



Appendix 5

The Curriculum and
Assessment
for
Sub-specialty training
in
Paediatric Emergency Medicine

CEM & RCPCH
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Glossary of terms

General terms

APLS Advanced Paediatric Life Support

ED Emergency Department
EM Emergency Medicine
EP Emergency Physician

EPLS European Paediatric Life Support

M Appears in yellow box and signifies mandatory

NLS Neonatal Life Support

PEM Paediatric Emergency Medicine

PEMP Paediatric Emergency Medicine Physician

Assessment Method Glossary

AA Audit Assessment

ACAT (EM) Acute Care Assessment Tool (Emergency Medicine)

C Case Based Discussion (CBD)

D Direct observation of procedural skills (DOPS)

L Life support course

Mini-clinical evaluation exercise (Mini-CEX)

M Multi-source feedback (MSF)

PS Patient Survey
S Simulation

TO Teaching Observation

W Web-based, ENLIGHTENme Hub and Knowledge Bank

GMP domain headings

GMP 1 Knowledge, skills and performance

GMP 2 Safety and quality

GMP 3 Communication, partnership and teamwork

GMP 4 Maintaining trust

1. Introduction

Emergency Medicine trainees should read this document in conjunction with the parent Emergency Medicine curriculum where the common competences, learning and teaching methods, and the assessment system are described. Emergency Medicine trainees will have acquired many competences during the third year of core training and in higher specialty training. During sub-specialty training, these competences should be revisited under the supervision of a Paediatric Emergency Medicine lead trainer, but with the trainee seeing more complex and greyer cases, as well as covering new areas.

Paediatric Emergency Medicine (PEM) is a sub-specialty of both Paediatrics and Emergency Medicine and is concerned with providing highly specialised acute health care to children of all ages. This document is intended for doctors who are close to completing Higher Specialty Training in Paediatrics or Emergency Medicine and wish to sub-specialise in PEM. The framework defines the competences that should be achieved by the end of sub-specialty training, in order to provide high quality care to sick and injured children in a modern NHS.

1.1 What is a Paediatric Emergency Medicine Physician (PEMP)?

- The PEMP is able to look after patients with a wide range of pathologies, from the life threatening to the self-limiting, within all paediatric age groups in the Emergency Department setting.
- Essential to the work of the PEMP is the principle that all decisions should be made in the best interests of the child or young person in their care.
- The PEMP is able to safely and effectively identify those children needing admission and those that can be discharged.
- The PEMP is able to conduct a primary assessment and take appropriate steps to stabilise and treat critically ill and injured children.
- The PEMP is able to work in the difficult and challenging environment of the Emergency Department and is able to re-prioritise and respond to new and urgent situations.
- The PEMP is an expert at directing and co-ordinating medical, surgical and trauma resuscitations involving children.
- The PEMP is skilled at practical procedures especially those needed for resuscitation.
- The PEMP is able to interact with, co-ordinate, educate and supervise all members of the Emergency Department team.
- The PEMP is able to understand the unique interaction of the Emergency Department with every part of the hospital and its significant role in interacting with the external community
- The PEMP is able to act as co-ordinator in the Emergency Department during a major incident.

2. Content of learning

2.1 General Competences for the Paediatric Emergency Medicine Physician

General compe	General competences				
	Sub-specialty PEM training	Assessment Methods	GMP		
2.1.1 Knowledge and understanding	 Know and understand the scientific base relevant to clinical practice in Paediatric Emergency Medicine Have the knowledge of the clinical features, diagnostic criteria, epidemiology, natural history, patho-physiology, complications and consequences of acute illness and injury in children Understand the specific health issues, immunization schedules, screening programmes, diseases and disorders related to the various stages of growth and development in the paediatric patient Understand the other factors that effect prioritisation of patients other than clinical priority Know that children are vulnerable and therefore illness or injury may be inflicted Know about the agencies both statutory and voluntary that can provide support to children and their families 	E, Mi, ACAT	1, 2, 3		
	Know and respect the legal framework and ethical issues relating to children in the Emergency Department setting including consent and confidentiality				
2.1.2 Skills	 Be able to recognise case histories which suggest serious, life threatening or unusual pathology in children Be able to assess the mental state of children and young people 	Mi, C, ACAT, DOPS	1		
	 Be able to expertly perform practical procedures related to the care of children Be able to show effective time management and prioritisation within the Emergency Department 				

	<u> </u>		
2.1.3 Communicati on skills	 Be able to conduct a consultation in such a way that a child, a young person and their families are able to talk about difficult or emotional issues Be able to show concern for age and 	Mi, C, ACAT	3, 4
	Be able to snow concern for age and development, gender, disability, psycho-social, cultural and economic implications of a patient's unique situation		
	Know how to write reports about alleged child abuse for Social Services or the Courts and a statement for police		
	Be able to reduce or eliminate tension in a difficult situation		
	Be able to tackle sensitivity over the issue of organ donation and end of life decisions in children		
	Be aware of the legal framework of the NHS on the care of the deceased and requirements for death certification and compulsory inquests		
2.1.4 Leadership and	Be able to take on a leadership role in the multidisciplinary team including in the setting of resuscitation and major incident	E, Mi, C, ACAT	2, 3, 4
management	Be able to understand the importance of cultural diversity and the difficulties that may arise where religious and cultural beliefs that parents may hold about the emergency treatment of their children differ from medical practice and know how to find legal and ethical guidelines to support their work		
	Understand the legal ramifications of the Children Act, the Human Rights Act and Information Act as they pertain to children and young people in the Emergency Department		
	Understand the National Service Framework, the role of the Royal College of Paediatrics and Child Health and the College of Emergency Medicine and the Postgraduate Medical Education Training Board		
	Be able to demonstrate the skills of efficient assessment, management and decision making in an environment of large patient volumes and rapidly changing priorities		
	Understand the principles of audit, risk management, incident reporting and complaint management pertinent to the ED		

2.2 Clinical competences for the Paediatric Emergency Medicine Physician

2.2.1 Acute life support and resuscitation M				
By the end of this	s training period the trainee will:	Assessmen † Methods	GM P	
Knowledge	 Understand the life-threatening nature of these problems and know when to call for the help of more experienced colleagues Understand the prognostic factors for outcome of cardiac resuscitation Understand the indications and procedures for transport to a definitive facility following stabilization Understand the, pharmacology, indications, contraindications, dose calculation and routes of administration of drugs used in resuscitation and in the stabilization of children in cardiac arrest or failure Understand the appropriate management of Sudden Death in Infancy and the local management guidelines for supporting the 	E, Mi. ACAT, C, S	1	
Skills	 Be able to recognise the patient at risk for an obstructed airway Be able to recognise the patient in respiratory failure or arrest Be able to formulate a differential diagnosis by age of a patient with acute-life threatening respiratory difficulty and prioritise management Be able to provide immediate management of a patient with acute life-threatening respiratory difficulty Be able to lead a resuscitation team in line with APLS/EPLS/NLS guidelines Be able to recognise the child in shock and formulate a differential diagnosis Be able to obtain venous and arterial access including IO & central lines Be able to ensure appropriate non-invasive and invasive monitoring including arterial and end tidal-Co2 Obtain, interpret and react appropriately to 	Mi. C, D, L	1, 3	
	Obtain, interpret and react appropriately to blood gas results and blood pressure			

measurements across a range of emergency presentations in all paediatric age groups	
Have developed a sensitivity and understanding regarding the management of chronic end- stage conditions	

Respiratory f	Respiratory failure or arrest M				
By the end o	of this training period the trainee will:	Assessment methods	GMP		
Knowledge	 Understand the appropriate use of pharmacological agents in induction and post-intubation and be aware of complications and side- effects Know the indications and contraindications for a surgical airway Understand the pharmacological and mechanical interventions post-stabilization of the airway and prior to arranging transport to the definitive unit Understand the prognostic features of the outcome of respiratory arrest 	E, C, Mi, ACAT	1		
Skills	 Be able to assemble a team prior to the patient's arrival Be able to differentiate upper and lower airway obstruction Be able to follow age-appropriate algorithms for obstructed airway Be able to manage the difficult airway including being able to perform basic airway opening manoeuvres, effective bag valve mask ventilation, laryngeal mask insertion and intubation Be able to manage a failed intubation Be able to initiate and maintain mechanical ventilation with an understanding of possible complications Be able to discuss end of life decisions in a sympathetic and caring manner with patients and their families 	E, Mi, C, D,	1, 3		

Cardiac failure or arrest M				
By the end o	f this training period the trainee will:	Assessment methods	GMP	
Knowledge	 Understand the causes of heart failure Understand the outcomes of cardiac arrest in children 	E, C, Mi, ACAT	1	
Skills	Be able to distinguish the type of shock and to differentiate compensated from uncompensated shock	Mi, C, D	1	
	Be able to perform effective cardiac compressions			
	Be able to recognise when to ask for urgent surgical opinion			
	Be able to recognise rhythm disturbances and initiate appropriate treatment			
	Be able to make appropriate use of fluids including blood products			
	Be able to defibrillate, perform cardioversion and provide external			
	Understand the indications for pacing and be able to initiate external			
	Be able to use vasoactive drugs appropriately including awareness of complications			
	Be able to take decisions in circumstances which present ethical issues and know when to cease resuscitation			
	Be able to discuss organ donation in a sensitive manner			

2.2.2 Cardiol	2.2.2 Cardiology M				
By the end o	f this training period the trainee will:	Assessment Methods	GMP		
Knowledge	 Have the knowledge and skills to be able to assess and manage babies and children presenting to the Emergency Department (ED) with cardiological disorders Understand the life-threatening nature of some of these conditions and when to ask for the help of a cardiologist or others with more specialised expertise Understand and recognise the possible cardiac complications of other system disorders Understand the pharmacology, indications, side-effects and complications of cardiac drugs used commonly in the emergency department Understand when referral for specialist paediatric cardiology assessment for further management is appropriate 	E, C, Mi, ACAT	1		
Skills	 Be able to formulate a differential diagnosis Be able to select and interpret appropriate cardiological investigations including ECGs at all ages and know the indications for echocardiography 	Mi, C, D	1		
Heart failure					
By the end o	f this training period the trainee will:	Assessment methods	GMP		
Knowledge	 Understand the causes and precipitating factors of heart failure Understand the appropriate drugs to use in treatment and their indications, contraindications and side-effects 	E, C, Mi, ACAT	1		
Skills	 Be able to initiate appropriate investigations and treatment Be able to identify patients who need to be referred and when to call for help urgently Be able to initiate appropriate invasive and non-invasive monitoring of patients Be able to recognise the need for, and be able to initiate mechanical ventilation 	Mi, C	1		

Arrhythmia M	Λ		
By the end o	f this training period the trainee will:	Assessment methods	GMP
Knowledge	 Understand the causes of common arrhythmias Understand the indications, contraindications and side-effects of anti-dysrhythmics Understand the indications for pacing 	E, C, Mi, ACAT	1
Skills	 Be able to differentiate between haemodynamically stable versus unstable rhythms Be able to institute appropriate emergency treatment including valsalva manoeuvre, cardioversion, defibrillation and external pacing 	Mi, C, D	1
Syncope M			
By the end o	f this training period the trainee will:	Assessment methods	GMP
Knowledge	Understand the common causes of syncopeUnderstand the common seizure types in children	E, C, Mi, ACAT	1
Skills	 Be able to formulate a differential diagnosis Be able to recognise pseudoseizures Be able to recognise those patients who need immediate treatment, initiate that treatment and commence appropriate investigations and arrange admission and those who can be managed as outpatients 	Mi, C,	1
Endocarditis	myocarditis, pericarditis M		
By the end o	f this training period the trainee will:	Assessment methods	GMP
Knowledge	Understand the causes of endocarditis, myocarditis and pericarditis	E, C, Mi, ACAT	1
Skills	 Be able to recognise the signs and symptoms and be able to formulate a differential diagnosis and treatment plan Be able to resuscitate and stabilize patients with life-threatening complications Be able to order appropriate investigations available in the emergency department setting and to interpret the results appropriately 	Mi, C, ACAT	1

