

Occupational therapy and neonatal care workbook

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Introduction

This workbook accompanies the Occupational Therapy Neonatal Services e-learning programme. It is intended to support the practice and development of occupational therapists who are new to their role in neonatal care who are working at Career Levels 6-7 (Clinical Practice Pillar) of the [RCOT Career Development Framework](#). The workbook may also help occupational therapists applying for roles in neonatal care to identify their learning and development needs.

How to use this resource

You can use this workbook as a tool to capture your learning, deepen your understanding and set some professional development goals.

The workbook can be used individually to guide reflective practice, and during supervision sessions. Completing the workbook and discussing learning with a mentor will enable you to identify your personal learning and development needs. A Personal Learning Action Plan template is included at the end of the document. Add goals and actions describing the steps you will take to achieve your development goals as you work through the workbook – prompts are provided throughout. Work through this workbook in your own time – you might want to return to some sections several times before moving on to the next.

This workbook can be used to demonstrate that you meet [HCPC standards of proficiency](#) during appraisals and as evidence of ongoing learning if you are selected for HCPC audit. It is important to remember however, that the overall aim of the e-learning programme and this accompanying workbook is to ensure you have the skills, confidence and knowledge to provide good quality occupational therapy for babies requiring neonatal care and their families.

When you have downloaded the workbook, please save it before starting to complete it to ensure that text is not lost.

Note:

Many of the articles referenced in this workbook can be found online. Others can be accessed via the [RCOT library](#).

Introducing the case study

The case study used in this workbook was developed by a group of allied health professionals working in neonatal care. It describes the neonatal journey of baby Rosie and her family from Rosie's NICU admission through to her discharge home.

The same case study is used in the workbooks that accompany the neonatal e-learning programmes for occupational therapists, physiotherapists, speech and language therapists and dietitians. You may wish to discuss the case study with other AHP colleagues to explore how the team works together to care for babies and families.

Rosie's presentation, family circumstances and care plan are described at each stage of her journey. The workbook includes some reflective questions, further reading and learning activities at each stage. These will help you clarify your thoughts, develop your understanding and apply learning to your own practice context.

Scenario

Rosie was born via spontaneous vaginal delivery after premature rupture of membranes at 28+4 weeks gestation. Rosie weighed 1.05kg at birth. The pregnancy had been regarded as low risk with scans indicating no cause for concern. An incomplete dose of steroids and magnesium sulphate was given just prior to delivery. Rosie was born in moderate condition requiring non-invasive ventilation and was admitted to the neonatal intensive care unit (NICU).

Activity

Check your understanding. Are there any terms in the description above that are unfamiliar to you? Carry out some research to develop your understanding. You might want to find out for example, the implications of a baby not receiving full doses of steroids and magnesium sulphate before a premature delivery, or the differences between invasive and non-invasive ventilation.

What don't I understand?	
How will I develop my understanding?	
When will I do this by?	
What did I learn?	

Applying the PEO model

Family history

Rosie's parents are Alex and Mina. Alex works full time in hospitality. Mina previously worked as an administrator and is now a stay-at-home mum. Mina had one previous miscarriage. Rosie has an older brother, Luca age 3, who is fit and well.

Rosie has been on the NICU since she was admitted and is now 3 days old (29 weeks post menstrual age- PMA). Alex and Mina have been given a NICU admission pack, have been orientated to the unit and have met their named Consultant. Mina is being supported with expressing her breast milk.

Learning objective:

Use the PEO model to examine how Rosie's early, unanticipated birth might have affected Alex and Mina's early parenting experiences.

Activity:

Read [Understanding parenting occupations in neonatal intensive care: application of the Person-Environment-Occupation Model](#).

Reflect on the following and record your responses.

Describe the personal factors you should consider when thinking about Alex and Mina's early parenting experiences. Explain how these might influence your approach as an occupational therapist.	
Consider how the NICU environment might make it difficult for Alex and Mina to carry out their parenting roles. Identify the physical and social factors that might support or limit Alex and Mina's parental role performance.	

