophageal reflux.
5. Familiar with tools used to undertake standardised neurodevelopmental assessment of infants requiring follow up (eg Prechtl, Griffiths, Bayleys, SOGS etc).
6. Carries out neonatal follow-up in accordance with national guidance.
7. Liaises and refers infants requiring allied health professional input in an MDT setting.
8. Leads multidisciplinary discharge planning for handover of care of complex infants.

SPIN Learning Outcome 4

Leadership and teamworking

Leads the wider neonatal multidisciplinary team to deliver care over the whole neonatal journey including antenatal counselling, resuscitation, stabilisation and inpatient management of premature and term neonates and post-discharge care.	GPC 1, 2, 3, 4, 5, 6, 7, 8, 9
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Key Capabilities

Provides antenatal counselling for neonates with serious medical conditions, congenital abnormalities, life limiting conditions and coordinates postnatal multidisciplinary care and end of life management	GPC 1, 2, 3
Leads discharge planning for and ongoing post-discharge management of neonates with complex medical problems involving the family and the wider multidisciplinary team including primary, secondary, tertiary and social care professionals. Provides counselling to families of complex babies on long term care needs.	GPC 2, 5, 7
Assumes the role of neonatal team leader liaising with maternity teams and other neonatal unit teams to effectively manage and coordinate patient flow across the neonatal network, identifying and supporting appropriate escalation of care to, and repatriation from, all levels of neonatal units.	GPC 2, 5, 6
Participates in clinical governance activities including investigating adverse incidents, managing complaints and implementation of national and local neonatal policy, guidance and audits.	GPC 5, 6, 8, 9
Works in partnership with parents and families across all aspects of the neonatal journey	GPC 2, 5, 6
Supports the delivery of services both locally and across the wider neonatal operational network. Promotes a collaborative, supportive relationship with network special care units to deliver ongoing care to the complex infant.	GPC 2, 4, 5

Illustrations

1. Participates in antenatal counselling for a foetus with a serious medical condition or congenital abnormality.
2. Understands the processes of end-of-life decisions, compassionate management of end of life care and bereavement support for families.
3. Involved in the consenting of families for post mortem examinations.
4. Liaises with maternity and neonatal teams to safely facilitate escalation of care & safe, timely repatriation to ensure patient flow across the neonatal operational network.
5. Engages parents as active participants in care using principles of Family Integrated Care
6. Leads a multi-professional discharge planning meeting and liaises with family to ensure preparedness for discharge.

7. Contributes to an incident review process and shares learning , referencing local and national guidance.
8. Contributes to a departmental response to a complaint
9. Example of network wide participation (e.g., involvement in network wide quality improvement initiatives and development of network guidance).
10. Undertakes a quality improvement project implementing new guidance or policy and participates in training the multidisciplinary team in adoption of new practice or policy
11. Participates in the perinatal mortality review processes including the use of the MBRRACE-UK perinatal mortality review tool.
12. Understands processes for death notification to the Coroner / Procurator Fiscal.
13. Application of knowledge of national neonatal databases including National Neonatal Audit Programme, National Neonatal Research Database.
14. Participates in Child Death Review (CDR) process.

SPIN Learning Outcome 5

Procedural skills and competencies

Performs high-level technical skills & and procedures utilising the appropriate equipment and medications necessary in the neonatal unit, with an ability to troubleshoot and teach.	GPC 2
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Key Capabilities

Skilled in airway management, including the use of airway adjuncts (including LMA) and intubation of preterm and term babies. Competent and confident in the administration of surfactant to manage RDS using invasive and less invasive approaches.	GPC 2
Skilled in establishing peripheral and central venous, and arterial access in babies.	GPC 2
Demonstrates knowledge and understanding of all medications and equipment used in the Neonatal Unit.	GPC 2
Skilled in cranial ultrasonography of infants at various gestations.	GPC 2
Competent to initiate therapeutic hypothermia and CFAM monitoring in neurologically abnormal infants	GPC 2
Skilled in insertion of chest drains. And needle thoracocentesis	GPC 2

Illustrations

1. Sets up equipment to deliver appropriate respiratory support.
2. Uses an appropriate airway adjunct (including LMA) to secure the airway in a resuscitation situation.
3. Intubates a preterm or term infant when indicated.
4. Successfully delivers surfactant to infant with respiratory distress syndrome using appropriate technique.
5. Establishes central venous & arterial access, and confirms correct placement, in an infant requiring intensive care.
6. Performs Cranial USS for infants of various gestations to assist in diagnosis and ongoing management.
7. Teaches & assesses junior practitioner / colleague in developing practical neonatal skills, including airway management, cranial ultrasound, and vascular access.
8. Inserts chest drain in infant with acute pneumothorax
9. Provides vascular access for short, and long-term, nutritional support.
10. Applies CFAM monitoring and commences therapeutic hypothermia in an infant with suspected HIE.

