## RCSLT

# Speech and language therapy staffing recommendations for neonatal units

Version 3, March 2025



### Contents

Introduction	Authors	3
Speech and language therapy in neonatal care		
Service planning	Background, incidence, and prevalence	4
Table 1: The risks versus benefits of the two different service delivery models       1         Staffing       12         National Benchmarking       12         Figure 1: Achievement of SLT recommended staffing levels across unit type from 2018 staffing recommendations       1         Staffing recommendations       1         Considerations when planning staffing levels       1         Surgical Neonatal Intensive Care Unit (Surgical NICU)       1         Medical Neonatal Intensive Care Unit (Medical NICU)       1         Local Neonatal Unit (LNU)       1         Special Care Unit (SCU)       1         Minimum staffing levels for LNU and SCU       2         Neonatal unit cot increase       2         Transitional care (TC) cot increase       2         Neonatal speech and language therapy operational delivery network role       2         Supervision       2         Education and Training       2         Future Steps       2         Appendix 1: Worked examples of staffing level calculations       4         Surgical Neonatal Intensive Care Unit (Surgical NICU)       4         Local Neonatal Intensive Care Unit (Medical NICU)       4	Speech and language therapy in neonatal care	7
Staffing       12         National Benchmarking       12         Figure 1: Achievement of SLT recommended staffing levels across unit type from 2018 staffing recommendations       1         Staffing recommendations       1         Considerations when planning staffing levels       1         Surgical Neonatal Intensive Care Unit (Surgical NICU)       1         Medical Neonatal Intensive Care Unit (Medical NICU)       1         Local Neonatal Intensive Care Unit (Medical NICU)       1         Minimum staffing levels for LNU and SCU       2         Neonatal unit cot increase       2         Transitional care (TC) cot increase       2         Neonatal speech and language therapy operational delivery network role       2         Workforce development       2         Competencies       2         Supervision       2         Future Steps       2         References       2         Appendix 1: Worked examples of staffing level calculations       4         Surgical Neonatal Intensive Care Unit (Surgical NICU)       4         Medical Neonatal Intensive Care Unit (Medical NICU)       4		
National Benchmarking       1:         Figure 1: Achievement of SLT recommended staffing levels across unit type from 2018 staffing recommendations       1         Staffing recommendations       1         Considerations when planning staffing levels       1         Surgical Neonatal Intensive Care Unit (Surgical NICU)       1         Medical Neonatal Intensive Care Unit (Medical NICU)       1         Local Neonatal Unit (LNU)       1         Special Care Unit (SCU)       1         Minimum staffing levels for LNU and SCU       2         Neonatal unit cot increase       2         Transitional care (TC) cot increase       2         Neonatal speech and language therapy operational delivery network role       2         Workforce development       2         Competencies       2         Supervision       2         Future Steps       2         Appendix 1: Worked examples of staffing level calculations       4         Surgical Neonatal Intensive Care Unit (Surgical NICU)       4         Addical Neonatal Intensive Care Unit (Medical NICU)       4	Table 1: The risks versus benefits of the two different service delivery models	11
Figure 1: Achievement of SLT recommended staffing levels across unit type from 2018 staffing recommendations       1         Staffing recommendations       1         Considerations when planning staffing levels       1         Surgical Neonatal Intensive Care Unit (Surgical NICU)       1         Medical Neonatal Unit (LNU)       1         Special Care Unit (SCU)       1         Minimum staffing levels for LNU and SCU       2         Neonatal unit cot increase       2         Transitional care (TC) cot increase       2         Neonatal speech and language therapy operational delivery network role       2         Workforce development       2         Competencies       2         Supervision       2         Future Steps       2         Appendix 1: Worked examples of staffing level calculations       4         Surgical Neonatal Intensive Care Unit (Surgical NICU)       4         Medical Neonatal Intensive Care Unit (Medical NICU)       4	Staffing	12
recommendations       1         Staffing recommendations       1         Considerations when planning staffing levels       1         Surgical Neonatal Intensive Care Unit (Surgical NICU)       1         Medical Neonatal Intensive Care Unit (Medical NICU)       1         Local Neonatal Unit (LNU)       1         Special Care Unit (SCU)       1         Minimum staffing levels for LNU and SCU       2         Neonatal unit cot increase       2         Transitional care (TC) cot increase       2         Neonatal speech and language therapy operational delivery network role       2         Workforce development       2         Competencies       2         Supervision       2         Future Steps       2         References       2         Appendix 1: Worked examples of staffing level calculations       4         Surgical Neonatal Intensive Care Unit (Medical NICU)       4         Local Neonatal Intensive Care Unit (Medical NICU)       4	National Benchmarking	12
Considerations when planning staffing levels       11         Surgical Neonatal Intensive Care Unit (Surgical NICU)       11         Medical Neonatal Intensive Care Unit (Medical NICU)       11         Local Neonatal Unit (LNU)       11         Special Care Unit (SCU)       11         Minimum staffing levels for LNU and SCU       22         Neonatal unit cot increase       22         Transitional care (TC) cot increase       22         Neonatal speech and language therapy operational delivery network role       22         Workforce development       24         Supervision       21         Education and Training       21         Future Steps       22         Appendix 1: Worked examples of staffing level calculations       42         Surgical Neonatal Intensive Care Unit (Surgical NICU)       4         Medical Neonatal Intensive Care Unit (Medical NICU)       4         Local Neonatal Unit (LNU)       4		14
Surgical Neonatal Intensive Care Unit (Surgical NICU)       1         Medical Neonatal Intensive Care Unit (Medical NICU)       1         Local Neonatal Unit (LNU)       1         Special Care Unit (SCU)       1         Minimum staffing levels for LNU and SCU       2         Neonatal unit cot increase       2         Transitional care (TC) cot increase       2         Neonatal speech and language therapy operational delivery network role       2         Workforce development       2         Competencies       2         Future Steps       2         References       2         Appendix 1: Worked examples of staffing level calculations       4         Surgical Neonatal Intensive Care Unit (Surgical NICU)       4         Local Neonatal Unit (LNU)       4	Staffing recommendations	14
Medical Neonatal Intensive Care Unit (Medical NICU) 11   Local Neonatal Unit (LNU) 11   Special Care Unit (SCU) 11   Minimum staffing levels for LNU and SCU 21   Neonatal unit cot increase 22   Transitional care (TC) cot increase 22   Neonatal speech and language therapy operational delivery network role 22   Workforce development 22   Competencies 21   Supervision 21   Education and Training 21   Future Steps 22   Appendix 1: Worked examples of staffing level calculations 42   Surgical Neonatal Intensive Care Unit (Surgical NICU) 4   Medical Neonatal Intensive Care Unit (Medical NICU) 4	Considerations when planning staffing levels	16
Local Neonatal Unit (LNU) 11   Special Care Unit (SCU) 12   Minimum staffing levels for LNU and SCU 21   Neonatal unit cot increase 22   Transitional care (TC) cot increase 22   Neonatal speech and language therapy operational delivery network role 22   Workforce development 22   Competencies 24   Supervision 21   Education and Training 21   Future Steps 22   Appendix 1: Worked examples of staffing level calculations 42   Surgical Neonatal Intensive Care Unit (Medical NICU) 4   Local Neonatal Unit (LNU) 4		
Special Care Unit (SCU) 11   Minimum staffing levels for LNU and SCU 21   Neonatal unit cot increase 22   Transitional care (TC) cot increase 22   Neonatal speech and language therapy operational delivery network role 22   Workforce development 24   Competencies 24   Supervision 21   Education and Training 24   References 22   Appendix 1: Worked examples of staffing level calculations 44   Surgical Neonatal Intensive Care Unit (Surgical NICU) 44   Medical Neonatal Intensive Care Unit (Medical NICU) 44   Local Neonatal Unit (LNU) 44		
Minimum staffing levels for LNU and SCU 2   Neonatal unit cot increase 2   Transitional care (TC) cot increase 2   Neonatal speech and language therapy operational delivery network role 2   Workforce development 2   Competencies 2   Supervision 2   Education and Training 2 <i>Future Steps</i> 2   References 2   Surgical Neonatal Intensive Care Unit (Surgical NICU) 4   Medical Neonatal Intensive Care Unit (Medical NICU) 4   Local Neonatal Unit (LNU) 4		
Neonatal unit cot increase 2   Transitional care (TC) cot increase 2   Neonatal speech and language therapy operational delivery network role 2   Workforce development 2   Competencies 2   Supervision 2   Education and Training 2   Future Steps 2   References 2   Surgical Neonatal Intensive Care Unit (Surgical NICU) 4   Medical Neonatal Unit (LNU) 4		
Transitional care (TC) cot increase 2   Neonatal speech and language therapy operational delivery network role 2   Workforce development 2   Competencies 2   Supervision 2   Education and Training 2   Future Steps 2   References 2   Surgical Neonatal Intensive Care Unit (Surgical NICU) 4   Medical Neonatal Intensive Care Unit (Medical NICU) 4		
Neonatal speech and language therapy operational delivery network role 2   Workforce development 2   Competencies 2   Supervision 2   Education and Training 2   Future Steps 2   References 2   Appendix 1: Worked examples of staffing level calculations 4   Surgical Neonatal Intensive Care Unit (Surgical NICU) 4   Medical Neonatal Unit (LNU) 4		
Workforce development       24         Competencies       24         Supervision       21         Education and Training       21         Future Steps       22         References       22         Appendix 1: Worked examples of staffing level calculations       42         Surgical Neonatal Intensive Care Unit (Surgical NICU)       44         Medical Neonatal Intensive Care Unit (Medical NICU)       44         Local Neonatal Unit (LNU)       44		
Competencies 24   Supervision 21   Education and Training 21   Education and Training 21   Future Steps 22   References 22   Appendix 1: Worked examples of staffing level calculations 42   Surgical Neonatal Intensive Care Unit (Surgical NICU) 43   Medical Neonatal Intensive Care Unit (Medical NICU) 44   Local Neonatal Unit (LNU) 44		22
Supervision       21         Education and Training       20         Future Steps       21         References       22         Appendix 1: Worked examples of staffing level calculations       42         Surgical Neonatal Intensive Care Unit (Surgical NICU)       44         Medical Neonatal Intensive Care Unit (Medical NICU)       44         Local Neonatal Unit (LNU)       44	Workforce development	24
Education and Training       20         Future Steps       22         References       29         Appendix 1: Worked examples of staffing level calculations       42         Surgical Neonatal Intensive Care Unit (Surgical NICU)       42         Medical Neonatal Intensive Care Unit (Medical NICU)       42         Local Neonatal Unit (LNU)       42	Competencies	24
Future Steps       22         References       29         Appendix 1: Worked examples of staffing level calculations       42         Surgical Neonatal Intensive Care Unit (Surgical NICU)       42         Medical Neonatal Intensive Care Unit (Medical NICU)       42         Local Neonatal Unit (LNU)       42	Supervision	25
References       29         Appendix 1: Worked examples of staffing level calculations       42         Surgical Neonatal Intensive Care Unit (Surgical NICU)       42         Medical Neonatal Intensive Care Unit (Medical NICU)       42         Local Neonatal Unit (LNU)       42	Education and Training	26
Appendix 1: Worked examples of staffing level calculations       42         Surgical Neonatal Intensive Care Unit (Surgical NICU)       42         Medical Neonatal Intensive Care Unit (Medical NICU)       42         Local Neonatal Unit (LNU)       42	Future Steps	28
Surgical Neonatal Intensive Care Unit (Surgical NICU)       4         Medical Neonatal Intensive Care Unit (Medical NICU)       4         Local Neonatal Unit (LNU)       4	References	29
Surgical Neonatal Intensive Care Unit (Surgical NICU)       4         Medical Neonatal Intensive Care Unit (Medical NICU)       4         Local Neonatal Unit (LNU)       4	Appendix 1: Worked examples of staffing level calculations	42
Medical Neonatal Intensive Care Unit (Medical NICU)       4         Local Neonatal Unit (LNU)       4		
Local Neonatal Unit (LNU) 4		
Special Care Unit (SCU) 4		
	Special Care Unit (SCU)	43



