

A Framework of Competences for the Level 3 Training Special Study Module in Paediatric Oncology

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Section 1 Introduction

Who is this book for?

It is for doctors at Level 3 in their General Paediatric training who wish to work towards an expertise in Paediatric Oncology during Level 3 training. It is also there to guide tutors and educational supervisors.

Why do I need it?

This book gives you and your tutors' guidance about the competences you need to cover **in addition** to the Framework of Competences for Level 3 Training in General Paediatrics. It gives you a clear picture of what you have to achieve by the end of this module of training in order to have expertise in this area.

How do I use the book?

You can sit down with the book on your own and use it to help you identify areas of practice that you need to work on and those areas in which you feel fairly confident. You can talk to your tutor about the balance of your experiences and look for ways to ensure you cover all areas you need to. It should be used by Schools and Educational Supervisors to ensure that a programme of training is developed in Level 3 which will allow the trainees to achieve these competences. In determining this programme, liaison with the relevant CSAC is important. In the appendix, there is guidance for training in the module which the programme must adhere to.

Progression

Following completion of Level 3 training and the module, the CCT holder should be competent to take up a post as a General Paediatrician or a General Paediatrician with a Special Expertise in this area. It is expected that there will be a requirement in paediatric services for consultants with special expertise provided by the module. Such posts will usually form part of a Regional Specialty Network including working with accredited sub-specialties in this area.

A note about the format of this document

This framework sets out the additional competences which should be achieved by the end of Level 3 training. The trainee also has to achieve all the competences in the Level 3 General Paediatric Framework.

The depth in which some of these skills are needed will vary according to the level of shared care delivered and those working in a Level 3 centre will in addition require many of the skills required to work in a Principal Treatment Centre.

Assessment

The RCPCH Assessment Strategy (PMETB approved) for Level 3 Training will be used. Trainees working with their educational supervisors should ensure that the Assessment Strategy is tailored to cover the area of Special Expertise as well as General Paediatrics and that learning and assessment are well documented within the e-portfolio.

Pilot

This special expertise module is being introduced as a pilot. The College will be seeking feedback from the Trainees, Educational Supervisors, Schools of Paediatrics, CSACs and potentially in future from Employ NHS Trusts and Regional Networks. This will look at;

1. Need for training in this module
2. Addition or omission of competences unique to the module
3. Feasibility of delivering the module within Level 3 General Paediatric training
4. Usefulness of the standards for training for the module.
5. Outcome of trainees undertaking the module
6. Need for revision of the competences
7. Need for further assessment

Section 2 Specific Competences in Paediatric Oncology

By the end of Level 3 module in Paediatric Oncology, trainees will:

- Know about the incidence and mortality rates for common childhood cancers
- Know about national regional and local cancer registration policies
- know about the role of clinical trials in paediatric oncology (PTC)
- understand the features and clinical presentations of childhood malignancy (PTC/POSCU)
- know about the principles of cancer treatment with chemotherapy and understand the rationale of combination chemotherapy regimens (PTC)
- know about the principles of high dose therapy and bone marrow transplantation (PTC)
- understand the acute toxicity of cancer treatment (individual drugs and radiotherapy) (PTC)
- have a knowledge and understanding of the late effects of therapy including endocrine consequences, major organ toxicities and their causative agents (PTC)
- have a knowledge of the other agencies able to support families of children with cancer
- be able to recognise a child or young person with an oncology diagnosis and refer appropriately
- be able to recognise and initiate a management plan for the treatment of oncological emergencies such as septic shock, tumour lysis, SVC obstruction, spinal cord compression, raised ICP (PTC/POSCU)
- have developed the technical skills to carry out a bone marrow aspiration and trephine biopsy
- be able to prescribe and administer safely intrathecal drugs according to local and national policies (level 3+)
- be able to prescribe, handle and administer chemotherapy safely using an electronic prescribing package where available (PTC/POSCU)
- be able to recognise and manage acute drug reactions to chemotherapy and manage the extravasation of chemotherapy agents appropriately (PTC/POSCU)
- be able to manage febrile neutropenia including management after failure of first line antibiotic therapy in discussion with PTC