Section 3

Assessment Strategy

How to assess the Neonatal SPIN

The assessment strategy for this SPIN module is aligned with the RCPCH Progress Programme of Assessment, utilising a range of different formative and summative assessment tools.

The Programme of Assessment comprises a wide range of assessment tools which must be used in conjunction with the blueprint to develop skills and assess capability. The assessments are knowledge, skills and capability-based, capturing a wide range of evidence which can be integrated to reach a judgement as to the practitioner's achievement of the SPIN module learning outcomes. The assessments also provide the opportunity to obtain developmental feedback. Further information on all assessment instruments can be found within the RCPCH Assessment Guide and the RCPCH Progress Assessment Strategy.

The key aspect of the assessment strategy for this SPIN module is the blueprint, on the following page. This grid indicates suggested assessments to support and demonstrate achievement of the Learning Outcomes. Please note, not all assessments are mandated or their use prescribed, and practitioners may use other assessment types from the list within the Programme of Assessment, where they and their supervisors feel this is appropriate.

The mandatory assessments are:

Directly Observed Procedures (DOPs)

- Intubation of the term and preterm baby (Learning Outcome 5)
- Administration of surfactant - invasive and minimally invasive routes (Learning Outcomes 2 and 5)
- Umbilical arterial and venous line insertion (Learning Outcome 5)
- PICC line insertion (Learning outcome 5)
- Cranial Ultrasound Scan for identification of intraventricular haemorrhage (Learning Outcome 5)

Paediatric Case Based Discussions (CBD)

- Initiation of therapeutic hypothermia (Learning Outcome 1 and 2)
- Leadership and Teamwork Capabilities (LEADER)
- Managing a Neonatal Unit (Learning Outcome 2 and 4) ACAT

Paediatric Mini Clinical Evaluation (ePaed MiniCEX)

- Management of a pneumothorax and chest drain insertion (Learning Outcome 1, 2 and 5)
- Leads a multidisciplinary discharge planning meeting (Learning Outcome 3 and 4)
- Handover Assessment Tool (HAT) for a Neonatal Intensive Care Unit

All evidence for the SPIN Module Learning Outcomes, including assessment outcomes, should be recorded within the trainee's ePortfolio.

Assessment blueprint

This table suggests assessment tools which may be used to assess the Key Capabilities for these Learning Outcomes.

This is not an exhaustive list, and trainees are permitted to use other methods within the RCPCH Assessment Strategy to demonstrate achievement of the Learning Outcome, where they can demonstrate these are suitable.

Key Capabilities	Assessment / Supervised Learning Event suggestions									
*Other – Reflection, ECAT, skills log, personal reading	Paediatric Mini Clinical Evaluation (ePaed Mini-CEX)	Paediatric Case-based Discussion (ePaeds Cbd)	Directly Observed Procedure / Assessment of Performance (DOP/AOP)	Acute Care Assessment Tool (ACAT)	Discussion of Correspondence (DOC)	Clinical Leadership Assessment Skills (LEADER)	Handover Assessment Tool (HAT)	Paediatric Multi Source Feedback (ePaed MSF)	Paediatric Carers for Children Feedback (Paed CCF)	Other
SLO 1 Key Capabilities										
Proficient in the leadership and delivery of neonatal resuscitation and stabilisation.	✓	✓		✓						
Stabilises and manages infants requiring intensive care in a local neonatal unit including infants born with congenital abnormalities.		✓				✓		✓	✓	
Recognises infants requiring transfer to an intensive care unit, and liaises with a transport team.	✓	✓		✓		✓	✓	✓	✓	
Supports, guides, and provides training for the multidisciplinary team in providing intensive care at the local neonatal unit.		✓				✓	✓	✓		
SLO 2 Key Capabilities										
Rapidly diagnoses and treats common neonatal disorders using a variety of diagnostic skills	✓	✓		✓		✓		✓		
Leads the neonatal intensive care and high dependency ward round providing holistic review and making immediate, medium and long-term management plans		✓						✓		
Demonstrates understanding of which conditions need referral to other specialists including escalation and repatriation.		✓						✓	✓	
Has expertise in the ongoing clinical management of infants with complex/long term needs.	✓	✓						✓		
SLO 3 Key Capabilities										
Skilled in supporting infant feeding respecting parental feeding choices.		✓				✓		✓		
Can appropriately assess and manage growth, nutrition and development.		✓				✓		✓		
Is skilled in assessment and management of infants with complex needs.		✓				✓				
Leads and co-ordinates plans of multidisciplinary discharge pathways for neonates with complex needs.		✓						✓		