### Authors

These recommendations were developed by the following members of the speech and language therapy neonatal clinical excellence network and are endorsed by the RCSLT.

- Michelle Sweeting, Highly Specialist Neonatal Speech and Language Therapist, Mid Essex Hospital Services NHS Trust
- Dr Celia Harding, Honorary Professor, School of Health & Psychological Sciences, Department of Language & Communication Science, City, University of London
- Alexandra Connolly, London Neonatal ODN, Lead Speech and Language Therapist/Highly Specialist Neonatal Speech and Language Therapist, Imperial College Healthcare NHS Trust
- Rebecca Murphy, Clinical Lead Neonatal Speech and Language Therapist, Kings College Hospital NHS Foundation Trust
- Katy Parnell, West Midlands ODN, Lead Speech and Language Therapist, Birmingham Women and Children's Foundation Trust
- Jo Marks, NWODN Lead Speech & Language Therapist, Professional Lead Speech & Language Therapy Paediatric/Neonates Manchester Foundation Trust



### Introduction

#### Background, incidence, and prevalence

Preterm and unwell term infants require neonatal care to receive specialist medical help and multi-disciplinary therapeutic support. In England and Wales, overall percentages of preterm live births increased from 7.4% in 2020 to 7.6% in 2021 (Office for National Statistics, 2023), a review of services in Scotland undertaken in 2019, found 6.8% of live singleton infants were born prematurely (NHS National Services Scotland and National Statistics, 2019). One thousand nine hundred infants were reported as being born preterm in Northern Ireland in 2020 (Neonatal Network Northern Ireland, 2021). In total, approximately 58,000 infants born in the UK each year are premature (Neonatal Data Visualisations researcher tools, n.d.). Nearly half (47%) of all babies admitted to neonatal units are term (born at gestational age 37 weeks or more) (Adams et al, 2022).

Improvements in neonatal care have enabled increased survival of infants born preterm including the extremely preterm (<28 weeks gestation) and those who have extremely low birthweight (Saigal and Doyle, 2008; Stoll et al, 2015). Prematurity can significantly increase the likelihood of motor, cognitive, educational, speech, language and communication, health and socioeconomic problems compared with infants born term (Cheong et al, 2019; Marlow et al, 2005).



