### Neonatal services and early intervention

#### Key Facts

Over 96,000 infants in the UK are born premature or ill each year, and often admitted to a neonatal unit, usually because of relatively minor problems with adaptation after birth or risk of serious illness (National Data Analysis Unit 2015, Bliss 2014). Neonatal care is divided into three types: special care (Level I), high-dependency care (Level II) and neonatal intensive care (Level III); all emphasize the importance of placing infants and families at the core of service delivery with the implementation of a family-centred approach.

Occupational therapy is centred on promoting health and wellbeing through enabling engagement and participation in everyday occupations. When working with high-risk infants*, occupational therapists promote optimal development of the child and work with families to support them to engage and participate in their role as parents/carers.

Occupational therapy services within neonatal settings are focused on supporting the development of the high-risk infant and their family by:

- Working collaboratively with parents of high-risk infants to facilitate the infant’s and parents’ occupational roles.
- Supporting the parent-infant relationship and ensuring a successful transition from hospital to home and community.
- Contributing to the provision and promotion of developmentally supportive care of high-risk infants. This approach serves to minimise the potential for harm of the neonatal unit environment on the infant’s developing brain and support their growth and development in order to promote early engagement with their parents, including shared occupations such as nurturing touch and the introduction of feeding, bathing and handling.
- Ongoing intervention and/or guidance to provide continued opportunities to support the development of infant occupations around self-care, learning and play following discharge from a neonatal unit and as they grow older.
- Educating parents on strategies to support and engage their infant with appropriate sensory and motor experiences and, as such, providing building blocks for developmental progression and parent-infant interaction.

Occupational therapists who work in the neonatal unit require advanced knowledge and skills in neonatal care in order to provide complex interventions to critically ill neonates and their families (Vergara et al 2006).

#### Key messages for commissioners and service providers

The National Institute for Health and Care Excellence Quality Standard, *Neonatal specialist care* (NICE 2010) contains a quality statement about the need for a skilled and multidisciplinary workforce, which includes access to specialist occupational therapists. The British Association of Perinatal Medicine standards (BAPM 2010) and the Bliss Baby Charter (Bliss 2015) also provide some guidance with regard to the service scope for occupational therapy services in neonatal care, whilst the practice guideline, *Occupational therapy in neonatal services and early intervention* (RCOT 2017) sets out a number of evidence-based recommendations to inform practice and service delivery.
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Occupational therapy makes a significant contribution to the neonatal team, and the services it provides to infants and families. The occupational therapist is uniquely placed to ensure that the occupations so critical to parents’ and infants’ identities are not lost in the neonatal unit, helping to keep the family at the centre of care. Some areas of practice will overlap with other professionals working in the neonatal setting and, as such, collaborative working within the multidisciplinary team is essential to ensure a comprehensive and consistent approach to service delivery throughout admission and with other agencies following discharge.

The inclusion of, or access to, an occupational therapist in multidisciplinary teams delivering enhanced developmental support and surveillance for children born pre-term is also confirmed within the NICE guideline, Developmental follow-up of children and young people born preterm (NICE 2017, p20). Unfortunately not all neonatal networks currently have access to, or funding for, occupational therapy services. The cost-benefit of enhancing neonatal services to incorporate occupational therapy provision as part of the multidisciplinary team is a decision for local networks. However, options for service developments which include occupational therapy should be explored to promote the best outcomes for infants and their families, and support their mutual participation and enjoyment of occupations that align with their family values and priorities.

Key benefits

The following key benefits of occupational therapy are synthesized from the Royal College of Occupational Therapists (RCOT 2017) evidence-based practice guideline: Occupational therapy in neonatal services and early intervention.


- The occupational therapist can recommend how to create a supportive environment that promotes developmentally supportive care and occupational participation (e.g. supporting sleep, facilitating parent-infant interaction), based on an infant’s age, status and individual needs (McAnulty et al 2010, Symington and Pinelli 2006, Symington and Pinelli 2002). Implementation of developmentally supportive care principles can enhance short term health and development outcomes (Als et al 2003, Legendre et al 2011, McAnulty et al 2010).

- Promoting and supporting parent engagement in nonpharmacological management such as skin-to-skin care (Ferber and Makhoul 2008, Johnston et al 2011), and facilitated tucking (Axelin et al 2006, Obeidat et al 2009) can support the infant’s neurobehavioural regulation, promote sleep, and reduce pain during relevant caregiving procedures (e.g. heel lance, endotracheal suctioning).

- The appropriate positioning of an infant can promote motor outcomes, self-regulatory behaviours and prevention of respiratory compromise (Gouna et al 2013, Grenier et al 2003, Liaw et al 2012, Nakano et al 2010). The occupational therapist can review the selection and use of neonatal positioning aids (Madlinger-Lewis et al 2015, Zarem et al 2013) and support the education of the neonatal team’s individualised positioning of high-risk infants in the neonatal unit (Coughlin et al 2010).
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- The occupational therapist is able to promote an appropriate environment (space, seating, privacy, sensory environment, and NICU culture) in the neonatal unit to support parent/infant participation in early feeding experiences (Flacking and Dykes 2013, Pickler et al 2013). Together with the other members of the multidisciplinary team, the occupational therapist can support parents in reading and responding to infant feeding readiness cues, thus promoting the shared occupation of feeding in the neonatal unit and following transition to home (Ross and Browne 2013, Brown and Pridham 2007, Caretto et al 2000).

- Occupational therapists support and facilitate the development of shared occupations of feeding, bathing, dressing, and early play activities to ensure sensitive and appropriate caregiving and promote the occupational performance of infants and parents (Chiarello et al 2006, Kadlec et al 2005, Winston 2015). As they work with parents, supporting their roles and relationships, they can assist in transforming parent involvement into opportunities for participation in nurturing and caring for their infants in ways that are meaningful for them (Gibbs et al 2015).

- Occupational therapists should be involved in the screening and assessment of high-risk infants for problems related to cognitive performance and social interaction, functional motor skills and sensory processing difficulties (Maitra et al 2014, Witt-Mitchell et al 2015). This is important to support the development of the infant’s occupations, such as play, social participation, education, and self-care, with referral for early intervention services as indicated.

- Provision of early developmental intervention programmes can promote improved cognitive performance through the preschool years (Orton et al 2009, Spittle et al 2015), may decrease parent anxiety (Spencer-Smith et al 2012) and provide a means of promoting occupational performance (Hwang et al 2013).

Cost benefits

Increased access to occupational therapy services may result in cost-savings across both the health and education sectors as a direct result of decreased hospital admission for infants, reduced need for ongoing medical appointments, decreased incidence of developmental/educational concerns due to earlier identification and support, and decreased incidence of mental health concerns for parents and high-risk infants through early childhood.

*High-risk’ has been used to describe the target population of this guideline, which includes all infants born preterm, high-risk infants born at term (e.g. infants with neonatal hypoxic ischaemic encephalopathy, neonatal abstinence syndrome, congenital conditions or having undergone complex surgical procedures), infants receiving palliative care, and their parents.
References


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