Occupational therapy staffing on neonatal units

Recommendations of the Neonatal Clinical Forum, part of the RCOT Specialist Section - Children, Young People and Families

Royal College of Occupational Therapists

Purpose

This document provides up to date staffing recommendations for occupational therapists (OTs) working in neonatal care. We've revised these in line with the second edition of the RCOT practice guidelines on *Occupational therapy in neonatal services and early intervention*[1] and the Neonatal Critical Care Review[2] recommendations for appropriate allied health professional (AHP) staffing levels.

Rationale

The first edition of the *Occupational Therapy Staffing on Neonatal Units*[3] referenced national documents describing the contribution of OT in neonatal care.[4,5] We reviewed these documents alongside new evidence and found a high level of consistency between them. The staffing recommendations we've made in this document are based on this updated review and reflect the current climate and expectations of OTs working in neonatal care.

This document was peer-reviewed and accepted by the RCOT Children, Young People and Families Specialist's Section - Neonatal Forum Committee.

Background

Historically, neonatal care focused on increasing survival of preterm and medically fragile infants. Infant survival rates are much higher now due to advances in medicine, but levels of disability remain proportionately high[6]. Whilst the aim of neonatal care has shifted to provision of care that achieves high quality outcomes, care focused on improving quality of life and functional abilities cannot be achieved by medical and nursing intervention alone. Known increased risks of language and cognition difficulties, attention and hyperactivity disorders, motor difficulties and mental health problems[7] highlight the need for ultra-early intervention from AHPs.

AHPs who have advanced skills and experience within their discipline make an essential contribution to neonatal care and optimising outcomes for high-risk newborns[8]. The early involvement and collaboration of key professions in the care plan:

- enhances clinical effectiveness
- shortens length of stay
- enhances therapeutic interventions
- helps avoid complications
- improves long term neurodevelopmental outcomes[9].

Following the Neonatal Critical Care Review (NCCR) Implementation Plan[10], an AHP team was created by Neonatal Operational Delivery Networks (ODNs) in England. Their purpose included reviewing OT staffing recommendations to inform and assist the commissioning of new neonatal OT roles.

While the aim of this document is to make OT staffing recommendations for neonatal units, the safety of services and the effectiveness of patient care is influenced by more than staffing numbers alone. The quality of care and its impact on patients must also be considered.

- Staffing requirements will be affected by changes to a patient's needs, service delivery models and skill mix within the unit.
- Embedded service models with appropriate skill mix will ensure opportunities for training and development and facilitate more robust succession planning.

[1] RCOT (2022), [2] NHS England (2019), [3] RCOT (2018), [4] Scottish Government (2013), [5] Wales NHS (2017), [6] Marlow N (2015), [7] Doyle et al (2014), [8] BAPM (2022), [9] Craig et al (2020), [10] NHS England (2019).

Neonatal occupational therapy

OTs make a unique contribution to the neonatal team and the services provided to infants and families. The second edition of the RCOT practice guideline on *Occupational therapy in neonatal services and early intervention* describes the unique and specialist skills of neonatal OTs and their contribution to enhancing neonatal care.

- OTs are specialists in supporting parent and infant co-occupations, infant neuro-behavioural regulation and sensory development.
- Use of specialist skills, knowledge of infant neuro-behavioural and neuro-motor development and analysis of the impact of the physical/sensory/psychosocial environment helps optimise infant development and enables the delivery of Family Integrated Care (FiCare).
- OTs play a key role in the delivery of neuro-developmental follow up care and early intervention services, which supports the development of infant occupations including self-care, learning and play.

The following table summarises the OT role in the promotion of infant neurodevelopment, parent self-efficacy and parental wellbeing throughout the infant journey and neonatal admission.

Level of provision	Scope of intervention
Intensive care provision:	• OTs work with the neonatal MDT to promote a neuro-protective care environment for the infant. • OTs carry out observational assessments of the infant's neuro-behavioural regulation to develop an individualised developmentally supportive care model. • Recommendations are made for caregiving approaches that mediate some of the impact of necessary intensive medical and nursing care on the infant's developing brain. This will continue throughout the infant's admission, with adjustments made to reflect the infant's growing developmental maturity. • Where a multidisciplinary neonatal therapy model is in place in intensive care, a shared approach to supporting infants and families may be employed.
	• Supporting parents is a key focus for OT at this level. In many situations, parents are unable to care for their infant in the way they anticipated and prepare for. • OTs work with parents (and staff) to identify sensitive and supportive activities (parent occupations) that parents can undertake with their infant, considering the infant's fragility and ongoing care needs. • Interventions may include containment holding, enabling skin-to-skin care, providing maternal scent and non-pharmacological pain management support.
	• OTs work closely with clinical psychology services to provide psychosocial-based support and intervention for parents going through a traumatic period of their parenting journey.