<p>Part of the occupational therapy role is to support parents' occupational adaptation to the NICU environment. Explain how you might do this.</p>	
<p>Describe how you would introduce your role and contribution as an occupational therapist to Mina and Alex</p>	
<p>Consider the approach used to support parent engagement in your neonatal unit. Describe how an occupation-focused approach could further enable parent participation.</p>	
<p>Consider the use of occupation-centric language when working with parents/carers and your neonatal colleagues. Identify opportunities to use more occupation-focused language in your interactions and communications. Explain why this is important.</p>	

Add to your Personal Learning Action Plan.

Reflect on the above and identify learning/development goals to add to your Personal Learning Action Plan. What steps will you take to achieve these goals? How will you apply this learning to your practice and how will you know if these changes have improved the quality of the service you provide to infants and families?

Family-centred and family integrated care

Learning objective:

Understand what is meant by family-centred care and family integrated care.

Activity:

Read [Recommendations for involving the family in developmental care of the NICU baby - PubMed \(nih.gov\)](#) to develop your understanding of family-centred care.

Reflect on the following and record your responses.

<p>Describe the key principles of family centred care. Explain how these principles support the occupational performance of infants and their parents/caregivers in the short and longer term.</p>	
<p>Explain how the presence or absence of a family-centred care approach might affect a family's experience on the NICU.</p>	

Activity:

Explore these resources [About FICare - Family Integrated Care](#) to develop your understanding of the Family Integrated Care Model.

Reflect on the following and record your responses.

<p>Describe the four pillars of Family Integrated Care. Identify how an occupational therapist could support each of these pillars. Find and record examples of good practice for each of the pillars from your own unit and/or others.</p>	
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Activity:

Watch these videos: [Video Library - Family Integrated Care](#) Complete the RCOT '[5-minute reflection: Capture your learning](#)' after each one, recording key learning points and identifying how you might apply the learning to your practice.

Learning objective:

Apply learning about family centred and family integrated care to your practice.

- Find out which model of family-centred or family integrated care is operating in your unit. What training is available to help staff members understand the principles and methods of implementing the model? Discuss and agree with your mentor/line manager a plan for accessing this training.
- Explore how your unit's model is applied to support parental engagement in caregiving in your setting. Identify examples of good practice and any gaps between the aims and practice of family-centred care on your unit.
- Identify and critically review a selection of your unit policies. Do these support family-centred care? What works well and how do you know? What changes could be made to facilitate parents' roles as primary caregivers within your setting?
- Observe an interaction between parent(s) and a staff member on your unit. Record your observation and reflections, ensuring that confidentiality is maintained. Did the interaction facilitate or inhibit family centred care? What personal /environmental factors or behaviours influenced this? What have you learned from observing this interaction and how will this influence your practice? Use a tool such as the RCOT '5-minute reflection: Daily work experience' template to record your observations and learning. [Bite-sized learning - RCOT](#)
- Identify any factors that limit the implementation of family-centred care within your setting. What actions could you take to further promote family-centred care?

Add to your Personal Learning Action Plan.

Reflect on the above and identify learning/development goals to add to your Personal Learning Action Plan. What steps will you take to achieve these goals? How will you apply this learning to your practice and how will you know if these changes have improved the quality of the service you provide to infants and families?

Developmental care

Rosie's early presentation

At 29 weeks PMA Rosie now weighs 997g. She is in an incubator, positioned with a nest around her and is receiving non-invasive BiPAP. Rosie is receiving parenteral nutrition and a combination of Mina's expressed breastmilk and donor expressed milk. Her heart rate and blood pressure are stable, but a small patent ductus arteriosus (PDA) has been identified. .

Activity

Check your understanding. Are there any terms in the description above that are unfamiliar to you? Carry out some research to develop your understanding.

What don't I understand?	
How will I develop my understanding?	
When will I do this by?	
What did I learn?	

Learning objective:

Understand what is meant by developmental care & your role as an occupational therapist in promoting this approach

Activity:

Explore these resources to discover more about developmental care and its relevance to occupational therapy.

