

# Neonatal occupational therapy

Professional development framework for occupational therapists working in neonatal care



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“When I was new to neonatal therapy, I can remember thinking that I couldn’t wait until I had five years of experience because then I’d know everything I need to know. I found myself saying the same thing about ten years of experience, then fifteen, and then twenty. It makes me laugh now. There is no “knowing everything” when it comes to neonatal therapy (or anything for that matter). The field is in constant development – just like us.”

Sue Ludwig,  
Occupational Therapist, Author of *Tiny Humans*, *Big Lessons*.

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# Purpose and scope

## Purpose

This Neonatal Care Professional Development Framework (NCPDF) provides a structure for the development and career progression of post-registration OTs working in neonatal care.

## Scope

The framework is for OTs working in neonatal care and those interested in working in this specialist area of practice. It is also for commissioners and managers of neonatal OT services.

Our aim is to:

- ensure a common language and consistency across the levels of practice for OT in neonatal care
- define the scope of practice for OTs in neonatal care
- describe progression between levels of practice
- provide a framework for OTs to benchmark their knowledge and skills.

We've included a self-assessment tool to help OTs review their knowledge and skills and plan their professional development goals.

# Benefits of the framework

The framework describes the breadth of specialist knowledge and skills that OTs need to deliver safe and effective care for infants and their families in neonatal settings.

It provides a structure that supports workforce development in neonatal care by clearly describing the knowledge and skills expected of OTs working at foundation, enhanced, advanced and expert levels of practice.

The framework communicates the specialist contribution of OT at advanced and consultant levels of practice within the wider neonatal workforce and system.

The following table summarises the benefits of the framework for different audiences.

Occupational therapists	Supervisor/manager	Neonatal unit teams	Clinical commissioners	Neonatal networks
<b>Ensures a common language to improve communication across the neonatal OT workforce</b>	Creates a common language to support communication about OT and to advocate for neonatal OT at a strategic level	Creates a common language to promote understanding of the role and value of neonatal OT	Creates a common language when providing a rationale for commissioning neonatal OT services	OTs work with the neonatal MDT to promote a neuro-protective care environment for the infant.
<b>Provides a framework for individuals to review knowledge and skills, identify learning needs and opportunities for CPD</b>	Provides a framework to review OT knowledge and skills, identify learning needs and signpost opportunities for CPD	Increases understanding of OT capabilities required to support safe and effective neonatal care	Informs commissioning of appropriately skilled OTs in neonatal settings	Describes workforce capabilities and educational needs which can be reviewed and benchmarked across a network
<b>Provides a national roadmap for neonatal OT career progression</b>	Provides a framework to support workforce development and upskilling of future neonatal workforce (such as paediatric staff and students)	Provides a reference to inform and support a unit's workforce development plan	Provides guidance on the neonatal workforce required within a region	Supports benchmarking and development of workforce strategy across networks
<b>Supports identification of OT workforce gaps</b>	Provides information to support business cases to improve neonatal OT service provision	Provides information to support business cases to ensure local standards and national guidance are met	Provides a framework and rationale for funding OTs at different levels of practice	Provides neonatal network OT leads with a framework to benchmark current OT workforce to support business cases

## How to use the framework

The framework is for OTs working in neonatal care full or part-time, and for OTs interested in this specialist area of practice. Neonatal OT roles are rarely full-time, and many people work in other areas (including community paediatrics) alongside their neonatal role. There are many skills that can be transferred to the neonatal setting.

Career development requires an OT to progress across four pillars of professional practice:

1. Professional practice
2. Facilitation of learning
3. Leadership
4. Evidence, research and development

The following descriptors are taken from the *RCOT Career Development Framework Guiding Principles for Occupational Therapy 2nd Edition*.

<b>Professional/ clinical practice</b>	Maintain occupation at the centre of practice. Deliver safe, effective, person-centred and ethical practice. Use professional judgement and evidence-based critical reasoning to make decisions.
<b>Facilitation of learning</b>	Inspire, teach, mentor, supervise and/or assess others. Facilitate practice-based and work-based learning. Access, create and evaluate contemporary learning environments, methods, tools and materials.
<b>Leadership</b>	Identify, monitor and enhance one's own and others' knowledge, skills and ways of thinking. Lead, guide and/or facilitate teamwork. Influence, design, plan and implement professional and/or organisational change.
<b>Evidence, research and development</b>	Access, evaluate and implement evidence to inform practice. Initiate, design, participate in and disseminate research. Engage with and influence broader socio-economic and political agendas.

## Levels of practice

Each pillar includes a description of the knowledge, skills and experience required at foundation, enhanced, advanced and expert/consultant levels of OT practice within neonatal care.

Foundation level practitioners will:

- typically be in their first role in neonatal care. Previous experience in paediatric or adult OT settings means people can work autonomously and have robust clinical reasoning skills
- work primarily with more stable, moderate and late preterm infants (for example >32 weeks PMA)
- require regular supervision and mentoring, provided by an enhanced or advanced level OT working in the same unit or from within the neonatal network.

### Foundation level in neonatal care

Due to the high degree of risk for infants and their families, OTs working in neonatal care require a high level of knowledge and skills (AOTA 2018). For this reason, OTs working at foundation level in neonatal care should have previous, relevant OT experience and be employed at Band 6 level (or equivalent).

Whilst foundation level OTs are essential to the development of a sustainable neonatal workforce, they cannot be the only OT in a neonatal team. They must work under the guidance of and receive appropriate supervision from an experienced, senior neonatal OT.

Enhanced level practitioners will:

- have some core experience in neonatal care
- be able to provide OT for infants and families across the full range of clinical presentations, including very preterm infants and infants with HIE
- work autonomously
- require access to supervision/mentoring from an advanced level OT on a negotiated basis for ongoing professional development and to support the management of complex infants, service development and evaluation.

Advanced level practitioners are either:

Working in a neonatal unit as a clinical specialist – providing care for the most complex infants and families including extremely preterm infants, those requiring surgical care and infants on ECMO

- providing supervision/mentoring for foundation level and enhanced level practitioners within a trust or region
- leading the establishment and development of neonatal OT service at a tertiary level hospital or across a Trust.

Or:

- working in an OT network role with responsibility for developing neonatal OT services across a range of units in a neonatal network.

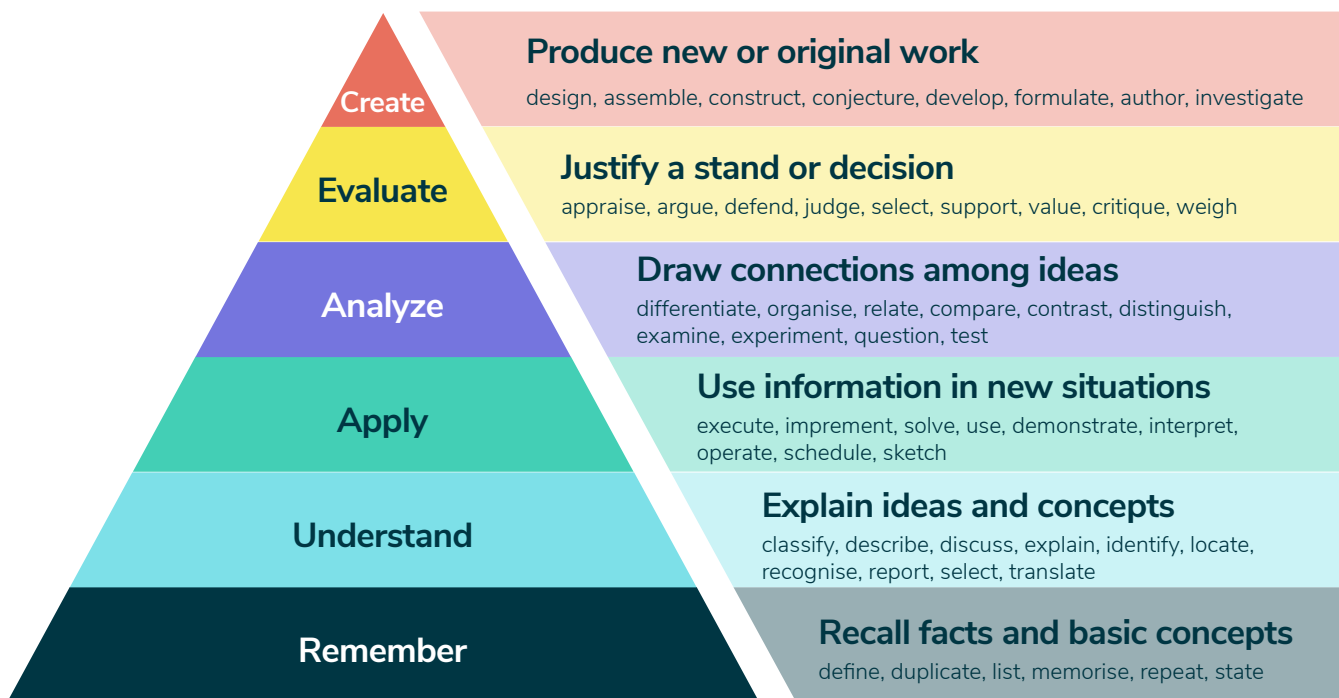


Expert/consultant level practitioners:

- display a tripartite approach to their roles encompassing expert clinical skill application, education and research delivery
- recognised for their national and/or international contribution to neonatal OT.

We have drawn on Bloom's Taxonomy to describe the skills and expertise required at each level of practice. The following graphic was originally published in 1956 and revised in 2001 to include verbs and gerunds to better capture the cognitive processes by which thinkers encounter and work with knowledge (Armstrong, 2010). It was developed by the Vanderbilt Center for Teaching and provides an outline of the different levels of knowledge and skill objectives defined in each of the pillars.

## Bloom's Taxonomy



Armstrong, P (2010). Bloom's Taxonomy. Vanderbilt University Center for Teaching. Reproduced under a Creative Commons Attribution License.

# Case example: applying the professional development framework

**Emily is a Band 7 OT who has been working in community paediatrics with children aged 0-18 for 2 years.**

As part of her career development and to expand her clinical skills she's keen to work in the neonatal unit at the local hospital. She evaluated her current skills against the framework and assessed herself:

- Clinical skills – Emily has developed knowledge and skills in early years as part of her caseload and has experience of working with children and families with complex needs. Some of these skills are transferable, such as positioning, understanding of developmental needs and supporting infant occupations. However, she has limited knowledge of preterm development and no experience with neuro-behavioural assessment or supporting neonatal interventions in the context of a neonatal unit. She has therefore identified her clinical skill level as foundation.
- Leadership – Emily has been able to demonstrate via her past experience and supervision of colleagues that her leadership skills are at an enhanced level as these are transferable skills. She has also led on several service improvement projects within the department.
- Facilitation of learning – Emily takes an active role in her own learning and has attended several webinars relating to neonatal care in her own time. She has also developed education packages for parents to support early development and provides regular education and mentoring for the band 6 staff in her department. These skills are transferable, and Emily and her manager feel that she is performing at an enhanced level in this area.
- Evidence, research and development – Emily uses current evidence to underpin her paediatric practice. She takes part in journal club and led a recent audit for the team. Whilst these skills are transferable into a neonatal setting, she has limited understanding of the neonatal evidence base or its application to practice. She has determined that she is meeting the requirements at the foundation level.

The framework provided Emily with a structure to consider her skills and development in neonatal care. Emily and her manager reviewed Emily's learning needs and identified learning opportunities to support a future career in neonatal care. The Band 8a OT working in the local neonatal unit agreed for Emily to attend the unit once a month to support the development of her knowledge and skills. She also invited Emily to attend neonatal teaching sessions and offered to provide some informal mentoring.

# Clinical practice

The clinical practice pillar is divided into four components of occupational performance. The knowledge and skills for each component area are described. These areas support the occupational performance of infants and parents individually and together through co-occupations. They are relevant for occupational therapy delivered during a neonatal admission and when supporting infants and families as they make the transition home.

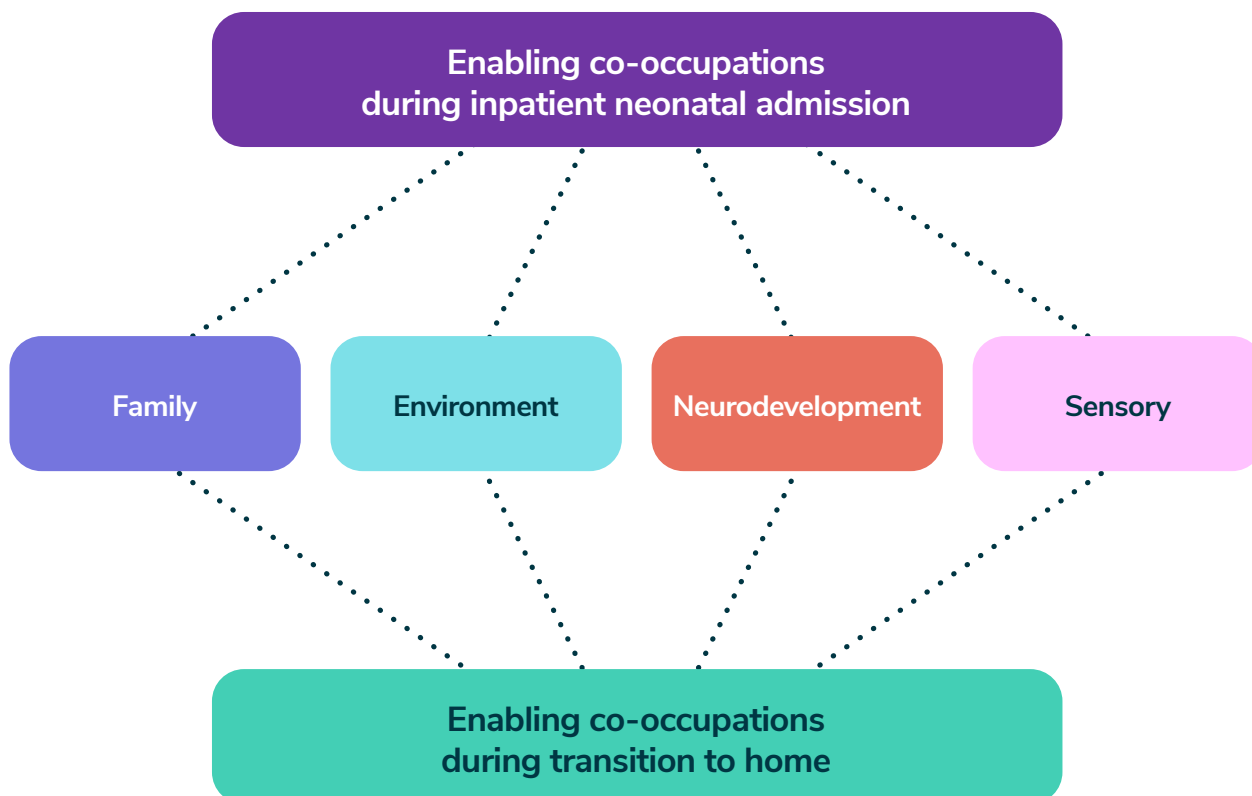


Figure 1: Enabling occupational performance of infants and families in neonatal care

Four key performance components (family, environment, neurodevelopment and sensory) were identified as key domains of neonatal therapy practice by the National Association of Neonatal Therapists (NANT, 2022). They have been adapted with permission.