Speech and Language therapists (SLTs) work with infants and their families receiving care on neonatal units in the areas of both feeding and communication development (Murphy et al, 2021). For preterm and unwell term infants, acquiring the skills required to feed involves developing the coordination of sucking, swallowing, and breathing and this process can take time depending on an infant's physiological and neurological development and any other medical conditions (Jadcherla, 2016). Necessary medical interventions and illness can interrupt or delay oral feeding progress, impair the development of positive oral motor and somatosensory learning experiences, and have a negative impact on parental mental health and well-being (Burklow et al, 2002; Malouf et al, 2021). Preterm infants are at risk of aspiration, with 40% of preterm infants born at 25-37 weeks gestational age identified as aspirating on videofluoroscopy swallow assessment at term age (Uhm et al, 2013) or exhibiting airway protection problems (Lee et al, 2011). Difficulties with feeding can persist once discharged home, regardless of gestational age at birth, although targeted feeding intervention for parents whilst on the unit can enable a more positive feeding experience (Harding et al, 2022). Infants and their families need on-going feeding support once discharged home, and often require hospital readmission for feeding related difficulties (Harding et al, 2022). Up to 20.4% of infants can experience persistent feeding problems once discharged home thereby necessitating the importance of neonatal follow-up from Speech and Language therapists (Hoogewerf et al 2017).

Children born preterm are at high risk of developing speech, language and communication difficulties that persist throughout childhood and therefore impact on social and educational success and confidence (Rautava et al, 2016;



Stene-Larson et al 2014; Johnson et al, 2015). The lower the gestational age at birth, the higher the risk of developing speech, language and communication difficulties (Loeb et al, 2020; Serenius et al, 2013; Wolke et al, 2008; Zambrana et al, 2021). Other studies have also identified risk of significant and wide-ranging speech, language and communication disorders and delays in groups of children born at later gestational birth ages (Rabie et al, 2015; Sansavini, 2011).

Bonding, attachment, and skin to skin care are essential precursor skills for the development of productive dyadic relationships. Interventions from SLTs that support and emphasise gaze, eye-contact and meaningful interactions between parents and their infants can be a basis for long-lasting, positive, and rich linguistic experiences (Harding et al, 2019). Consistent use of spoken language by carers directed towards their preterm infant in a neonatal setting enables infants to vocalize more, and to develop better language and cognitive outcomes at 7 and 18 months (Caskey et al, 2014). Parent stress behaviours can inhibit positive interaction, but when supported to provide specific communication skills on a neonatal unit, mothers are more responsive to their infant's cues and show fewer stress behaviours (Milgrom et al, 2013). Parental therapy participation in the neonatal unit with Speech and Language therapists, Physiotherapists and Occupational therapists was found to be a means of regaining autonomy and control in a context of trauma (Edney and McHugh, 2023).



#### Speech and language therapy in neonatal care

Recent documents including the NHS Long Term Plan (National Health Service, 2019), the Neonatal Critical Care Review (NHS England and NHS Improvement, 2019) the Getting it Right First-Time report (Adams et al, 2022) highlighted the significant shortage of medical and nursing staff in neonatal services across the . UK. The Ockenden review highlighted the need for improved multidisciplinary team working across maternity and neonatal services (Ockenden, 2022). Alongside the identified shortages of nursing and medical staff, Allied Health Professionals (AHPs) are also under-resourced, being available only during the week in less than half of UK neonatal units and almost completely absent at weekends (Adams, 2020). SLTs are part of the AHP workforce along with Physiotherapists, Occupational therapists, Dietitians, Pharmacists and Clinical Psychology services who are underrepresented within neonatal care. SLTs work in collaboration with members of the multidisciplinary neonatal team in the areas of feeding and swallowing development and early communication facilitation (Murphy et al, 2021).

SLTs assess and treat infants and their families and work with other members of the neonatal team providing intervention within a Developmental Care framework (Als, 1998), and ensuring that other standards such as UNICEF BFI neonatal standards (UNICEF, 2022) and the Bliss Baby Charter standards (Bliss, 2005) are adherred to and integrated into therapeutic work practices. Given that infants born preterm and unwell term infants are at high risk of developing both long-term feeding problems and significant speech, language and communication difficulties, SLT intervention is necessary. SLTs are essential



members of the neonatal team, both when infants and their families are establishing early feeding and communication skills on the neonatal unit and during follow-up sessions once discharged home. SLTs are skilled in the assessment, treatment, and monitoring of pre-feeding skills, feeding skills, positive oral experiences, early identification and management of feeding and swallowing difficulties and early communication development and disorders (Murphy et al, 2021; Marks et al, 2022). Speech and Language therapists abide by their professional standards of practice in care, work in partnership with members of the neonatal team and parents when implementing their work, are involved in shared decision making and also undertake training of both neonatal staff and parents where necessary (Health and care professionals, 2014).

Neonatal SLTs with dual qualifications as International Board-Certified Lactation Consultants (IBCLC) have an additional skill set which enhances lactation and breastfeeding support to infants, their families and the neonatal team as well as contributing to the achievement of National Neonatal Audit Programme (NNAP) measures.

#### Service planning

Neonatal AHPs work collaboratively with neonatal teams to optimise care of infants and their families, using their own unique professional skill set to enhance neonatal outcomes. At a service level, collaborative working aims achieve improved health outcomes, reduced costs, prevention of longer-term feeding problems developing and improved patient experiences (Hoogewerf et al, 2017; Earnest and Brandt, 2014).



A collaborative multi-professional model of service planning strives to improve the infant and family neonatal experience and health outcomes during neonatal care, reducing the pressure placed on community services to provide long term support. Effective collaboration between the neonatal team members enables neonatal SLTs to identify infants at risk and enable necessary onward referrals to other services (Dow et al, 2018).

When neonatal AHPs are embedded within the neonatal team and roles are clearly defined, each professional is able to reinforce key elements of developmentally supportive care, whilst providing individualised assessment and therapeutic input in their specific disciplines. This model of transdisciplinary working avoids duplication of effort and efficient use of resources whilst enabling sharing of information, knowledge, and skills to support optimal outcomes (Foley, 1990).

Service planning for "high risk" infants should be a continuum with the involvement of key services from admission, through to neurodevelopmental follow up with seamless access to early therapeutic and educational interventions in the community (Lipner and Huron, 2017).

It is recognised currently that there are various models of neonatal speech and language therapy service delivery across the country that differ in comparison with a funded embedded neonatal service. These include in-reach from acute paediatric or adult service, community in-reach service with agreed service level agreement (SLA), and an ad-hoc service with unidentified funding or specialised commissioning funding of individual infants. The service provision model



impacts on the risks versus benefits and is important consideration when service planning (Marks et al, 2022).

There are considerations with regards to service planning, workforce and delivery. Table 1 compares some of the risks versus benefits of two service delivery models embedded versus in-reach speech and language therapy provision.

Funded SLT provision embedded in neonatal care	In-reach SLT provision
Dedicated and ring-fenced neonatal time to establish and maintain a responsive and proactive service	Ad hoc service delivery unfunded and based on goodwill taken from other clinical areas of SLT provision. Lack of responsiveness of service due to multiple service demands
Enabling timely intervention that protects development and prevents problems occurring	'Last resort' referral culture leading to a reactive service and potentially avoidable feeding difficulties, prolonged tube feeding and delayed discharge
Recognition of the holistic needs of the neonate as a complex and neuro-developmentally immature and at-risk infant with consideration for communication, feeding and brain development	Reactive referral service for dysphagia/swallowing only assessment referrals, missing SLT role and expertise in early communication and supporting feeding development
Integration into and understanding of neonatal unit practice, structure and ethos enables implementation of effective SLT care recommendations	SLT role not well understood, utilised, or valued



SLT is part of the neonatal MDT with	Opportunities for more SLTs to have
opportunities to build effective	some limited experience/exposure to
working relationships, trust, and	neonatal units however lack of
credibility with other staff	opportunity to develop expertise
Accessible training for SLT while on	Difficulty accessing neonatal training
the unit at ward rounds and	and supervision for competency
meetings	development
Able to provide training for MDT and	Limited opportunity or capacity to be
parents. Dedicated time for follow-	part of integrated training programmes
up post-discharge from the neonatal	within the unit. No
unit as part of wider AHP team	neurodevelopmental follow up by SLT

Table 1: The risks versus benefits of the two different service delivery models

(Marks et al, 2022).