2.2.3 Child and Adolescent Mental Health M				
By the end c	of this training period the trainee will:	Assessment Methods	GMP	
Knowledge	 Understand normal behaviour patterns including response to injury and illness from birth to adolescence Understand about attachment and conduct disorders Understand the influence of physical, emotional and social factors on development and health Understand about excessive crying and resources available to help families Understand about the roles of other professions, agencies and the voluntary sector Understand the emotional impact of hospitalisation on children Understand the behaviour aspects of eating disorders Understand adolescent behaviour in maturation Understand about the multi-disciplinary nature of child and adolescent mental health services Understand the signs and symptoms that indicate serious conditions such as depression and psychosis 	E, C, Mi, ACAT	1	
Skills	 Be able to recognise, support and manage patients presenting with self-harm Be able to recognise fabricated illness and injury in children Be able to recognise abnormal child behaviour patterns 	Mi, C, D	1	

2.2.4 Child protection and children in special circumstances M				
By the end of	this training period the trainee will:	Assessment Methods	GMP	
Knowledge	Understand the local and national guidance and follow procedures for cases where child abuse is suspected	E, C, Mi, ACAT	1	
	Understand the need to initiate a safe response where abuse is suspected while treating the family with respect and courtesy at all times			
	Understand the ways in which their own beliefs, experiences and attitudes may influence professional involvement in child protection work			
	Understand how and when to access the Child Protection register and understand its role and its limitations			
	Know how to access and understand the roles of allied health professionals and other agencies in the support of children and families			
	Know what to do if a child discloses allegations of abuse			
	Know where help with management can be obtained and understand the pathways to ensure follow-up			
Skills	Recognise features in the presentation where child protection may be an issue, for example, where there are inconsistencies in the history and understand how to act on them	Mi, C, D	1	
	Recognise where families are distressed and in need of help to prevent child abuse			
	Be familiar with local facilities for adolescents requiring advice including drug and alcohol misuse			
	Be familiar with the different categories of abuse and recognise that they may occur together i.e. physical, emotional, sexual and neglect, fabrication or falsification/induction of illness in a child			
	Keep accurate records of all findings in communication with the child, caregivers and all other professionals			
	Be able to record clearly the results of the examination of a baby, child or adolescent using body charts			

	Recognise the importance of noting all observations of the child's demeanour and interactions with parents or carers		
	Be able to compile and present a written report for police or social services which may be used in a case conference		
	Be able to conduct an assessment for physical abuse, recording findings and come to a conclusion about the nature of injuries		
	Be able to appear as a professional witness in civil or criminal proceedings		
	Be able to present a medical report to a case conference and be able to contribute to that conference		
Physical abu	se M		
By the end o	f this training period the trainee will:	Assessment methods	GMP
Knowledge	 Understand the unusually subtle signs of physical abuse 	E, C, Mi, ACAT	1
	 Understand the signs of common injury or illness that may mimic physical abuse 		
	 Understand the common fractures seen in physical abuse 		
Skills	Be able to recognise patterns of injury or illness which might suggest child abuse	Mi, C	1, 3
	Be able to initiate child protection procedures as		

Sexual abus	e M		
By the end c	of this training period the trainee will:	Assessment methods	GMP
Knowledge	 Understand the ways in which children might reveal sexual abuse Understand and recognise the signs and symptoms of sexual abuse in children Understand the relationship between sexually transmitted infections and sexual abuse in children Understand the importance of seeking help from experienced colleagues in the assessment of children where child abuse might be an issue 	E, C, Mi, ACAT	1, 2, 3
Skills	Be able to institute appropriate child protection procedures if sexual abuse suspected	MI, C	1, 2, 3
Self-harm M			
By the end c	of this training period the trainee will:	Assessment methods	GMP
Knowledge	 Recognise this as an expression of distress, acute or long-term Recognise repeated self-harm as indicating serious emotional distress 	E, C, Mi, ACAT	1
Skills	Be able to refer to the CAMHS (Child & Adolescent Mental Health Services) team	MI, C	1, 3
Neglect M			
By the end c	of this training period the trainee will:	Assessment methods	GMP
Knowledge	Understand the ways in which children may present with neglect	E, C, Mi, ACAT	1
Skills	Be able to refer appropriately	MI, C	1, 3

Apnoeic episodes as an infant M			
By the end o	of this training period the trainee will:	Assessment methods	GMP
Knowledge	Be aware of this as a possible presentation of imposed airway obstruction and know the indicators that this may be the case	E, C, Mi, ACAT	1
	Understand the life- threatening nature of imposed airway obstruction		
Skills	Refer to an experienced colleague for help	MI, C	1, 3

2.2.5 Dermatology			
By the end o	f this training period the trainee will:	Assessment Methods	GMP
Knowledge	Have the knowledge and skills to be able to assess and manage children presenting to the Emergency Department with dermatological disorders	E, C, Mi, ACAT	1
	 Understand and recognise the possible dermatological manifestations and complications of other system disorders 		
	Understand when referral for specialist dermatological opinion is appropriate		
	Understand the principals of therapy for skin conditions		
Skills	Be able to describe accurately any rash	Mi, C, D	1
	Be able to formulate a differential diagnosis		
	 Recognise and manage the serious as well as the life-threatening complications of some of these conditions 		
	ing dermatological emergencies i.e. toxic epidermal n a, Stevens-Johnson Syndrome, Staphylococcal scalded	-	e
By the end of this training period the trainee will: Assessment to the description of the trainee will:			GMP
Knowledge	Understand the features of management of life- threatening emergencies	E, C, Mi, ACAT	1
Skills	 Be able to assess and start treatment promptly Be able to recognise when to obtain other specialist opinions e.g. from dermatology or ophthalmology 	MI, C	1, 3
<u>. </u>			

Eczema and seborrheic dermatitis			
By the end o	f this training period the trainee will:	Assessment methods	GMP
Knowledge	Understand the common treatments for eczema and reasons for treatment failure	E, C, Mi, ACAT	1
Skills	Be able to manage eczema and seborrheic dermatitis	MI, C	1
	Be able to advise patients and families about disease process and treatment		
Bites and infe	estations		
By the end o	f this training period the trainee will:	Assessment methods	GMP
Knowledge	 Understand the aetiology by age and the patho- physiology of bites and infestations 	E, C, Mi, ACAT	1
	 Understand and recognise the signs and symptoms of bites and infestations 		
Skills	Be able to manage children with acute bites and infestations, including recognition of signs and symptoms of life- and limb-threatening complications	MI, C	1

2.2.6 Endocri	nology and Metabolic medicine		
By the end o	f this training period the trainee will:	Assessment Methods	GMP
Knowledge	 Have the understanding and skills to be able to assess and manage children presenting to the Emergency Department with endocrine or metabolic disorders Understand the life-threatening nature of some of these conditions Understand and recognise the possible metabolic and endocrine complications of other system disorders Understand when and how to perform endocrine and metabolic investigations in neonates and children presenting to the Emergency Department Understand the biochemical findings in children presenting with metabolic disease 	E, C, Mi, ACAT	1
Skills	 Be able to formulate a differential diagnosis Be able to select and interpret appropriate endocrine and metabolic investigations Be able to measure children accurately and assess their growth using appropriate growth charts, taking into account parental stature and pubertal status Be able to assess pubertal stages of development accurately Recognise and be able to manage clinical and biochemical features of electrolyte and acid base abnormalities 	Mi, C, D	1
Diabetic ket	oacidosis		
By the end o	f this training period the trainee will:	Assessment methods	GMP
Knowledge	 Understand the pathophysiology of ketoacidosis Understand local and national guidelines for the management of diabetic ketoacidosis, including the principles of fluid management and insulin therapies 	E, C, Mi, ACAT	1
Skills	 Be able to formulate a likely diagnosis and recognise features of the presentation and complications Be able to recognise features of cerebral 	мі, С	1

	oedema and be able to provide emergency		
	treatment		
	Be able to perform appropriate investigations and act on the results		
	Be able to prescribe fluid, electrolyte and insulin therapy		
	Be able to explain the condition to patients and caregivers		
Hypoglycae	mia		
By the end o	of this training period the trainee will:	Assessment methods	GMP
Knowledge	Understand the causes, presentations, complications, investigations and emergency treatment in the neonatal period and beyond	E, C, Mi, ACAT	1
Skills	Be able to perform appropriate investigationsBe able to treat appropriately	Mi, C	1
Adrenal insu	fficiency M		<u>'</u>
By the end c	of this training period the trainee will:	Assessment methods	GMP
Knowledge	Understand the pathophysiology of the hypothalamic /pituitary/adrenal axis	E, C, Mi, ACAT	1
Skills	Be able to initiate appropriate investigations and treatment	Mi, C	1
	Be able to recognise the features and select appropriate investigations and management for adrenal insufficiency		
	Be aware of and able to treat life-threatening complications including electrolyte disturbances		
Acid-base a	nd electrolyte abnormalities M		
By the end c	of this training period the trainee will:	Assessment methods	GMP
Knowledge	Understand the aetiology and patho-physiology of dehydration	E, C, Mi, ACAT	1
	Understand the presentation of dehydration		
	Understand the presentation, investigation and treatment of electrolyte disturbances		
Skills	Be able to recognise the life-threatening complications of dehydration	E, Mi, C	1
	Be able to perform and interpret blood gas		

results	
Be able to calculate and interpret anion and osmolar gaps	
 Be able to calculate and prescribe fluid replacement, maintenance fluids and replacement for ongoing losses 	

2.2.7 Gastroe	2.2.7 Gastroenterology			
By the end o	f this training period the trainee will:	Assessment Methods	GMP	
Knowledge	 Have the understanding and skills to be able to assess and manage children presenting to the Emergency Department with gastrointestinal disorders Understand the life-threatening nature of some of these conditions Understand and recognise the possible gastrointestinal complications of other system disorders Understand when to refer for specialist gastroenterological opinion 	E, C, Mi, ACAT	1	
Skills	 Be able to formulate a differential diagnosis Be able to select and interpret appropriate investigations as well as understand the role of interventional procedures like endoscopies in the investigation of acutely unwell patients Be able to provide appropriate monitoring including measurement of central venous pressure if required 	Mi, C, D	1	
Acute abdor	ninal pain			
By the end o	f this training period the trainee will:	Assessment methods	GMP	
Knowledge	Understand and be able to recognise the causes of acute abdominal pain in all age-groups	E, C, Mi, ACAT	1	
Skills	 Be able to recognise conditions requiring stabilization and urgent intervention, including fluid resuscitation and pain control 	E, Mi. C	1	
	 Be able to recognise atypical presentations of common conditions 			
	Be able to interpret plain x- rays			
	 Recognise the signs of pain in an infant or small child 			
	Recognise when a surgical opinion is required			

Acute vomit	ing with or without diarrhoea		
By the end o	of this training period the trainee will:	Assessment methods	GMP
Knowledge	 Understand and be able to recognise the causes of acute vomiting and diarrhoea Understand about the scientific principles of oral and intravenous fluid replacement 	E, C, Mi, ACAT	1
Skills	 Be able to recognise and order appropriate treatment for the seriously ill patient Be able to recognise and manage dehydration safely 	Mi, C	1
Upper and lo	ower gastrointestinal bleeding		
By the end c	of this training period the trainee will:	Assessment methods	GMP
Knowledge	 Understand the causes of upper and lower GI bleeding Understand and be able to recognise lifethreatening causes, including intussusception 	E, C, Mi, ACAT	1
Skills	 Be able to stabilize the hemodynamically compromised patient including use of intraosseous insertion and central access Be able to identify the need for investigations including endoscopy, blood transfusion and surgical referral appropriately 	MI, C	1
Acute liver fo	ailure M		
By the end c	of this training period the trainee will:	Assessment methods	GMP
Knowledge	 Understand the causes of acute liver failure Understand the management of paracetamol overdose 	E, C, Mi, ACAT	1
Skills	 Be able to assess the severity and complications of this condition Be able to initiate appropriate resuscitation and liaise early with a liver unit 	MI, C	1, 3

Recurrent abdominal pain M			
By the end o	of this training period the trainee will:	Assessment methods	GMP
Knowledge	 Understand the possible biological, psychological and social contributing factors in recurrent abdominal pain Understand which features suggest that reassurance rather than investigation is needed 	E, C, Mi, ACAT	1
Skills	 Recognise features in the presentation that suggest the importance of different aetiologies Ensure appropriate outpatient follow-up 	MI, C	1
Constipation			
By the end o	of this training period the trainee will:	Assessment methods	GMP
Knowledge	 Understand and be able to recognise predisposing conditions as well as psychological and dietary factors involved 	E, C, Mi, ACAT	1
Skills	Be able to initiate management based on national guidelines	MI, C	1
	 Be able to arrange appropriate follow-up for the patient and identify patients requiring specialist input 		
	 Be able to communicate dietary and psychological strategies as well as the role of medication in treatment 		