Each performance component area is described with reference to:

- key knowledge requirements
- assessment skills
- intervention skills.

## Family

This section describes the knowledge and skills required to provide safe and effective OT with families of infants admitted to the neonatal unit. A key focus is enabling parent occupations – the activities parents do to care for their infant and support their infant's development, health and wellbeing. These include observable activities (such as care giving and holding their infant) and 'hidden' activities, such as decision-making and interpreting their infant's behaviour and needs.

The early, unanticipated birth of an infant who requires neonatal care can significantly affect parents' role and engagement in parenting occupations. An infant's fragility, the neonatal care environment and the physical/emotional impact of a traumatic pregnancy and/or delivery will affect parents' roles, routines and confidence to engage in parenting occupations. Parenting in a neonatal care environment can look and feel very different from what the parents had anticipated and hoped for before delivery, and this will be a considerable adjustment for them. OTs need to be aware of the influences of these experiences on parents and families and consider how best to promote optimal early parent-infant relationships.

The family section outlines key knowledge requirements, assessment and intervention skills in the areas of:

- family systems
- enabling parent/family occupational participation
- adult learning styles.

# Knowledge

## Family systems

Foundation	Enhanced	Advanced	Expert
<p>Understands the impact of the following on parents' participation and engagement in parenting occupations in neonatal care:</p> <p>Family structures, established and anticipated occupational roles, culture, beliefs, values, parenting experience/ practice and sibling needs.</p> <p>Family resources including finances, social-emotional support from extended family and others, proximity to the neonatal unit, caring responsibilities and other factors affecting ability to be present on the unit.</p> <p>Parents' adaptation to their role as parent of a high risk infant admitted to a neonatal unit, including anticipated occupations, role transition, and environmental impact on parenting role.</p> <p>Parent mental health and wellbeing and the impact on participation in meaningful parenting occupations.</p>	<p>Demonstrates comprehensive knowledge of differences in family structure, resources, occupational adaptation and parent mental health and wellbeing and understands their impact on parents' participation and engagement in parenting occupations in neonatal care.</p> <p>Demonstrates comprehensive knowledge of the impact of child bereavement/loss on parents' participation in caregiving occupations and the impact of this on parents' participation and engagement in parenting occupations.</p> <p>Demonstrates comprehensive understanding of the occupational needs and roles of members of the wider family including siblings and explains how OT can enhance their involvement with their infant's care.</p>	<p>Demonstrates critical understanding of how differences in family structure, resources, and parent mental health and wellbeing influence occupational adaptation and parental role transitions in neonatal care. Is able to analyse and interpret the impact of these factors on parents' participation and engagement in parenting occupations in neonatal care.</p> <p>Demonstrates advanced, evidence-based knowledge of the impact of perinatal mental health on parent-infant relationships in neonatal care, and the role of OT in supporting parents experiencing perinatal mental health problems.</p> <p>Demonstrates advanced, evidence-based knowledge of the wider determinants of health on care and outcomes for infants requiring neonatal care across their lifespan and the role of OT in supporting these.</p> <p>Demonstrates advanced, evidence-based knowledge of different types of care, for example kinship and foster carers, and analyses and interprets the impact of these on the carer-infant relationship.</p>	<p>Leads the development of educational models of OTs and other neonatal providers on the influence of family structure, resources, occupational adaptation and parent mental health and wellbeing on parent presence and participation in caregiving.</p> <p>Provides consultative advice on the design of direct care and service models to embed family support systems across a network or at national level.</p>

# Knowledge

## Enabling parent/carer/family participation

Foundation	Enhanced	Advanced	Expert
<p>Understands the key characteristics of parent-infant relationships/attunement, and how a neonatal unit admission can affect this.</p> <p>Identifies a range of OT strategies and approaches to support and promote parent-infant attunement .</p> <p>Understands what is meant by infant neurobehavioural regulation.</p> <p>Understands the importance of enabling parents to accurately observe, interpret, and respond to their infant's unique cues including benefits for both infant and parent/carer.</p> <p>Understands the principles of coaching methods to support parent/carer/family participation in caregiving.</p>	<p>Demonstrates comprehensive understanding of the association between sensitive and attuned parent-infant relationships and infant social-emotional development.</p> <p>Applies understanding of the impact of a neonatal unit admission on parent-infant relationships to identify and use strategies to promote attunement, synchronicity and reciprocity.</p> <p>Demonstrates comprehensive understanding of the impact of infant neuro-behavioural regulation on health, development and occupational performance.</p> <p>Applies understanding to support parents' confidence in their ability to accurately observe, interpret, and respond to their infant's unique cues.</p> <p>Demonstrates comprehensive understanding of the importance of enabling parent advocacy to facilitate positive and sensitive occupational engagement experiences.</p> <p>Demonstrates comprehensive understanding of coaching methods and their application to OT interventions.</p>	<p>Demonstrates advanced, evidence-based knowledge of the association between sensitive and attuned parent-infant relationships and infant social-emotional development.</p> <p>Synthesises knowledge of the characteristics of parent-infant relationships and attunement, and the impact of a neonatal unit admission to identify, use and develop strategies and interventions that promote parent-infant attunement, synchronicity and reciprocity.</p> <p>Demonstrates advanced, evidence-based knowledge of the impact of infant neuro-behavioural regulation on parent-infant interaction and applies this to the delivery of neonatal OT services.</p> <p>Demonstrates advanced knowledge of the impact of health inequalities on parent access to neonatal care.</p> <p>Identifies opportunities to enable parent advocacy, applying this knowledge to facilitate positive and sensitive occupational engagement experiences.</p> <p>Demonstrates advanced, evidence-based knowledge of the attributes of coaching methods and their application to enable parent/carer/family participation in the delivery of neonatal OT services.</p>	<p>Leads the development of educational models of OTs and other neonatal providers on theory and models of care delivery which enable parent/carer/family occupational engagement and participation, for delivery at local, regional, national and international level.</p> <p>Generate new knowledge on strategies for supporting occupational adaptation which promote parent/carer/family participation.</p> <p>Provides consultative advice on the design of direct care and service models to enable parent/carer/family occupational engagement and participation across a network or at national level.</p>

# Knowledge

## Adult learning styles

Foundation	Enhanced	Advanced	Expert
<p>Understands individual differences in learning styles.</p> <p>Understands the relationship between emotional state and learning capacities.</p> <p>Understands the potential variability in parental focus during neonatal unit admission and preparedness for education participation.</p>	<p>Demonstrates comprehensive understanding of individual differences in learning styles.</p> <p>Demonstrates comprehensive understanding of the relationship between emotional state and learning capacities in preparing parent education.</p> <p>Demonstrates comprehensive understanding of the variability in parental focus during NICU admission and preparedness for education participation and applies this when planning educational interventions.</p>	<p>Demonstrates advanced, evidence-based knowledge of individual differences in learning styles and adapts approaches appropriately when working directly with families.</p> <p>Applies advanced knowledge of the relationship between parent emotional state and learning capacities to direct and adapt OT approaches when working with individuals and groups.</p> <p>Demonstrates advanced, evidence-based understanding of the impact of the NICU course on parental focus. Applies knowledge of parent preparedness for education participation by adapting approaches to enable provision of individualised intervention.</p>	<p>Leads the development of parent/carer/family focused educational models, tools and materials that reflect individual differences in learning styles, influence of parent emotional state and individualised adaptation of materials as needed.</p>

# Assessment

Foundation	Enhanced	Advanced	Expert
<p>Perform assessment of:</p> <p>Parent identified occupations, including collaboratively derived goals for parent participation and engagement for late preterm infants.</p>	<p>Able to independently complete a comprehensive assessment of:</p> <p>Parent identified occupations, including setting collaboratively derived goals for parent participation and engagement for all infants.</p> <p>Aspects of parental wellbeing that underpin occupational engagement and performance including parent stress and self-efficacy.</p>	<p>Leads advanced, evidence-based assessments of:</p> <p>Parent identified occupations for the most complex infants, including setting collaboratively derived goals for parent participation and engagement.</p> <p>Parental wellbeing. Analysing and interpreting the influence of factors such as parental stress and self-efficacy on engagement and occupational performance.</p> <p>Parent-infant attunement. Analysing, interpreting and applying findings to enable early parent-infant relationship development.</p> <p>Parent mental health. Identifying anxiety and depression, analysing, interpreting and applying findings to understand and promote occupational adaptation.</p>	<p>Formulate and evaluate robust tools/measures for occupation based assessment of parent participation and engagement in NICU care of their infant.</p>



# Interventions

## Family systems

Foundation	Enhanced	Advanced	Expert
<p>Apply knowledge of family structure, resources, occupational adaptation and parent mental health and wellbeing to support participation in parent and family occupations.</p>	<p>Demonstrates comprehensive knowledge of family structure, resources, occupational adaptation, applying clinical reasoning and decision making skills to support participation in individualised parent and family occupations that are meaningful and goal-directed.</p> <p>Independently adapts interventions and uses a problem solving approach according to the family and infant's changing needs.</p> <p>Provides appropriate psychosocial interventions to promote parental mental health and wellbeing which enable participation in meaningful parenting occupations, referring to psychological therapies when appropriate.</p>	<p>Applies advanced knowledge, clinical reasoning and decision making skills with the most complex and fragile infants to support participation in individualised parent and family occupations that are personally constructed, meaningful, symbolic, and goal-directed.</p> <p>Synthesises and interprets complex clinical information, identifying and adapting intervention approaches according to an infant's changing medical status/ circumstances and considering the family culture, changing emotions, needs, and resources.</p> <p>Demonstrates advanced, evidence-based knowledge of psychosocial interventions that promote parental mental health and wellbeing and enable participation in meaningful parenting occupations.</p> <p>Work collaboratively with psychological therapy practitioners to ensure a comprehensive approach to supporting parent mental health and wellbeing at a unit and/or network level.</p> <p>Effectively communicates and liaises with the neonatal team and neonatal network to ensure consistency in the approach of and support for parent occupational engagement.</p>	<p>Provides clinical interventions as outlined for advanced practitioner level in addition to:</p> <p>Leading the application of theory and intervention development which supports participation in individualised parent and family occupations that are personally constructed, meaningful, symbolic, and goal-directed, for the diverse range of infants admitted to neonatal care.</p> <p>Providing consultative advice and interventions in complex family situations to support parent occupational engagement for the neonatal workforce at unit and network level.</p> <p>Collaborating with psychological therapy leads to generate universal and specialised approaches to enable parent mental health and wellbeing at a network or national level.</p>

# Interventions

## Enabling parent/family/carer participation

Foundation	Enhanced	Advanced	Expert
<p>Demonstrated use of parent-identified goals for parent participation and enablement to prioritise and structure OT input.</p> <p>Promotes opportunities for parent attunement during specific parenting co-occupations.</p> <p>Provides parent interventions to prepare for engagement in infant caregiving (such as individualised education, modelling, simulation training, anticipatory guidance).</p>	<p>Able to independently implement OT interventions in accordance with parent-identified goals for parent participation and enablement.</p> <p>Able to independently provide education and therapeutic input to promote parent attunement and establish synchrony in parent-infant interactions in infants.</p> <p>Independently provides targeted interventions to prepare parents for engagement in infant caregiving including individualised education, modelling, simulation training and coaching.</p> <p>Incorporates reflective and coaching attributes with parents to promote occupational adaptation, self-efficacy and confidence.</p> <p>Supports engagement with extended family members (including infant's siblings) within the visitation policy guidelines for the neonatal unit.</p> <p>Independently provides psychosocial interventions to mitigate parent stress and anxiety associated with performing parenting occupations post discharge.</p> <p>Demonstrates knowledge of mechanisms for supporting families post discharge from the neonatal unit, using these to promote parent confidence and competence in caring for their infant following the transition to home.</p>	<p>Demonstrates advanced, evidence-based knowledge of OT interventions that support parent-identified goals for parent participation and enablement with the most complex and fragile infants.</p> <p>Provides evidence-based education and therapeutic input to promote parent attunement and establishment of synchrony in parent-infant interactions with infants in complex care situations.</p> <p>Demonstrates advanced, evidence-based knowledge of targeted interventions to prepare parents for engagement in infant caregiving (including individualised education, modelling, simulation training, coaching) in complex family situations.</p> <p>Routinely uses advanced reflective and coaching approaches with parents to promote occupational adaptation, self-efficacy and confidence.</p> <p>Anticipates, recognises and addresses factors affecting extended family members' engagement on the neonatal unit (including siblings) and supports their engagement within the unit visitation policy guidelines.</p> <p>Works collaboratively with families and the MDT to foster meaningful parent-infant experiences when planning and delivering end of life care.</p> <p>Demonstrates advanced, evidence-based knowledge of psychosocial interventions to mitigate parent stress and anxiety associated with performing parenting occupations with complex infants post discharge.</p>	<p>Provides consultative advice on the delivery of interventions which promote parent attunement, establishment of synchrony in parent-infant interactions, parental preparation for involvement in caregiving and application of coaching models in the neonatal setting.</p> <p>Provide leadership at network and national level on the design and delivery of parent-occupation focused interventions.</p>

# Interventions

## Enabling parent/family/carer participation

Foundation	Enhanced	Advanced	Expert
		<p>Works collaboratively with psychological therapy practitioners to ensure a comprehensive approach for promoting parent mental health and wellbeing post discharge at a unit and/ or network wide level.</p> <p>Effectively communicates and liaises at network level to ensure consistency of approaches and support for enabling parent/family occupational participation.</p>	

## Adult learning styles

Foundation	Enhanced	Advanced	Expert
<p>Incorporates parent/ family education into OT intervention.</p> <p>Includes provision of parent/ family education that incorporates approaches relevant to a range of adult learning styles so as to provide an individualised approach for each family.</p> <p>Offers opportunities for families to discuss knowledge needs and concerns.</p>	<p>Independently carries out individualised parent/family education that takes into account parent occupational goals, infant readiness, and parent emotional state.</p> <p>Independently applies a therapeutic approach in which families feel able to discuss knowledge needs and concerns, repeating content as necessary.</p> <p>Able to independently deliver education that puts the parents at the centre of their child's care and accommodates a variety of adult learning styles.</p>	<p>Demonstrates advanced, evidence-based knowledge of individualised parent/family education that is cognisant of parent occupational goals, infant readiness, and parent emotional state when working with the most complex and fragile infants.</p> <p>Incorporates relationship focused care that provides families with a supportive milieu in which to discuss knowledge needs and concerns.</p> <p>Demonstrates advanced, evidence-based knowledge of parent/family education approaches, analysing adult learning styles to provide an appropriate, individualised approach for each family.</p> <p>Provides education using a collaborative approach that ensures parents' centrality to the care of their child.</p>	<p>Provides clinical interventions as outlined for advanced practitioner level in addition to:</p> <p>Providing consultative advice on the delivery of parent education and information that is individualised to parent learning styles.</p> <p>Provide leadership at a network or national level on the development of parent/ family education that is inclusive of individualised adult learning styles.</p>

## Environment

This section outlines the knowledge and skills required to provide safe and effective OT to meet the environmental needs of the infant and parent in the neonatal unit.