### Staffing

#### National Benchmarking

A national benchmarking survey of SLT provision on neonatal units was carried out between October 2016 to October 2017 by the Royal College of Speech and Language Therapists (RCSLT) Neonatal SLT stakeholders' group. 67 out of a total 190 units (35%) responded. 16 of the 67 respondents did not have a SLT service, and it was noted that there was a higher response rate from the units that did have had a SLT service provided. It was interesting to note that 93% of the responses were from local neonatal units (LNUs) and neonatal intensive care units (NICUs) meaning a lack of data on speech and language service provision in special care units (SCUs). Data collected provided information about the level of unit, funding, staffing levels, access to supervision and the scope of SLT clinical practice. Only 54% of units that responded, had allocated time for SLTs to work on the neonatal unit. The results showed significant discrepancies in provision and funding locally and nationally (Murphy et al, 2021; Royal College of Speech and Language Therapists, 2017b). The benchmarking data and best consensus opinion were used to write the initial RCSLT neonatal staffing recommendations in 2018 (Royal College of Speech and Language Therapists, 2017b; Royal College of Speech and Language Therapists, 2018).

The summary document of neonatal services and workforce configuration in the UK from both Getting It Right First Time (GIRFT) and the Royal College of Paediatrics and Child Health (RCPCH) initial assessment data highlighted significant shortage of AHPs in neonatal services across the UK. Less than a



quarter of NICUs and LNUs, and only 6% of SCUs had a SLT available during the week and no provision at weekends (Adams, 2020).

The GIRFT neonatology supplementary workforce report showed that only 34% of neonatal units received regular SLT service provision (Adams et al, 2022). Only a third of NICUs met the RCSLT staffing standards for neonatal units (Royal College of Speech and Language Therapists, 2018) and only a quarter of LNUs. Nearly 80% of SCUs met the standards. Despite a third of NICUs, a quarter of LNU's and 80% of SCUs meeting the RCSLT 2018 standards for neonatal units, 75% of NICUS and LNU's felt that SLT service provision was insufficient. A total of 27% of units had no identified budget for speech and language therapy services. In over a third of units with no budget or service, speech and language therapy services were not considered a priority. The level of service provision was higher than the level of funding across all levels of units, particularly within SCUs suggesting a significant component of goodwill provision from paediatric acute and community services providing in-reach (Adams et al, 2022).



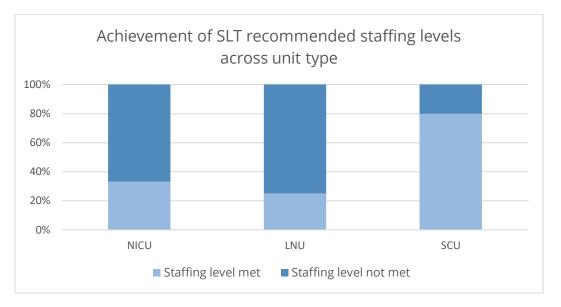


Figure 1: Achievement of SLT recommended staffing levels across unit type from 2018 staffing recommendations

#### Staffing recommendations

An update to the staffing recommendations was required to accurately reflect the SLT service needs on neonatal units according to activity and clinical need. The recommendations for SLT provision are based on the designation of the neonatal unit (surgical NICU, medical NICU, LNU, SCU) and number of cots using GIRFT workforce data, national benchmarking, national scoping and best consensus opinion. A calculation was developed based on how much whole time equivalent (WTE) of SLT provision is required per service, based on annual cot activity as opposed to declared cot numbers. This method of calculation is in line with medical and nursing staffing establishment calculations.

The following process was used to review the changes to the staffing calculations based on annual cot activity instead of declared cots in 2023:



- A calculation for total annual cot activity (IC+HD+SC)/292 (80% cot occupancy) x WTE for each type of neonatal unit based on 2018 staffing recommendation WTE. In the 2018 staffing recommendations document, surgical and medical NICUs were not differentiated. However, this review identified that service level needs were different between surgical and medical NICU units due to their clinical complexity. Therefore, the types of units are differentiated as surgical NICU, medical NICU, LNU and SCU. There was an increase in each of the unit designation WTE to reflect the need for embedded models of service provision and supporting professionals activity (SPA) time.
- 2. The proposed change to the calculation's viability was tested by members of the RCSLT Neonatal SLT Clinical Excellence Network consisting of neonatal SLTs across the UK. SLTs were asked to compare the recommended calculations of annual cot activity WTE time with the declared cots WTE time (RCSLT staffing recommendation from 2018) in their units, to see if this would provide an embedded SLT service to the unit. The overall consensus was the change in calculation reflected an appropriate amount of SLT input for inpatient provision.



#### Considerations when planning staffing levels

When planning staffing levels for SLT, the following should be taken into consideration:

- 1. Number and acuity of cots on the unit.
- Additional specialities provided and likely consequent input required from SLT e.g., cardiac, surgical, respiratory, neurology, ear, nose, and throat (ENT) may require more staffing.
- The location and funding stream of transitional care within services. Transitional care cots may come under neonatal services in some Trusts, and this would influence staffing calculations produced.
- Consideration of whether this is newly funded provision or additional to established provision and the experience of staff required to develop/meet the required service model.
- 5. Skill mix of staff to ensure adequate service development/policy development, clinical supervision, training, and succession planning.
- 6. Status within the Operational Delivery Network and provision of support to other units within that network.
- Geographical considerations such as distance of travel when working between units e.g., hub and spoke model, rural areas, reduced transport links.
- 8. The ability to provide cross cover for annual, study and sick leave.
- 9. Involvement in developmental care / family integrated care / UNICEF BFI accreditation / Bliss Baby Charter.
- 10. Involvement in staff training.



11. Involvement in audit, QI projects and research.

The provision of outpatient services e.g., hospital based neurodevelopmental follow-up, enhanced outreach and complex feeding clinics have not been included in these calculations. The RCSLT Neonatal CEN is currently developing staffing recommendations for these areas.

The RCSLT (2014) dysphagia training and competency framework and the RCSLT (2018) neonatal competency framework are due to be updated in 2023/2024 to align with the RCSLT (2023) professional development framework therefore terminology for the level of competency associated with the following staffing recommendations may alter.

#### Surgical Neonatal Intensive Care Unit (Surgical NICU)

- Band 8 Clinical Lead in Neonatology (working at a Consultant/Advanced Clinical Practitioner level practitioner on RCSLT Neonatal competencies, 2018).
- 2. Surgical NICU calculator to help determine WTE SLT provision see below).
- 3. WTE calculation needs to prioritise Band 8 time but may include Band 7 and Band 6.
- 4. Band 6 posts must be supervised by a Band 7 or above as part of the skill mix and not in isolation.
- 5. SLT post holders must have access to appropriate clinical supervision (whether internal or external).



#### Calculation:

Total annual cot activity (IC+HD+SC)/292 x 0.055 WTE of Speech and Language therapy provision required (292 represents 80% cot occupancy in a year).