Level of provision	Scope of intervention
High-dependency provision:	• OTs continue serial observational assessment of the infant's neuro-behavioural regulation, liaising with neonatal professional colleagues to incorporate individualised recommendations into the infant's daily care plan.
	• As the infant becomes more stable, OTs take an enabling approach (in collaboration with nursing colleagues), promoting family-centred care and supporting parents to become more actively involved in their infant's care.
	• For infants who are having a longer length of stay, OTs provide appropriate developmental support for infants and their families post-term age, in accordance with their medical status.
Special-care provision:	• OTs collaborate with the neonatal nursing team to deliver a model of family-centred developmental care that enables parents and infants to take part in co-occupations (such as bathing, interacting and comforting) that reflect the infant's medical status.
	• OTs carry out formal neuro-behavioural and neurological assessments of identified high-risk infants to provide detailed recommendations for discharge planning and follow-up intervention. Assessments may include Neonatal Behavioural Assessment Scale (NBAS) and Prechtl General Movements Assessment.
	• OTs continue to provide parent-focused interventions that support parent confidence and ability to read and respond to their infant's neuro-behavioural cues. This improves the parent-infant relationship and increases their confidence/ability to carry out parenting and caregiving tasks in preparation for discharge from the neonatal unit. Tools to support practice may include the Newborn Behavioural Observations.
	• OTs liaise with community and children's inpatient services to ensure appropriate referrals and follow up are in place after discharge.
	• In accordance with NICE quality standards (2018)[11], OTs are key members of the MDT providing neonatal developmental follow-up surveillance for two years post discharge.

The range of common core skills offered by neonatal healthcare professionals[12, 13] is an advantage in the delivery of neonatal care. A multidisciplinary model of teamwork is economical and effective when working with infants who have a relatively uncomplicated range of abilities compared to adults[14]. Different disciplines understand and appreciate their unique contributions and core skills. They also agree where the boundaries between professions can be blurred to deliver effective services for families. Each professional brings their own perspectives, skills and experience to these shared roles, adding a richness of knowledge to the team. The scope of practice for each profession will be influenced by the presence or absence of other AHPs and the skills they have, as well as the care needs of the infant.

[11] NICE (2018), [12] Craig et al (2020), [13] Barbosa (2013), [14] Barbosa (2013),

Recommended service levels

The following describes the staffing resources required to deliver universal, targeted and specialist neonatal OT services. Recommendations for OT assessments and interventions are described in the practice guidelines on Occupational therapy in neonatal services and early intervention[15].

Methodology used for review

Data was gathered from four neonatal units to ascertain the average duration of contacts per baby in ITU, HDU and SCBU. The units chosen had varying OT staffing levels from a full complement of therapists (as determined by existing staffing recommendations) to a unit where OT services were provided just one day a week. The number of contacts, direct clinical time, indirect clinical time and type of interventions were considered.

Recommendations are based on this data, published evidence and consensus opinion. The WTE for OT provision per cot at the differing levels of care acuity was calculated.

Once the average length of time spent with a baby over a week was determined, an additional amount of indirect clinical time was added for service development, CPD and input to programmes such as family integrated care, in which OT plays an essential role. Across the four trusts, for a band 7 neonatal OT the split between clinical and non-clinical work would be approximately 70% clinical and 30% nonclinical. This is influenced by an individual Trust's therapy workforce strategy and job plan.

Universal, targeted and specialist provision is informed by the case mix, complexity, cot occupancy and a unit's individual priorities.

[15] RCOT (2022)

Findings

We have not differentiated by WTE for staffing levels between ITU, HDU and SCBU for the following reasons:

- Direct clinical time was noted to increase from ITU to HDU and SCBU across all units. The OTs reported that their role became more involved with increasing time once the baby was extubated.
- The highest amount of direct clinical time spent across levels was in HDU, with ITU and SCBU equally second.
- The more complex babies requiring additional OT input for parent infant co-occupations, sensory and environmental adaptations were seen in HDU and SCBU and these babies tended to have a longer length of stay, particularly on the level III NICUs.
- Psychosocial support was provided across all areas for parents through their journey, particularly for a longer NNU stay.
- The babies in ITU were seen on ward rounds and developmental care rounds as standard practice which formed more of a targeted approach.
- The role of OT in ITU is one of anticipatory guidance, psychosocial support, caregiving and environmental adaptation with parents and nurses to support the neuro-behavioural development of the infant. These approaches are also used in the other nursery settings.