2.2.8 Gynae	cology and obstetrics		
By the end o	f this training period the trainee will:	Assessment Methods	GMP
Knowledge	 Have the knowledge and skills to be able to assess and manage children and adolescents presenting with gynaecological disorders to the Emergency Department Understand the life-threatening nature of some of these conditions and when to call for help Understand when referral for specialist paediatric gynaecology assessment is appropriate Understand when referral to the child protection team is appropriate Understand the forensic aspects of child sexual abuse and male/female rape as pertinent to emergency care Have the knowledge and skills to be able to assess and manage transfer of patients in labour if appropriate and be aware of the life-threatening complications of pregnancy and necessary 	E, C, Mi, ACAT	1
Skills	 emergency interventions Be able to formulate a differential diagnosis Be able to select and interpret appropriate gynaecological investigations including microbiology and virology results, beta Human Chorionic Gonadatrophin and ultrasonography Be able to assist with a precipitous delivery 	Mi, C, D	1
Ectopic preg	Inancy		
By the end c	f this training period the trainee will:	Assessment methods	GMP
Knowledge	 Understand the pathophysiology of ectopic pregnancy Understand and recognise the signs and symptoms as well as complications of ectopic pregnancy Recognise the value of and be able to interpret the findings of ancillary studies in patients with ectopic pregnancies 	E, C, Mi, ACAT	1

Skills	Be able to recognise shock and peritonitis in the young female	MI, C, D	1
	 Be able to manage life-threatening complications of ectopic pregnancy including venous access and management of hemorrhagic shock 		
Sexually tran	smitted infections		
By the end o	f this training period the trainee will:	Assessment methods	GMP
Knowledge	 Understand and recognise the signs and symptoms of common sexually transmitted infections 	E, C, Mi, ACAT	1
	Understand the appropriate antimicrobial therapy		
Skills	Be able to undertake a pelvic exam	MI, C, D	1
	 Be able to use a speculum and take appropriate swabs for diagnosis and organize referral to an appropriate GUM facility 		

2.2.9 Haemat	2.2.9 Haematology and Oncology				
By the end of	By the end of this training period the trainee will:		GMP		
Knowledge	 Have the knowledge and skills to be able to assess and manage children presenting to the Emergency Department with haematological and oncological disorders Understand the life-threatening nature of some 	E, C, Mi, ACAT	1		
	of these conditions				
	Understand and recognise the possible haematological and oncological complications of other system disorders				
	Understand the normal age-dependent haematological blood values				
	Understand the indications, contraindications and complications of the use of blood products				
	 Understand about national and local blood transfusion policies 				
	Understand the legal process if faced with parental objection to the use of blood products				
	Understand when referral for specialist paediatric haematological or oncological assessment is appropriate				
Skills	Be able to formulate a likely differential diagnosis	Mi, C, D	1		
Sickle cell cri	Sickle cell crisis				
By the end of	this training period the trainee will:	Assessment methods	GMP		
Knowledge	Understand the common presentations and complications of sickle cell crisis	E, C, Mi, ACAT	1		
Skills	Be able to provide emergency management as well as appropriate pain control and fluid balance	MI, C	1		

Anaemia					
By the end o	By the end of this training period the trainee will:		GMP		
Knowledge	 Understand the causes of anaemia Understand the presentation and treatment of severe anaemia 	E, C, Mi, ACAT	1		
Skills	 Be able to interpret haematologic investigations and recognise serious underlying pathology Be able to manage iron deficiency anaemia 	MI, C	1		
Purpura and	bruising				
By the end o	f this training period the trainee will:	Assessment methods	GMP		
Knowledge	Understand the causes of purpura	E, C, Mi, ACAT	1		
Skills	Be able to recognise features in the presentation which suggest serious pathology including meningococcemia and leukemia	Mi, C	1		
	Be able to manage life- threatening causes of purpura				
	Be able to diagnose, organise follow-up and explain Henoch-Schonlein purpura and idiopathic thrombocytopaenia purpura to patients and caregivers				
	Be able to recognise patterns suggestive of child abuse and organise care				
Leukaemia/l	Leukaemia/lymphoma M				
,		Assessment methods	GMP		
Knowledge	Understand the presentation and emergency treatment of acute complications	E, C, Mi, ACAT	1		
Skills	Be able to recognise and diagnose in the emergency room setting	Mi, C	1		

Immuno-compromised patient			
By the end of this training period the trainee will:		Assessment methods	GMP
Knowledge	Understand the life-threatening complications and treatment	E, C, Mi, ACAT	1
	Understand the common sites of infection and organisms causing sepsis in this group of patients		
	Understand the rationale behind specific antimicrobial regimes		
Skills	Be able to follow local guidelines for the management of the febrile neutropenic patient	Mi, C	1

2.2.10 Infection, Immunology and Allergy				
By the end of	this training period the trainee will:	Assessment Methods	GMP	
Knowledge	 Have the knowledge and skills to be able to assess and manage children presenting to the Emergency Department presenting with infectious diseases and allergic conditions Understand the life-threatening nature of some of these conditions Understand and recognise the possible infectious complications of other system disorders Understand when referral for specialist infectious disease or allergy assessment is appropriate Understand the causes of vulnerability to infection Understand the classification of infectious agents Understand the epidemiology, pathology and 'natural history' of common infections of the newborn and children in Britain and the public health policies associated with them Understand the importance of worldwide infections, for example TB, HIV, Malaria, Hepatitis C Understand the rationale for prescribing common antimicrobials Understand the indications for antimicrobial prophylaxis Understand the pathophysiology and principles 	E, C, Mi, ACAT	1	
Skills	of treatment of allergic and autoimmune disorders Be able to formulate a likely differential	Mi, C, D	1	
	 Be able to select and interpret appropriate laboratory investigations, including microbiology and virology cultures, and understand the significance of results pertaining to all agegroups 			
	 Be able to select and interpret appropriate laboratory investigations, including microbiology and virology cultures, and understand the 			

	significance of results pertaining to all age- groups		
	 Be able to follow agreed national and local guidelines on the notification of infectious diseases 		
Septic shock M	1		
By the end of t	his training period the trainee will:	Assessment methods	GMP
Knowledge •	Understand the definition of sepsis and be able to distinguish between compensated and uncompensated shock Understand the pathophysiology of sepsis causing shock	E, C, Mi, ACAT	1
•	Understand the life-threatening complications of sepsis		
•	Understand the nationally agreed guidelines for the management of septic shock		
Skills •	Be able to initiate and lead management of early and advanced features of septic shock	Мі, С	1
•	Be able to recognise and treat rapidly life- threatening complications.		
•	Be able to initiate vasoactive drug therapy and be aware of their complications and side effects		
Febrile child M			
By the end of t	his training period the trainee will:	Assessment methods	GMP
Knowledge •	Understand the implication of fever without a focus in different age groups	E, C, Mi, ACAT	1
•	Knowledge of national guidelines		
Skills	Be able to appropriately investigate and treat children with fever without a focus in all age groups	Mi, C	1
Common child	lhood exanthems M		
By the end of t	his training period the trainee will:	Assessment methods	GMP
Knowledge •	Understand about the clinical manifestations, aetiology, epidemiology, isolation, immunization schedule, control measures and care of exposed people	E, C, Mi, ACAT	1
Skills •	Be able to notify Public Health	С	1

Needle-stick injury			
By the end of this training period the trainee will:		Assessment methods	GMP
Knowledge	Understand the local guidelines for management of needle-stick injury	E, C, Mi, ACAT	1
Skills	Be able to identify patients requiring Emergency Department prophylaxis	Mi, C	1
	 Be able to recognise the importance of universal precautions as well as the disposal of sharps within the department 		
Anaphylaxis			
By the end of this training period the trainee will:		Assessment methods	GMP
Knowledge	Understand the management of anaphylaxis in the Emergency Department setting	E, C, Mi, ACAT, S	1
Skills	Be able to manage life-threatening complications	Mi, C	1
Kawasaki dis	sease		
By the end of this training period the trainee will:		Assessment methods	GMP
Knowledge	Understand and recognise the signs of Kawasaki disease	E, C, Mi, ACAT	1
Skills	Be able to recognise and manage life-threatening complications of Kawasaki disease	Mi, C	1
	Be able to initiate a management plan		

2.2.11 Neono	itology M		
By the end o	f this training period the trainee will:	Assessment Methods	GMP
Knowledge	 Have the knowledge and skills to be able to assess and manage neonates presenting to the Emergency Department Understand the life-threatening nature of some of these situations and the need to call for help Understand the pathophysiological processes leading to neonatal cardio-pulmonary instability, including the role of thermoregulation Understand and recognise the signs and symptoms of neonatal distress 	E, C, Mi, ACAT, S	1
Skills	 Be able to formulate a differential diagnosis for a variety of common presenting symptoms Be able to lead a resuscitation team as per APLS/EPLS/NLS guidelines Be able to perform a reliable assessment of fluid status and adjust fluid management as needed Be able to select and interpret appropriate investigations and explain results to parents Be able to identify neonates requiring admission, requiring a midwife or health visitor input and identify mothers requiring additional support 	Mi, C, D	1
Cyanotic/no	n cyanotic congenital heart disease M		
By the end o	f this training period the trainee will:	Assessment methods	GMP
Knowledge	Understand the anatomy and presentation of congenital heart disease	E, C, Mi, ACAT	1
Skills	 Be able to make a likely diagnosis and investigate and manage appropriately Be able to initiate antiprostaglandin therapy as required and recognise the need for ventilatory support Be able to identify those neonates requiring urgent specialist opinion 	Mi, C	1

Jaundice	Jaundice			
By the end o	By the end of this training period the trainee will:			
Knowledge	Understand the investigations that differentiate between conjugated and unconjugated hyperbilirubinemia	E, C, Mi, ACAT	1	
Skills	 Be able to diagnose and manage jaundice Be able to identify which neonates require specialist input and arrange follow up in an appropriate timeframe 	Mi. C	1	
Sepsis M				
By the end o	Assessment methods	GMP		
Knowledge	 Understand the importance of timely treatment and the range of treatments for likely pathogens Understand the appropriate treatment for a septic neonate 	E, C, Mi, ACAT	1	
Skills	Be able to perform and interpret appropriate investigations	C, D	1	

2.2.12 Nephro	2.2.12 Nephro-urology			
By the end of this training period the trainee will:		Assessment Methods	GMP	
Knowledge	 Have the knowledge and skills to be able to assess and manage children presenting with Nephro-urology problems to the Emergency department. Have the knowledge and understanding of fluid 	E, C, Mi, ACAT	1	
	and electrolyte imbalances and blood pressure in children with kidney problems			
	Understand the life-threatening nature of some of these conditions			
	 Understand when referral for specialist paediatric nephrology, general surgical or urological assessment is appropriate 			
Skills	Be able to perform an accurate assessment and management of fluid status	Mi, C, D	1	
	 Be able to select and interpret appropriate renal investigations including urine microbiology and renal function tests 			
Urinary tract i	nfection			
By the end of	this training period the trainee will:	Assessment methods	GMP	
Knowledge	Be aware of national guidelines for urinary tract infections in children	E, C, Mi, ACAT	1	
	 Understand the presentation, aetiology and management of urinary tract infections in the acute setting at different age groups 			
	 Understand the range and accuracy of different methods of urine collection 			
	 Understand the appropriate imaging, based on age and local guidelines, of patients post-urinary tract infection 			
Skills	Be able to interpret common urine microscopic and culture findings and initiate appropriate treatment	Mi, C	1	

Hypertension	า		
By the end o	of this training period the trainee will:	Assessment methods	GMP
Knowledge	 Understand the techniques for blood pressure measurement Understand the causes of hypertension and the principles of treatment 	E, C, Mi, ACAT	1
Skills	 Be able to interpret blood pressure measurement based on the age of the patient Be able to initiate emergency management of hypertension 	Mi, C	1
Acute scroto	Il pain		
By the end o	of this training period the trainee will:	Assessment methods	GMP
Knowledge	Understand the differential diagnosis, investigations and management	E, C, Mi, ACAT	1
Skills	 Be able to recognise the causes of acute scrotal pain Be able to identify children requiring urgent surgical referral 	Mi, C	1