An additional 0.02 per declared transitional cot would be needed for units or trusts where transitional care is included.

#### Medical Neonatal Intensive Care Unit (Medical NICU)

- 1. Band 8 Clinical Lead in Neonatology (working at Consultant level/Advanced Clinical Practitioner on RCSLT Neonatal competencies).
- 2. Medical NICU calculator to help determine WTE SLT provision (see below).
- WTE calculation needs to prioritise Band 8 time but may include Band 7 and Band 6
- 4. Band 6 posts must be supervised by a Band 7 or above.

SLT post holders must have access to appropriate clinical supervision (whether internal or external).

#### **Calculation:**

Total annual cot activity (IC+HD+SC)/292 x 0.05 WTE of SLT provision required (292 represents 80% cot occupancy in a year).

An additional 0.02 per declared transitional cot would be needed for units where transitional care is included.



#### Local Neonatal Unit (LNU)

Band 8/7 Clinical Lead Speech and Language Therapist / Highly Specialist SLT in Neonatology/Paediatric Dysphagia (who is working at enhanced practitioner level and specialist level dysphagia practitioner on the RCSLT Neonatal Competencies).

Service development with access to Band 8 support and/or conjunction with ODN SLT lead.

LNU calculator to help determine WTE SLT provision (see below).

Band 6 posts must be supervised by a Band 7 or above.

SLT post holders must have access to appropriate clinical supervision (whether internal or external).

#### Calculation:

Total annual cot activity (IC+HD+SC)/292 x 0.05 WTE of SLT provision required (292 represents 80% cot occupancy in a year).

An additional 0.02 per declared transitional cot would be needed for units or trusts where transitional care is included.

#### Special Care Unit (SCU)

Band 7 Highly Specialist Speech and Language Therapist in Neonatology/Paediatric Dysphagia (working at/towards a specialist level dysphagia Practitioner on the RCSLT Neonatal Competencies).

Service development with access to Band 8 support and/or conjunction with ODN Speech and Language therapy lead.



SCU calculator to help determine WTE SLT provision (see below).

Band 6 posts must be supervised by a Band 7 or above.

Neonatal SLT post holders must have access to appropriate clinical supervision (whether internal or external).

#### Calculation:

Total annual cot activity (IC+HD+SC)/292 x 0.04 WTE of SLT provision required (292 represents 80% cot occupancy in a year).

An additional 0.02 per declared transitional cot would be needed for units or trusts where transitional care is included.

#### Minimum staffing levels for LNU and SCU

The process of calculating recommended staffing levels also needs to take into account of the practicalities of working within this setting. Expert consensus identified that in order to be an effective member of the multidisciplinary team, a minimum service level of 0.4 WTE SLT per LNU and 0.2 WTE per SCU was required. Where there is minimal staffing requirement due to low annual cot activity, posts should not be standalone and require workforce planning to configure joint posts (such as a "hub and spoke" model) with funding across a local maternity neonatal service (LMNS) or Integrated Care Board/System (ICB/S) to ensure recruitment and sustainable clinical practice. Staffing levels of less than this heightens the risks associated with an in-reach service (see table 1).



#### Neonatal unit cot increase

The RCSLT neonatal staffing calculation (2023) of whole-time equivalents (WTEs) is based on annual cot activity for cots and level of the unit designation on the neonatal unit. When new cots are added to the unit (of any level of designation) we can make a predicted increase of cot activity for the added cots by working out the percentage difference of existing cots and the increased cot numbers. The percentage increase is added to the already calculated whole time equivalent (WTE) for staffing to give the new staffing calculation for the cost increase.

A worked example:

Current total	Current SLT WTE	Additional	Percentage increase	New WTE
cot numbers	based on annual	cots being	calculation	
	activity (32 cots)	added		
32	2.0	8	8/32 x 100 = 25%	2.0 + 25%
				= 2.5 WTE

#### Transitional care (TC) cot increase

The RCSLT neonatal staffing calculation (2023) of WTEs for TC is currently based on declared cot numbers and not annual activity. If there is an increase in TC cot numbers 0.02WTE would need to be added for every additional cot.



A worked example:

Current total TC	Current SLT WTE	Additional	New WTE
cot numbers	based on 0.02 per	cots being	
	cot	added	
6	0.1 WTE	4	6 + 4 x 0.02 = 0.2

### Neonatal speech and language therapy operational delivery network role

A minimum of 0.3 WTE per 10,000 births is the recommended staffing standard for a neonatal speech and language therapy operational delivery network role.

As part of the implementation of the Neonatal Critical Care Transformation Review (NHS England and NHS Improvement, 2019) NHS England provided three years of new funding through the NHS Long Term Plan in 2021 (National Health Service, 2019). This funding was the equivalent of 0.1 WTE per 10,000 births of a Band 8a for each of the allied health professional specialities to provide a lead network role in each Operational Delivery Network.

Each network has employed a speech and language therapist as part of a wider ODN AHP team. There is however "individualised" variability across funded sessions and contractual agreement (e.g., permanent vs secondments short term contracts).

Each network role will be defined by the needs of the operational delivery network with the same overarching aims. Whilst current network roles and funding have been created to focus on workforce growth and sustainability at a



unit level, the network roles offer opportunities for career progression for neonatal SLTs into leadership, change management, strategy and innovation.

As defined by the NCCR action plan, network roles aim to raise the profile and added value of SLTs and AHPs in neonatal care and reduce inequalities of neonatal speech and language therapy care experienced by infants and families across geographical areas or 'sectors'. Inequalities may arise due to variability in the speech and language therapy skillset or inequity of speech and language therapy time on a neonatal unit.

Consensus opinion from the ODN speech and language therapist already in these roles is the current funding level (a third of the recommended time) is not adequate to fulfil the needs of the role and job description and does not allow for any clinical time.

See appendix 1 for worked examples of all of the above calculations.



### Workforce development

#### Competencies

The Royal College of Speech and Language Therapists (2018) Neonatal CEN published a set of neonatal dysphagia competencies for speech and language therapists working within the neonatal setting. These reflect the advanced practice level and specialist nature of working with a neonatal population. The competencies outline the essential knowledge and skills needed by a SLTs working within the neonatal setting and provide a framework of how to achieve these. It also offers valuable guidance on the training of SLTs in the field of neonatal care, an integral part of succession planning within all neonatal units. They are currently undergoing revision and are expected to be published in 2023.

According to the national neonatal SLT benchmarking data in 2016-2017, the majority of current neonatal SLT posts were either Band 8 or 7 (90%). There were a minority of Band 6 posts, but all worked alongside, with supervision from, a Band 7 or above (Royal College of Speech and Language Therapists, 2017a). The level of banding reflects the specialist field but proves to be limiting when considering the small number of trained neonatal SLTs and the need for succession planning. In consultation with the neonatal SLT, there is a need for neonatal units to develop clear succession plans with teaching opportunities for Band 6 posts who should work alongside Band 7/8 clinicians. The possibility of the inclusion of Band 5 rotational posts could be considered where a service is established with an embedded SLT provision with posts funded and banded



according to the recommendations. Future work with higher education institutions for undergraduate exposure to neonates as part of pre-registration education and training is required. This is vital for ensuring the training and career progression of specialists for the future.

The GIRFT neonatology supplementary workforce report showed that existing SLT staff are highly trained within the field and more than half of all SLT staff have five or more years of experience in a NICU (Adams et al, 2022).