OTs possess unique skills to assess the environment. This is one of the most influential external factors affecting the developing brain of the infant and the occupational performance of infants and parents. We understand the impact of environment on the infant, their family and the ability of staff to provide individualised neuro-protective care and enable parent-infant occupational performance. We have a key role in making recommendations to ensure a neuro-protective environment for infants and their carers.

In the context of the neonatal environment, both the physical and social/cultural environments need to be considered.

### Physical environment

- medical equipment and procedures
- frequency, timing, duration, quality and intensity of sensory input from medical equipment and procedures
- sensory input from equipment, procedures and staff activities that is disruptive to the infant's neurobehavioural organisation.

### Social/cultural environment

The social/cultural environment and its relationship to the infant's neurobehavioural organisation is affected by interactions and relationships between:

- parents and their infant
- extended family members and the infant
- staff members and the infant
- parents and staff members
- the OT, parents and staff members (Vergara et al, 2006).

# Knowledge

Foundation	Enhanced	Advanced	Expert
<p>Understands the impact of the physical environment on the preterm infant and their occupational performance and participation in co-occupations.</p> <p>Understands the impact of the physical environment on parent occupational performance and participation in co-occupations.</p> <p>Understands the impact of the neonatal environment on staff and their delivery of individualised neuro-protective care.</p>	<p>Demonstrates comprehensive knowledge of the influence of modifications to the physical neonatal environment on the high-risk infant and their occupational performance and participation in co-occupations.</p> <p>Demonstrates comprehensive knowledge of the impact of the physical and social environment on parent occupational performance and participation in caregiving.</p> <p>Demonstrates comprehensive knowledge of the impact of the neonatal environment on staff and their delivery of individualised neuro-protective care.</p>	<p>Demonstrates advanced, evidence-based knowledge of how occupational-environment transactions can be enabled through supportive modifications of:</p> <p>The physical environment to enable the occupational performance of high-risk infants, including their participation in co-occupations.</p> <p>The physical and social environment to enable parent occupational performance and participation in caregiving of high-risk infants.</p> <p>The staff/social environment, impacting the delivery of individualised neuro-protective care for high-risk infants, and processes that support parent occupational performance.</p> <p>Demonstrates advanced, evidence-based knowledge of environmental assessments and their application within the neonatal setting.</p>	<p>Leads the development of PEO model theory application for OTs and other neonatal providers on the influence of occupation-environmental transitions and their impact on infant and parent occupational performance.</p> <p>Provides consultative advice on the design of direct care and service models to enable supportive occupation-environmental transactions across a network or at national level.</p>

# Assessment

Foundation	Enhanced	Advanced	Expert
<p>Perform assessment of:</p> <p>Strengths and barriers of the physical environment in enabling infant and parent occupational performance.</p> <p>Strengths and barriers of the physical environment for neonatal staff in their delivery of individualised neuroprotective care.</p>	<p>Uses relevant formalised tools to independently carry out an assessment of the:</p> <p>Physical and social environment and the impact this has on infant neurobehaviour and occupational performance.</p> <p>Physical and social environment and the impact this has on parent presence and participation in co-occupations.</p> <p>Supports/educates foundation level OTs in the unit to use environmental assessment tools.</p>	<p>Demonstrates advanced, evidence-based knowledge of assessments for the most complex infants including the physical and social environment - analysing the impact this has on infant neurobehaviour and occupational performance, and</p> <p>parent presence and participation in co-occupations.</p> <p>Leads the embedding of environmental assessment as a routine part of occupational service delivery in the unit/network.</p>	<p>Formulates and evaluates robust tools/measures for assessment of occupation-environment transactions to direct OT intervention which promotes infant and parent occupational performance.</p>

# Interventions

Foundation	Enhanced	Advanced	Expert
<p>Demonstrated knowledge of environmental factors in developing therapeutic recommendations to enhance the individual infant environment which support neuroprotection and participation in co-occupations (for example skin to skin care, early feeding experiences).</p> <p>Interpret knowledge of neonatal physical and social environment to contribute to recommendations for the neonatal unit environment which support the delivery of FICare and infant and family centred developmental care.</p>	<p>Demonstrates comprehensive knowledge of physical and social occupation-environment transactions to independently:</p> <p>Provide individualised environmental interventions depending on the complexity and gestation of infants.</p> <p>Implement specialist environmental adaptations to enable parent and infant occupations.</p> <p>Provide supportive therapeutic environmental interventions, including the use of specialist equipment, to meet individual needs.</p> <p>Coach parents and staff to enrich a developmentally appropriate environment that supports early play as an occupation.</p> <p>Demonstrates comprehensive knowledge of the application of occupation-environment transactions to independently implement individualised developmentally appropriate recommendations for the neonatal environment for all infants/families.</p> <p>Liaises with and refers to community teams for home-based environmental modification to meet individual needs.</p>	<p>Applies advanced knowledge, clinical reasoning and decision-making skills to design and provide individualised environmental interventions for the most complex and fragile infants.</p> <p>Analyses and prescribes environmental modification adaptations to enable parent participation for the most complex and fragile infants.</p> <p>Leads the neonatal unit MDT to ensure environmentally appropriate support for longer term/complex infants, including:</p> <ul style="list-style-type: none"> <li>• Specialist adaptations to parent and infant occupations such as specialised positioning, seating and sleep systems, and bathing equipment.</li> <li>• Assessment of the home environment for home O2 and other specialist equipment.</li> <li>• Individualised environmental interventions which support development of play as an occupation.</li> </ul> <p>Leads the implementation of infant and family centred developmentally supportive environmental recommendations for the benefit of all infants/families on the unit.</p>	<p>Provides clinical interventions as outlined for advanced practitioner level in addition to:</p> <p>Leading the application of theory and intervention development which supports the development of neonatal care models which enable positive and protective occupation-environmental transactions at a national level.</p> <p>Providing consultative advice and environmental interventions which enable infant and parent occupational performance for the neonatal workforce at unit and network level.</p>

## Neurodevelopment

This section outlines the knowledge and skills required to provide safe and effective OT to meet the neurobehavioural and neurodevelopmental needs of infants receiving neonatal care. These performance components can have a significant impact on person-occupation transactions, infants' occupational performance and their ability to participate in co-occupations with their parents/carers.

'Neurobehaviour' refers to the relationship between the central nervous system and emotions, behaviour and learning. Infants use behaviour cues to communicate how well they're coping at any given moment. These cues – which can be categorised into 'stress' or 'coping' behaviours – help us to understand whether they are ready to be approached for intervention and what help they need to regulate. Infants will attempt to self-regulate and organise their neurobehaviour so they can engage with their environment and cope with stimuli.

'Neurodevelopment' refers to the development of neural pathways in the brain which affect the development of functional skills and performance. This includes learning and cognition, motor skills, sensory development and language and communication skills.

# Knowledge

## Brain and neurodevelopment

Foundation	Enhanced	Advanced	Expert
<p>Understands the impact of the following on infant development:</p> <ul style="list-style-type: none"> <li>Processes of typical growth and development of the term and preterm infant including neuromotor development in-utero.</li> <li>Medical conditions and events which may impact on the normal development of the term infant's brain including genetic conditions, neurological disorders, and acquired brain injuries during birth.</li> <li>Neuroprotective developmental care as it relates to infants &gt;32 weeks' gestation.</li> </ul>	<p>Demonstrates comprehensive understanding of the impact of preterm birth on stages of brain development from conception to early childhood.</p> <p>Demonstrates comprehensive understanding of the impact of pre, peri and postnatal factors on infant and child development.</p> <p>Demonstrates comprehensive understanding of typical and atypical signs of neurological development in the preterm and term infant.</p> <p>Demonstrates comprehensive knowledge of neuroprotective developmental care and strategies which protect and optimise brain development.</p>	<p>Demonstrates advanced, evidence-based knowledge of the impact of preterm birth on person-environment transactions and stages of brain development from conception to early childhood Applies this knowledge to identify, apply and adapt strategies and interventions that optimise infant neurodevelopment.</p> <p>Demonstrates critical understanding of evidence-based strategies and guidelines for the physical and sensory environment that promote optimal brain development.</p> <p>Demonstrates advanced, evidence-based knowledge of neurological and neurobehavioural assessment in neonatal care settings.</p>	<p>Leads the critical review of the evidence base for neuroprotective care strategies.</p> <p>Provides consultative advice on the design of direct care and service models to embed neuroprotective care models across a network or at national level.</p>

# Knowledge

## Neurobehaviour

Foundation	Enhanced	Advanced	Expert
<p>Understands and recognises the infant behaviours which represent autonomic, motor, state, attention and self-regulatory sub-systems in the preterm and term born infant.</p> <p>Understands the Synactive Model of Neonatal Behavioural Organisation and its implications for infant development and selection of interventions.</p> <p>Understands and complies with guidelines for management of physiological stability.</p>	<p>Demonstrates comprehensive knowledge of the Synactive Model of Neonatal Behavioural Organisation with regards to the interactions between subsystems and the caregiving environment.</p> <p>Independently develops individualised descriptions of infant behavioural responses to inform caregiving (avoids generalisation of behaviour into predetermined categories, for example organised and disorganised, approach and avoidance.)</p> <p>Demonstrates comprehensive understanding of the development of each subsystem as demonstrated by the infant's behaviour.</p>	<p>Demonstrates advanced, evidence-based understanding of infant neurobehavioural regulation (Synactive Model) and its application to:</p> <p>Developmental maturation of regulatory sub-systems in infant care plans.</p> <p>The development, importance and facilitation of infant self-regulation.</p> <p>The initiation of co-regulatory responsiveness to infant behavioural cues.</p> <p>The impact of infant regulation on person-occupation transactions.</p> <p>Identifies and influences opportunities to enable parent advocacy and facilitate positive and sensitive occupational engagement experiences on the neonatal unit.</p> <p>Leads audits and quality improvement projects examining implementation of strategies to support infant neurobehavioural regulation at unit level.</p>	<p>Leads the development of educational models of OTs and other neonatal providers on theory and models of neurobehavioural regulation which enable infant occupational performance at local, regional, national and international level.</p> <p>Generate new knowledge on strategies for supporting neurobehavioural regulation strategies which promote infant and family centred developmental care practices.</p> <p>Provides consultative advice on the design/delivery of direct care and service models which support infant neurobehavioural regulation across a network or at national level.</p>

## Physical development and growth

Foundation	Enhanced	Advanced	Expert
<p>Understands the impact of factors related to prematurity on infant growth.</p> <p>Understands the impact of preterm birth on organ development and function.</p> <p>Understands the different contributions of the roles within the MDT in relation to the growth and development of the infant.</p>	<p>Demonstrates comprehensive understanding of typical and atypical infant growth patterns.</p> <p>Demonstrates comprehensive understanding of the contribution of different factors affecting infant growth, such as activity, nutrition, medical and environmental.</p> <p>Demonstrates comprehensive understanding of the impact of intrauterine growth restriction on neurobehavioral outcomes.</p>	<p>Demonstrates advanced, evidence-based knowledge of strategies to address infant growth through systematic observation and analysis of infant behaviour, and caregiving on the neonatal unit.</p> <p>Demonstrates and applies advanced, evidence-based knowledge of factors affecting infant growth to the delivery of neonatal OT services.</p>	<p>Leads the development of educational models of OTs and other neonatal providers on systematic observation and analysis of infant behaviour, and caregiving to optimise infant growth, for delivery at local, regional, national and international level.</p>



# Knowledge

## Pain and stress

Foundation	Enhanced	Advanced	Expert
<p>Understands the impact of the following on infant experience and brain development:</p> <p>The impact of care-based interventions (invasive and non-invasive) on infant stress and pain responses.</p> <p>Neurophysiology of stress and pain experiences.</p> <p>Common behavioural responses to stress and pain (acute/chronic) in preterm and term born infants.</p> <p>Demonstrates awareness of:</p> <p>The development of foetal, preterm and newborn pain perception.</p> <p>The use of infant pain scales in the neonatal setting.</p>	<p>Demonstrates comprehensive understanding of the impact of stressful and painful care experiences on infant neurobehaviour.</p> <p>Demonstrates comprehensive understanding of the impact of stress/pain on the developing architecture of the infant's brain and related long-term outcomes.</p> <p>Demonstrates comprehensive understanding of the cumulative effect of repeated pain/stress exposures on infant stability and sensitivity.</p> <p>Applies knowledge to select appropriate pain assessment tools for implementation into practice.</p>	<p>Critically appraises neonatal pain scales for purpose. Influences unit-wide adoption of appropriate infant pain assessment tools.</p> <p>Demonstrates and applies advanced, evidence-based knowledge of the role of parents in managing infant pain and providing comfort.</p> <p>Applies advanced, evidence-based knowledge of the impact of stress/pain on the developing architecture of the infant's brain and related long term outcomes to advocate for and participate in the development of unit pain management policies and protocols.</p> <p>Demonstrates advanced evidence-based knowledge of non-pharmacological pain management strategies and leads audits of their use in neonatal unit.</p>	<p>Leads the development of educational models of OTs and other neonatal providers on systematic observation and analysis of infant behaviour, to increase understanding of infant stress thresholds, at local, regional, national and international level.</p> <p>Provides consultative advice on the selection and implementation of neonatal pain scales across a network or at national level.</p>