2.2.13 Neurol	ogy		
By the end o	f this training period the trainee will:	Assessment Methods	GMP
Knowledge	Have the knowledge and skills to be able to assess and manage children presenting to the Emergency department with neurological disorders	E, C, Mi, ACAT	1
	 Understand and use a range of communication skills with disabled children, their families and other professionals 		
	Understand the life-threatening nature of some of these conditions		
	 Understand and recognise the possible neurological complications of other system disorders 		
	Understand when referral for specialist neurological opinion is appropriate		
Skills	 Be able to perform a developmental assessment appropriate to the Emergency department setting 	Mi, C, D	1
	Be able to formulate a differential diagnosis		
	 Be able to select and interpret appropriate neurological investigations with major abnormalities including EEG and head CT scans 		
Coma M			
By the end o	f this training period the trainee will:	Assessment methods	GMP
Knowledge	 Understands the need for airway protection Understands the differential diagnosis, and appropriate sequence of investigations and treatment 	E, C, Mi, ACAT	1
Skills	 Be able to ensure a patent airway in the unconscious patient Be able to use a validated coma scale correctly e.g. Glasgow Coma Score (GCS) 	Mi, C	1

Meningitis/E	ncephalitis		
By the end o	of this training period the trainee will:	Assessment methods	GMP
Knowledge	 Understand the bacterial and viral aetiologies for all age groups and the appropriate antimicrobial/antiviral treatment Understand the recommendations for prophylaxis for household contacts and the process and method of Public Health notification Understand the contraindications and complications of a lumbar puncture 	E, C, Mi, ACAT	1
Skills	 Be able to recognise and institute treatment for life-threatening complications, including raised intracranial pressure Be able to perform and interpret results of a lumbar puncture on all age-groups as appropriate 	Mi, C	1
Seizures incl	uding status epilepticus		
By the end o	of this training period the trainee will:	Assessment methods	GMP
Knowledge	 Understand the common causes of seizures in babies and children and their complications Understand local and national guidelines for the treatment of status epilepticus Be familiar with the side-effects and complications of anticonvulsants and their management 	E, C, Mi, ACAT	1
Skills	 Be able to recognise and treat the life-threatening complications Be a key part of the Anaesthetic team that would institute appropriate management including RSI for prolonged, intractable seizures 	Mi, C	1, 3
Headache A	Λ		
By the end o	of this training period the trainee will:	Assessment methods	GMP
Knowledge	 Understand how to distinguish between the causes Understand current local guidelines for treatment of migraine 	E, C, Mi, ACAT	1
Skills	Be able to initiate and interpret appropriate investigations and treatment	Mi, C	1

•	Be able to advise families on triggers of migraine	
	and management of acute attacks	

2.2.14 Neurosi	urgery		
By the end of	this training period the trainee will:	Assessment Methods	GMP
Knowledge	 Have the knowledge and skills to be able to assess and manage children presenting with neurosurgical conditions to the Emergency Department Understand the life-threatening nature of these 	E, C, Mi, ACAT	1
	 Understand when referral for specialist paediatric neurosurgical assessment is appropriate 		
Skills	Be able to select and interpret appropriate neurosurgical investigations including CT scans, MRI and lumbar puncture	Mi, C, D	1
Blocked shun	t		
By the end of	this training period the trainee will:	Assessment methods	GMP
Knowledge	 Understand the presentation, complications and management of children with blocked shunts 	E, C, Mi, ACAT	1
Skills			

2.2.15 Ophth	almology M		
By the end o	f this training period the trainee will:	Assessment Methods	GMP
Knowledge	 Have the knowledge and skills to be able to assess and manage children presenting with opthamological problems to the ED Understand when referral for specialist paediatric ophthamological assessment is appropriate 	E, C, Mi, ACAT	1
Skills	Be able to select and interpret appropriate ophthamological investigations including Snellen charts and visual field examinations	Mi, C, D	1
Bell's palsy			
By the end o	f this training period the trainee will:	Assessment methods	GMP
Knowledge	 Understand the differential diagnosis of possible underlying disorders 	E, C, Mi, ACAT	1
Skills	 Be able to identify those needing only out-patient follow-up and give simple advice to child and parents Recognise cases requiring further investigation 	Mi, C	1
Conjunctiviti	s		
By the end o	f this training period the trainee will:	Assessment methods	GMP
Knowledge	Understand the differential diagnosis of red eye	E, C, Mi, ACAT	1
Skills	Be able to identify those patients requiring treatment	Mi, C	1
Chemical ey	re injury		
By the end o	f this training period the trainee will:	Assessment methods	GMP
Knowledge	Understand the importance of timely treatment where appropriate	E, C, Mi, ACAT	1
Skills	 Be able to institute eye irrigation Be able to refer for further treatment as appropriate 	Mi, C	1

2.2.16 Orthor	paedics		
By the end of	this training period the trainee will:	Assessment Methods	GMP
Knowledge	 Understand the likely types of soft tissue and bony injuries for each age group Understand the Salter-Harris classification of epiphyseal injuries Understand when referral to physiotherapy would be of benefit Understand the likely time-frame for recovery in children 	E, C, Mi, ACAT	1
Skills	 Be able to judge if these relate correctly to the stated mechanism of injury Be aware of rheumatological, infectious, malignant and non-accidental causes of musculoskeletal presentations Be able to examine a child in a way which localises the injury Be able to manage and score pain appropriately Be able to request and interpret x-rays appropriately Be able to splint or apply plaster of Paris appropriately to limbs Be able to arrange appropriate follow-up at a sensible time 	Mi, C, D	1
Shoulder reg	ion		<u> </u>
By the end of	this training period the trainee will:	Assessment methods	GMP
Knowledge	 Know the presentation and management of the range of traumatic injuries of the shoulder Know about the presentation and management of septic arthritis of the shoulder 	E, C, Mi, ACAT	1
Skills	 Be able to examine the shoulder region, identify injuries and any associated neurovascular problems Be able to reduce a dislocated shoulder safely and treat the other conditions appropriately Recognise the possibility of NAI in the case of spiral fracture of the humerus and instigate safeguarding children procedures if appropriate 	Mi, C, D	1

Elbow			
By the end o	of this training period the trainee will:	Assessment methods	GMP
Knowledge	 Know the presentations of the range of fractures around the elbow and their management Understand the fracture-dislocations (Monteggia and Galeazzi) 	E, C, Mi, ACAT	1
Skills	 Be able to identify an effusion correctly and any neurovascular problems Be able to reduce a pulled elbow and treat the other conditions appropriately Recognise the fracture patterns which require urgent orthopaedic referral 	Mi, C, D	1
Wrist			
By the end o	of this training period the trainee will:	Assessment methods	GMP
Knowledge	Understand about distal radius and scaphoid fractures	E, C, Mi, ACAT	1
Skills	Understand when to refer displaced fractures for reduction	Mi, C	1
Hand injuries	3		
By the end of this training period the trainee will: Assessment method			GMP
Knowledge	Know the presentation and management of fractures of the bones of the hand	E, C, Mi, ACAT	1
Skills	Have developed a technique for assessing the neurovascular function and tendon function of the hand in verbal and pre-verbal children	Mi, C, D	1

Pelvis, hip ar	nd thigh		
By the end o	of this training period the trainee will:	Assessment methods	GMP
Knowledge	 Know about the mechanism, identification and treatment of the fractured pelvis – stable and unstable Understand the differential diagnoses of limp and knee and hip pain as well as concept of referred pain Know about avulsion fractures around the hip Know about the mechanisms of development of a fractured femur Understand the appropriate imaging for each of the pathologies 	E, C, Mi, ACAT	1
Skills	 Be able to examine gait, stature and the hip joint in all age-groups Be aware of which blood tests are appropriate and when to perform them Be able to perform a femoral nerve block and splintage of femoral shaft fractures 	Mi, C, D	1
Knee and lo	wer leg		
By the end o	of this training period the trainee will:	Assessment methods	GMP
Knowledge	 Know the presentation and management of the causes of knee pain including fractures, dislocations and osteochondritis. Understand the significance of haemarthrosis Understand the mechanism, risk, early recognition, prevention, and consequences of compartment syndrome 	E, C, Mi, ACAT	1
Skills	 Be able to detect an effusion, examine the quadriceps mechanism and detect a locked knee Be able to detect the subtle signs of a toddler's fracture and use the radiographs appropriately Use plain radiography (including the Ottawa Knee Rules) appropriately Be able to reduce a patella dislocation Be able to identify compartment syndrome 	Mi, C, D	1

Ankle			
By the end o	of this training period the trainee will:	Assessment methods	GMP
Knowledge	Understand common epiphyseal injuriesUnderstand the commonly injured ligaments	E, C, Mi, ACAT	1
Skills	 Be able to examine and assess the ankle joint and identify patients who need plain radiography (Ottawa Ankle Rules) Be able to recognise those ankle fractures that require operative intervention 	Mi, C, D	1
Foot			
By the end o	of this training period the trainee will:	Assessment methods	GMP
Knowledge	Understand the presentation and management of talar, calcaneal, metatarsal and phalangeal fractures	E, C, Mi, ACAT	1
Skills	Be able to recognise those patients who need radiography (Ottawa foot rules)	Mi, C, D	1
Spine			
By the end o	of this training period the trainee will:	Assessment methods	GMP
Knowledge	 Understand the mechanisms and risk of spinal injury in children Know the myotomes and dermatomes Be aware of SCIWORA Understand the differential diagnosis of non-traumatic back pain in children 	E, C, Mi, ACAT	1
Skills	 Be able to immobilise the spine and log roll a patient Be able to manage the anxious immobilised child Be able to examine the spine and the indications for being able to clinically 'clear' the spine Understand the indications for radiology and be able to interpret common abnormalities paediatric spinal radiographs 	Mi, C, D	1

2.2.17 Plastic	2.2.17 Plastic surgery			
By the end o	of this training period the trainee will:	Assessment Methods	GMP	
Knowledge	 Have the knowledge and skills to be able to assess and manage children presenting injuries requiring plastic surgery to the Emergency department Have a detailed knowledge of the anatomy of the hand, wrist and face Understand the limb-threatening nature of some of these injuries Understand when referral for specialist plastic surgical assessment is appropriate Understand and be proficient with various skin closure techniques including those for lip lacerations and select and apply appropriate wound dressings and splints Understand and initiate appropriate tetanus prophylaxis 	E, C, Mi, ACAT	1	
Skills	 Be able to use local anaesthesia appropriately and safely, understanding the anatomy of nerve blocks and the dosages and complications of local anaesthetic agents Be able to assess a wound and underlying structures Be able to explore, clean and debride wounds as appropriate 	Mi, C, D	1	

2.2.18 Poisonin	g and accidents		
By the end of t	his training period the trainee will:	Assessment Methods	GMP
Knowledge	 Understand the epidemiology of poisoning and be able to identify the major types of ingestions by age Understand and recognise the specific signs and symptoms of poisoning with a range of toxic agents Understand the appropriate sequence of investigations in the poisoned child Understand the role of antidotes in specific ingestions Understand the role of activated charcoal and other modalities to prevent absorption and methods to enhance elimination in the treatment of the poisoned child Understand various methods of access to information about poisons Understand the pharmacology and the treatment of common poisonings Understand how to manage the adolescent refusing treatment for a life-threatening overdose Know that repeated ingestions may be a presentation of neglect Have the knowledge and skills to be able to assess and manage patients presenting with near-drowning and drowning. Understand the key signs of potential life-threatening injury associated with near-drowning and the sequence of appearance of these signs Understand the signs, symptoms and management of life-threatening hyper and hypothermia in children 	E, C, Mi, ACAT	1
Skills	 Be able to prioritise critical assessment and management interventions Be aware of overdose as a self-harm presentation Be able to identify the major types of significant electrical injuries 	Mi, C, D	1
	Be able to recognise the signs and symptoms of potential life-threatening electrical injuries		

Burns	Burns			
By the end o	of this training period the trainee will:	Assessment methods	GMP	
Knowledge	Understand how to differentiate the depth as well as the percentage of burn	E, C, Mi, ACAT	1	
	Understand the appropriate management depending on the age of the child and the severity of the burn			
Skills	Be able to recognise upper airway risks from heat and lower airway risks from inhalation injury and manage the patient accordingly	Mi, C, D	1, 2	
	Be able to assess accurately the area and depth of the burn			
	Be able to recognise the importance of burns in specific areas e.g. face			
	Be able to calculate resuscitation and ongoing fluid requirements			
	Be able to identify patients requiring referral to a specialist centre			
	Be able to manage minor burns and arrange appropriate follow-up			
	Be able to recognise possible patterns of child abuse in burn injuries			
Drowning				
By the end c	of this training period the trainee will:	Assessment methods	GMP	
Knowledge	Understand and recognise the differences in the probable aetiology of drowning and associated problems by age group	E, C, Mi, ACAT, L, S	1	
	Understand the physiology of drowning			
	Understand the key signs of potential life- threatening injuries associated with near-drowning episodes			
Skills	Be able to manage life-threatening injuries and complications	Mi, C, D	1	
	Be able to ensure temperature measurement, thermal regulation and temperature control			
	Be able to initiate appropriate re-warming techniques in the hypothermic patient			