#### **Supervision**

Neonatal SLT It is considered an advanced practice sub - specialty area within paediatric SLT requiring supervision and support (Adams et al, 2022; British Association of Perinatal Medicine, 2022). According to the national SLT neonatal benchmarking project, 85% of SLTs who responded receive formal supervision. Band 8 neonatal SLTs currently have fewer options for clinical supervision, particularly in areas of the country with less SLT provision. However, where sought, peer supervision is a possible option. Due to the limited availability of trained neonatal SLTs to provide supervision, it may be necessary to receive this support in-house or externally. Only 3% of responses received supervision funded by neonatal services. Other SLTs self-funded or were covered by paediatric SLT acute or community budgets (Royal College of Speech and Language Therapists, 2017b). This highlights the need for clinical supervision time be written into policies, procedures, and future business cases.

There is no national-prescribed frequency or duration of supervision. The RCSLT recognises that the intensity of supervision can change as the SLT develops their



expertise, goes through transitional periods or extends the demands of their work and roles (Royal College of Speech and Language Therapists, 2017b).

See RCSLT (2017a) <u>best practice guidance and best consensus opinion on</u> <u>supervision</u> for further information.

#### **Education and Training**

Foundation modules for AHPs and SLTs working in neonatal care are available on HEE platform eLearning for Health alongside the use of supporting workbook to further consolidate learning and promote mentoring & supervision (NHS England, 2022; NHS Health Education England, 2022):

- HEE training module on e-learning for health for all Allied Healthcare Professional's <u>Introduction to Allied Health Professionals in Neonatal Care</u>
   <u>elearning for healthcare (e-lfh.org.uk)</u>
- HEE training 2 Introductory Speech and Language Therapy modules and workbook <u>HEE elfh Hub (e-lfh.org.uk)</u>

HEE with the professional bodies are now developing Enhanced Modules with the aim of publishing in early 2024.

There is an established RCSLT Neonatal SLT Clinical Excellence Network which runs annual Hot Topic events (highlighting the most up to date and relevant research) and joint study days with the RCSLT Paediatric Dysphagia Clinical Excellence Network. There are on-going working groups to develop areas of clinical practice including writing position papers, competencies, education



resources, outcome measures, research, and implementation of the NCCR & GIRFT recommendations.



### **Future Steps**

The NICE Guidelines for Developmental Follow - up of Children and Young People Born Preterm (National Institute of Health Care and Excellence, 2017) recommended enhanced developmental support and surveillance by a multidisciplinary team up to 2 years (corrected age) for children born preterm who are at high risk of developmental problems or disorders and a developmental assessment at 4 years (uncorrected age) for all children born before 28 weeks gestation (National Institute of Health Care and Excellence, 2017). The RCSLT Speech and Language therapy Clinical Excellence Network is currently developing staffing recommendations for neurodevelopmental followup services. This document will provide evidence and staffing recommendations in support of experienced neonatal Speech and Language therapists being part of the MDT offering enhanced developmental support and surveillance for highrisk infants. In addition, the RCSLT Neonatal SLT Clinical Excellence Network is currently developing staffing recommendations for enhanced outreach provision.



### References

Adams, E. (2020) A snapshot of neonatal services and workforce in the UK. Royal College of Paediatrics and Child Health. Available at: <u>https://www.rcpch.ac.uk/sites/default/files/2020-</u> <u>09/a snapshot of neonatal services and workforce in the uk 2.4.pdf</u> (Accessed: 30 June 2023)

Adams, E., Harvey, K., Sweeting, M. (2022) Neonatology – Workforce. Supplementary GIRFT Programme National Specialty Report. Getting it Right First Time: 2022. Available at: <u>https://gettingitrightfirsttime.co.uk/medical\_specialties/neonatology/</u> (Accessed: 30 June 2023)

Adams, E., Harvey, K., Sweeting, M. (2022) Neonatology – GIRFT Programme National Specialty Report. Getting it Right First Time: 2022. Available at: <u>https://gettingitrightfirsttime.co.uk/medical\_specialties/neonatology/</u> (Accessed: 30 June 2023)

Als, H. (1998) Developmental care in the newborn intensive care unit. *Current Opinion in Pediatrics*, 10 (2), 138-142. <u>https://doi.org/10.1097/00008480-</u> <u>199804000-00004</u>



Bliss. (2005) What is the baby charter? Available at: <u>www.bliss.org.uk/health-</u> <u>professionals/bliss-baby-charter/what-is-the-baby-charter/</u> ((Accessed: 30 June 2023)

British Association of Perinatal Medicine. (2022) The British Association of Perinatal Medicine Service and Quality Standards for Provision of Neonatal Care in the UK. Available at <u>https://www.bapm.org/resources/service-and-quality-</u> <u>standards-for-provision-of-neonatal-care-in-the-uk</u> (Accessed: 30 June 2023)

Burklow, K A., McGrath, A M., Kaul, A. (2002). Management and prevention of feeding problems in young children with prematurity and very low birth weight. *Infants & Young Children*. 14 (4), 19-30. <u>https://doi.org/10.1097/00001163-200204000-00004</u>

Caskey, M., Stephens, B., Tucker, R., Vohr, B. (2014). Adult talk in the NICU with preterm infants and developmental outcomes. *Pediatrics*. 133(3), e578-e584. <u>https://doi.org/10.1542/peds.2013-0104</u>

Cheong, J L., Wark, J D., Cheung, M M., Irving, L., Burnett, A C., Lee, K J., Doyle, L W. (2019) Impact of extreme prematurity or extreme low birth weight on young adult health and well-being: the Victorian Infant Collaborative Study (VICS) 1991–



1992 Longitudinal Cohort study protocol. BMJ Open. 9 (5), e030345. http://dx.doi.org/10.1136/bmjopen-2019-030345

Dow, A., Ivey, K C., Shulman, B. (2018) The Future of Pediatric Speech-Language Pathology in a More Collaborative World. *Pediatric Clinics of North America*. 65 (1), 171-177. <u>https://doi.org/10.1016/j.pcl.2017.08.029</u>

Earnest, M., and Brandt, B. (2014) Aligning practice redesign and interprofessional education to advance triple aim outcomes. *Journal of Interprofessional Care.* 28(6), pp497–500. https://doi.org/10.3109/13561820.2014.933650

Edney, S. K., and McHugh, G. (2023) Parental participation in NICU-based Occupational Therapy, Physiotherapy, and Speech and Language Therapy: A qualitative study. *Advances in neonatal care*. 23(3), 246–253. <u>https://doi.org/10.1097/ANC.00000000000830</u>

Foley, G M. (1990) Portrait of the arena evaluation: Assessment in the transdisciplinary approach. In E. D. Gibbs & D. M. Teti (Eds.) Interdisciplinary assessment of infants: A guide for early intervention professionals (pp271–286). Baltimore: Paul Brooks.



Harding, C., Bell, N., Griffiths, S., Michou, E. (2022). A descriptive evaluation of early feeding development of infants in a local neonatal unit. *Journal of Neonatal Nursing*, In Press.