Key Capabilities	Assessment / Supervised Learning Event suggestions									
*Other – Reflection, ECAT, skills log, personal reading	Paediatric Mini Clinical Evaluation (ePaed Mini-CEX)	Paediatric Case-based Discussion (ePaeds Cbd)	Directly Observed Procedure / Assessment of Performance (DOP/AOP)	Acute Care Assessment Tool (ACAT)	Discussion of Correspondence (DOC)	Clinical Leadership Assessment Skills (LEADER)	Handover Assessment Tool (HAT)	Paediatric Multi Source Feedback (ePaed MSF)	Paediatric Carers for Children Feedback (Paed CCF)	Other
Performs appropriate follow up for low, medium and high-risk infants to an appropriate age.						✓		✓		
SLO 4 Key Capabilities										
Provides antenatal counselling for neonates with serious medical conditions, congenital abnormalities, life limiting conditions and coordinates postnatal multidisciplinary care and end of life management.						✓				
Leads discharge planning for and ongoing post-discharge management of neonates with complex medical problems involving the family and the wider multidisciplinary team. Provides counselling to families of complex babies on long term care needs.						✓		✓		
Assumes the role of neonatal team leader liaising with maternity teams and other neonatal unit teams to effectively manage and coordinate patient flow across the neonatal network, identifying and supporting appropriate escalation of care to, and repatriation from, all levels of neonatal units		✓				✓		✓		
Participates in clinical governance activities including investigating adverse incidents, managing complaints and implementation of national and local neonatal policy, guidance and audits.						✓		✓		
Supports the delivery of services both locally and across the wider neonatal operational network. Promotes a collaborative, supportive relationship with network special care units to deliver ongoing care to the complex baby.						✓		✓		
SLO 5 Key Capabilities										
Skilled in airway management, including the use of airway adjuncts and intubation of preterm and term babies. Administration of surfactant to manage RDS using invasive and less invasive approaches.		✓				✓				
Skilled in establishing peripheral and central venous, and arterial, access in babies.						✓				
Demonstrates knowledge and understanding of all medications and equipment used in the neonatal unit.		✓				✓				
Skilled in cranial ultrasonography of infants at various gestations.		✓				✓		✓		
Competent to initiate therapeutic hypothermia and CFAM monitoring in neurologically abnormal infants.						✓		✓		
Skilled in insertion of chest drains.						✓				

This SPIN module meets the current and future anticipating requirements of the health service, reflecting patient and population needs.

Paediatricians increasingly work as part of wider clinical networks. By supporting them in developing an interest in a specific area of practice, SPINs help facilitate more patients being seen by a paediatrician with the expertise to treat certain specific conditions nearer to their home, rather than having to travel to a major paediatric unit.

Neonatal Paediatricians based in Local Neonatal Units (LNU) have a key role in the delivery of Neonatal care within a wider clinical neonatal network. High-quality neonatal care in the LNU setting delivered by a paediatrician with the neonatal expertise provides a family focused service enabling babies to be cared for in a unit near to their home.

A recent publication by the British Association of Perinatal Medicine (BAPM 2018) recommends that new Consultant appointments to LNU services should either have a sub-specialty CCT in Neonatal medicine or be General Paediatricians who have developed an expertise in this area. The SPIN in Neonatal Paediatrics has been developed and revised to directly support this service need. Development of this workforce supports the delivery of safe, high-quality care in LNUs and the development of future consultants and leaders for these services.

This SPIN module considers interdependencies across related specialties and disciplines, and has been developed and supported by the relevant key stakeholders.

This SPIN module has been supported and developed by the Neonatal CSAC, a stakeholder group including LNU Neonatal Paediatricians, SPIN practitioners with additional input sourced through the British Association of Perinatal Medicine (BAPM). Given the requirement for Paediatricians with expertise in Neonatal Paediatrics to work across General Paediatric and Regional Neonatal Services it is essential that experience and skills are acquired and developed both in the sub-specialty Neonatal Training Centres and district general LNU setting.