# Knowledge

## Developmental outcomes for preterm and high-risk infants including neurodevelopmental follow-up

Foundation	Enhanced	Advanced	Expert
<p>Understands the processes of typical development of the term infant up to six-months of age.</p> <p>Recognises typical and atypical signs of neurological development in the term infant.</p> <p>Demonstrates understanding of the implications of medical conditions/events on neurodevelopmental outcomes of the infant, including HIE, IVH, PVL, genetic conditions, maternal substance misuse, brain abnormalities; and explains justification for OT assessment and intervention.</p> <p>Understands the impact of prematurity and/or a neonatal admission on the social and emotional development of the infant.</p> <p>Understands the role of other members of the MDT in managing infants with neurological disability.</p>	<p>Demonstrates comprehensive understanding of the health, growth, cognitive, behavioural, emotional and social consequences of preterm birth and neonatal care.</p> <p>Demonstrates comprehensive understanding of typical and atypical signs of neurological development in the preterm and term infant.</p> <p>Demonstrates comprehensive understanding of neurodevelopmental outcomes of infants admitted to neonatal care to inform requirements for OT assessment and intervention.</p> <p>Demonstrates comprehensive understanding of factors which influence the social and emotional development of the infant (for example the importance of parent-infant co-regulation).</p> <p>Demonstrates comprehensive knowledge of interventions which have a positive impact on social and emotional development in foetal, preterm and newborn period, and infancy.</p> <p>Demonstrates comprehensive understanding of the mechanism of neurological pharmacological treatments including tone management medication, secretion management.</p> <p>Demonstrates understanding of the role of other professionals and agencies that provide services for children with neurological disability.</p> <p>Demonstrates comprehensive understanding of different neurodevelopmental treatment approaches and their application with individuals/groups of infants.</p>	<p>Demonstrates advanced, evidence-based knowledge of developmental outcomes for high-risk infants. Applies this knowledge to implement pathways for identification and assessment of infants at high risk of adverse neurological sequelae.</p> <p>Demonstrates advanced, evidence-based knowledge of social emotional development and infant mental health principles that impact on preterm infant and parent experience.</p> <p>Demonstrates advanced knowledge of a wide range of neurological conditions and neurodisability and the delivery of OT services to complex infants.</p> <p>Appraises options for treatment and management of neurodisability as it manifests in the neonate and applies this to practice.</p>	<p>Leads the development of educational models of OTs and other neonatal providers on developmental outcomes for high-risk infants at local, regional, national and international level.</p> <p>Leads the development and implementation of clinical pathways and strategies to support infants at high risk of neurodevelopmental sequelae.</p> <p>Generates new knowledge on implementing therapeutic strategies which optimise the social and emotional development of infants.</p> <p>Provides consultative advice on the design of direct care and service models to create hospital to community pathways for infants at high risk of adverse neurological sequelae across a network or at national level.</p>

# Assessment

## Developmental outcomes for preterm and high-risk infants including neurodevelopmental follow-up

Foundation	Enhanced	Advanced	Expert
<p>Performs observational assessment of term infant neurobehavioural subsystems for the purposes of implementing strategies for:</p> <ul style="list-style-type: none"> <li>energy conservation to support growth</li> <li>sleep protection</li> <li>contingently supportive responses to caregiving</li> </ul> <p>Performs informal initial postural assessment of an infant to determine the best postural management indicated for the individual infant to optimise occupational performance.</p> <p>Understands the implications of an MRI report for specific infants as it pertains to OT assessment and intervention.</p> <p>Basic knowledge of the general implications of an abnormal EEG or CFM as it pertains to OT assessment and intervention.</p> <p>Understands purpose and structure of commonly used developmental assessments for infants and children (for example BSID, HELP).</p> <p>Understands context of neurological assessment as it pertains to OT assessment and intervention (for example HNNE).</p>	<p>Demonstrates comprehensive understanding of the purpose and structure of commonly used neonatal neurobehavioural assessments (for example, NBAS, NAPI).</p> <p>Independently carries out formal observational assessments of neurobehavioural regulation to create bespoke care plans for preterm and term infants.</p> <p>Certified in use of a comprehensive neurobehavioural assessment of infants (for example, NBAS).</p> <p>Independently evaluates and adjusts bespoke care plans to optimise infant growth and development.</p> <p>Independently performs assessment of infant/environment factors influencing infant growth to determine developmental care strategies.</p> <p>Demonstrates understanding of the purpose, method and results of MRI investigations and their implications for OT assessment and intervention.</p> <p>Demonstrates understanding of the implications of abnormal EEG or CFM and plans appropriate assessment to assist in prediction of neurodevelopmental outcome/sequelae.</p> <p>Demonstrates ability to distinguish between norm and criterion referenced developmental assessments.</p> <p>Independently administers appropriate standardised developmental assessments and interprets the results regarding functional implications.</p>	<p>Demonstrates advanced, systematic behavioural observation in all infant interactions in the neonatal unit.</p> <p>Undertakes, evaluates and applies additional training in observational assessment (for example NIDCAP).</p> <p>Applies and interprets advanced observational assessments of neurobehavioural regulation to create bespoke care plans for the most complex infants.</p> <p>Demonstrates advanced knowledge of standardised neurobehavioural assessments with infants as young as 32 weeks gestational age (for example, APIB, NNNS, NBAS, NAPI)</p> <p>Demonstrates understanding of CFM and EEG findings and confidently discusses their implications with regards to appropriate neurodevelopmental assessment and follow-up with MDT colleagues.</p> <p>Demonstrates advanced, evidence-based knowledge of standardised developmental assessments appropriate for use with the neonatal population.</p> <p>Demonstrates advanced knowledge and use of neurological assessments, working with neonatology and neurology teams to predict infant outcomes (for example HNNE, GMA).</p> <p>Reliably scores validated pain scales for clinical or research use.</p>	<p>Participate in expert reference groups at national level for the formulation of observational infant assessment tools/measures.</p> <p>Provides consultative advice at unit, network and national level regarding the identification of the most suitable neurobehavioural and neurodevelopmental assessments to use in research and evaluation.</p>

# Interventions

Foundation	Enhanced	Advanced	Expert
<p>Discuss findings of neurobehavioural observational assessment with parents, nursing and medical team to inform changes to care plans to support the infant's neurobehavioural regulation.</p> <p>Develop and implement an individualised program to support neurobehavioural and neuromotor development which includes:</p> <p>Adaptation of infant care based on behavioural cues to facilitate improved organisation.</p> <p>Provision of education and support to parents/ carers on infant behavioural cues and implementation of strategies to mediate stress experiences.</p> <p>Follows guidelines for assessment and management of pain and comfort.</p> <p>Certification in the implementation of the Newborn Behavioural Observation (NBO) System for term infants in the neonatal unit.</p> <p>Provide advice on handling during term infant cares and occupations including bathing, feeding and dressing.</p>	<p>Independently able to complete and interpret appropriate neurological assessments with understanding of the functional implications (for example HNNE, GMA).</p> <p>Demonstrates comprehensive knowledge of neurobehavioural sub-systems maturation to therapeutic goal setting with realistic expectations according to age and stage of development.</p> <p>Demonstrates comprehensive knowledge of signs of organised and disorganised behavioural states. Adapts care to facilitate improved organisation, fitting these to the infant's own self-regulatory efforts.</p> <p>Models interactions with the infant that preserve/ enhance autonomic stability and energy conservation (for example pacing, position, environment) for parents and carers.</p> <p>Provides postural supports which facilitate physiological stability (for example lung mechanics and digestion) and developmentally appropriate movements and posture; supporting infant's own efforts to regulate tone and movement.</p> <p>Independently recognises infant's efforts to reach alertness and adapts caregiving interaction to facilitate attention.</p> <p>Independently provides an appropriate setting to support good quality sleep.</p>	<p>Demonstrates advanced knowledge of neurobehavioural and neurological assessments, analysing and applying findings to set goals, and implement and adapt caregiving plans that supports an infant's developmental and medical status.</p> <p>Demonstrates advanced knowledge, clinical reasoning and decision making skills in managing neurobehavioural difficulties for the most complex infants including those with EPT, NAS etc.</p> <p>Demonstrates advanced knowledge, clinical reasoning and decision making skills regarding the provision of neurodevelopmental support and intervention for the most complex infants (for example, complex respiratory, surgical, cardiac and other medical conditions).</p> <p>Influences implementation of strategies that promote infant growth in conjunction with the neonatal MDT.</p> <p>Leads engagement with the neonatal unit team and at network level to ensure consistency of approaches that promote parent occupational engagement.</p> <p>Advocates for unit approach to the minimisation of the number of painful experiences for infants.</p> <p>Demonstrates advanced knowledge of therapeutic non-pharmacological pain management strategies/ approaches and supports parents and carers to use these too.</p>	<p>Provides clinical interventions as outlined for advanced practitioner level in addition to:</p> <p>Leads the application of theory and OT intervention development which supports infant neurological, neurodevelopmental and neurobehavioural performance in the context of enabling infant occupational performance and optimising neurodevelopmental outcomes.</p> <p>Provides consultative advice and interventions for complex infant management for the neonatal workforce at unit and network level.</p>

## Sensory

This section outlines the knowledge and skills required to provide safe and effective OT to meet the sensory needs of the infant and parent in the neonatal unit.

The development of an infant's sensory system and their ability to process and regulate sensory input is complex and directly influenced by internal and external environmental factors. How infants receive, interpret and regulate sensory information can affect their ability to take part in occupations such as sleep and feeding. Parents play an important role in supporting their infant to regulate and adapt to their new environment. The neonatal OT can assess internal and external factors that affect the sensory system and infant engagement in occupations and co-occupations by considering person-environment-occupation transactions. We provide interventions and advice to enable the parent to offer an optimal sensory experience for their baby. This may be through adaptation of the environment, care strategies or the occupation.

# Knowledge

## Sensory development and processing

Foundation	Enhanced	Advanced	Expert
<p>Understands typical sensory development of the full-term infant and its impact regarding participation in infant occupations.</p> <p>Understands the impact of preterm birth on the development of the sensory system.</p> <p>Interprets when infant sensory development is atypical and the influence on the performance of infant occupations and co-occupations (for example feeding, sleep).</p> <p>Understands the impact of the parent and child sensory profile on early relationship development.</p>	<p>Demonstrates comprehensive understanding of the impact of preterm birth on foetal/infant sensory system development and occupational performance.</p> <p>Demonstrates comprehensive understanding of the impact of sensory thresholds on infant regulation and the impact on infant occupational performance.</p> <p>Demonstrates comprehensive understanding of the presentation of sensory dysfunction in high risk/vulnerable infant populations and explains the impact on occupational performance.</p> <p>Demonstrates comprehensive understanding of the impact of maternal substance misuse on infant neurobehaviour and sensory processing.</p> <p>Demonstrates comprehensive understanding of parent-child sensory profiles and uses this to inform OT intervention which supports early relationship development.</p>	<p>Demonstrates advanced knowledge of differences in sensory development in preterm/high-risk infants and their influence on infant development and occupational performance.</p> <p>Demonstrates advanced knowledge of sensory thresholds and infant regulation and applies this knowledge to inform OT intervention to promote infant occupational performance.</p> <p>Demonstrates advanced knowledge of sensory dysfunction in high risk/vulnerable infants and its impact on infant occupational performance.</p> <p>Demonstrates advanced knowledge of the impact of maternal substance misuse and its impact on infant neurobehaviour and sensory processing; applies this knowledge to identify interventions which enable infant occupations and parent-infant co-occupations.</p> <p>Demonstrates advanced theoretical knowledge relating to parent-infant relationships, attunement, co-regulation and the development of attachment styles.</p> <p>Demonstrates advanced knowledge of the impact of atypical infant sensory processing and/or negative sensory experiences/stress on the performance of infant feeding occupations.</p>	<p>Leads the development of educational models of OTs and other neonatal providers on the influence of sensory development and processing on infant and parent occupational performance.</p> <p>Provides consultative advice on the design of direct care and service models to mediate the impact of adverse neonatal sensory experiences on infant occupational performance across a network or at national level.</p>

# Assessment

Foundation	Enhanced	Advanced	Expert
<p>Perform functional assessment of stable infants &gt;32 weeks PMA, identifying the impact of infant sensory processing on occupational performance.</p> <p>Perform informal assessment of the infant's sensory environment to understand infant-environment transactions. Use information to liaise with MDT regarding developmentally supportive care strategies for individual infants.</p>	<p>Demonstrates comprehensive understanding of the purpose and structure of commonly used sensory assessments.</p> <p>Independently performs comprehensive clinical assessments of sensory threshold, processing and dysfunction in term and preterm infants.</p> <p>Independently performs comprehensive analysis of the infant's sensory environment to inform application of sensory interventions.</p> <p>Independently performs assessment of infant feeding (in conjunction with SLT), with specific focus on the infant's ability to modulate sensory information in order to develop a safe feeding plan.</p>	<p>Appraises the evidence base for formal and observational sensory assessments. Selects and applies tools appropriately to evaluate infants' sensory threshold, sensory processing and dysfunction. Synthesises findings to understand and promote infant occupational performance in the neonatal unit.</p> <p>Demonstrates advanced clinical assessment of infant feeding in conjunction with SLT, with specific focus on the infant's ability to modulate sensory information and organise motor function whilst evaluating co-regulation between infant and feeder in order to develop a safe feeding plan.</p> <p>Provides consultation/ second opinions regarding sensory processing for complex/high-risk infants.</p> <p>Leads the delivery of education regarding sensory assessment for foundation and enhanced level neonatal OTs.</p>	<p>Participate in expert reference groups at national level for the formulation/ refinement of sensory-based assessment tools/measures.</p> <p>Provides consultative advice at unit, network and national level regarding the identification of the most suitable sensory assessments to use in research and evaluation.</p> <p>Leads the development of educational models of OT advanced sensory assessment at regional, national and international level.</p>