Major incident planning MAJAX			
By the end o	of this training period the trainee will:	Assessment methods	GMP
Knowledge	Understand the safety aspects of chemical/biological/radionuclear incidents (CBRN)	E, C, Mi, ACAT, L	1
	Understand local and national guidelines on Major Incident planning		
	Have the knowledge and understanding to act as the Emergency Department team leader during an incident		
Skills	Be able to safely use and oversee other staff members in their safe use of decontamination equipment	Mi, C, L	1, 3
	Be able to triage mass casualties		
	Be able to co-ordinate an Emergency Department response		
	Be able to debrief staff following an incident		

2.2.19 Respire	atory medicine, with Ear, Nose and Throat		
By the end of	f this training period the trainee will:	Assessment Methods	GMP
Knowledge	 Have the understanding and skills to be able to assess and manage children presenting with respiratory disorders or ENT problems to the Emergency Department Understand the life-threatening nature of some of these conditions Understand and recognise the possible respiratory complications of other system disorders 	E, C, Mi, ACAT	1
	Understand when referral for specialist paediatric respiratory assessment is appropriate		
Skills	 Be able to formulate a differential diagnosis Be able to select and interpret appropriate respiratory investigations including arterial blood gases, chest x- rays and peak flow measurements 	Mi, C, D	1
Asthma			
By the end of	f this training period the trainee will:	Assessment methods	GMP
Knowledge	 Understand and be able to apply the British Thoracic Society asthma guidelines for the management of asthma Understand the pharmacological therapies 	E, Mi, C, ACAT	1
	 available and their indications and complications Understand the indications and complications of drugs used in intubating severely asthmatic patients 		
Skills	 Be able to recognise patients with life-threatening asthma who may require ventilation Be able to provide bag valve mask ventilation and intubation in life-threatening asthma 	Mi, C, D	1

Acute stridor			
By the end c	f this training period the trainee will:	Assessment methods	GMP
Knowledge	Understand the infective, allergic and obstructive causes of this condition	E, Mi, C, ACAT	1
Skills	Be able to institute appropriate acute airways management	Mi, C, D	1
Pneumothor	ах		
By the end c	f this training period the trainee will:	Assessment methods	GMP
Knowledge	Understand the diseases or circumstances predisposing to pneumothorax	E, Mi, C, ACAT	1
Skills	 Be able to recognise pneumothorax Be able to perform needle thoracocentesis and chest drain insertion in life-threatening situations, recognizing possible complications Be able to transport a patient safely with a chest drain in situ 	Mi, C, D	1
Bronchiolitis	M		
By the end c	f this training period the trainee will:	Assessment methods	GMP
Knowledge	Understand the epidemiology and common presentations of bronchiolitis	E, Mi, C, ACAT	1
Skills	Be able to prioritise and interpret investigations and treatment Be able to formulate a differential diagnosis.	Mi, C, D	1
	 Be able to formulate a differential diagnosis Be able to recognise other conditions with similar presentations including cardiac causes 		
	 Be able to initiate appropriate respiratory support including nasal/facial continuous positive airway pressure (CPAP) ventilation 		

Pneumonia			
By the end c	of this training period the trainee will:	Assessment methods	GMP
Knowledge	Understand the principles of management of community-acquired pneumonia according to local antimicrobial resistance	E, Mi, C, ACAT	1
Skills	 Be able to recognise the patient requiring admission and possible mechanical support Be able to provide supplemental oxygen therapy as required including mechanical ventilation Be able to provide monitoring including arterial lines as appropriate 	Mi, C, D	1
Pertussis M			
By the end c	of this training period the trainee will:	Assessment methods	GMP
Knowledge	 Understand the age-dependent presentations and indications for admission Understand the environmental implications Understand the appropriateness of antibiotic therapy depending on the stage of presentation Understand and follow the procedures for the notification to the Public Health Department 	E, Mi, C, ACAT	1
Skills	 Be able to initiate appropriate treatment of patient and contacts Be able to identify those at risk of life-threatening complications 	MI, C D	1
Earache or o	lischarge		
By the end c	of this training period the trainee will:	Assessment methods	GMP
Knowledge	Understand the presentation of otitis media and glue ear and their association with hearing loss in children	E, Mi, C, ACAT	1
Skills	 Be able to perform otoscopy correctly Be able to identify otitis external and otitis media and treat them appropriately Recognise that language delay or attention deficit requires onward referral 	Mi, C, D	1, 3

Traumatic ed	Traumatic ear conditions			
By the end o	By the end of this training period the trainee will:			
Knowledge	Be aware of the possibility of abuse in cases of ear trauma	E, Mi, C, ACAT	1, 2	
Skills	 Be able to remove foreign bodies in the ear canal or pinna Be able to recognise a haematoma requiring surgical drainage 	Mi, C, D	1	
Epistaxis				
By the end o	By the end of this training period the trainee will:			
Knowledge	Be aware of the most likely causes of epistaxis	E, Mi, C, ACAT	1	
Skills	Be able to advise parents on first aid measures and identify correctly the need for immediate or out-patient referral	Mi, C	1, 3	
Nasal traum	a			
By the end of this training period the trainee will: Assessment methods		GMP		
Knowledge	Understand the clinical signs of a fractured nasal bone, and the appropriate timescale for referral	E, Mi, C, ACAT	1	
Skills	 Be able to identify and refer for a septal haematoma Be able to remove nasal foreign bodies 	Mi, C, D	1	

Acute throat	infections		
By the end c	of this training period the trainee will:	Assessment methods	GMP
Knowledge	 Be aware of indications for tonsillectomy Be aware of life-threatening airway obstruction in epiglottitis, and how to avoid it 	E, Mi, C, ACAT	1, 2
Skills	 Be able to take an appropriate history to identify sleep apnoea Be able to identify a quinsy on examination Be able to manage a post-tonsillectomy bleed safely Be able to manage or refer where appropriate foreign bodies in the throat 	Mi, C, D	1
Airway obstr	uction		
By the end o	of this training period the trainee will:	Assessment methods	GMP
Knowledge	 Understand the technique of a providing a surgical airway under supervision (at least on a model) Be familiar with emergency airway equipment (e.g. Magill's forceps) 	E, Mi, C, ACAT, L, S	1
Skills	 Be able to recognise all the signs of airway obstruction (choking, stridor, tracheal tug and sternal recession, dysphonia etc) Be able to perform the basic and advanced life support manoeuvres for the choking child Be able to call for help and manage safely the child with potential airway obstruction 	Mi, C, D	1, 3
Dental probl	ems		
By the end c	of this training period the trainee will:	Assessment methods	GMP
Knowledge	Understand the indications for urgent referral to a maxillofacial specialist as opposed to referral to a dental practitioner	E, Mi, C, ACAT	1
Skills	 Be able to recognise a dental abscess Be able to replace an avulsed permanent tooth 	Mi, C, D	1

2.2.20 Trauma			
By the end of	this training period the trainee will:	Assessment Methods	GMP
Knowledge	Understand the likely types of injury following a fall from a height and a road traffic accident	E, C, Mi, ACAT, L	1
	 Understand and apply the principles of Acute Trauma Life Support/Advanced Paediatric Life Support 		
	Understand blood product administration in management		
	Understand the indications for immediate surgical intervention including thoracotomy and laparotomy		
Skills	Be able to take on the role of trauma team leader and organise the composition of the team	Mi, C, D, L	1
	Be familiar with commonly used equipment, e.g. cervical immobilisation, fluid warmer, body warmer, splintage		
	Be aware of the indications for intubation and able to perform the procedure recognizing potential complications		
	Be able to distinguish and manage the causes of shock in the trauma patient		
	Be able to achieve vascular access including intraosseous and central access		
	Be able to "clear" the c-spine as appropriate and, if not, be able to proceed with a logical sequence of investigations to help clear the c-spine		
	Be able to examine a child in a way which localises injuries		
	Be able to manage pain appropriately by understanding the pharmacology, indications, contraindications and side-effects of commonly used agents as well as the use of pain scores in the Emergency Department		
	Be able to request and interpret laboratory investigations and x-rays appropriately		
	Be aware of safeguarding children and accident prevention issues		

Head injury	Head injury M			
By the end o	of this training period the trainee will:	Assessment methods	GMP	
Knowledge	 Understand the pathophysiology and optimal mechanisms of maintaining adequate cerebral perfusion Understand the signs of basal skull fracture, depressed skull fracture, raised intracranial pressure Understand the NICE guidelines for head injury Understand when to involve neurosurgical colleagues Understand when to safely discharge children with minor head injury Understand how to recognise signs of physical abuse and how to proceed with local child protection protocols 	E, Mi, C, ACAT, L	1, 2	
Skills	 Be able to recognise when rapid sequence induction for intubation is indicated Understand and be able to manage the side-effects and complications of the drugs used Be able to interpret oximetry and end tidal Co2 analysis Be able to assess AVPU and Glasgow Coma Score (GCS) Be able to judge pupil response and size accurately Be able to request appropriate radiology including plain skull x- rays and head CT scans as per local and national guidelines Be able to initiate management of all children with scalp lacerations 	Mi, C, D, L	1	
Abdominal i	njury M			
By the end o	of this training period the trainee will:	Assessment methods	GMP	
Knowledge	 Understand the common types of injury and how to detect them clinically Understand the indications for and limitations of ultrasound and CT scan in diagnosis 	E, Mi, C, ACAT, L	1	
Skills	Be able to identify correctly and manage shock when the patient is not responding to volume	Mi, C, D, L	1	

	resuscitation, and recognise the need for urgent surgical opinion Request the appropriate level of observation required		
Chest injury	M		
By the end o	of this training period the trainee will:	Assessment methods	GMP
Knowledge	 Understand the likely chest injuries through different age groups Understand the presentation and management of pulmonary contusion Understand the presentation and management of flail chest Understand when surgical treatment is required Understand the indications for plain x- rays, ultrasonography, CT scans echocardiography and angiography 	E, Mi, C, ACAT, L	1
Skills	 Be able to perform a thorough chest examination Be able to detect and treat a tension and simple pneumothorax as well as haemothorax Be able to recognise and initiate management for great vessel trauma Be able to anticipate need for and recognise when a thoracotomy is indicated and assemble surgical support Be able to recognise and initiate management of tracheobronchial rupture Be able to perform an emergency pericardiocentesis 	Mi, C, D, L	1, 3

Fractured pe	elvis M		
By the end o	of this training period the trainee will:	Assessment methods	GMP
Knowledge	Understand how pelvic fractures may be stable or unstable, understand the common fracture patterns, and the causes of hypovolaemia	E, Mi, C, ACAT, L	1
Skills	Be able to identify and manage an unstable pelvic fracture during primary survey and rapidly enlist senior orthopaedic assistance	Mi, C, D, L	1, 3
Crush, de-gl	oving injuries and amputation M		
By the end o	of this training period the trainee will:	Assessment methods	GMP
Knowledge	Understand the pathophysiology of rhabdomyolysis and compartment syndrome	E, Mi, C, ACAT, L	1
Skills	Be able to identify compromised soft tissues requiring plastic surgical referral	Mi, C, D	1
	 Be able to identify signs of rhabdomyolysis and compartment syndrome 		
	Be able to preserve an amputated body part correctly		
Major burns	M		
By the end o	of this training period the trainee will:	Assessment methods	GMP
Knowledge	Understand the pathophysiology of different types of burn – electrical, thermal, and chemical	E, Mi, C, ACAT, L	1
	 Understand the difference between different depths of burn 		
	Understand about dressings used		
Skills	Be able to recognise the child with a potentially compromised airway or inhalational injury	Mi, C, D, L	1, 3
	Be able to assess burn size and depth		
	 Be able to identify correctly burns which need specialist referral 		
	Be able to recognise toxic shock syndrome		