Harding, C., Levin, A., Crossley, S L., Murphy, R., Van den Engel–Hoek, L. (2019) Effects of early communication intervention on speech and communication skills of preterm infants in the neonatal intensive care unit (NICU): a systematic review. *Journal of Neonatal Nursing*. 25 (4), 177-188. <u>https://doi.org/10.1016/j.jnn.2019.04.004</u>

Health and care professionals. (2014) Standards of proficiency: Speech and Language therapists. Available at: <u>https://www.hcpc-</u> <u>uk.org/standards/standards-of-proficiency/speech-and-language-therapists/</u> (Accessed: 30 June 2023)

Hoogewerf, M., Ter Horst, H J., Groen, H., Nieuwenhuis, T., Bos, A F., Van Dijk, M W G. (2017). The prevalence of feeding problems in children formerly treated in a neonatal intensive care unit. *Journal of perinatology*. 37 (5), 578-584. https://doi.org/10.1038/jp.2016.256



Jadcherla, S. (2016) Dysphagia in the high-risk infant: potential factors and mechanisms. *The American journal of clinical nutrition*, 103(2), 622S-628S. <u>https://doi.org/10.3945/ajcn.115.110106</u>

Johnson, S., Evans, T A., Draper, E S., Field, D J., Manktelow, B N., Marlow, N., Boyle, E M. (2015) Neurodevelopmental outcomes following late and moderate prematurity: a population-based cohort study. *Archives of Disease in Childhood-Fetal and Neonatal Edition.* 100 (4), F301-F308.

https://doi.org/10.1136/archdischild-2014-307684

Lee, J H., Chang, Y S., Yoo, H S., Ahn, S. Y., Seo, H. J., Choi, S H., Park, W S. (2011) Swallowing dysfunction in very low birth weight infants with oral feeding desaturation. *World Journal of Pediatrics*. 7, 337-343. <u>https://doi.org/10.1007/s12519-011-0281-9</u>

Lipner, H., Huron, R. (2017) Developmental care of the pre-term infant: from NICU through high-risk infant follow-up. *Pediatric Clinics of North America*. 65(1),135-141. <u>https://doi.org/10.1016/j.pcl.2017.08.026</u>

Loeb, D F., Imgrund, C M., Lee, J., Barlow, S M. (2020) Language, motor, and cognitive outcomes of toddlers who were born preterm. *American journal of* 



*speech-language pathology*. 29 (2), 625-637. <u>https://doi.org/10.1044/2019\_AJSLP-</u> <u>19-00049</u>

Malouf, R., Harrison, S., Burton, H A., Gale, C., Stein, A., Franck, L S., Alderdice, F. (2021). Prevalence of anxiety and post-traumatic stress (PTS) among the parents of babies admitted to neonatal units: A systematic review and metaanalysis. *EClinicalMedicine*, 43, 101233. <u>https://doi.org/10.1016/j.eclinm.2021.101233</u>

Marks J, Gordon Z, Parnell K. (2022) Introducing the new neonatal Operational Delivery Network speech and language therapists. *Infant*. 18(6), 214-16.

Marlow, N., Wolke, D., Bracewell, M A., & Samara, M. (2005) Neurologic and developmental disability at six years of age after extremely preterm birth. *New England Journal of Medicine*. 352(1), 9-19. <u>https://doi.org/10.1056/NEJMoa041367</u>

Milgrom, J., Newnham, C., Martin, P R., Anderson, P J., Doyle, L W., Hunt, R W., Gemmill, A. W. (2013). Early communication in preterm infants following intervention in the NICU. *Early human development*, 89 (9), 755-762. <u>https://doi.org/10.1016/j.earlhumdev.2013.06.001</u>



Murphy, R., Harding, C., Aloysius, A., Sweeting, M., & Crossley, S L. (2021) Developments in allied health professionals' role in UK neonatal units: a speech and language therapy perspective. *Infant*. 17 (4), 157-161. Available at: <u>https://openaccess.city.ac.uk/id/eprint/26624/1/inf\_100\_7231.pdf</u> (Accessed: 30 June 2023)

National Health Service (2019) The NHS Long Term Plan. Report number: 1.2. Available at: <u>https://www.longtermplan.nhs.uk/wp-</u> <u>content/uploads/2019/08/nhs-long-term-plan-version-1.2.pdf</u> (Accessed 30 June 2023)

National Institute of Health Care and Excellence. (2017) Developmental follow-up of children and young people born preterm (NICE guideline NG72). Available at: <u>https://www.nice.org.uk/guidance/ng72</u> (Accessed 30 June 2023)

Neonatal data Visualisations researcher tools (no date) Imperial College London. Available at: <u>https://www.imperial.ac.uk/neonatal-data-analysis-unit/neonatal-data-analysis-unit/neonatal-data-visualisations-researcher-tools/</u> (Accessed: 30 June 2023).



Neonatal Network Northern Ireland (2021) Health and Social Board Headquarters. Available at: <u>https://hscboard.hscni.net/wpd2021</u> (Accessed 30 June 2023)

NHS England (2022). Introduction to Allied Health Professionals in Neonatal Care. Available at: <u>https://www.e-lfh.org.uk/programmes/introduction-to-allied-health-</u> <u>professionals-in-neonatal-care/</u> (Accessed 30 June 2023)

NHS England and NHS Improvement. (2019) Implementing the recommendations of the neonatal critical care transformation review. Available at: <u>https://www.england.nhs.uk/wp-content/uploads/2019/12/Implementing-the-</u> <u>Recommendations-of-the-Neonatal-Critical-Care-Transformation-Review-</u> <u>FINAL.pdf</u> (Accessed 30 June 2023)

NHS Health Education England (2022). Introductory Speech and Language Therapy modules and workbook. Available at: <u>https://portal.e-</u> <u>lfh.org.uk/Catalogue/Index?HierarchyId=0\_57254&programmeId=57254</u> (Accessed 30 June 2023)

NHS National Services Scotland and National Statistics. (2019) Births in Scottish Hospitals: year ending 31 March 2019. A National Statistics Publication for Scotland. Available at: <u>https://www.isdscotland.org/Health-Topics/Maternity-and-</u>



<u>Births/Publications/2019-11-26/2019-11-26-Births-Report.pdf</u> (Accessed 30 June 2023)

Ockenden, D. (2022) Findings, conclusions and essential actions from the independent review of maternity services at the Shrewsbury and Telford Hospital NHS Trust. London, UK. Open government licence. Available at: <u>https://www.ockendenmaternityreview.org.uk/wp-</u> <u>content/uploads/2022/03/FINAL\_INDEPENDENT\_MATERNITY\_REVIEW\_OF\_MATER</u> <u>NITY\_SERVICES\_REPORT.pdf</u> (Accessed: 30 June 2023)

Office for National Statistics. (2023) Office for National Statistics: statistical bulletin: birth characteristics in England and Wales: 2021. Available at: <a href="https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarri">https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarri</a> ages/livebirths/bulletins/birthcharacteristicsinenglandandwales/2021 (Accessed 30 June 2023)

Rabie, N Z., Bird, T M., Magann, E F., Hall, R W., McKelvey, S S. (2015) ADHD and developmental speech/language disorders in late preterm, early term and term infants. *Journal of Perinatology*, 35(8), 660. <u>https://doi.org/10.1038/jp.2015.28</u>

Rautava, L., Andersson, S., Gissler, M., Hallman, M., Häkkinen, U., Korvenranta, E., Lehtonen, L. (2010). Development and behaviour of 5-year-old very low



birthweight infants. *European child & adolescent psychiatry, 19*, 669-677. https://doi.org/10.1007/s00787-010-0104-x

Royal College of Speech and Language Therapists. (2014) Dysphagia training and competency framework. Available at: <u>https://www.rcslt.org/wp-</u> <u>content/uploads/media/dysphagia-training-and-competency-framework-2014-</u> <u>pdf.pdf</u> (Accessed: 30 June 2023)

Royal College of Speech and Language Therapists. (2017a) Supervision: Information for Speech and Language Therapists. Available at: <u>https://www.rcslt.org/wp-content/uploads/media/docs/delivering-quality-</u> <u>services/supervision-summary-for-speech-and-language-therapists.pdf</u> (Accessed 30 June 2023)

Royal College of Speech & Language Therapists. (2017b) Royal College of Speech & Language Therapists National Benchmarking Survey of Provision to Neonatal Units in the UK, 2017.