# Interventions

Foundation	Enhanced	Advanced	Expert
<p>Develop and implement an individualised program to support infant sensory development which includes:</p> <p>Individualised management of infant sensory experiences which promote the development of infant occupations.</p> <p>Provision of education to support parents/carers on infant sensory development and implementation of strategies to support parents to recognise their infant's sensory preferences.</p> <p>Liaison with MDT colleagues to develop positive sensory environments which promote sensory development and infant occupational performance.</p>	<p>Demonstrates comprehensive knowledge of sensory development to set collaborative therapeutic goals with parents which reflect realistic expectations according to infant age and stage of development.</p> <p>Demonstrates comprehensive knowledge, clinical reasoning and decision-making skills to design an individualised programme of graded therapeutic activities that support increased graded sensory experience based on the infant's developmental maturation.</p> <p>Independently provides sensory interventions to meet individual needs/stage of development (for example positive touch, positive oral/smell experiences).</p> <p>Independently applies activity analysis to adapt infant occupations to meet an infant's sensory needs.</p> <p>Independently provides an appropriate positional and sensory environment which enables successful infant participation in feeding occupations.</p> <p>Independently provides caregiving recommendations which support family participation in co-occupations which meet the sensory needs of the infant.</p> <p>Independently applies coaching skills to support parents to develop reflective abilities in reading infant cues and to optimise co-regulation.</p> <p>Independently implements environmental adaptations to minimise adverse sensory input to the developing brain, providing associated education to staff and parents.</p>	<p>Demonstrates advanced ability to analyse and synthesise complex information and sensory assessments to set goals and develop caregiving plans that support the infant's developmental and medical status.</p> <p>Applies advanced knowledge, clinical reasoning and decision-making skills to design an individualised programme of graded therapeutic activities that supports increased graded sensory experience based on an infant's developmental maturation.</p> <p>Demonstrates advanced knowledge of sensory interventions, undertaking additional training and certifications where appropriate, for example neonatal touch and massage.</p> <p>Demonstrates advanced understanding of activity analysis, adapting infant occupations to support the sensory needs of complex infants.</p> <p>Demonstrates advanced knowledge of person-environment interaction to select positional and sensory interventions that enable complex infants to successfully participate in feeding.</p> <p>Demonstrates advanced knowledge and skills to make caregiving recommendations that support a family to adapt to the neonatal unit environment and meet the sensory needs of the most complex infants.</p>	<p>Provides clinical interventions as outlined for advanced practitioner level in addition to:</p> <p>Lead the application of theory and OT intervention development which supports infant sensory development in the context of enabling infant occupational performance and optimising neurodevelopmental outcomes.</p> <p>Provides consultative advice and interventions for complex infant management for the neonatal workforce at unit and network level.</p>



# Interventions

Foundation	Enhanced	Advanced	Expert
	<p>Independently delivers education and makes recommendations to staff to provide graded post menstrual age-appropriate sensory input to optimise infant development.</p>	<p>Demonstrates advanced knowledge of person-environment interaction to select positional and sensory interventions that enable complex infants to successfully participate in feeding.</p> <p>Demonstrates advanced knowledge and skills to make caregiving recommendations that support a family to adapt to the neonatal unit environment and meet the sensory needs of the most complex infants.</p> <p>Demonstrates and applies advanced knowledge of environmental adaptation to minimise the impact of adverse sensory input to the developing brain.</p> <p>Leads the development and delivery of training for staff and parents regarding environmental adaptations to minimise the impact of adverse sensory input on the unit.</p> <p>Leads the delivery of education and training to OT and MDT about optimal sensory experiences and its impact on long term outcomes and brain development.</p> <p>Applies advanced coaching skills to educate/coach parents to develop reflective abilities in reading infant cues and optimise co-regulation.</p>	

## Infant-parent co-occupations

This section describes the knowledge and skills required to provide safe and effective OT that facilitates and supports infant-parent co-occupations in the neonatal unit. It brings together core knowledge and skills outlined in the previous sections, focusing on individual performance components (family, environment, neurobehaviour, and neurodevelopment and sensory) and considering implications for occupation-specific assessment and intervention.

The challenges of an infant's medical status and interventions alongside the physical and sensory environment of the neonatal unit can significantly affect engagement between the parent and their infant in practical, positive infant-parent co-occupations. This happens during the neonatal journey and post-discharge. Parent-infant separation is one of the most significant and traumatic events for an infant and family in the NICU and the experience of the neonatal unit poses its own challenges and risks for parental mental health. Positive engagement in co-occupations between the infant and parent is essential to reduce these stresses and promote the health and wellbeing of both infant and parent.

The neonatal OT facilitates positive engagement in practical parenting activities including nappy changes, holding, feeding, bathing and early play and engagement between the parent and their infant. They are instrumental in assessing the strengths and challenges for both infant and parent in the context of the neonatal unit and their family. We promote supportive and adaptive strategies to enable positive participation in these activities now and in the future, while promoting parent-infant attunement.

The infant-parent co-occupation section outlines key knowledge requirements in the areas of:

- Infant-parent co-occupations in the neonatal unit environment
- Infant-parent co-occupations in transitions between care levels/units in a network, from neonatal unit to Paediatric Intensive Care Unit setting, and in preparation for the transition to home.

# Knowledge

## Parent-infant co-occupations

Foundation	Enhanced	Advanced	Expert
<p>Understands the relevance of occupational performance models to neonatal OT provision and their application to parent-infant co-occupations.</p> <p>Understands the range of occupations in which an infant engages during the neonatal period and how participation and occupational performance is disrupted in the preterm or medically unwell infant.</p> <p>Understands range of occupations in which the parent engages when caring for their baby – both directly and indirectly - and how parent occupational performance can be disrupted in the neonatal setting.</p> <p>Understands the implications for enabling autonomous and successful co-occupations as a parent with a preterm infant in the NICU.</p>	<p>Demonstrates knowledge of occupational performance models and their application to neonatal OT provision which promotes infant and parent occupational performance during engagement in co-occupations.</p> <p>Demonstrates comprehensive knowledge of the influence of personal and environmental factors on an infant's occupational performance in the neonatal setting.</p> <p>Demonstrates comprehensive knowledge of personal and environmental factors and their influence on parental occupational performance in the neonatal setting.</p> <p>Demonstrates comprehensive knowledge of the application of occupational performance theory to enable autonomous and successful co-occupations for parents and infants.</p> <p>Demonstrates comprehensive understanding of the characteristics and culture of neonatal settings which promote parent occupational engagement as the primary caregiver for their infant.</p>	<p>Demonstrates advanced, evidence-based knowledge of personal and environmental factors affecting infant occupational performance and their impact on the management of complex infants.</p> <p>Demonstrates advanced evidence-based knowledge of personal and environmental factors that influence parental occupational performance and their impact on parental engagement in the care of infants with complex needs and circumstances.</p> <p>Demonstrates advanced evidence-based knowledge of the impact of parent-infant co-occupational engagement on infant development and relational attunement.</p> <p>Demonstrates advanced, critical understanding of the characteristics and culture of neonatal settings that promote and present a barrier to parent occupational engagement as the primary caregiver for their infant.</p> <p>Demonstrates advanced, evidence-based theoretical knowledge of parent-infant relationships including attunement and quality interactions, including for infants with highly complex needs.</p>	<p>Leads the development of educational models of OTs on the application of occupational performance models to neonatal OT provision to enable parent-infant co-occupational performance.</p> <p>Generate new knowledge on occupational performance theory and its application in the neonatal setting.</p> <p>Provides consultative advice on the design of direct care and service models to embed occupational performance approaches across a network or at national level.</p>

# Knowledge

## Infant-parent co-regulation

Foundation	Enhanced	Advanced	Expert
<p>Understands the principles of self-regulation and the impact of co-regulation on occupational performance of infants and parents/carers.</p> <p>Interprets when an infant's occupations and co-occupations are impacted by infant and parental self-regulatory difficulties.</p>	<p>Demonstrates comprehensive understanding of infant and parent self-regulation and co-regulation and their influence on occupational performance.</p> <p>Demonstrates comprehensive understanding of infant and parent self-regulatory difficulties and their relevance to occupational performance assessment and interventions.</p>	<p>Demonstrates advanced, evidence-based knowledge of the impact of infant and parent self-regulation and co-regulation on occupational performance and factors that affect this.</p> <p>Demonstrates advanced, evidence-based knowledge of the importance of parent engagement in co-occupations to support regulation, comfort and pain/stress management in the care of complex infants.</p>	<p>Leads the development of educational models of OTs and other neonatal providers on the impact of infant-parent co-regulation on occupational performance.</p> <p>Provides consultative advice on the design of direct care and service models to promote infant-parent co-regulation to enable occupational performance across a network or at national level.</p>

## Transition within NNU and hospital to home (implications for occupational performance)

Foundation	Enhanced	Advanced	Expert
<p>Understand the associated stress and difficulties inherent in the process of transition from neonatal unit to home for infants and parents.</p> <p>Understands the impact of these experiences on parent-infant co-occupational performance to support preparation for hospital discharge.</p>	<p>Demonstrates comprehensive understanding of the impact of stress associated with hospital discharge on engagement in and performance of parent-infant co-occupations.</p> <p>Demonstrates comprehensive understanding of the impact of stress associated with transitions between levels of neonatal care (including in between units in the network) on engagement in and performance of parent-infant co-occupations.</p>	<p>Demonstrates advanced evidence-based knowledge of the impact of stresses associated with care transitions on engagement in and performance of parent-infant co-occupations.</p>	<p>Leads the development of educational models of OTs and other neonatal providers on supportive care transition processes to enable engagement in and performance of parent-infant co-occupations.</p>

# Assessment

Foundation	Enhanced	Advanced	Expert
<p>Perform occupation-focused assessment of parent-infant co-occupational performance to inform collaborative goal setting.</p> <p>Perform sensitive observational assessment of parent-infant attunement as it relates to participation in co-occupations.</p>	<p>Independently performs detailed occupation-focused assessment of parent-infant co-occupational performance, identifying barriers to successful occupational performance, to inform collaborative goal setting.</p> <p>Independently performs ongoing assessment of parent-infant attunement and co-regulation as it relates to participation in co-occupations and establishment of parent-infant relationships.</p>	<p>Appraises, selects, administers and synthesises assessment information for the most complex infants including:</p> <p>Occupation-focused assessment of parent-infant co-occupational performance, identifying barriers to successful occupational performance and communicating findings to inform collaborative goal setting.</p> <p>Parent-infant attunement and co-regulation as it relates to participation in co-occupations and establishment of parent-infant relationships.</p>	<p>Formulate robust tools/ measures for assessment of occupational performance of parent-infant co-occupations to direct OT intervention which promotes infant and parent occupational performance.</p>

# Interventions

## Enabling co-occupations during inpatient neonatal admission

Foundation	Enhanced	Advanced	Expert
<p>For infants &gt;32 weeks PMA:</p> <p>Provides opportunities for parents in the performance of parent-infant co-occupations in the context of the environment (for example equipment, seating, privacy)</p> <p>Supports parents alongside nursing staff in the performance of specific parent-infant co-occupations – inclusive of nappy changes, nest making, mouth cares, dressing, swaddled bathing, play.</p> <p>Support parents alongside nursing staff in infant/parent transfers for skin-to-skin care or parent holding.</p> <p>Facilitate parent participation in meaningful, non-interactive occupations (for example personalising bed space, using own bed linen, washing baby's bed linen and clothes).</p> <p>Facilitate parent contingent responses to infant approach and avoidance cues to elicit appropriate sensory, motor and social responses during occupational engagement.</p>	<p>For infants &gt;28 weeks PMA:</p> <p>Independently supports parents in the performance of parent-infant co-occupations in the context of the neonatal environment considering equipment, seating, privacy etc.</p> <p>Independently carries out interventions which enable the performance of specific parent-infant co-occupations for optimisation of positive and nurturing parent-infant experiences.</p> <p>Demonstrates comprehensive knowledge of relationship building tools to inform and promote successful infant-parent co-occupations and parental confidence in activities including cares, settling and engagement/play.</p> <p>Independently uses parent education to support parents' understanding of infants changing skill attainment to adapt co-occupation tasks accordingly.</p> <p>Independently carries out activity analysis to support parents alongside nursing staff in infant/parent standing transfers for skin-to-skin care.</p> <p>Independently facilitates parent participation in meaningful, non-interactive occupations (such as personalising bed space, using own bed linen, washing baby's bed linen and clothes), within caregiving requirements for higher-acuity infants.</p> <p>Independently provides targeted interventions to enable parent understanding of co-regulation and infant readiness for co-occupational participation (such as sleep, feeding, cares).</p>	<p>For all infants, including those with complex presentations:</p> <p>Demonstrates advanced evidence-based knowledge of occupational-based interventions that enable parent participation in parent-infant co-occupations in the challenging neonatal environment (for example equipment, seating, privacy etc).</p> <p>Demonstrates advanced knowledge of relationship building skills, applying these to inform and promote successful infant-parent co-occupations, including anticipatory guidance for families in complex circumstances, in order to build parental confidence in activities including cares, settling and engagement/play</p> <p>Demonstrates application of advanced, sensitive coaching approaches to facilitate parents' understanding of their infant's changing skills/needs, enabling them to adapt co-occupations accordingly.</p> <p>Demonstrates advanced skills in activity analysis, and synthesises knowledge of medical stability and staff availability/experience to support parents alongside nursing staff in safe infant/parent standing transfers for skin-to-skin care for infants on all forms of respiratory support.</p>	<p>Provides clinical interventions as outlined for advanced practitioner level in addition to:</p> <p>Leads the application of theory and intervention development which supports the development of neonatal care models which promote the integration of an occupational performance approach.</p> <p>Provides consultative advice and interventions which enable infant and parent occupational performance for the neonatal workforce at unit and network level.</p>

# Interventions

## Enabling co-occupations during inpatient neonatal admission

Foundation	Enhanced	Advanced	Expert
	<p>Independently facilitates parent contingent responses to infant regulation and readiness to elicit appropriate sensory, motor and social responses that enable parent-infant co-occupational performance.</p> <p>Independently uses education to support parents (alongside MDT) to recognise infant feeding cues to facilitate effective feeding co-occupations.</p> <p>Independently provides anticipatory guidance and interventions for parents to engage with their infant in early play and communication post term age.</p> <p>Independently supports parent understanding and facilitates engagement in appropriate pain management strategies, to enable them to provide sensitive support to their infants and promote parent self-efficacy.</p>	<p>Facilitates parent participation in meaningful, parenting occupations for the most complex infants including those receiving therapeutic hypothermia, ECMO etc</p> <p>Demonstrates advanced knowledge, clinical reasoning and decision making skills to support parent understanding and facilitate engagement in appropriate pain management strategies for complex infants, enabling parents to provide sensitive support to their infants and promoting parent self-efficacy.</p> <p>Leads education and support for parents to enable them to carry out neonatal massage with their infant(s) as indicated by PMA and medical status, and in accordance with unit guidelines.</p> <p>Demonstrates advanced coaching skills to support parents' development of reflective abilities in reading their infant's cues, to optimise co-regulation and enable co-occupational performance.</p> <p>Works collaboratively with families to foster meaningful parent-infant co-occupations when planning and delivering end of life care.</p> <p>Leads effective communication and liaison at network level to ensure consistency in the approach to and support for parent-infant co-occupations.</p>	