Practitioners with a special interest in Neonatal Paediatrics provide significant value to their regional networks not only through their clinical skills, but also in the support and development of regional guidelines and pathways for babies requiring escalation in treatment or repatriation to local services and contributing to network governance and education across the regional multi-disciplinary team.

Appendices

Appendix A: Further guidance and resources

It is anticipated that practitioners who complete this SPIN will achieve the capabilities to deliver care to term and preterm babies who require the level of care that is delivered in a local neonatal unit setting. In addition they will develop the skills to deliver neonatal care as part of a wider Regional Neonatal Specialty Network working collaboratively across tertiary centres, Local Neonatal Units and Special Care Units. It is possible to complete this SPIN module post-CCT.

It is expected that practitioners who have completed this SPIN will have a sound understanding of the clinical management of term and preterm babies requiring care within a local neonatal unit setting, including acute care, planning and delivery of on-going care, discharge planning and post discharge developmental follow-up. The practitioner will have developed skills in leading the acute resuscitation and stabilisation of newborn babies, expertise in procedural skills, and expertise in the initial management of babies requiring mechanical ventilations and non-invasive ventilation strategies and delivery of high-quality safe care in a Neonatal Unit setting.

It is suggested that practitioners undertaking this SPIN module consider becoming Neonatal Life Support (NLS) trainers in order to teach NLS and resuscitation skills to members of the wider Neonatal team within their local trusts.

Doctors completing this SPIN module may find the following resources useful to support their training. Please note, there is no mandatory requirement to use any or all of these resources, and RCPCH cannot be held responsible for the quality or content of any external materials.

Assessment

RCPCH Assessment web pages www.rcpch.ac.uk/assessment
RCPCH Assessment Strategy www.rcpch.ac.uk/progress

Recommended reading

- Rennie and Robertson, *Textbook of Neonatology*, Churchill Livingstone (2012)
- Fox G, Hoque N, Watts T, *Oxford Handbook of Neonatology* (2nd Edition), Oxford University Press (2017)
- Boardman J, Groves A, Ramasethu J (Editors), *Avery and MacDonalds Neonatology: Pathophysiology and Management of the Newborn* (8th edition), Wolters Kluwer Health (2021)
- [BAPM website](#) (and membership is strongly recommended)
- RCPCH Curriculum for [Paediatric Training Neonatal Medicine Level 1, 2 and 3 Training](#)

Training events or courses

- Neonatal Life Support (NLS) – recommended for all practitioners
- Cranial Ultrasound Scan Course
- ARNI (Advanced Resuscitation of the Newborn Infant) course.
- A collaborative distance learning course run in conjunction with the University of Southampton and the European Society for Neonatology – specific modules may be taken although fees apply <https://moodle.neonataltraining.eu/mod/page/view.php?id=374>.

Other relevant specific courses to consider include:

- Cardiac echo courses.
- Neonatal neurology (including MRI interpretation eg NeoNATE course)
- Difficult airway management
- Transport stabilisation
- Point of Care Ultrasound
- Ethical issues in Neonatal Medicine

For more information

More information regarding SPIN modules, and all current SPIN curricula and supporting forms, can be found at www.rcpch.ac.uk/spin

For general queries regarding SPIN modules, including eligibility to undertake a SPIN or how to apply, please contact spin@rcpch.ac.uk.

For queries relating to the SPIN curriculum, please contact curriculumandquality@rcpch.ac.uk

The SPIN Lead is a member of the Neurology CSAC. See the RCPCH website for the contact details of the current SPIN Lead: <https://www.rcpch.ac.uk/membership/committees/general-paediatrics-csac>

Appendix B: Criteria for SPIN delivery

Meeting GMC training requirements

All training must comply with the GMC requirements presented in Promoting excellence: standards for medical education and training (2017). This stipulates that all training must comply with the following ten standards across 5 themes:

Theme 1: Learning environment and culture

- S1.1 The learning environment is safe for patients and supportive for learners and educators. The culture is caring, compassionate and provides a good standard of care and experience for patients, carers and families.
- S1.2 The learning environment and organisational culture value and support education and training, so that learners are able to demonstrate what is expected in Good Medical Practice and to achieve the learning outcomes required by their curriculum.

Theme 2: Educational governance and leadership

- S2.1 The educational governance system continuously improves the quality and outcomes of education and training by measuring performance against the standards, demonstrating accountability and responding when standards are not being met.
- S2.2 The educational and clinical governance systems are integrated, allowing organisations to address concerns about patient safety, the standard of care, and the standard of education and training.
- S2.3 The educational governance system makes sure that education and training is fair and is based on the principles of equality and diversity.