- [Infant- and family-centred developmental care – EFCNI](#)
- [Chapter 12: Developmental care: how to support your Baby's development \(d38zhff63t2a7t.cloudfront.net\)](#)

Consider your role as an occupational therapist in providing developmental care to support Rosie's neurodevelopment. Explain how your role complements developmental care strategies used by other AHPs on your unit.

Activity:

Explore these resources to discover more about sensory development in the womb:

- [Resources | Sensory Beginnings](#)

List differences between the womb environment and incubator environment on the NICU. Explain how these differences might affect Rosie's development.

Activity:

Explore these resources to consider your role in creating a nurturing environment that promotes and protects Rosie's development.

- <https://sensorybeginnings.com/blog/pain-and-stress-in-the-neonatal-unit/>
- (PDF) [Prevention and management of procedural pain in the neonate: An update, American Academy of Pediatrics, 2016 \(researchgate.net\)](#)

Rosie needs a range of interventions to ensure she survives and thrives. Describe the strategies that could be used to help Rosie cope with the pain and stress of these procedures. Explain how you could support Alex, Mina and other members of the team to implement them.

Describe the potential challenges for Rosie in coming out of the incubator for skin-to-skin contact. Explain what you could do to facilitate skin-to-skin contact between Rosie and Alex, Mina and the nursing team.

Add to your Personal Learning Action Plan.

Reflect on the above and identify learning/development goals to add to your Personal Learning Action Plan. What steps will you take to achieve these goals? How will you apply this learning to your practice and how will you know if these changes have improved the quality of the service you provide to infants and families?

Sensory development

Care in the HDU

Rosie is transferred to the HDU at 31 weeks PMA, weighing 1125g. She is out of the incubator, in a cot with a heated mattress and still using a nest. Nursing staff have noticed that Rosie becomes quickly unsettled when the room is busy, arching her back.

Alex has gone back to work full time and Mina comes to the Unit each morning while Luca is at preschool. Mina likes to have as much skin-to-skin contact time as possible while she is with Rosie. Nursing staff have noticed that Rosie has developed some flattening on each side of her head.

Rosie's current medical status is as follows:

- Respiratory – on high flow oxygen 6Lpm, FiO2 0.23, SpO2 96%
- Nutrition – receiving Mina's expressed breastmilk every three hours by NG tube plus vitamins, phosphate and sodium chloride supplements.
- Cardiovascular – the PDA is no longer in evidence
- Rosie is medically stable and well.

Activity

Check your understanding. Are there any terms in the description above that are unfamiliar to you? Carry out some research to develop your understanding. What don't I understand?

How will I develop my understanding?

When will I do this by?

What did I learn?

Learning objective:

Understand infant sensory development and the role of occupational therapy in creating a nurturing sensory environment.

Activity:

Read these blogs about different aspects of the sensory system, considering how the move from NICU to HDU might affect Rosie and her parents: [Blog](#) | [Latest News](#) | [Sensory Beginnings](#).

<p>Outline Rosie's sensory development at 31 weeks PMS. Identify what might be challenging for her in this new setting. What might Rosie's behaviour be telling us?</p>	
<p>Describe how the sensory environment could be modified to facilitate Rosie's occupational performance.</p>	
<p>Explain why Rosie's elongated head shape might be a cause for concern. How could you support Alex and Mina to promote an optimal head shape?</p>	
<p>Consider how environmental changes from the NICU to HDU might affect Alex and Mina. Explain how you could you modify the environment to enable Alex and Mina to carry out their parenting roles.</p>	

Add to your Personal Learning Action Plan.

Reflect on the above and identify learning/development goals to add to your Personal Learning Action Plan. What steps will you take to achieve these goals? How will you apply this learning to your practice and how will you know if these changes have improved the quality of the service you provide to infants and families?

Activity:

Discover more about the SENSE programme by exploring this website:
[NICU Therapy Lab at USC](#)

Write some case examples illustrating how you could use programmes such as this to help families provide positive sensory experiences that support their infant's outcomes.