# Interventions

## Enabling co-occupations in preparing for transition to home

Foundation	Enhanced	Advanced	Expert
<p>Formulates and implements a discharge and follow-up plan for infants born &gt;32 weeks gestational age with the family and other team members to ensure a smooth transition to the community, integrating OT goals into the overall goals and priorities of the family.</p> <p>Provide family with other therapeutic resources and/or information to support environmental enrichment, development and engagement in occupations (for example, EISmart leaflets).</p> <p>Implementation of back to sleep guidance to support parent-infant co-occupations regarding safe sleep and be able to access appropriate government resources as required.</p> <p>Complete home environment discussion with family to identify any environmental concerns for discharge.</p> <p>Provide individualised equipment recommendations to support co-occupational engagement in play, bathing, changing and sleeping.</p> <p>Provide practical education and/or written advice to support parent safety awareness re use of car seats, buggies and slings.</p> <p>Provides interventions to build parent confidence in engaging in parent-infant co-occupations post-discharge for infants born &gt;32 weeks gestational age.</p>	<p>Independently formulates and implements a discharge and follow-up plan for infants born &gt;28 weeks gestational age with the family and other team members to ensure a smooth transition to the community, integrating OT goals into the overall goals and priorities of the family.</p> <p>Independently analyses assessment findings to design a comprehensive therapy programme (including environmental enrichment, neurobehavioural, motor and sensory aspects) which can be continued during transition to home.</p> <p>Demonstrates comprehensive knowledge of Back to Sleep practices and independently makes recommendations in line with government guidelines with higher-acuity infants.</p> <p>Independently carries out home environment discussions with families, utilising risk assessments to ascertain need for any adaptation to home environment to meet medical needs, such as LTV/ O2 requirements.</p> <p>Independently makes OT recommendations for adaptations to home environment (if indicated) and works collaboratively with the family and neonatal MDT to address any concerns.</p> <p>Independently prescribes equipment to support co-occupational engagement in play, bathing, changing, and sleeping, including safe use of car seats, buggies and slings.</p> <p>Independently provides advice on a variety of infant positions to prevent head shape deformity.</p>	<p>Synthesises complex information to formulate and implement a discharge and follow-up plan for the most complex infants, working collaboratively with the family and other team members to ensure a smooth transition to the community, integrating OT goals into the overall goals and priorities of the family.</p> <p>Analyses and interprets complex assessment findings, applying knowledge of the family and infant medical status to design a comprehensive therapy programme (including environmental enrichment, neurobehavioural, motor and sensory aspects) which can continue during transition to home.</p> <p>Applies expert knowledge of Back to Sleep practices and makes sleep recommendations in line with government guidelines for complex infants.</p> <p>Leads home environment risk assessments and recommends adaptations for infants with long-term complex needs.</p> <p>Demonstrates advanced knowledge of specialised equipment to support co-occupational engagement in play, bathing, changing, and sleeping.</p> <p>Demonstrates advanced evidence-based knowledge of adaptations to daily parent-infant co-occupations to promote parental confidence in transition to home.</p>	<p>Provides clinical interventions as outlined for advanced practitioner level.</p> <p>Leads the application of theory and intervention development which supports the development of neonatal care pathways which promote the integration of an occupational performance approach that considers the post-discharge environment.</p> <p>Provides consultative advice and interventions which enable infant and parent occupational performance during transition to home for the neonatal workforce at unit and network level.</p> <p>Provide consultative and advice on discharge pathways and processes at unit, network and national level.</p>



# Interventions

## Enabling co-occupations in preparing for transition to home

Foundation	Enhanced	Advanced	Expert
<p>Ensure parents are linked in with supportive services in the community.</p> <p>Utilise written communication skills to clearly summarise OT assessments, intervention and recommendations into infant discharge reports, including early intervention referrals where appropriate to:</p> <ul style="list-style-type: none"> <li>• Community therapy services</li> <li>• Local neonatal follow up</li> <li>• Additional specialist services</li> </ul>	<p>Independently carries out interventions and provides anticipatory guidance to support parent engagement in sensitive and contingent co-occupational performance post-discharge.</p> <p>Provides appropriate psychosocial interventions to facilitate occupational adaptation, enabling parents to care for their infant at home, working with psychology services to support parent mental health.</p> <p>Uses coaching and reflective communication skills to promote parental confidence in adapting occupations with educational support as required.</p>	<p>Demonstrates advanced evidence-based knowledge of psychosocial interventions to mitigate the impact of stress, anxiety and depression on parent self-efficacy and wellbeing to enable supported transition to home.</p> <p>Demonstrates advanced, evidence-based knowledge of specialised strategies to support sleep for the unsettled and/or dysregulated infants.</p> <p>Provides advice to inform discharge pathways and processes on units and across a network.</p>	

# Leadership

## Professional and organisation leadership

The leadership pillar incorporates models of behaviour that have a positive influence at an individual and team level. Effective leadership skills will help to shape neonatal services and drive change.

The leadership subdivisions are:

- Management of self and others
- Working together
- Service development and strategic thinking

If you wish to explore a more comprehensive leadership framework, the NHS Leadership Academy provides the Healthcare Leadership Model as well as a range of structured programmes of education.

## Management of self and others

Foundation	Enhanced	Advanced	Expert
<p>Understands differences in leadership styles.</p> <p>Demonstrates the ability to manage neonatal workload with support of supervisor, including the identification of priorities, and manage time and resources effectively within the neonatal unit.</p> <p>Ability to undertake a self-assessment of neonatal OT knowledge and skills, identifying one's own learning needs and objectives with the support of a supervisor/mentor.</p> <p>Demonstrates personal responsibility in maintaining and developing own knowledge and skills relevant to neonates, maintaining CPD as required by the HCPC.</p> <p>Demonstrates leadership in the supervision of OT assistants/students working in conjunction with OT in the neonatal environment.</p> <p>Participates in leading aspects of clearly identified neonatal projects with support of a senior OT.</p>	<p>Demonstrates comprehensive knowledge and understanding of one's own and other leadership styles to enable effective MDT working in the neonatal unit.</p> <p>Undertakes additional work based training for the development of personal and team leadership skills.</p> <p>Works autonomously, identifying priorities and effective management of time/resources within a neonatal unit, acting as a role model for others.</p> <p>Completes independent self-assessment of neonatal OT knowledge and skills, identifying learning needs and objectives with agreement of supervisor.</p> <p>Collaborates with parents/carers to co-produce relevant and meaningful resources reflecting family priorities at unit level.</p>	<p>Demonstrates advanced knowledge of different leadership styles and models and their application within the unit and at a strategic and network level to enable effective OT service delivery.</p> <p>Undertakes advanced training in leadership skills (personal, team and systems) and operational/strategic management skills and applies this to influence change in neonatal settings.</p> <p>Demonstrates advanced ability to balance clinical caseload and the requirements of operational/strategic leadership within the team and network, acting as a role model for others.</p> <p>Critically appraises processes and policies within local neonatal OT and network teams, identifying strengths and using these to formulate OT guidelines and protocols.</p> <p>Appraises, adapts and evaluates existing services and resources in collaboration with service users at unit and network level to reflect priorities of service users.</p>	<p>Analyses leadership styles and models both within the unit and at a strategic and network level to enable effective OT service delivery.</p> <p>Demonstrates completion of advanced training in strategic leadership.</p> <p>Organises operational and strategic leadership responsibilities within complex and changing systems, acting as a role model for others.</p> <p>Provide strategic oversight to develop and maintain a high standard, cost effective, streamlined provision with capacity to work across traditional services and professional boundaries.</p> <p>Leads neonatal peer review of service within the local OT/neonatal/network team.</p> <p>Create networks to enhance one's own senior-level leadership abilities.</p> <p>Formulates and evaluates services and resources in collaboration with service users at national level to reflect priorities of service users.</p>

# Leadership

## Management of self and others

Foundation	Enhanced	Advanced	Expert
	<p>Provides leadership and clinical supervision to foundation level OT staff in the unit including the completion of annual appraisals and facilitating their development of appropriate neonatal objectives based on their self-assessment.</p> <p>Provides clinical leadership to other AHPS/neonatal staff to support effective MDT work for consistent care of infants and families.</p>	<p>Leads development of clinical guidelines to inform neonatal OT service provision locally and regionally.</p> <p>Provides professional leadership and clinical supervision for foundation and enhanced level OTs, including annual appraisal and objective setting.</p> <p>Leads accountability for the operational delivery of the neonatal OT service.</p> <p>Provides professional OT leadership at a network level.</p> <p>Appraises, selects and uses effective/recognised tools or strategies to analyse, measure and evaluate team culture/performance.</p> <p>For network roles:</p> <p>Leads OT within neonatal network. Uses national knowledge and skills competency frameworks to develop and deliver strategies that develop and ensure sustainability of new and existing staff, ensuring consistency across the network.</p>	<p>Leads the development of clinical guidelines to inform neonatal OT service provision.</p> <p>Demonstrates leadership and clinical expertise at national and international levels for neonatal OT.</p> <p>Provides supervision/mentoring for OT services/staff in challenging circumstances (for example services in special measures, under review etc).</p> <p>Demonstrates extensive supervisory and mentoring skills.</p>

# Leadership

## Working together

Foundation	Enhanced	Advanced	Expert
<p>Understands the roles and responsibility of each member of the neonatal multi-disciplinary team.</p> <p>Demonstrates a communication style which is professional with colleagues and sensitive to family's needs.</p> <p>Works effectively across professional and agency boundaries, actively involving and respecting the contribution of others.</p>	<p>Demonstrates comprehensive knowledge of team structure, human factors, interpersonal relationships that may influence neonatal team performance.</p> <p>Demonstrates enhanced communication skills with colleagues and a communication style which is sensitive and emotionally responsive to family's needs.</p> <p>Works collaboratively with other members of the neonatal MDT to ensure local service delivery.</p> <p>Supports co-production and includes the parents/families as part of the healthcare team.</p> <p>Initiates opportunities for neonatal teams to meet and learn/discuss patient care and service development projects.</p>	<p>Anticipates/recognises and addresses barriers to optimal team performance.</p> <p>Demonstrates advanced communication skills when delivering challenging/sensitive information to families.</p> <p>Applies conflict resolution skills to manage complex communication difficulties with staff and families.</p> <p>Actively seeks out opportunities to collaborate with other professions to enhance and deliver larger scale service change.</p> <p>Represents OTs/AHPs at strategic meetings.</p> <p>Disseminates relevant information across local, regional or national professional groups through appropriate media/forums.</p> <p>For network roles:</p> <p>Collaborates with other AHP leads within the network to support enhanced and equitable service provision.</p> <p>Coordinates staff across professional and organisational boundaries within the network to benchmark service delivery and determine need for change or improvement.</p>	<p>Generates collaborative working with other national neonatal professional bodies on a regular basis.</p> <p>Engages with external agencies and sectors to enhance service delivery.</p> <p>Influences the national agenda of neonatal AHP services.</p> <p>Recognised as an OT leader and spokesperson within the neonatal care community.</p> <p>Is sought as an expert OT in neonatal care both within and outside the organisation, and at national and international levels.</p>

# Leadership

## Service development and strategic thinking

Foundation	Enhanced	Advanced	Expert
<p>Recognition of where service change is needed and informs senior staff.</p> <p>Involved in the generation of innovative ideas to support service improvement.</p> <p>Participates in service improvement projects with support from senior OT.</p> <p>Demonstrates awareness of current neonatal OT evidence base to support service improvement.</p> <p>Demonstrates awareness of the priorities of the employing local neonatal unit.</p> <p>Understands how their own personal objectives fit with the wider neonatal service strategy.</p> <p>Works to contribute to the OT and neonatal team objectives.</p>	<p>Collects evidence/data to complete service evaluation and demonstrate the need for change.</p> <p>Identifies relevant stakeholders required in service change.</p> <p>Uses a variety of methods to engage service users in service improvement.</p> <p>Demonstrates comprehensive knowledge of service improvement tools and leads service improvement projects, for example PDSA cycles with support of advanced OT.</p> <p>Shares findings from service improvement projects with the neonatal unit to influence change in practice.</p> <p>Alerts colleagues and/or managers to resource issues that affect learning, development and performance.</p> <p>Demonstrates comprehensive knowledge and understanding of regional and national neonatal strategic agendas and how trust is working towards these.</p> <p>Participates in trust-wide quality improvement initiatives.</p> <p>Contributes to the development of strategies to engage appropriate stakeholders/service users.</p>	<p>Leads evaluation of neonatal OT services at trust level and identifies need for change.</p> <p>Demonstrates and applies advanced knowledge of service improvement tools and methods to lead on large scale change projects.</p> <p>Engages relevant leadership strategies to drive and evaluate change and develop OT within the neonatal unit/network.</p> <p>Leads analysis of OT service needs to support the development of business cases and requests for increased resources.</p> <p>Critically appraises services within the NICU and the MDT and offers opinions to improve service quality.</p> <p>Develops strategic objectives and action plans for the development of OT in neonatal care within trust.</p> <p>Contributes to the monitoring of clinical activity within neonatal care and works with others to ensure effective management of a budget.</p> <p>Represents neonatal OT profession at relevant profession specialist groups and networks, informing the direction and delivery of standards of practice.</p>	<p>Fosters innovation, creativity and diversity to consider new ways of working</p> <p>Provide consultative advice for neonatal OT services within the network/ nationally alongside other AHPs and supports constructive debates to improve quality of service.</p> <p>Works at a regional/ national level to develop and influence service change.</p> <p>Provides consultative advice to enable regional and national neonatal strategy developments.</p> <p>Demonstrates advanced skills and experience in writing strategy and strategic influence at a national and international level.</p>

# Leadership

## Service development and strategic thinking

Foundation	Enhanced	Advanced	Expert
		<p>Guides and supports OT services across the network to develop robust business plans and provide rationale for increased workforce.</p> <p>Collaborates with other AHP leaders to develop shared strategies across a network</p> <p>Demonstrates advanced skills in strategy development, writing and implementation to influence OT delivery at network level.</p> <p>Collaborates with the network management team, Provider Trusts, the Neonatal Improvement Board and NHS England to action and implement AHP relevant recommendations.</p> <p>Represents OT, providing updates and reports to invested partners, such as the Network Board, Local Maternity &amp; Neonatal Systems (or equivalent).</p>	

# Facilitation of learning

The facilitation of learning pillar captures both the individual's capacity for active learning as well as supporting the education and development of others. This includes the development of educational resources.