Theme 3: Supporting learners

- S3.1 Learners receive educational and pastoral support to be able to demonstrate what is expected in Good Medical Practice, and to achieve the learning outcomes required by their curriculum.

Theme 4: Supporting educators

- S4.1 Educators are selected, inducted, trained, and appraised to reflect their education and training responsibilities.
- S4.2 Educators receive the support, resources and time to meet their education and training responsibilities.

Theme 5: Developing and implementing curricula and assessments

- S5.1 Medical school curricula and assessments are developed and implemented so that medical students are able to achieve the learning outcomes required for graduates.
- S5.2 Postgraduate curricula and assessments are implemented so that doctors in training are able to demonstrate what is expected in Good Medical Practice, and to achieve the learning outcomes required by their curriculum.

It is the responsibility of each Deanery/Local Education Training Board (LETB) to ensure compliance with these standards for paediatric training, and to notify the RCPCH if further support is required in achieving this. Training delivery must also comply with the requirements of the Conference of Postgraduate Medical Deans' (COPMeD), The Gold Guide: a reference guide for postgraduate specialty training in the UK (9th ed.).

The following requirements should be met when designing a training programme for a SPIN module trainee. Adherence to these criteria will help ensure the trainee will have the necessary support and access to experiences which they will require to successfully complete this SPIN module. These criteria are framed against the standards set out in Excellence by Design: standards for post graduate curricula (GMC 2017).

Purpose	
<ul style="list-style-type: none"> • Access to regular supervised clinics • Service specific requirements to enable achievement of the curriculum e.g. Day case facilities, imaging. • Opportunities to work with shared care networks in primary and secondary care. • Opportunities to work with shared care clinical guidelines and protocols. • The learning environment is safe for patients and supportive for learners and educators. The culture is caring, compassionate and provides a good standard of care and experience for patients, carers and families. (Taken from GMC Promoting Excellence). 	<p>SPIN specific requirements:</p> <ul style="list-style-type: none"> • Indicative 12 months* training post in a tertiary NICU (may be 2 different units) which is recognised for higher specialty training. • A 6 month placement in a busy DGH (minimum of 500 combined ITU/HDU days) which delivers a Local Neonatal Unit Service. This post may involve out of hours cover to the general paediatric service. • * whole time equivalent
Governance and strategic support	
<ul style="list-style-type: none"> • The Site must ensure that Supervisors and trainers can effectively deliver the RCPCH Assessment Strategy. • The practitioner will be able to participate in leadership and management activities 	<p>SPIN specific requirements:</p> <ul style="list-style-type: none"> • Opportunities to lead clinical management with appropriate supervision in both the tertiary NICU and the LNU setting
Programme of learning	
<ul style="list-style-type: none"> • Specific requirements for structured learning opportunities. • Exposure within the clinical environment will provide sufficient learning opportunities to meet the requirements of the curriculum. • Access to multidisciplinary teams consisting of a minimum of nurses, physiotherapists, occupational therapists. • The post should provide a training experience that enables completion of the practitioner's PDP 	<ul style="list-style-type: none"> • N/A

Programme of assessment	
<ul style="list-style-type: none"> • The site has adequate levels of Educational supervisor/mentors. • Consultants with either General Paediatric or Sub Specialty expertise can be matched to the requirements of the SPIN practitioner. It is important that Educational supervisor/mentors can provide supervision and have the required remission to facilitate this, i.e. 1 PA per week per 4 practitioners. • Supervision must ensure patient safety. Support for trainers and supervisors must be available within the Trust. 	<ul style="list-style-type: none"> • N/A
Quality assurance and improvement	
<ul style="list-style-type: none"> • The post will allow participation in audits and clinical improvement projects • The post will allow the practitioner to actively engage with the teaching, assessing and appraising of junior staff • The post will allow opportunities to engage in research activities. 	<ul style="list-style-type: none"> • N/A

Ensuring fairness and supporting diversity

The RCPCH has a duty under the Equality Act 2010 to ensure that its curriculum and assessments do not discriminate on the grounds of age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion and belief, sex or sexual orientation.

Care has been taken when authoring the SPIN Module curricula to ensure as far as is reasonable and practicable that the requirements for those undertaking the module do not unnecessarily discriminate against any person on the basis of these characteristics, in line with the requirements of the Act.