- be able to investigate and manage fungal and viral infections in the immuno-compromised child in conjunction with the PTC (Primary Treatment Centre)
- be able to organise a long-term follow up programme and develop strategies for surveillance of survivors using national guidelines
- be able to formulate a symptom control plan for pain management recognising the different patterns of pain and their different therapeutic interventions including non pharmaceutical approaches
- be able to address other symptom control such as breathlessness, bowel obstruction and access appropriate advice (PTC/POSCU)
- demonstrate an understanding of good clinical practice in line with the European Directive for all aspects of the conduct of clinical trials and have undergone recognise GCP training
- understand the importance of accurate return of toxicity data to PTC
- understand the difficulties in discussing consent issues e.g. consent for a randomized clinical treatment trial with a family who have recently been given a potentially life-threatening diagnosis (PTC)
- understand the issues around developing and sustaining effective and safe shared care of paediatric oncology patients within a regional service
- Appreciate the importance of regular and effective communication between PTC and POSCU (Paediatric Oncology Shared Care Unit)
- Have an understanding of the national cancer peer review process
- Have experience of managing central venous access devices
- Be able to prescribe and administer chemotherapy safely as agreed with PTC
- Be able to recognise and manage the side effects of treatment

Section 3 Specific Clinical Competences in Paediatric Oncology

Educational development

- Understand the impact of diagnosis and treatment, particularly radiotherapy on a child's ability to learn
- Be aware of the need for specialized assessments (such as neuropsychology) that may influence the process of formal statutory assessment

Growth and Nutrition

- Understand the contribution to the tolerance of chemotherapy
- Demonstrate a proactive multi-disciplinary approach to nutritional assessment in children receiving treatment for cancer

Section 4 Condition-specific Competences in Paediatric Oncology

Leukaemias

- be aware of the various clinical presentations of children with leukaemia
- know about the appropriate diagnostic investigations in children with leukaemia
- understand the prognostic factors in childhood leukaemia and their implications on risk stratification
- know about the current treatment trial protocols for Acute lymphoblastic leukaemia (ALL) and acute myeloid lymphoma (AML)
- have an historical perspective on the evolution of current trials for the treatment of leukaemias
- know about monitoring the response to treatment including minimal residual disease (MRD) with a recognition of its limitations

Lymphomas

Hodgkin's Lymphoma

- know the epidemiologic, clinical and laboratory features of Hodgkin's Lymphoma in children
- recognise impaired cellular immunity in a patient with Hodgkin Lymphoma
- know the complications and late effects of chemotherapy and radiotherapy in the treatment of Hodgkin Lymphoma including cardiac and lung function, increased risk of breast cancer in those receiving mediastinal radiation at a young age and risks of subfertility

Non-Hodgkin's Lymphoma (NHL)

- know the association of Epstein-Barr virus and human immunodeficiency virus with Non-Hodgkin's Lymphoma
- recognise the clinical presentation of NHL
- be able to manage the acute presentations of NHL including SVC obstruction, airway compression, spinal cord compression and tumour lysis

Haemopoietic Stem Cell Transplantation (HSCT)

- understand the role of high dose therapy with autologous stem cell rescue in the management of malignant disorders in children and young adults
- be aware of the complications of HSCT including graft-vs-host disease, veno-occlusive disease and graft failure
- be aware of the role of total body irradiation (TBI) in HSCT, including its short and long term side effects
- understand the principles of immunosuppression and the types of immunosuppression agents used in HSCT
- understand the consequences of myelosuppression and immunosuppression post-HSCT, including the need for infection prophylaxis
- be aware of the late effects of HSCT in children, including growth, fertility and second malignancy

Transfusion

- know the clinical indications for blood product support including the choice of appropriate blood products and the indications for irradiated blood products
- know about the hazards of blood transfusion including transfusion-transmitted infection and transfusion reactions