Provide examples illustrating how resources and education programmes could be adapted to ensure they can be understood and accessed by parents/caregivers with a range of preferred learning styles, educational and cultural backgrounds.

Co-occupations

Learning objective:

Understand what is meant by co-occupations within the context of neonatal care and the role of occupational therapy in supporting co-occupations.

Activity:

Read the following articles:

- [The acquisition of parenting occupations in neonatal intensive care: A preliminary inquiry](#)
- [Parents' perspectives: An expanded view of occupational and co-occupational performance in the neonatal intensive care unit](#)

Considering neuroprotective principles, explain what you could do to promote and facilitate co-occupations for Rosie, Alex and Mina at this stage of their neonatal care experience.

Reflect on a parent-infant co-occupation that you have supported. Why did you choose that activity? What did you do to support parental engagement and occupational performance? What would you do differently next time? How do you know that your support made a difference to the occupational performance of the baby and caregiver?

Think about a family you are supporting and identify any unobservable parenting occupations they engage in. Describe any actions you could take to support and highlight participation in these hidden occupations for this family and others. Explain why this is important.

Add to your Personal Learning Action Plan.

Reflect on the above and identify learning/development goals to add to your Personal Learning Action Plan. What steps will you take to achieve these goals? How will you apply this learning to your practice and how will you know if these changes have improved the quality of the service you provide to infants and families?

Attunement

Care in SCBU

At 34 weeks PMA Rosie is now in SCBU, weighing 1600g. She is in a cot and a nest is being used to provide postural support and for sleep. Rosie is awake for longer periods and is showing signs of feeding readiness, for example turning her head, opening her mouth and protruding her tongue. Nursing staff have noticed that Rosie will often arch her back and kick her legs over the top of the nest.

Mina is feeling more confident in performing care tasks such as nappy changing and helping with NG tubes. She is able to spend more time on the unit as Rosie's grandparents have come to stay. Mina has been attempting to put Rosie to the breast when she shows feeding cues. Mina would like to give Rosie her first bath. Plans are being made for Rosie's discharge.

Rosie's current status is as follows:

- Respiratory – on 1l nasal cannulaed oxygen (weaning), SpO2 98%
- Nutrition – MEBM plus breast milk fortifier at 150ml/kg/day x 3 hourly via NG tube plus vitamins and iron supplements.
- Feeding – Mina has been shown how to use the breast feeding assessment chart to recognise breastfeeding opportunities. Some NG tube feeds have been reduced because Rosie has started to take some milk from the breast.
- Neurology – cranial ultrasound scan shows resolving left sided grade 3 IVH
- Ophthalmology – regular scans show no ROP.

Activity

Check your understanding. Are there any terms in the description above that are unfamiliar to you? Carry out some research to develop your understanding. What don't I understand?

How will I develop my understanding?	
When will I do this by?	
What did I learn?	

Learning objective:

Understand what is meant by attunement and the occupational therapy role in promoting this.

Activity:

Read this commentary on the interplay between parent-infant emotions, attunement and attachment: [Rupture and Repair: Emotions, Attunement, and Attachment - Attachment and Trauma Network \(attachmenttraumanetwork.org\)](https://www.attachmenttraumanetwork.org)

Identify some of the barriers to the development of attunement between Rosie and her parents during Rosie's admission to the neonatal unit.	
Identify potential relational-based tools you might consider using with Rosie and her parents moving forward. Discuss how these could be used to facilitate engagement and attunement.	
Rosie is showing some early atypical neurological signs such as arching her back and extending her legs. Discuss with your AHP colleagues how this might affect Rosie's neurodevelopment, specifically in relation to establishing responsive breastfeeding and ability to communicate.	
Describe how you might assist Rosie's parents to give her the first bath. What would you need to consider in relation to Rosie's neurodevelopment e.g. autonomic stability, motoric development, state organization, self-regulation and the environment?	
Discuss within your AHP team what's required from each of the specialties to support plans for Rosie's discharge home.	

Add to your Personal Learning Action Plan.

Reflect on the above and identify learning/development goals to add to your Personal Learning Action Plan. What steps will you take to achieve these goals? How will you apply this learning to your practice and how will you know if these changes have improved the quality of the service you provide to infants and families?