Spine			
By the end c	of this training period the trainee will:	Assessment methods	GMP
Knowledge	 Understand the mechanisms and risk of spinal injury in children 	E, Mi, C, ACAT, L	1
	 Understand the anatomic myotomes and dermatomes 		
	Be aware of SCIWORA		
	 Understand the pathophysiology and signs of spinal shock and its treatment 		
Skills	Be able to manage the anxious immobilised child	Mi, C, D, L	1
	 Be able to examine the spine and apply the indications for being able to clinically 'clear' the spine 		

3. Practical procedures and investigations

By the end c	f this training period the trainee will:	Assessment Methods	GMP
Knowledge	Understand the appropriate relevant anatomical markers, indications, contraindications and complications of procedures commonly used in the Emergency Department	E, C, Mi, ACAT	1
	 Understand local and national guidelines for obtaining informed consent 		
	 Understand local guidelines for providing sedation and pain relief in the Emergency Department 		
	 Understand and practise scrupulous aseptic techniques 		
	 Understand age-appropriate normal ranges of tests commonly requested in the Emergency Department setting 		
	 Understand the positive and negative predictive value of commonly performed tests 		
Skills	Be able to interpret results and undertake a management plan accordingly	Mi, C, D	1
	Be able to record results and document procedures legibly and accurately		
	 Be able to explain investigation results to caregivers and/or the patient 		
	 Be able to enlist the help of play therapists and nursing staff in order to attempt to reduce the anxiety of a child and caregivers 		
	 Recognise the importance of the disposal of sharps and understand the local guidelines for management of needle-stick injury be able to identify with patients requiring prophylaxis 		

4. Diagnostic procedures

By the end of sub-specialty training, trainees will be able to perform, interpret and teach the following diagnostic procedures:	Assessment Methods	GMP
Pulse oximetry	Mi, C, D, TO	1
Capnography and end tidal Co2 recording	Mi, C, D, TO	1
Measurement of peak flow	Mi, C, D, TO	1
Non-invasive and invasive blood pressure and central venous pressure measurement	Mi, C, D, TO	1
Collection of blood from central lines	Mi, C, D, TO	1
Umbilical venous cannulation and sampling	Mi, C, D, TO	1
Peripheral arterial cannulation	Mi, C, D, TO	1
Venesection	Mi, C, D, TO	1
Capillary blood sampling	Mi, C, D, TO	1
Intraosseous line insertion	Mi, C, D, TO	1
Saphenous vein cut down	Mi, C, D, TO	1
Suprapubic aspiration of urine	Mi, C, D, TO	1
Urethral catheterisation	Mi, C, D, TO	1
Routine testing of urine	Mi, C, D, TO	1
Electrocardiogram	Mi, C, D, TO	1
Lumbar puncture	Mi, C, D, TO	1
Visual acuity testing	Mi, C, D, TO	1
Fluorescein instillation into eye	Mi, C, D, TO	1

5 Therapeutic procedures

By the end of sub-specialty training, trainees will be able to perform and teach the following therapeutic procedures:	Assessment Methods	GMP
Acute Life Support/Resuscitation procedures		
Manual airway clearance manoeuvres	Mi, C, D, TO	1
Airway insertion	Mi, C, D, TO	1
Heimlich manoeuvre	Mi, C, D, TO	1
Oxygen delivery techniques	Mi, C, D, TO	1
Orotracheal and nasotracheal intubation (M)	Mi, C, D, TO	1
Mechanical ventilation (M)	Mi, C, D, TO	1
Use of Continuous Positive Airways Pressure (M)	Mi, C, D, TO	1
Replacement of tracheostomy tube	Mi, C, D, TO	1
Cricothyrotomy and percutaneous trans-tracheal ventilation	Mi, C, D, TO	1
Needle thoracentesis	Mi, C, D, TO	1
Tube thoracotomy	Mi, C, D, TO	1
Intraosseus line insertion	Mi, C, D, TO	1
Direct current electrical cardio-version defibrillation	Mi, C, D, TO	1
External cardiac pacing	Mi, C, D, TO	1
Pericardiocentesis	Mi, C, D, TO	1
Dentistry		
Re-implantation of tooth	Mi, C, D, TO	1
Splinting of tooth	Mi, C, D, TO	1
Reduction of TMJ dislocation	Mi, C, D, TO	1
ENT Procedures		
Control of epistaxis with cautery, anterior packing, posterior packing and balloon replacement	Mi, C, D, TO	1
Cerumen removal	Mi, C, D, TO	1
Incision and drainage of auricular haematoma	Mi, C, D, TO	1
Aural wick insertion	Mi, C, D, TO	1

Foreign Body Removal		
• Nose	Mi, C, D, TO	1
• Ear	Mi, C, D, TO	1
In soft tissue	Mi, C, D, TO	1
• Eye	Mi, C, D, TO	1
Ring removal	Mi, C, D, TO	1
Gastrointestinal procedures		
Oro/nasogastric tube replacement	Mi, C, D, TO	1
Gastrostomy tube replacement	Mi, C, D, TO	1
Gastric lavage	Mi, C, D, TO	1
Hernia reduction	Mi, C, D, TO	1
Reduction of rectal prolapse	Mi, C, D, TO	1
Genitourinary		
Paraphimosis reduction	Mi, C, D, TO	1
Urethral catheterisation	Mi, C, D, TO	1
Minor Surgical Procedures		
Infiltration of local anaesthetic	Mi, C, D, TO	1
Incision and drainage of abscesses	Mi, C, D, TO	1
Incision and drainage of paronychia	Mi, C, D, TO	1
Evacuation of sub-ungual haematoma	Mi, C, D, TO	1
Wound exploration and irrigation	Mi, C, D, TO	1
Wound repair with glue, adhesive strips and sutures	Mi, C, D, TO	1
Fingernail/nailbed injuries	Mi, C, D, TO	1
Emergency management of amputation (M)	Mi, C, D, TO	1
Musculoskeletal Techniques		
Immobilisation techniques	Mi, C, D, TO	1
Application of Broad Arm Sling	Mi, C, D, TO	1
Application of Collar and Cuff	Mi, C, D, TO	1

Application of Thomas Splint	Mi, C, D, TO	1
Pelvic stabilisation techniques	Mi, C, D, TO	1
Spinal immobilization/log rolling	Mi, C, D, TO	1
Fracture/dislocation reduction techniques		
Shoulder dislocation	Mi, C, D, TO	1
Elbow dislocation	Mi, C, D, TO	1
Phalangeal dislocation	Mi, C, D, TO	1
Supracondylar fracture with limb-threatening vascular compromise	Mi, C, D, TO	1
Patellar dislocation	Mi, C, D, TO	1
Ankle reduction	Mi, C, D, TO	1
Plaster techniques		
Backslabs	Mi, C, D, TO	1
• Splints	Mi, C, D, TO	1
• POP	Mi, C, D, TO	1
Neurological Procedures		
Lumbar puncture (M)	Mi, C, D, TO	1
Obstetric and Gynaecological Procedures		
Normal delivery	Mi, C, D, TO	1
Gynaecological speculum examination	Mi, C, D, TO	1
Ophthalmic Procedures		
Conjunctival irrigation	Mi, C, D, TO	1
Contact lens removal	Mi, C, D, TO	1
Eversion of eyelids	Mi, C, D, TO	1
Use of slit lamp	Mi, C, D, TO	1
Pain relief and sedation		
Pain scoring	Mi, C, D, TO	1
Non-pharmacologic measures	Mi, C, D, TO	1
		

Pharmacologic approaches	Mi, C, D, TO	1
Local anaesthetics	Mi, C, D, TO	1
Regional nerve blocks	Mi, C, D, TO	1
Procedural sedation techniques	Mi, C, D, TO	1

M = mandatory to demonstrate competency during sub specialty PEM training

6 The Paediatric Emergency Medicine assessment system

6.1 Introduction

The Emergency Medicine trainee should be familiar with the assessment, supervision and training sections of the EM parent curriculum. Using the standard assessment tools of CbD, Mini-CEX, DOPS and ACAT, together with additional tools used by the RCPCH (see below under blueprint), the trainee will gather evidence to demonstrate they have covered the content of the sub-specialty curriculum. Trainees may well have covered parts of this curriculum earlier in the EM programme and evidence of this can be amalgamated with that acquired in this additional year. However, trainees are expected to demonstrate competence in a number of key areas, even if they have previous experience of this topic, so competence can be confirmed. These competences are marked 'M' in the main curriculum. There is no summative assessment of knowledge (exam) but topics will be assessed using the above assessment tools

Each Paediatric Emergency Medicine trainee will be allocated an Educational Supervisor, who will be a recognised Paediatric Emergency Medicine trainer. The trainee is expected to meet with their Educational Supervisor as described below.

6.2 Reviewing educational progress

An initial meeting with the educational supervisor should occur within the first few weeks of the trainee starting their sub-specialty training post. At this meeting individual training requirements should be discussed and personal learning objectives set. This meeting is key to determining the activity for the year; previous experience is reviewed and the curriculum considered in detail, together with the ARCP decision tool.

A meeting must occur at least every three months throughout the period of training. The purpose of the meeting is to review progress and determine where additional work is needed to ensure curriculum coverage. An educational supervisor's report must be prepared prior to the national review, described below.

Supervising consultants are asked to complete a training report informed by the ARCP decision tool (see below) at 6 and 12 months. This will provide a formal review of the trainee's competences, identify areas for improvement and help inform the assessment process. Any problems identified through these reports will be addressed at the time of interview and fed back to the Deanery. It is ESSENTIAL that where there is concern about any aspect of a trainee's performance specific examples of the behaviour that has led to concern are provided. If an individual has not observed an aspect of a trainee's performance then they should not attempt to rate this area.

Trainees at this stage of their training are learning to work independently within a team, developing expert clinical reasoning and further developing their common competences. Evidence of acquiring these skills can come from workplace based assessments and the e-portfolio. From 2010 workplace based assessments will become mandatory for all trainees undertaking sub-specialty training.

6.3 ARCP decision tool

The competences required to successfully complete sub-specialty training must be clearly identified to the trainee, using assessment methods previously described in the EM parent curriculum. Trainees must provide evidence that they have covered the whole of the curriculum using the tools suggested. For EM trainees those items identified with 'M' must be assessed, even if previously covered. Those areas that are not identified with 'M' may well be covered again, and the trainee should optimise these learning opportunities using the tools available. Below are summary tables, with the ARCP decision tool, which provide a synopsis of what is expected.

6.4 Paediatric Emergency Medicine Annual Review Process

In addition to the local deanery annual review (at which the trainee's ARCP is completed) there will be a national Paediatric Emergency Medicine annual review towards the end of the training year. This formative process will inform the deanery review processes.

The yearly review will be carried out by the RCPCH Chair of the College Specialty Advisory Committee (CSAC), CSAC training advisors as well as representatives from the College of Emergency Medicine. The purpose of the review is threefold:

- 1. To review the trainee's educational progress in the sub-specialty, identify any areas of training still to be covered and how this will be achieved and give the trainee an opportunity to discuss any aspect of their training.
- 2. To provide information for the College's annual report to PMETB that standards have been met and that there is consistency across the national Paediatric Emergency Medicine training centres.
- 3. To provide an educational opportunity to develop the trainee's critical appraisal and presentation skills.

The yearly review will involve the following elements; the purpose to which these relate is identified in parentheses:

- A review of the trainee's portfolio using a standardised proforma. (1)
- A review of a report from the trainee's supervisor structured and standardised. (1)
- A review of completed workplace based assessments. The numbers required will differ according to parent specialty. In Emergency Medicine all topics indicated with an M (mandatory) must be assessed using the tools indicated. All other topics should have been covered in CT3 PEM or ST4-7 EM see ARCP decision tool. (1)
- A reflective summary by trainee on their sub-specialty training in Paediatric Emergency Medicine. Objective evidence will be sought, in particular across the areas covered in the PMETB specialty specific questionnaire. (2)
- Trainee presentation of a topic relevant to Paediatric Emergency Medicine with evidence of critical appraisal of the relevant literature. For Emergency Medicine trainees this may be the Clinical Topic Review presented for FCEM, if it was relevant to paediatrics. If this is not the case a scholarly project related to Paediatric Emergency Medicine, such as the generation of an e-learning module, evidence based guideline, or publication in peer reviewed journal (3).

The portfolio assessment sheet, structured training report and workplace based assessment sheets for the above are available at the end of this appendix.