The RCPCH seeks to address issues of equality, diversity and fairness during the development of SPIN curriculum in a range of ways, including:

- Curriculum content to be authored, implemented and reviewed by a diverse range of individuals. Equality and diversity data are gathered regularly for clinicians involved in the work of the RCPCH Education and Training division.
- Undertaking careful consideration of the Learning Outcomes and Key Capabilities to ensure that there is a clear rationale for any mandatory content, and thus there are no unnecessary barriers to access or achievement. Beyond these mandatory requirements, the assessment tools can be deployed in a more flexible and tailored manner, meeting the requirements of the individual trainee.
- All draft SPIN curricula to be reviewed specifically against the protected characteristics prior to sign-off, identifying any possible barriers and ensuring these are appropriately addressed.
- All SPINs are approved for use by the RCPCH Training and Quality Board (TQB). As the body responsible for production of the Annual Specialty Report, and receiving summary reports on the National Training Survey from Heads of Schools and other sources, the Committee is well placed to ensure the curriculum meets the needs and addresses any existing concerns of the trainee population.
- All SPIN curriculum documents will be published in font type and size that is appropriate for a wide range of audiences and optimised for readability. Information regarding the curriculum will be made available through a wide range of media, acknowledging differing learning styles.

The RCPCH is committed to gathering regular feedback from users of its SPIN modules, identifying any areas of bias or discrimination.

Please contact the RCPCH Quality and Standards team (qualityandstandards@rcpch.ac.uk) if you have any concerns regarding equality and diversity in relation to this SPIN module curriculum.

Quality assurance and continual improvement

Ensuring quality in delivery

A robust quality assurance and improvement framework is required to support an effective curriculum and assessment strategy. The purpose of this is to promote the improving quality of the trainee experience, and to ensure that the curriculum content, delivery, assessment and implementation is monitored and reviewed in a planned, systematic and appropriate manner.

The RCPCH quality infrastructure for training and assessment is based on the Plan, Do, Check, Act (PDCA) cycle, introduced by Deming. In the context of the Programme of Assessment, this means planning for effective assessment processes, executing those processes, review and evaluation including data analysis and multi-source feedback, and finally implementing any required changes.

The framework to support this curriculum will comprise several quality improvement tools and processes that impact on the overarching aspects of assessment. These will include:

1. **Effective selection mechanisms.** The SPIN application process ensures trainees will have the necessary capacity, supervision, and access to the breadth and depth of experience needed to meet the requirements of the SPIN module.
2. **Gathering and responding to feedback.** RCPCH gathers feedback in a structured way from SPIN module completers and uses this and feedback from employers to support the regular review of SPIN modules.
3. **Review of attainment and evidence.** CSACs (or another designated SPIN Lead) review all completed SPIN portfolios prior to sign-off, ensuring consistency.
4. **Quality assurance of assessments.** This takes a variety of forms during the development, delivery and monitoring of assessment tools, as outlined in the RCPCH Progress Assessment Strategy.
5. **Quality of assessors and supervisors.** All SPIN applicants are required to have a suitable Educational Supervisor to support their SPIN training. RCPCH supports this through the Educational Supervisor course and a variety of guidance and resources available on the College website.
6. **Scheduled reviews.** All SPINs are subject to review every three years, although they may be updated more regularly where required.

By applying the framework processes outlined above, the College will ensure that SPIN Modules are monitored and reviewed in a structured, planned and risk-based manner.

SPIN governance

The RCPCH's Training and Quality Board (TQB) has overall responsibility for the RCPCH SPIN curricula, working closely with the SPIN Lead. The TQB will monitor the performance of the SPIN through the relevant CSAC/ SPIN Lead and receive scheduled reviews of feedback from SPIN users.

SPIN module review and revision

SPINs are reviewed every three years to ensure they remain fit for purpose, meeting the intended service need. Reviews are led by the SPIN Lead (usually the relevant RCPCH CSAC), who will report to the TQB requesting any changes required. Where necessary, a SPIN can be updated before the three-year review is due, for example to reflect changes in guidelines.

Updated SPIN curricula will be published, making clear using the version tracking table at the front of each document what amendments have been made on each occasion. Where this amendment relates to a Key (mandatory) Capability, the ETQC will issue guidance for trainees currently undertaking the SPIN module, noting any implications of the amendment and whether they are required to meet the new criteria. Amendments will only be made where a clear rationale exists for doing so, and every effort will be made to minimise any negative impact on the trainee.