Preparation for discharge

At 36+2 weeks Rosie is discharged home weighing 1850g. She is fully breast-feeding every 2-3 hours with no oxygen support. The family are being supported by the outreach team, prior to handing over to the health visitor. Mina continues to express her breast milk to optimise supply.

Mina is relieved to be home and to spend time with Rosie and Luca together. Alex has been practicing some of the developmental activities with Rosie that he learnt on the unit. They are starting to think about Rosie's ongoing development and potential medical needs, so would like to talk to someone about this.

Learning objective:

Understand the occupational therapy role in facilitating successful discharge

Activity

Explore the developmental leaflets on this website: [EI SMART – Early intervention for infants and young children](#).

Discuss with other members of the AHP team the follow-up support you feel Rosie needs in the short and longer term. Identify potential onward referrals that should be considered. How would you access these services locally?

Given Rosie's medical history and her current presentation, discuss with your AHP colleagues the difficulties Rosie may present with as she grows. Consider all aspects of her development including motor, feeding/weaning, communication, state regulation, occupations and so on.

Outline the infant-parent co-occupational roles you anticipate Rosie will take part in, once she is at home. Describe how you could contribute to support Rosie's success in these roles. How does your role sit with other members of the MDT?

Add to your Personal Learning Action Plan.

Reflect on the above and identify learning/development goals to add to your Personal Learning Action Plan. What steps will you take to achieve these goals? How will you apply this learning to your practice and how will you know if these changes have improved the quality of the service you provide to infants and families?

Next steps

This workbook was developed as a tool to support the clinical practice and development of occupational therapists new to their role in neonatal care. Completing the e-learning programme, workbook and your personal action plan will help develop your skills, confidence and knowledge to provide good quality occupational therapy for babies and their families.

To identify your next steps for professional development we recommend that you map yourself against the [RCOT Career Development Framework](#) Pillars of Practice. The four Pillars of Practice (professional practice, facilitation of learning, leadership, evidence, research and development) offer a structured framework to plan how to progress your career, learning and development.

Ongoing support and development opportunities

You may be interested in joining the Royal College of Occupational Therapists Specialist Section – Children, Young People and Families. This includes a Clinical Forum for occupational therapists with an interest in neonatal care. You can find out more and become a member here: [RCOT SS: Children, Young People and Families Clinical Forums](#)

If completing this workbook and e-learning programme raises questions about support for your professional development, health and well-being please speak to your line manager in the first instance. RCOT members can also contact the Professional Practice Enquiry Service for advice: professional.enquiries@rcot.co.uk

Resources and further reading

- [Occupational therapy in neonatal services and early intervention: Practice Guideline](#)
- [Occupational therapy staffing on neonatal units](#)
- [Professional standards for occupational therapy practice, conduct and ethics - RCOT](#)
- [The Person-Environment-Occupation Model: A Transactive Approach to Occupational Performance - Mary Law, Barbara Cooper, Susan Strong, Debra Stewart, Patricia Rigby, Lori Letts, 1996 \(sagepub.com\)](#)
- [Becoming the parent of a preterm infant: A meta-ethnographic synthesis - Deanna Gibbs, Kobie Boshoff, Mandy Stanley, 2015 \(sagepub.com\)](#)
- [Facilitators and barriers to neonatal intensive care unit follow-up program attendance: A critically appraised topic: Journal of Occupational Therapy, Schools, & Early Intervention: Vol 11, No 2 \(tandfonline.com\)](#)

Feedback link:

Please provide any feedback about this workbook here: [CPD@RCOT Resource - Feedback form \(Page 1 of 2\) \(office.com\)](#)

Personal action plan

What is your learning and development goal?	
How will you achieve your goal?	
What support or resources will you need to achieve your goal?	
How will you know when you have reached your learning and development goal?	
Target date to achieve your learning and development goal	
How will you apply your learning to your practice?	
How will you know if your learning has improved the quality of the service you provide? know if your learning has improved the quality of the service you provide?	

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