The OT service provision in transitional care was very limited at time of data collection and provided little useful information to make accurate staffing recommendations. Benchmarking will be required to make specific recommendations for transition care staffing in the future.

All four units provided some level of neonatal follow up surveillance, most commonly at two years of age. Neuro-developmental assessments were often provided by OTs in partnership with other AHP therapists, and recommendations reflect this staffing mix.

Staffing recommendations

Inpatient services

For all neonatal units 0.05 WTE of neonatal OT per cot is recommended.

Level of Care	Whole time equivalent (WTE) per cot
Intensive Care cots	0.05
High Dependency cots	0.05
Special Care cots	0.05

Neonatal and Neurodevelopmental follow-up services

Neonatal OT is required for screening/assessment of infants attending neonatal and neurodevelopmental follow-up services as outlined in the NICE quality standard[16].

Level of Care	Whole time equivalent (WTE) per half day clinic
Follow up clinic	0.15

Transitional care cots

To be further benchmarked when more data is available.

Note: staffing numbers should be viewed in the context of an embedded service, including the availability of an appropriate skill mix to provide opportunities for training and development and succession planning. This will ensure a robust, expert and sustainable OT workforce.

[16] NICE (2018)

Neonatal occupational therapist job plans

Job plans for a neonatal OT should include direct and indirect clinical time, as well as other supporting activities as outlined below.

Activity	Description of activity (includes)
Direct and indirect clinical contact	Development of individualised assessment, intervention and treatment plans. Attendance at ward rounds, MDT rounds and infant planning meetings. Clinical documentation, preparing for OT sessions and discussion with colleagues and caregivers.
Non-clinical time	CPD, service development, provision/receipt of supervision, attendance at education and training courses. Engagement in peer support. Data collection such as statistics and contacts.
Universal support	Attendance at family integrated care meetings, development and care group meetings, parent teaching sessions, clinical induction for doctors and nurses.

Neonatal network roles

In addition to the unit-specific recommendations outlined above, provision should be made for OT support at a network level. The network clinical advisory role supports service coordination and development for neonatal OT across a region. Network roles are typically undertaken by a neonatal OT, with hours added to the direct service provision hours in the post-holder's 'base' unit. The person in this role is responsible for activities such as:

- OT workforce development
- facilitation of training and education
- coordinating opportunities for clinical supervision for neonatal OTs working across the network
- collaboration with national ODN OTs and the wider AHP group.

Network role	0.2WTE / 10 000 births across a network

Occupational therapy expertise

Based on the specialist knowledge and practice skills required by OTs working in the neonatal setting and the degree of risk, we recommend that neonatal roles should be held by experienced/senior OTs. In line with the British Association of Perinatal Medicine (BAPM) recommendations[17].

- OT positions in neonatal services should be Band 7 level, at a minimum.
- In many instances it may be appropriate for these roles to be considered at a clinical specialist level (band7/8).
- Clinical advisory roles across a neonatal network should be band 8.

We also recommend that therapists beginning practice in the neonatal setting have existing robust experience in children's OT services, with refined occupational assessment and intervention skills with infants, and recognise the importance of working within a family-centred care approach. This would form a practical basis from which to extend knowledge and skills development into the specialist area of the neonatal unit.
Details of banding expectations are described below.

Clinical Banding	Descriptor
Foundation (Band 6): Experienced occupational therapists, typically in their first role in the specialist practice area of neonatal care.	• Previous experience in paediatric or adult OT settings, able to work autonomously with robust clinical reasoning skills. • Works with more stable, moderate and late preterm infants (for example >32 weeks PMA). • Working alongside a more senior OT on a unit. • Will require regular supervision/mentoring from enhanced or advanced level OTs either in the same unit or from within the neonatal network.
Enhanced (Band 7) Experienced in neonatal care	• Provides OT for infants and families across the full range of clinical presentations (for example very preterm infants, infants with HIE etc). • Works autonomously. • Requires access to supervision/mentoring from an advanced level OT on a negotiated basis for ongoing professional development regarding the management of complex infants, service development and evaluation.
Advanced (Band 8a)	Advanced level OTs may be: • Working in clinical specialist roles in a neonatal unit providing care for the most complex infants and families (including extremely preterm infants, surgical care, infants on ECMO). • Working in an OT network role with responsibility for the development of neonatal OT services across a range of units within a network. • All will require access to peer-peer support or mentorship.

[17] BAPM (2022)

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Version 4/September 2023