6.5 Generic Competences

Generic Competences	
History taking	М
Clinical examination	М
Therapeutics and safe prescribing	М
Time management and decision making	CT3/ST4
Decision making and clinical reasoning	М
The patient as central focus of care	М
Prioritisation of patient safety in clinical practice	М
Team working and patient safety	CT3/ST4
Principles of quality and safety improvement	CT3/ST4
Infection control	CT3/ST4
Managing long term conditions and promoting patient self-care	CT3/ST4
Relationships with patients and communication within a consultation	М
Breaking bad news	М
Complaints and medical error	CT3/ST4
Communication with colleagues and cooperation	CT3/ST4
Health promotion and public health	CT3/ST4
Principles of medical ethics and confidentiality	CT3/ST4
Valid consent	CT3/ST4
Legal framework for practice	CT3/ST4
Ethical research	CT3/ST4
Evidence and guidelines	CT3/ST4
Audit	CT3/ST4
Teaching and training	CT3/ST4
Personal behaviour	CT3/ST4
Management and NHS structure	CT3/ST4
TOTAL 25, 8 MANDATORY in PEM	CT3/ST4

M= mandatory during PEM, CT3/ST4-7 = must have been covered during paeds training in EM

6.6 Clinical Competences for the Paediatric Emergency Medicine Physician

Clinical Competences for the Paediatric Emergency Medicine Physician		
Acute Life Support / resuscitation M		
Cardiology	CT3/ST4	
Heart failure	CT3/ST4	
Arrhythmia	М	
Syncope	М	
Cardiac inflammation	М	
Child and Adolescent Mental Health	М	
Child Protection and children in special circumstances	CT3/ST4	
Physical abuse	М	
Sexual abuse	М	
Self harm	М	
Neglect	М	
Apnoeic episodes in an infant M	М	
Dermatology		
Life threatening	CT3/ST4	
Eczema	CT3/ST4	
Bites and infestations	CT3/ST4	
Endocrinology and metabolic medicine		
DKA	CT3/ST4	
Hypoglycaemia	CT3/ST4	
Adrenal insufficiency	М	
Acid Base	М	
Gastroenterology		
Acute abdominal pain	CT3/ST4	
D&V	CT3/ST4	
GI bleeding	CT3/ST4	
Acute liver failure	CT3/ST4	

Recurrent abdominal pain	М
Constipation	CT3/ST4
Gynaecology and Obstetrics	•
Ectopic	CT3/ST4
STDs	CT3/ST4
Haematology and Oncology	·
Sickle cell	CT3/ST4
Anaemia	М
Purpura	CT3/ST4
Leukaemia/ lymphoma	М
Immunocompromised patient	CT3/ST4
Infection, Immunology and Allergy	
Septic shock	М
Febrile child	М
Common exanthems	М
Needle stick	CT3/ST4
Anaphylaxis	CT3/ST4
Kawasaki disease	М
Neonatology	
Congenital heart disease	М
Jaundice	М
Sepsis	М
Nephro-urology	
UТI	CT3/ST4
Hypertension	CT3/ST4
Acute scrotal pain	CT3/ST4
Neurology	
Coma	М
Meningitis	CT3/ST4

Seizures	CT3/ST4
Headache	М
Neurosurgery	
Blocked shunt	CT3/ST4
Ophthalmology	
Bells palsy	CT3/ST4
Conjunctivitis	CT3/ST4
Chemical injury	CT3/ST4
Orthopaedics	
Shoulder	CT3/ST4
Elbow	М
Wrist	М
Hand	М
Pelvis hip	М
Knee	М
Leg	М
Ankle	CT3/ST4
Foot	CT3/ST4
Plastic surgery	М
Poisoning and accidents	
Burns	CT3/ST4
Drowning	CT3/ST4
Major incident	CT3/ST4
Respiratory medicine, with Ear, Nose and Throat	CT3/ST4
Asthma	CT3/ST4
Acute stridor	CT3/ST4
Pneumothorax	CT3/ST4
Bronchiolitis M	М
Pneumonia	CT3/ST4

Pertusssis	CT3/ST4
Earache and discharge	CT3/ST4
Traumatic ear conditions	CT3/ST4
Epistaxis	CT3/ST4
Nasal trauma	CT3/ST4
Acute throat infections	CT3/ST4
Airway obstruction	CT3/ST4
Dental problems	CT3/ST4
Trauma	
Head injury	М
Abdominal injury	М
Chest injury	М
Pelvic injury	М
Crush injury	М
Major burns	М
Spinal injury	CT3/ST4
TOTAL 85, of which 38 are Mandatory in PEM	

M= mandatory during PEM level 3

CT3/ST4-7 = must have been covered during paeds training in EM

6.7 Table of PEM procedures

Acute	Life Support/Resuscitation procedures	Status
•	Manual airway clearance manoeuvres	CT3/ST4
•	Airway insertion	CT3/ST4
•	Heimlich manoeuvre	CT3/ST4
•	Oxygen delivery techniques	CT3/ST4
•	Orotracheal and nasotracheal intubation	М
•	Mechanical ventilation	М
•	Use of Continuous Positive Airways Pressure	М
•	Replacement of tracheostomy tube	CT3/ST4
•	Cricothyrotomy and percutaneous trans-tracheal ventilation	CT3/ST4
•	Needle thoracentesis	CT3/ST4
•	Tube thoracotomy	CT3/ST4
•	Intraosseus line insertion	CT3/ST4
•	Direct current electrical cardioversion defibrillation	CT3/ST4
•	External cardiac pacing	CT3/ST4
•	Pericardiocentesis	CT3/ST4
Dentis	stry	
•	Re-implantation of tooth	CT3/ST4
•	Splinting of tooth	CT3/ST4
•	Reduction of TMJ dislocation	CT3/ST4
ENT P	ocedures	
•	Control of epistaxis with cautery, anterior packing, posterior packing and balloon replacement	CT3/ST4
•	Cerumen removal	CT3/ST4
•	Incision and drainage of auricular haematoma	CT3/ST4
•	Aural wick insertion	CT3/ST4

Foreign E	Body Removal	
• No	ose	CT3/ST4
• Ec	ar	CT3/ST4
• In	soft tissue	CT3/ST4
• Ey	ve	CT3/ST4
• Ri	ng removal	CT3/ST4
Gastroin	estinal procedures	
• 0	ro/nasogastric tube replacement	CT3/ST4
• G	astrostomy tube replacement	CT3/ST4
• G	astric lavage	CT3/ST4
• He	ernia reduction	CT3/ST4
• R6	eduction of rectal prolapse	CT3/ST4
Genitour	inary	
• Pc	araphimosis reduction	CT3/ST4
• Ur	ethral catheterisation	CT3/ST4
Minor Su	rgical Procedures	
• In	filtration of local anaesthetic	CT3/ST4
• In	cision and drainage of abscesses	CT3/ST4
• In	cision and drainage of paronychia	CT3/ST4
• Ev	acuation of subungual haematoma	CT3/ST4
• W	ound exploration and irrigation	CT3/ST4
• W	ound repair with glue, adhesive strips and sutures	CT3/ST4
I	ngernail/nailbed injuries	CT3/ST4
• Fir		0.0,01.

Musculoskeletal Techniques	
Immobilisation techniques	CT3/ST4
Application of Broad Arm Sling	CT3/ST4
Application of Collar and Cuff	CT3/ST4
Application of Thomas Splint	CT3/ST4
Pelvic stabilisation techniques	CT3/ST4
Spinal immobilization/log rolling	CT3/ST4
Fracture/dislocation reduction techniques	
Shoulder dislocation	CT3/ST4
Elbow dislocation	CT3/ST4
Phalangeal dislocation	CT3/ST4
Supracondylar fracture with limb-threatening vascular compromise	CT3/ST4
Patellar dislocation	CT3/ST4
Ankle reduction	CT3/ST4
Plaster techniques	
Backslabs	CT3/ST4
• Splints	CT3/ST4
• POP	CT3/ST4
Neurological Procedures	
Lumbar puncture	М
Obstetric and Gynaecological Procedures	
Normal delivery	CT3/ST4
Gynaecological speculum examination	CT3/ST4
Ophthalmic Procedures	
Conjunctival irrigation	CT3/ST4
Contact lens removal	CT3/ST4
Eversion of eyelids	CT3/ST4

Use of slit lamp	CT3/ST4
Pain relief and sedation	
Pain scoring	CT3/ST4
Non-pharmacologic measures	CT3/ST4
Pharmacologic approaches	CT3/ST4
Local anaesthetics	CT3/ST4
Regional nerve blocks	CT3/ST4
Procedural sedation techniques	CT3/ST4
Total 71, 5 Mandatory	

6.8 Level 3 PEM ARCP DECISION AID

Level 3 PEM ARCP DECISION	ON AID
Common competences	Competent in all the competences listed, of which 8/25 must be demonstrated in this year at level 4 and in the context of Paediatric EM. Evidence of competence gained previously in those areas not covered must be provided
	(ACAT/CBD/Mini-CEX)
Emergency	For each area competence must be demonstrated.
presentations by system	All 38 (marked with M) must be demonstrated in this year Evidence of competence gained previously in those areas not covered must be provided
	(ACAT/CBD/Mini-CEX)
Practical procedures	For each area competence must be demonstrated
	> 2/3 must be demonstrated in this year and all those marked with M (5). Evidence of competence gained previously in those areas not covered must be provided
	(ACAT/CBD/Mini-CEX)
Management and leadership	Demonstrates leadership competency in all areas in relation to PEM
Safeguarding Children	Level 3
Life support courses	APLS, NLS, or EPLS
Minimum number of assessments by consultants or associate specialists	All assessments in this year must be undertaken by consultants (PEM, EM, PICU or Paeds Med) or Associate Specialists (AS) in these specialties
Experience	Should see >800 cases per 6/12 in EM
	Should have looked after >100 cases in the resuscitation room, PICU, HDU setting and be able to demonstrate this – by log book, computerised log books. All of these cases must originate in the resuscitation room cases (but can be involved from ED or PICU perspective)
MSF	X1
Outcome	Failure to achieve the above will mean that sub specialty training recognition can not be awarded. Further advice would be needed from the schools of EM and Paediatrics to identify training needs and addition training

6.9 Educational supervisors report

For EM trainees there will be a PEM ST7 section within the e-portfolio to be used during this year.

PEM Assessment Standards: Blueprints for Level 3, ST7 PEM

This blueprint defines the assessment instruments that can be used to confirm that assessment standards have been met. It does not define which instruments will be used; these are defined in our overall assessment strategy.

Glossary of terms used

APLS: Acute Paediatric Life Support - a teaching course on paediatric life support with in-built assessment.

CbD: Case-based Discussion - an instrument to review patient management based on a case.

Critical Appraisal Project: project undertaken by sub specialty trainee in PEM which focuses on topic relevant to PEM and which includes critical appraisal of relevant literature on subject.

DOPS: Directly Observed Practical Procedures - an instrument to assess competence in practical procedures.

EPLS; European Paediatric Life Support - a teaching course on paediatric life support with inbuilt assessment.

MiniCeX: Mini-Clinical Evaluation exercise - an instrument to assess a clinical encounter.

MSF: Multi source feedback

NLS: Neonatal Life Support - a teaching course on neonatal life support with in-built assessment.

PCAT: Patient Consultation Assessment Tool - an instrument which assesses through direct observation consultation skills.

SAIL: Sheffield Instrument for Letters - an instrument to review quality of letter writing.

SHEFFPAT: Sheffield Parent Assessment Tool - an instrument giving feedback from parents on doctors' performance.

SPRAT: The Sheffield Peer Assessment Tool - a multi source feedback instrument.

STrAP: Specialty Trainee Assessment Process.

Structured Educational Supervisor's report: educational supervisor's structured report commenting on trainee's performance with regards Good medical practice, maintaining good medical practice, professional and clinical relationships, communication, ethical and legal knowledge.