Facilitation of learning subdivisions are:

- Opportunities for learning
- Developing others
- Learning resources
- Culture of learning and development

## Opportunities for learning

Foundation	Enhanced	Advanced	Expert
<p>Actively seeks out and engages in local team in-service training and internal trust educational programs.</p> <p>Attends relevant induction training programs on the neonatal unit together with new starters in the wider neonatal MDT.</p> <p>Engages with and participates in local and departmental opportunities to appraise and apply current evidence into practice (for example journal clubs, in-service training).</p>	<p>Identifies professional development objectives and uses these to support applications to attend relevant OT/neonatal education programmes.</p> <p>Engages with other members of the neonatal care team to understand their roles and develop new skills.</p>	<p>Has a master's degree (or equivalent) and consistently works at this level.</p> <p>Identifies and follows opportunities to expand and develop advanced clinical skills.</p> <p>Evaluates the impact of new learning on practice and infant/family care and outcomes.</p> <p>Advocates locally for MDT education and training.</p>	<p>Pursues doctoral level training to enable robust development of clinical and academic abilities.</p> <p>Explores/applies for funding for fellowship schemes and secondment opportunities to develop skills and capabilities in national or international environments.</p>

## Developing others

Foundation	Enhanced	Advanced	Expert
<p>Delivers pre-designed education sessions with peers, undergraduate students, carers and parents.</p> <p>Collects basic feedback for education sessions and incorporates this to improve further sessions.</p> <p>Demonstrates awareness of resources/individuals to liaise with for support and advice related to education provision.</p>	<p>Independently develops and delivers education for foundation level therapists, peers, parents/carers.</p> <p>Demonstrates comprehensive knowledge of different adult learning styles and considers these in the design of education sessions to support the retention of information provided.</p> <p>Mentors and coaches others within the OT profession.</p>	<p>Links with universities to provide post-graduate education focused on care of the neonate.</p> <p>Appraises, selects and evaluates different theoretical teaching models and their applicability for different audiences/content.</p> <p>Leads development and delivery of educational programs for OTs in neonatal units across a network.</p> <p>Mentors and coaches individuals from other professional backgrounds.</p>	<p>Provides education that can be tailored for doctoral staff.</p> <p>Applies complex or innovative multi-modal opportunities for education.</p> <p>Collaborates with RCOT, HEI's and HEE to support the development and review of national education programs.</p> <p>Collaborates with the neonatal OT network lead to support the development of neonatal OT services across the network.</p>

# Facilitation of learning

## Learning resources

Foundation	Enhanced	Advanced	Expert
<p>Identifies key areas of knowledge aimed at student or assistant level and creates appropriate resources to support learning.</p> <p>Demonstrates awareness of sources of materials and resources to support the development of teaching resources.</p>	<p>Independently develops comprehensive teaching and educational programmes (including teaching materials) for junior staff within the wider therapy team/ neonatal unit (including nursing and medical staff).</p> <p>Represents the OT profession locally to inform and educate the wider MDT about the OT role in neonatal care, including developmental care and neurodevelopmental follow up.</p>	<p>Demonstrates advanced knowledge of multimedia formats and evaluates their appropriateness for meeting the varying needs of the users.</p> <p>Contributes to the development and delivery of advanced practice seminars and post-graduate modules for OTs and other professionals.</p>	<p>Creates and promotes resources that will contribute to the international field of OT and neonatal care.</p> <p>Creates all resources for learning to a standard that allows for publication.</p> <p>Tailors learning resources that will be easily accessed across the MDT and also across all regions of the UK.</p> <p>Collaborates with the neonatal OT lead to create learning resources for use across the neonatal network.</p>

## Culture of learning and development

Foundation	Enhanced	Advanced	Expert
<p>Welcomes constructive feedback to improve the delivery of care.</p> <p>Supports the development of students in the neonatal unit environment in appropriate contexts.</p> <p>Selects suitable infants and families from the neonatal unit for case review with peers and supervisor.</p> <p>Reflects on their ability to mentor and coach others and seek appropriate support.</p>	<p>Mentors graduate staff across the MDT on topics that include OT within neonatal care, and the broader supportive developmental care evidence base.</p> <p>Provides mentorship of foundation level staff in managing caseloads and prioritisation of tasks.</p> <p>Supports foundation level staff in clinical reasoning and reflection for neonatal OT provision.</p> <p>Delivers clear and constructive feedback to junior staff.</p> <p>Manages the team caseload to allow time for teaching, supervision and support.</p>	<p>Mentors OTs and others at postgraduate level.</p> <p>Provides supervision and support to enable the neonatal OT team and enhanced level practitioners to manage caseloads, unit and project priorities</p> <p>Ensures the alignment of team and individual objectives to the wider trust neonatal strategy.</p> <p>For network roles:</p> <p>Leads regular reviews of the knowledge and skills gap within the OT profession across the network and explores innovative and advanced practice opportunities for development.</p>	<p>Provides mentoring for peers in other neonatal units that need support.</p> <p>Supports a nurturing environment to deliver high quality neonatal care education across the MDT and the different trusts.</p> <p>Works collaboratively with the neonatal OT network lead to support a culture of learning and development across the network.</p>



# Evidence, research and development

This pillar includes knowledge and skills in relation to evaluating the neonatal evidence base and the tools required to influence service change and improvement.

Note that the ability to reach 'expert' within a research environment is likely to require a career move from clinician to researcher.

The research, evidence and improvement sub-divisions are:

- Evidenced based practice
- Service evaluation and audit
- Research knowledge

## Evidence-based practice

Foundation	Enhanced	Advanced	Expert
<p>Understands evidence-based practice principles.</p> <p>Understands the key aspects of evidence/literature which inform clinical practice.</p> <p>Able to undertake systematic searches of healthcare databases to identify relevant literature to support evidence-based practice.</p> <p>Able to undertake critical appraisal using recognised appraisal methods.</p> <p>Incorporates the use of a range of quality/outcome measures into clinical practice (including clinical outcomes, patient reported outcomes and patient experience).</p>	<p>Demonstrates comprehensive knowledge of the evidence base specific to both neonatal clinical OT practice and models of neonatal OT/AHP service delivery.</p> <p>Undertakes systematic searches of healthcare databases to identify relevant literature to support evidence-based practice and supports junior staff to do the same.</p> <p>Critically appraises and synthesises the outcome of relevant research, evaluation and audit, using the results to underpin own practice.</p> <p>Applies evidence synthesis to underpin the development of service resources including local guidelines and educational delivery content.</p> <p>Supports junior staff to undertake critical appraisal and/or translate evidence into practice.</p> <p>Engages and supervises junior staff to utilise a range of quality/outcome measures into clinical practice (including clinical outcomes, patient reported outcomes and patient experience).</p>	<p>Critically appraises the evidence base for neonatal clinical OT and models of neonatal OT/AHP service delivery to formulate local guidelines and protocols.</p> <p>Designs and undertakes systematic search strategies to identify relevant literature to support evidence-based clinical practice/service delivery and teaches search skills to junior staff.</p> <p>Critically appraises and synthesises the outcome of relevant research, evaluation and audit, using the results to underpin own practice and to inform that of others.</p> <p>Analyses gaps in the evidence base needed to support practice, and highlights these to appropriate individuals and organisations.</p> <p>Leads the implementation of clinical guidelines, putting national policies, evidence syntheses, educational resources into practice with the OT team/unit/network.</p>	<p>Evaluates the evidence base specific to both neonatal clinical OT practice and models of neonatal OT/AHP service delivery.</p> <p>Conducts evidence-based synthesis to support current and emergent areas of neonatal OT practice.</p> <p>Disseminates best practice research findings, evidence synthesis and related quality improvement projects through appropriate presentation and publication forums.</p> <p>Represents profession and/or service through local, regional or national peer review of publications or consultations.</p> <p>Represents neonatal OT profession, informing the direction of and standards of practice.</p>

# Evidence, research and development

## Service evaluation and audit

Foundation	Enhanced	Advanced	Expert
<p>Understands the differences between service evaluation, audit and research.</p> <p>Participates in local service evaluation and audit under guidance.</p> <p>Initiates and completes audits of neonatal OT service delivery against national and/or professional standards.</p> <p>Understands a range of quality measures relevant to measuring the delivery of neonatal OT services.</p>	<p>Conducts audits of own and others' practice using agreed standards.</p> <p>Evaluates aspects of neonatal OT service delivery including the selection and application of valid, reliable service evaluation methods.</p> <p>Implements quality improvement initiatives to address improvements in clinical care or operational service delivery identified by audit/evaluation activities.</p> <p>Applies service evaluation and audit activity to demonstrate gaps within local neonatal OT service delivery.</p> <p>Integrates findings of service evaluation and audit activities in service delivery reporting (for example annual reporting, contribution to business case development etc)</p> <p>Undertakes benchmarking activity locally, regionally or nationally to inform practice.</p> <p>Supports and coordinates foundation level or mentored staff to complete service evaluation and audit projects and translate findings into practice.</p> <p>Contributes a local perspective, where relevant, to national/ priority audit programmes.</p>	<p>Appraises, selects and applies a range of quality/outcome measures encompassing patient experience, clinical, health-economic, and patient reported outcomes to evaluate the effectiveness of OT care and service delivery.</p> <p>Disseminates own local, regional or national service evaluation and audit findings through appropriate media/forums.</p> <p>Takes an active role in service evaluation and audit projects across professional and/or organisational boundaries, addressing local and network/regional practice.</p> <p>Appraises and supports the service evaluation and audit activity of others.</p> <p>Utilises service evaluation and audit activity to generate research questions and/ or to translate into local and/or network quality improvement initiatives.</p> <p>Engages with and influences the local/network agenda of multi-professional service evaluation and audit activity programmes or strategies.</p>	<p>Coordinates national neonatal OT audit programmes.</p> <p>Utilises service evaluation and audit activity to generate research questions and/or translates into large scale local, regional or national quality improvement initiatives.</p> <p>Influences the regional or national agenda of service evaluation and audit activity programmes or strategies for neonatal OT.</p> <p>Coordinates staff across professional and organisational boundaries to measure, analyse and evaluate data to evaluate effectiveness of interventions or service delivery and determines need for change or improvement.</p>

# Evidence, research and development

## Research knowledge

Foundation	Enhanced	Advanced	Expert
<p>Understands basic qualitative and quantitative research methods, including the hierarchy of scientific evidence.</p> <p>Understands local processes of registering/applying to undertake research.</p> <p>Aware of the research agenda/priorities of the organisation/institution/profession.</p>	<p>Working towards postgraduate accreditation at Masters level.</p> <p>Demonstrates comprehensive understanding of the range of qualitative and quantitative research methods and their applicability to neonatal OT research.</p> <p>Demonstrates comprehensive understanding of descriptive statistical analysis.</p> <p>Demonstrates comprehensive understanding of legal requirements pertaining to healthcare research (for example the Data Protection Act, Freedom of Information Act, Equality Act 2010).</p> <p>Demonstrates comprehensive understanding of the codes of conduct and guidelines for the ethical conduct of research, including research involving vulnerable children.</p> <p>Demonstrates awareness of local/regional or profession-specific funding opportunities to undertake research.</p>	<p>Champions research and identifies priority areas for research within OT and/or the organisation.</p> <p>Demonstrates advanced knowledge of legal requirements pertaining to healthcare research (for example the Data Protection Act, Freedom of Information Act, Equality Act 2010).</p> <p>Applies research skills and knowledge to work as a collaborative member of a research team.</p> <p>Conducts peer reviews, appraises research proposals of others and acts as an independent reviewer.</p> <p>Demonstrates knowledge of research funding sources and grant application procedures.</p> <p>For network roles:</p> <p>Coordinates cross-network involvement in the delivery of neonatal OT specific research.</p>	<p>Independently leads research projects pertaining to neonatal OT practice and related infant/family outcomes.</p> <p>Successful application for research funding to support research programme development.</p> <p>Dissemination of research findings across national and international audiences.</p> <p>Supervises others to undertake study at PhD or equivalent level.</p> <p>Provides research supervision and leadership within organisation and/or profession.</p> <p>Collaborates with perinatal research groups to highlight the contribution of OT involvement in the set-up and delivery of broader neonatal studies.</p>

# Self-assessment tool

We've provided this tool to help you evaluate your current level of knowledge/skills and create an action plan for career development. Mark the grid with a simple 'x' to describe your current level for each pillar and subsection.

Name \_\_\_\_\_ Date of completion: \_\_\_\_\_

	Foundation	Enhanced	Advanced	Expert
Clinical practice				
Knowledge of family systems including family structure, enabling parent/carer/family participation and adult learning styles				
Assessment of parent-identified occupations				
Interventions to enable parent/family/carer participation				
Knowledge of impact of the physical environment on the infant, parent and staff				
Assessment of the physical environment				
Interventions based on physical and social environment				
Knowledge of brain and neurodevelopment, neurobehaviour, pain and stress, physical development and growth, developmental outcomes for high risk infants				
Complete standardised and non-standardised assessments of neurobehaviour and neuromotor				
Intervention to provide individualised programmes and adapt cares to support neurobehavioural and neuromotor development				
Knowledge of sensory development and processing				
Assessment of sensory environment and infant sensory processing				
Interventions which promote sensory development and infant occupational performance				

# Self-assessment tool

	Foundation	Enhanced	Advanced	Expert
<b>Clinical practice</b>				
Knowledge of parent-infant co-occupations, infant-parent co-regulation and transition within NNU and to home				
Assessment of parent-infant co-occupations				
Interventions which enable co-occupations during inpatient admission and in preparation for transition to home				
<b>Leadership</b>				
Management of neonatal caseload and complete self-assessment of knowledge and skills				
Management of others including students and/or junior staff				
Effective MDT working including communication and collaboration with neonatal team				
Engagement in service development				
<b>Facilitation of learning</b>				
Identifies own learning needs and engages in formal and informal learning opportunities				
Developing others through participating in education programmes and coaching				
Developing learning resources using a variety of media for the wider MDT				
Supports learning culture through reflective practice				

# Self-assessment tool

	Foundation	Enhanced	Advanced	Expert
<b>Evidence, research and service development</b>				
Active engagement in evidence based practice				
Participates in quality improvement and service development				
<b>Research</b>				
Understands research tools and methodology				
Active participation in research				

# Action plan

Pillar	Areas for further self development	Actions needed
Professional practice		
Facilitation of learning		
Leadership		
Evidence, research and development		