Renal Tumours

- recognise the clinical presentation of a renal tumour and know the differential diagnosis of a renal mass
- be able to manage hypertension secondary to a renal mass in conjunction with PTC
- be aware of congenital anomalies associated with Wilm's tumour and current strategies for screening
- understand the principles of treatment for all stages of tumour according to the current (CCLG/SIOP) clinical trial
- know the prognosis for Wilm's tumour
- understand the complications of Wilm's tumour and its treatment and late effects of treatment

Neuroblastoma

- recognise clinical presentation of neuroblastoma
- be able to initiate the management of the clinical problems associated with neuroblastoma, including hypertension, spinal cord compression, Horner's Syndrome, abdominal mass

Retinoblastoma

- recognise the clinical presentation of retinoblastoma and the clinical manifestations of bilateral retinoblastoma
- have knowledge of referral route for retinoblastoma

Bone Tumours

- know about the clinical presentations of osteosarcoma and Ewing's tumours and potential metastatic sites
- be aware of the plain x-ray appearances of a suspected bone tumor
- have knowledge of referral of local referral route for children and young people with bone tumours

Soft tissues sarcomas

- be aware of the clinical presentation of rhabdomyosarcoma affecting the head and neck (parameningeal versus non-parameningeal nasopharyngeal, orbital, pelvic and extremities)

Central Nervous System Tumours

- be aware of the different clinical presentations of CNS tumours according to age of child, anatomical positional and presence of raised intracranial pressure
- be aware of late effects of brain tumours arising from; tumour, surgery, radiotherapy and chemotherapy related to patient's age and stage of development
- be aware of potential neurological, endocrinological, cognitive, behavioural and social sequelae of CNS tumours and their treatment
- be aware of secondary malignancies associated with treatment of CNS tumours (also management of a brain tumour as a second malignancy)

Appendix 1

Paediatric Guidance Checklist

These standards were derived to assist in the assessment of the paediatric training standards of in your deanery

Specialty: Special Study Module in Paediatric Oncology

The Programme (which may consist of several posts) should provide:

1. Supervision	✓/x
1.1 An educational supervisor that is a Consultant paediatric oncologist trained in assessment and appraisal	
1.2 An educational supervisor who provides on 1 PA per 4 trainees per week of educational supervision	
1.3 Evidence that the assessment strategy is being delivered	
1.4 Trainers receive appropriate training on the delivery of the assessment strategy	
1.5 appropriate supervision to ensure patient safety	
2. Other Personnel	
2.1 A minimum of 2 consultants in Oncology to support and supervise in a level 3 unit and/or a consultant with expertise, working as part of a Shared Care Unit	
2.2 More than one ST4-8 in the children's department	
2.3	
3. Service requirements and facilities	
3.1 Specialty specific requirements of subspecialty department: paediatric haematology(malignant and non-malignant), clinical oncology, paediatric neuro-oncology, adolescent oncology, palliative care, BMT, late effects	
3.2 Specialty specific requirements of related clinical departments that are involved in delivery of the curriculum: paediatric surgery, paediatric neurosurgery, PICU, paediatric radiotherapy, pharmacy	
3.3 Specialty specific requirements of service departments relevant to delivery of curriculum (eg investigation departments, PAMs departments, surgery or anaesthesia): There must be clear access routes to investigation facilities, including haematology, biochemistry, immunology, microbiology and virology, cytogenetics, molecular genetics, radiology, nuclear medicine, cardiology for ECG and Echocardiography , audiometry	
3.4 Specialty specific requirements of clinical networks: Evidence of working partnership with "or cancer networks and the NCRN	