ASSESSMENT STANDARDS: RCPCH BLUEPRINTS FOR LEVEL 3 in PEM

Standa rds	By the end of Level 3 training, trainees will demonstrate:	SPRAT	CbD	MiniCex	SAIL	DOPS	Portfolio	Structured Educational Supervisor	Critical Appraisal	Comment
The dutie	es of a doctor									
1	a commitment to advocate for the individual child in her/his particular context	1						1/		
Good cl	inical care									
2	responsibility for an effective response to complex challenges and stress in paediatrics	V	V	V			V	V		
3	effective responses to life-threatening situations and to unpredictability in paediatric clinical situations	V	V			V		V		
4	responsibility for an analytic and focused three-way consultation and examination		V	V				V		
5	commitment to focused and analytic assessments of common and complex clinical problems in paediatrics		V	V				V		
6	effective skills in making a safe decision about the 'most likely' diagnosis in paediatrics	V	V	V				V		
7	leadership skills in the management of common and complex conditions in general paediatrics and paediatric sub-specialties seeking additional advice and opinion as appropriate (as outlined in the Framework of Competences for Level 3 in General Paediatrics and the Paediatrics sub-specialties)	V	$\sqrt{}$	V				V		
8	effective skills in ensuring the management of behavioral, emotional and psychosocial aspects of illness in children and families	V	V					V		
9	expertise in a range of practical procedures in paediatrics specific to general and sub-specialist training	V				V	V	V		
10	effective skills in written communications for a range of audiences, for children and their families, colleagues and other organizations	V	V				V			

11	effective collaboration with other specialties in using and interpreting complex investigations undertaken in children	V	V			V		
12	responsibility for safe prescribing in paediatrics in common and complex situations and for the supervision of others		V			V		
13	effective leadership skills in the organisation of paediatric teamworking and effective handover	V	V			V		
14	effective skills in advising other agencies in child protection cases		V	V	V	V		
15	detailed, up-to-date knowledge of the science-base for general paediatrics or a paediatric sub- specialty (as outlined in the Framework of Competences for Level 3 in General Paediatrics and the Paediatric sub-specialties)		V			V		
16	detailed knowledge of common and serious paediatric conditions and their management in General Paediatrics or in a Paediatric sub-specialty		V			√		
17	effective skills in recognising and responding effectively to disordered growth and development of any king in paediatrics		V			√		
18	involvement in health promotion activities specific to general paediatrics or a paediatric subspecialty				1	√		
19	independent thinking to enable them to challenge guidelines and procedures in paediatrics where appropriate	1	1		√	V		
20	an application of risk assessment strategies through active involvement in the development, evaluation and implementation of policy and clinical governance activities in paediatric practice	1	1		√	V		
21	effective skills to maintain and develop knowledge and clinical skills required of a specialist in paediatrics	V			√	V		
22	responsibility for ensuring an open- minded approach to equality and diversity in the paediatric team				1	V		
23	detailed knowledge of the law regarding death, data protection, confidentiality and consent in paediatrics	1			√	√		

Teachin	g and training, appraising and assessing							
24	a commitment to effective teaching and training of colleagues working in different contexts in the care of children and young people	V			1	V		
25	effective skills in the training, supervision and assessment of a wide range of colleagues working in the care of children and young people	1			√	√		
26	understanding and application of complex methodological approaches in research in paediatrics				1		V	
Relation	ships with patients							
27	effective strategies to engage children in consultations and in the management of their care	V	V			V		SHEFFP AT PCAT could also be used
28	effective skills in conveying and discussing difficult information, including death and bereavement, with young people and their families	V	1			V		SHEFFP AT PCAT could also be used
29	effective skills in giving information and advice to young people and their families in common and complex cases	V	1			V		SHEFFP AT PCAT could also be used
Working	with colleagues							
30	positive and constructive relationships within teams of colleagues from a wide range of professional contexts	1	1			$\sqrt{}$		
31	a commitment to effective multi- agency and multi-disciplinary team- working for the care of children	1	1			V		
32	effective managerial skills in taking on a positive managerial role to support effective service provision	1	1			V		
33	effective skills in promoting clinical practice through engagement with local, national and international organizations involved in the care of children	1				V		
Probity								
34	exemplary professional and personal conduct so as to act as a role model to others	√	1			V		

35	responsibility for ensuring their own reliability and accessibility and that of others in the team	1					V	
Heath								
36	Effective skills in ensuring their own responsible approach to personal health, stress and well-being and that of others	V				V	$\sqrt{}$	
Paediat	ric emergency medicine curriculum							
37	effective clinical skills reflecting wide range of topics in curriculum for subspecialty of paediatric emergency medicine		V	V		V	$\sqrt{}$	
38	expertise in range of practical procedures specific to sub-specialty of paediatric emergency medicine				1		V	

6.11 RCPCH WPBA forms

PORTFOLIO ASSESSMENT SHEET

NAME:

PORTFOLIO	Not present	Below average	Average	Good	Excellent	Any comments
General comments						
Structured, organized, easy for someone else to find their way around						
Evidence of learning from experience						
Appropriate balance between selectivity and evidence						
Range of evidence relating to areas of professional practice						
Paints a picture of doctor as a professional						
Specific sections						
Reflective summary for last year						
Evidence of appropriate CPD						
Teaches regularly, demonstrates planning and evaluates their teaching						
Clinical experience summarized with discussion of learning from posts						

Reviewer comments			
Highlights			
What could be edited out?			
What would improve the portfolio?			

Paediatric Emergency Medicine Higher Specialist Training

Annual Educational Supervisor's Structured Training Report

Name of trainee			GMC number	
Current Year of T	raining			
Report covering	period:	From	†·	0
Paediatric Emerg	gency			
Training Program Region	me:			
Training Institution	1			
Educational Supe	ervisor			
PMETB post appro	oval		Training Number	

WPBA in current placements (only successful WPBAs should be included here)						
Assessment	Dates and number	Outcome	Comments			
Mini-CEX						
DOPs						
CBD						

MSF			
Other (please specify)			
Experiential outc	omes (please re	view evidence in lec	arning portfolio)
Activity	Date	Outcome	Comments
Log book			
CG activity			
PDP			
Educational achievements			
Management			
Short courses (any life support recertification required)			
Other evidence			

Other outcome to be considered that may not be in the learning portfolio						
Activity	Date	Outcome	Comments			
Critical incidents						
Complaints						
Other						

	Critical incident	rs .				
	Complo	iints				
	Other					
1) [Date com	npleted				
2) F	Please list	other st	aff consulted pric	or to completing this I	report:	
Hav	e you dis	scussed	this report with th	e trainee?		
Yes		No				
Has	the train	ee seen	this report and si	gned it before submi	ission?	
Yes		No				
-	-		itisfied with the ov	verall performance c	of the trainee during	
Yes		No				
Any	other co	mment	S			

Summary of Trainees Assessment	
Educational Supervisor to complete. Please or give examples of behaviours.	e attach evidence if available to support opinions
Strengths of Trainee	
Weaknesses of Trainee	
TYCARTICSSCS OF ITALITICS	
Suggestions for improvement	
I confirm that this is an accurate description and WPBA, covering the period from	n/summary of this trainee's learning portfolio
toto	
Name and Signature	Trainee Signature
Date:	Date:
I confirm that I conform to the standards of Medical Practice	probity and health required by the GMC in Good
Signed (Trainee):	
Date	

Mini CEX – Mini Clinical Examination

Doctor's surname		GMC numbe	r	Training year			
Sc	enario:	seriously ill po	ntient / serious	trauma / other case	?S		
Cli	nical problem:	respiratory / o	cardiac / syste	emic shock / neurolo	ogical / trauma		
Cc	omplexity of case	Low Avera	ge High				
As	sessor's position	Consultant	more senior S	pR SAS doctor			
Ov	rerall performanc	:e:					
	Below expectati reassessment	ions and requi	res significant o	additional learning b	pefore		
	Nearly at expec	ted level over	all with one or	r two small areas of I	earning required		
	At expected lev	vel .					
	Exceeds expect	ted performar	nce at trainee	's level			
As	Assessor's Signature Trainee's signature						
As	Assessor's Name: Trainee's Name						
As	Assessor's Grade:						
Do	ite of assessment	: :	_				

Mini-CEX - Key areas for improvement and development:

Please grade the following areas using the scale	Below expectations for ST level	At trainees expected level of	expectations	At the level of consultant	Area not observed	Please write specific comments on excellence or area of concern for trainee to concentrate on
Initial assessment and						
management of the airway						
Initial assessment and						
management of the breathing						
Initial assessment and						
management of circulatory						
Initial assessment and						
management of the						
Appropriate selection and						
interpretation of investigations						
Construction of differential						
diagnosis						
Appropriate definitive						
management plan and ongoing						
Referral to appropriate						
inpatient specialty						
Management of the team						
Communication with the						
Child and/or accompanying						

Mini-CEX Explanatory notes for the assessor

Thank you for completing this form which will provide the record of satisfactory assessment of a core clinical skill prior to progression as part of their annual ARCP. In addition, the form gives an opportunity for the trainee to discuss further learning objectives in the light of their performance that can be recorded and reviewed later. The form will be kept in the trainee's portfolio and should be countersigned. We would recommend you take a copy for your staff file.

The trainee is expected to approach you and request assessment. Ideally you will have been involved in their workplace based learning and therefore agree that the trainee is ready for this summative assessment. You may however not get time to discuss the preparedness of the trainee to be assessed before this type of case arrives and during the case it may become apparent that the trainee is either not fully ready or that the case is more complex than they can cope with and you will need to intervene.

Clearly patient safety is key and the assessment must stop if there is any risk to patient care. However even in those circumstances a thoughtfully completed form is useful for the trainee's portfolio to guide future development and we would recommend completing the form in all circumstances.

The case should be graded as to the complexity of the case. The trainee will be assessed on 8 cases over a year, and these should include low, moderate and highly complex cases. The cases should include serious illness, serious trauma and a mixture of cases reflecting the variety of Paediatric problems encountered within Paediatric emergency setting. The mini-CEX can also be used to focus on communication skills as well as their clinical skills.

Please remember that this is for the assessment of trainees in their higher specialty training programme. Your assessment of their competence should be against what you would expect of a trainee at their current level.

For each area or domain that you are assessing, there is space to write comments. These should include specific examples of good practice demonstrated by the trainee as well as any specific example where their performance is not to standard. These comments are greatly valued by the trainee and should be a comprehensive as possible.

There may be a requirement to complete an additional assessment form for a particular skill. For example, if the trainee elects to insert an intraosseous line, the DOPS assessment form may be used in conjunction with this form if required.

At the end we would ask that you give an overall view of the trainees performance as well as agree with the trainee any future learning needs and objectives.

Suggested criteria for performance	Unacceptable performance (below expectation)	Acceptable for sub-specialty trainee (at expected level)	Above expected level for sub-specialty trainee
Initial assessment and management of the airway	t Ignores obstructed airway, fails to give supplemental oxygen, canno open airway,	Manages airway and assists or performs RSI performs (if completed PIU training)	Supports trainee through RSI
Initial assessment and management of the breathing and ventilation	t Inadequate assessment, fails to recognise ventilatory compromise, inadequate manual ventilation or inappropriate chest	Manages ventilated patient (if post PICU training),	Manages respiratory condition and supports learning opportunity for other trainees
Initial assessment and management of circulatory status	t Inadequate assessment, fails to recognise circulatory compromise or arrhythmia, failure to act on	Manages circulatory collapse, treats peri-arrest arrhythmias Leading team	Manages advanced or anticipates impending circulatory compromise and supports other trainees
Initial assessment and management of the neurological status of patient	t Inadequate assessment and fails to	Recognises neurological problem, timely independent action and treatment,	Manages problem comprehensively and provides learning opportunity for others
Appropriate selection and interpretation of investigations	Orders investigations indiscriminately or cannot justify Selection Inadequate or incorrect interpretation of results	Selectively orders investigations, recognises time critical investigations, interprets subtle abnormalities and plans medium term management of non life	Appropriate selection, high level analysis of results and provides learning opportunity for others
Construction of differential diagnosi	s Differential lacks key potentially life threatening or important diagnosis Differential non selective and poorly prioritized for likelihood		Comprehensive differential with succinct justification as learning opportunity for others

Appropriate definitive management plan and ongoing care	Fails to make on going management plan, short term only	Able to define likely definitive management and potential time course as well as possible complications and treatment/prevention	Able to predict possible variance from predicted recovery including for less likely diagnoses
Referral to appropriate inpatient specialty	Poorly structured inappropriate referral, failure to refer to correct specialty	Structured referral with emphasis on key requirements for specialty and summary of progress, deals with possible reluctance from specialty	
Management of the team involved	Failure to recognise needs of team, doesn't use all team members, inappropriate task allocation, , poor communications	Good team leadership, stands back, delegation and support of team, team debrief attempted	Develops team spirit, utilizes opportunities for individual development of team members, good team debrief and suggestions
Communication with the child and accompanying Adult	Ignores child, accompanying adults, poor transfer of information, doesn't listen to information given by Adult or child	Ensures parents informed and supported by nursing staff, updates on status, involves in decisions and	Deals with difficult parents during patient encounter, manages adverse reactions

Further information about SPRAT and SheffPAT Is available on Healthcare Assessment and Training website www.hcat.nhs.uk