Royal College of Speech and Language Therapists. (2018) Royal College of Speech and Language Therapists Staffing Recommendations for Neonatal Units. Available at: <u>https://www.rcslt.org/wp-</u>



<u>content/uploads/media/Project/RCSLT/neonatal-speech-and-language-therapy-</u> <u>staffing-level-recommendations.pdf</u> (Accessed: 30 June 2023)

Royal College of Speech and Language Therapists. (2018) Royal College of Speech and Language Therapists Neonatal Dysphagia Competency Framework (2018). Available at:

https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.rcslt.or g%2Fwp-content%2Fuploads%2Fmedia%2FProject%2FRCSLT%2Fneonataldysphagia-competency-framework-2018.docx&wdOrigin=BROWSELINK (Accessed: 30 June 2023)

Royal College of Speech and Language Therapists. (2023) Professional development framework. Available at: <u>https://www.rcslt.org/wp-</u> <u>content/uploads/2023/03/RCSLT-Professional-Development-Framework.pdf</u> (Accessed 30 June 2023)

Saigal, S., Doyle, L W. (2008) An overview of mortality and sequelae of preterm birth from infancy to adulthood. *The Lancet.* 371(9608), 261-269. <u>https://doi.org/10.1016/S0140-6736(08)60136-</u>

Sansavini, A., Guarini, A., Savini, S., Broccoli, S., Justice, L., Alessandroni, R., Faldella, G. (2011) Longitudinal trajectories of gestural and linguistic abilities in



very preterm infants in the second year of life. *Neuropsychologia*. 49 (13), 3677-3688. <u>https://doi.org/10.1016/j.neuropsychologia.2011.09.023</u>

Serenius, F., Källén, K., Blennow, M., Ewald, U., Fellman, V., Holmström, G., Lindberg, E., Lundqvist, P., Maršál, K., Norman, M., Olhager, E., Stigson, L., Stjernqvist, K., Vollmer, B., Strömberg, B., EXPRESS Group. (2013). Neurodevelopmental outcome in extremely preterm infants at 2.5 years after active perinatal care in Sweden. *Jama*. 309 (17), 1810-1820. https://doi.org/10.1001/jama.2013.3786

Stene-Larsen, K., Brandlistuen, R E., Lang, A M., Landolt, M. A., Latal, B., Vollrath, M E. (2014) Communication impairments in early term and late preterm children: a prospective cohort study following children to age 36 months. *The Journal of pediatrics*. 165 (6), 1123-1128. <u>https://doi.org/10.1016/j.jpeds.2014.08.027</u>

Stoll, B J., Hansen, N I., Bell, E F., Walsh, M C., Carlo, W A., Shankaran, S., Laptook, A R., Sánchez, P J., Van Meurs, KP., Wyckoff, M., Das, A., Hale, E C., Ball, M B., Newman, N S., Schibler, K., Poindexter, B B., Kennedy, K A., Cotton, C M., Watterberg, K L., D'Angio, C T., DeMauro, S B., Truog, W E., Devaskar, U., Higgins, R D., Eunice Kennedy Shriver National Institute of Child Health and Human Development Neonatal Research Network. (2015) Trends in care practices, morbidity, and mortality of extremely preterm neonates. *JAMA*, 314 (10), 1039-1051. <a href="https://doi.org/10.1001/jama.2015.10244">https://doi.org/10.1001/jama.2015.10244</a>



Uhm, K E., Yi, S H., Chang, H J., Cheon, H J., & Kwon, J Y. (2013). Videofluoroscopic swallowing study findings in full-term and preterm infants with Dysphagia. *Annuals of rehabilitation medicine.* 37 (2), 175-182. https://doi.org/10.5535/arm.2013.37.2.175

UNICEF. (2022) Guide to the UNICEF UK Baby Friendly Initiative Neonatal Standards. UNICEF UK. 2nd edition. Available at: <u>https://www.unicef.org.uk/babyfriendly/wp-</u> <u>content/uploads/sites/2/2022/03/UNICEF-UK-Baby-Friendly-Initiative-Guide-to-</u> <u>the-Neonatal-Standards.pdf</u> (Accessed: 30 June 2023)

Wolke, D., Samara, M., Bracewell, M., Marlow, N., EPICure Study Group. (2008) Specific language difficulties and school achievement in children born at 25 weeks of gestation or less. *The Journal of pediatrics*, 152(2), 256-26. <u>https://doi.org/10.1016/j.jpeds.2007.06.043</u>

Zambrana, I M., Vollrath, M E., Jacobsson, B., Sengpiel, V., Ystrom, E. (2021) Preterm birth and risk for language delays before school entry: A sibling-control study. *Development and psychopathology*, 33(1), 47-52. https://doi.org/10.1017/S0954579419001536



## Appendix 1: Worked examples of staffing level calculations

#### Surgical Neonatal Intensive Care Unit (Surgical NICU)

Within this surgical NICU the total cot activity is 10,000 (this information can be found on Badgernet or via SLT ODN). It has 8 transitional cots

Total annual cot activity (IC+HD+SC)/292 x 0.055

10,000/292 x 0.055 = 1.88

Transition beds = 8 x 0.02 = 0.16

1.88 + 0.16 = 2.04

Staffing required = 2 WTE SLT

#### Medical Neonatal Intensive Care Unit (Medical NICU)

Within this medical NICU the total cot activity is 8000 (this information can be found on Badgernet or via SLT ODN). It has 6 transitional cots.

Total annual cot activity (IC+HD+SC)/292 x 0.05

8000/292 x 0.05 = 1.37

Transition beds =  $6 \times 0.02 = 0.12$ 

1.37 + 0.12 = 1.49

Staffing required = 1.5 WTE SLT



#### Local Neonatal Unit (LNU)

Within this LMU the total cot activity is 6000 (this information can be found on Badgernet or via SLT ODN). It has 4 transitional cots.

Total annual cot activity (IC+HD+SC)/292 x 0.05

6000/292 x 0.05 = 1.03

Transition beds =  $4 \times 0.02 = 0.08$ 

Staffing requirements = 1.11 WTE SLT

#### Special Care Unit (SCU)

Within this SCU the total cot activity is 2000 (this information can be found on Badgernet or via SLT ODN). It has no transitional cots

Total annual cot activity (IC+HD+SC)/292 x 0.04

1000/292 x 0.04 = 0.14

Staffing requirements = 0.2 WTE SLT

NB although the staffing level calculation total 0.14, this figure is below the recommended minimal level of staffing of 0.2 therefore it is rounded up 0.2 WTE.

The Royal College of Speech and Language Therapists (RCSLT) is the professional body for speech and language therapists in the UK. As well as providing leadership and setting professional standards, the RCSLT facilitates and promotes research into the field of speech and language therapy, promotes better education and training of speech and language therapists, and provides its members and the public with information about speech and language therapy.

rcslt.org | info@rcslt.org | @RCSLT

### RCSLT