4. Educational activities and training	
4.1 Specialty specific clinical exposure required to provide sufficient learning opportunities (NB if giving workload data ensure it is explicit whether this is number per annum or number trainee would be expected to be exposed to over entire programme):	
4.2 Specialty specific requirements for structured training opportunities to include courses: Attendance at least 70% of educational opportunities Access to relevant nationally organised specialty training opportunities Desirable to attend the Advanced Paediatric Oncology Course (or equivalent)	
4.3 Specialty specific requirements for other experiential learning (excluding clinics and ward rounds): Exposure to radiotherapy planning; intrathecal therapy training and experience; bone marrow aspiration training; chemotherapy prescribing; breaking bad news	
5. Working patterns	
5.1 Safe cover arrangements for paediatric department out of hours in line with RCPCH guidance	
5.2 Evidence of compliance with existing employment rules to working time	
5.3 Working intensity and pattern that is appropriate for learning	
5.4 Access to sub-specialty training which allows achievement of the competences throughout the programme	
5.5 the post forms part of a complete paediatric training programme which provides a minimum of 5 years of acute clinical experience including out of hours duties.	
6. Specific Post requirements	
6.1 12 months in a principal treatment centre and 6 months in a Paediatric Oncology Shared Care Unit	
7. Enabled to learn new skills, necessary skills and curriculum coverage (speciality specific) <i>This section can be used to highlight marker conditions to which trainee should be exposed or the numbers of cases/procedures that trainee will be expected to see/do. Ensure that it is clear whether any numbers are for whole training programme or per annum</i>	
7.1 Specialty specific marker conditions trainee should be exposed to: opportunities to assess and manage children of all ages presenting with Leukaemias	
7.2 Specialty specific skills/procedures trainee needs to complete: administer chemotherapy safely by all routes	
8. Access to clinics and ward rounds and long term care of patients	
8.1 Specialty specific numbers and types of clinics expected to attend:	
8.2 Specialty specific combined clinics expected to attend:	
8.3 Specialty specific ward rounds consultant led and independent per week:	

9. Meetings	
9.1 Specialty specific number and types of MDT meetings expected to be exposed to: Regular attendance at MDT meetings, documented attendance, evidence of meeting preparation and administration	
10. Clinical audit	
11. Teaching appraising and assessing	
11.1 Opportunities for formal and informal teaching	
11.2 For senior trainees: opportunities for involvement of assessment of others	
11.3 For senior trainees :opportunity to be involved in the appraisal of others	
12. Research	
12.1 Provide opportunities to be involved in clinical research	
13. Management	
13.1 Opportunities to be involved in management e.g. participation in management meetings and projects	
13.2 Opportunities to be involved in organising departmental teaching programmes, journal clubs and local meetings	

X-ref	Comments

Appendix 2

All paediatricians working in a Paediatric Oncology Shared-Care Unit (POSCU) should:

- Be able to recognise a child or young person with a potential oncology diagnosis and refer appropriately
- Understand the two week wait process
- Be able to prescribe and administer chemotherapy safely (Level appropriate)
- Recognise and be able to manage the short and long term side effects of treatment
- Be able to manage neutropenic sepsis and other oncological emergencies
- Have experience of managing central venous access devices
- Be competent in the use of blood and blood products
- Understand the importance of nutritional support in oncology patients
- Understand the importance of the MDT and good communication between the PTC and the POSCU
- Be competent in communicating with children, young people and families
- Have training and experience in breaking bad news.
- Have an understanding of other agencies able to support families of children with cancer eg: Rainbow Trust, Clic Sargent
- Have some experience of symptom management and palliative care
- Appreciate the need for toxicity data to be fed back to PTC (and therefore some knowledge of treatment trials)
- Have completed recognised GCP (Good Clinical Practice) training
- Be an associate member of CCLG (Children's Cancer and Leukaemia Group)
- Have an understanding of the National Cancer Peer Review Programme

Shared Care Levels for Paediatric Oncology Shared Care Units (POSCUs)

POSCU level 1 Services

- In patient supportive care: care of children with febrile neutropenia
- Out-patient supportive care
- Out-patient follow up
- Out-patient oral chemotherapy and iv bolus chemotherapy

Exclusions – Day care infusional chemotherapy, inpatient chemotherapy and all exclusions listed in Level 3 (see Children’s Cancer Measures 2009)

POSCU level 2 services

- As for level1 and in addition, day care infusional chemotherapy

Exclusions. Inpatient chemotherapy and all exclusions listed in level 3.

POSCU Level 3 services

- As for level 2 and in addition, in-patient 24 hour chemotherapy
- An intrathecal chemotherapy service in a POSCU is an option for level 3 only if certain specific criteria are met (see Children’s Cancer Measures 2009)