# Education and training suggestions

FINE 1 FINE 2	<a href="http://www.finetraininguk.com">www.finetraininguk.com</a>
NIDCAP	<a href="https://nidcap.org/">https://nidcap.org/</a>
Newborn Behaviour Observations (NBO) Newborn Behaviour Observations (High risk) Newborn Behavioural assessment scale (NBAS)	<a href="http://www.brazelton.co.uk">www.brazelton.co.uk</a>
Prechtl Qualitative assessment of general movements Basic / Advanced	General-movements-trust.info Uch.educationcentre@nhs.net
Baby Bobath	<a href="http://www.bobath.org.uk">http://www.bobath.org.uk</a>
Hammersmith Neonatal Neurological examination Hammersmith infant Neurological examination	<a href="https://www.mackeith.co.uk/hammersmith-neurological-examinations/">https://www.mackeith.co.uk/hammersmith-neurological-examinations/</a>
Sensory Integration Infant sense integration training online parts 1-3	<a href="https://www.sensoryintegrationeducation.com">https://www.sensoryintegrationeducation.com</a>
Sensory beginnings	<a href="http://www.sensorybeginnings.com">www.sensorybeginnings.com</a>
Neonatal touch and massage certification	<a href="https://www.neonatalcertification.com/">https://www.neonatalcertification.com/</a>
Supporting and enhancing NICU sensory experiences (SENSE)	<a href="https://chan.usc.edu/nicu/sense">https://chan.usc.edu/nicu/sense</a>
EI Smart knowledge and skills framework	<a href="https://eismart.co.uk/resources/">https://eismart.co.uk/resources/</a>
Cerebral Palsy Cymru 'Early Intervention and Assessment'	<a href="https://www.cerebralpalsycymru.org/training/early-intervention-and-assessment-course-spring-summer-2023">https://www.cerebralpalsycymru.org/training/early-intervention-and-assessment-course-spring-summer-2023</a>
Training in early detection for early intervention TEDEI	TEDEI; Early Therapy; Newcastle University (ncl.ac.uk)
Leadership NHS leadership academy	<a href="https://www.leadershipacademy.nhs.uk/">https://www.leadershipacademy.nhs.uk/</a>
Education/research neonatal masters courses HEE modules: Introduction to AHPs in Neonatal care OT in Neonatal Services Foundation level	<a href="https://www.southampton.ac.uk/courses/neonatology-masters-msc">https://www.southampton.ac.uk/courses/neonatology-masters-msc</a> <a href="https://www.e-lfh.org.uk/programmes/introduction-to-allied-health-professionals-in-neonatal-care/">https://www.e-lfh.org.uk/programmes/introduction-to-allied-health-professionals-in-neonatal-care/</a>
RCOT Neonatal OT practice guidelines	<a href="https://www.rcot.co.uk/practice-resources/rcot-publications/downloads/neonatal-services">https://www.rcot.co.uk/practice-resources/rcot-publications/downloads/neonatal-services</a>



# Glossary and abbreviations

<b>APIB</b>	Assessment of Preterm Infant Behavior. A neurobehavioural assessment of preterm and full-term newborns aligned to the NIDCAP.
<b>Attunement</b>	'Attunement refers to an empathic sharing of emotions between parents and their infant. Parents and infants are not attuned at all times and it is through healthy 'ruptures' followed by 'repairs' to attunement that learning about interaction and the regulation of emotions and behaviour, takes place within the context of the developing parent-infant relationship' (Royal College of Midwives 2020, p23).
<b>Co-occupation</b>	Co-occupations are caregiving activities in which parents and infants actively engage that address infant needs but also support the developing parent–infant relationship (including positive touch, nurturing, feeding, bathing and early reciprocal interaction).
<b>Developmental care</b>	Term that refers to the use of strategies that are 'derived from neurodevelopmental, environmental and human sciences to improve the potential of infants who are disadvantaged by premature birth or adverse perinatal events'. (Warren and Bond 2010, p14)
<b>EEG</b>	Electroencephalography. A method to record electrical activity in the brain using electrodes positioned on the skull.
<b>FINE</b>	Family and Infant Neuro-developmental Education (FINE). An education programme for healthcare professionals that consists of three levels of training; available in the UK and used throughout Europe. Level One is accredited through the Royal College of Nursing. <a href="#">The FINE programme   Bliss</a>
<b>Gestational age</b>	'The age of the foetus or newborn, usually expressed in weeks dating from the first day of the mother's last menstrual period.' (Anderson 2002)
<b>HIE</b>	Hypoxic-ischaemic encephalopathy. A brain injury caused by oxygen deprivation to the brain, also commonly known as intrapartum asphyxia. It is the cause of death and severe impairment among infants. It is more common in term infants. <a href="https://www.cerebralpalsy.org/about-cerebral-palsy/cause/hypoxic-ischemic-encephalopathy">https://www.cerebralpalsy.org/about-cerebral-palsy/cause/hypoxic-ischemic-encephalopathy</a>
<b>High risk</b>	For the purpose of this guideline, high-risk infants include all infants born prematurely as well as term infants with neonatal encephalopathy, neonatal abstinence syndrome, neurological abnormalities, congenital conditions or who have undergone complex surgical procedures.
<b>IVH</b>	Intraventricular haemorrhage.  Graded I, II, III or IV. An IVH involves the germinal matrix, the immature capillary network, which overlies the head of the caudate nucleus. The haemorrhage may be confined to the germinal matrix, may extend into the ventricle or involve the parenchyma.  An IVH usually occurs within 72 hours of birth. The germinal matrix disappears at about 32 weeks gestation so haemorrhage is uncommon beyond this gestation.  Grade I: isolated germinal matrix haemorrhage  Grade II: IVH without ventricular dilatation  Grade III: IVH with acute ventricular dilatation  Grade IV: parenchymal haemorrhage venous infarct

<b>Kangaroocare/SSC</b>	<p>Refers to the practice of holding a baby with skin-to-skin contact between the baby's chest and mother/father's chest. Uses principles from kangaroo mother care, which has three components: skin-to-skin contact, exclusive breastfeeding and support for the mother–infant dyad.</p> <p>Skin-to-skin contact - Baby Friendly Initiative (<a href="http://unicef.org.uk">unicef.org.uk</a>)</p>
<b>LBW</b>	<p>Low birthweight.</p> <p>Birthweight of less than 2.5kg (5 pounds 8 ounces) regardless of gestational age.</p>
<b>Moderate to late preterm</b>	<p>Infants born between 32 and 37 weeks' gestational age.</p>
<b>Neonatal abstinence syndrome (NAS)</b>	<p>A behavioural pattern of irritability, tremulousness and inconsolability exhibited in newborns exposed to addictive opiate drugs. (Anderson 2002)</p>
<b>Neonate</b>	<p>An infant under 28 days of life.</p> <p><a href="https://www.bliss.org.uk/parents/in-hospital/about-neonatal-care/words-you-might-hear-on-the-neonatal-unit">https://www.bliss.org.uk/parents/in-hospital/about-neonatal-care/words-you-might-hear-on-the-neonatal-unit</a></p>
<b>Neurobehavioural organisation</b>	<p>Neurobehavioural organisation refers to the ability of the infant to organise and regulate themselves in reciprocal interaction with their caregiving environment, in order to facilitate the emergence of a hierarchy of co-ordinated neurobehavioural systems. These systems include autonomic/physiologic regulation, motor regulation, state organisation and social interaction.</p> <p>Concept clarification of neonatal neurobehavioural organization - PMC (<a href="http://nih.gov">nih.gov</a>)</p>
<b>Neurobehavioural state</b>	<p>This is the level of alertness of the infant and can be divided into six separate states: deep sleep, light (or REM sleep), drowsy, quiet alert, active alert and crying. The state of the infant is related to how they are able to block out external stimuli in order to be able to interact with the world. (Brazelton and Nugent 1995)</p>
<b>Neurodevelopment</b>	<p>Neurodevelopment refers to the organisation and function of the central nervous system (CNS).</p> <p>Neurodevelopmental delay: Case definition &amp; guidelines for data collection, analysis, and presentation of immunization safety data - PMC (<a href="http://nih.gov">nih.gov</a>)</p>
<b>Neuroplasticity</b>	<p>The brain's ability to reorganise itself by forming new neural connections throughout life. Neuroplasticity allows the neurons (nerve cells) in the brain to compensate for injury and disease and to adjust their activities in response to new situations or to changes in their environment.</p>
<b>NHS</b>	<p>National Health Service</p> <p>The NHS refers to the publicly-funded healthcare systems in the United Kingdom.</p>
<b>NICE</b>	<p>National Institute for Health and Care Excellence</p> <p>NICE (formerly the National Institute for Health and Clinical Excellence) provides national guidance and advice to improve health and social care.</p> <p><a href="http://www.nice.org.uk">http://www.nice.org.uk</a></p>

<p><b>NICU Levels I, II and III</b></p>	<p>Neonatal unit levels.</p> <ul style="list-style-type: none"> <li>• Neonatal intensive care unit (NICU) - This is the highest level of care and is for the smallest and sickest infants; for example, infants who need breathing support with a ventilator, weigh less than 1000 gram or were born before 28 weeks' gestation. NICUs can offer the entire range of neonatal care. Not all NICUs can provide highly specialised services, such as neonatal surgery and these services are concentrated at just a few hospitals.</li> <li>• Local neonatal unit (LNU) - These units still provide sophisticated care, but the infants are not as ill as those in the NICU. Infants weighing less than 1000 grams are sometimes cared for here if they are relatively strong. The local neonatal unit can provide continuous positive airways pressure (CPAP) for breathing support, and can look after infants who need their breathing to be stimulated. Infants can also receive intravenous (IV) or tube feeding in the local neonatal unit.</li> <li>• Special care baby unit (SCBU) - This level of care is sometimes referred to as 'low dependency'. The special care baby unit can offer infants some kinds of tube feeding, oxygen and phototherapy (light treatment) for jaundice. Special care is also for infants who need to have their breathing or heartbeat monitored. The unit can provide some intensive care in an emergency but not for longer periods.</li> </ul> <p>Neonatal Networks   British Association of Perinatal Medicine (bapm.org)</p>
<p><b>NIDCAP</b></p>	<p>The Newborn Individualized Developmental Care and Assessment Program (NIDCAP) 'NIDCAP, originated in 1984 by Heidelise Als, PhD, is [a] comprehensive, family centered, evidence-based approach to developmental care for newborn and infant intensive care nurseries.'</p> <p><a href="https://nidcap.org/">https://nidcap.org/</a></p>
<p><b>NNNS</b></p>	<p>NICU Network Neurobehavioral Scale (NNNS).  'Examines the neurobehavioural organization, neurological reflexes, motor development – active and passive tone, and signs of stress and withdrawal of the at-risk and drug-exposed infant. It was designed to provide a comprehensive assessment of both neurological integrity and behavioural function. Additionally, the NNNNS documents the range of withdrawal and stress behaviour likely to be observed in assessment and intervention with substance-exposed infants. This neurobehavioral assessment is applicable to term, normal healthy infants, preterm infants and infants at risk due to factors such as prenatal substance exposure.' <a href="https://www.brown.edu/research/projects/children-at-risk/about">https://www.brown.edu/research/projects/children-at-risk/about</a></p>
<p><b>NNU</b></p>	<p>Neonatal unit.  A term which may be used synonymously with neonatal intensive care unit, but is most commonly used to refer to level 2 units.</p>
<p><b>Non-pharmacological</b></p>	<p>A type of health intervention not based on medication/drugs.</p>
<p><b>Occupation</b></p>	<p>Occupation refers to practical and purposeful activities that allow people to live independently and have a sense of identity. This could be essential day-to-day tasks such as self-care, work or leisure. Infant 'occupations' are the activities that they engage in as they strive to master the skills they will need to adapt to their environment. These include participating in feeding, bathing, nurturing, play and learning, and early relationships.</p>
<p><b>Occupation-based assessment</b></p>	<p>Occupation-based assessment describes the consideration of an individual infant's early engagement patterns during routine caregiving and other elements associated with occupational performance. This includes identification of an infant's strengths and vulnerabilities as they experience and participate in caregiving interactions in the neonatal unit.</p>
<p><b>Occupational performance</b></p>	<p>The dynamic relationship between a person, a person's environment, and their occupations.</p>
<p><b>Occupational therapist (OT)</b></p>	<p>An occupational therapist's role is to help people of all ages overcome the effects of disability caused by illness, ageing or accident so that they can carry out everyday tasks or occupations. An occupational therapist will consider all of the person's needs – physical, psychological, social and environmental. Occupational therapists work with many people, including children and young people, people with physical or learning disabilities, people with mental health issues, and older people.</p> <p><a href="https://www.rcot.co.uk/about-occupational-therapy/what-is-occupational-therapy">https://www.rcot.co.uk/about-occupational-therapy/what-is-occupational-therapy</a></p>

<b>Paediatric Intensive Care Unit</b>	Hospital ward specialising in the care of critically ill infants and children.
<b>Parent</b>	Parent refers to the primary caregivers for the infant rather than the biological mother and father. For brevity in the document the word parent is used.
<b>Parental attunement</b>	See 'Attunement'.
<b>Parenting occupations</b>	See 'Co-occupations'.
<b>Periventricular leukomalacia (PVL)</b>	'Periventricular leukomalacia is a type of brain injury that is most common in babies born too soon (premature) or at low birthweight. The white matter (leuko) surrounding the ventricles of the brain (periventricular) is deprived of blood and oxygen leading to softening (malacia). The white matter is responsible for transmitting messages from nerve cells in the brain so damage to the white matter can cause problems with movement and other body functions.' <a href="https://www.gosh.nhs.uk/conditions-and-treatments/conditions-we-treat/periventricular-leukomalacia/">https://www.gosh.nhs.uk/conditions-and-treatments/conditions-we-treat/periventricular-leukomalacia/</a>
<b>Physiological regulation</b>	Physiological (or autonomic) regulation refers to an individual's ability to regulate certain body processes such rate of breathing, heart rate, digestion, temperature etc.
<b>Positive touch</b>	Positive touch is described as a specially adapted touch for infants who are premature or fragile and is given according to the individual behavioural and physiological responses of an infant (Warren and Bond 2010). It can include massage, gentle touch and supportive holding.
<b>Postural support</b>	Purposeful positioning of an infant with the goal of promoting self-regulation and facilitating an infant's participation in normal sensorimotor experiences, such as bringing their hand to their mouth and face (Vergara and Bigsby 2004).
<b>Preterm infant</b>	An infant born before 37 weeks' gestational age.
<b>RCOT</b>	Royal College of Occupational Therapists The Royal College of Occupational Therapists is a registered charity and wholly owned subsidiary of BAOT, which acts on behalf of all members of the Association. The College sets the professional and educational standards for the occupational therapy profession and represents the profession at the national and international levels. RCOT plays a crucial role in promoting the profession and meeting the professional needs of occupational therapy staff in the UK. About us - RCOT
<b>Self-efficacy</b>	Parent self-efficacy refers to a parent's belief in their ability to perform their parenting role successfully (Wittowski et al 2017).
<b>Self-regulatory behaviours</b>	'The active efforts on the part of the infant to regulate autonomic functions, motor control, and states of arousal, and availability for interactions with others, within the context of a dynamic environment' (Als 1982, referenced in Grenier et al 2003).
<b>Sensory processing</b>	'Sensory processing is a generic term used to describe the way in which sensation is detected, transduced and transmitted through the nervous system' (Roley et al 2007).
<b>Transitional care</b>	Level of care provided to babies who may need support for feeding or medical matters that do not require admission to the neonatal unit. Transitional care units are usually located in maternity and mothers are not separated from their baby.
<b>VLBW</b>	Very low birthweight. Birthweight of under 1.5kg (3 pounds 5 ounces) regardless of gestational age.

All websites in the glossary were accessed on 19.6.23

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