



APEM Fellowship EXAM  
Preparation  
Handbook



## The ACEM Paediatric Emergency Medicine Curriculum

Expert level of practice topics are in BOLD and UNDERLINED, high level of practice topics are in BOLD and general topics are just listed. The expert and high level of practice topics are usually the ones tested in SAQ and EMQ.

### **RESUSCITATION**

#### Airway

#### Airway Management

#### Life Support

#### Shock (SVM)

#### Age-specific differences

### **ANAESTHETICS**

#### General Anaesthetic Techniques

#### Local Anaesthetic Techniques

#### Pain Management

#### Procedural Analgesia and Sedation (SVM)

### **Cardiovascular**

#### **ECG's / CXR's**

#### **Valvular disorders**

Disorders of the myocardium

Atrial septal defect

Ventricular septal defect

Dextrocardia

Disorders of the pericardium

Acute pericarditis

Constrictive pericarditis

Pericardial effusion

Pericardial tamponade

#### Disturbances of cardiac rhythm

#### Bradycardias

#### Tachycardias

#### Narrow complex regular

#### Narrow complex irregular

#### Wide complex regular

#### Wide complex irregular

#### Torsade des pointes

#### Ventricular fibrillation

#### Accessory pathways

#### Wolff-Parkinson-White syndrome

#### International guidelines for the management of Arrhythmias

Endocarditis

Tumours

Congenital heart disease

Cyanotic heart disease

Rheumatic fever

### **Respiratory**

#### Upper airway obstruction

Croup

#### **Bronchiolitis**

#### **Pneumonia / CXR**

Empyema

**Acute lung injury/respiratory distress syndrome**

#### Asthma

#### **Haemoptysis**

Cavitating lung lesions

Isolated "coin" lesions on chest x-ray

Congenital/neonatal

Bronchopulmonary dysplasia

Cystic fibrosis

### **Gastrointestinal**

Gastroesophageal reflux

Tracheo-oesophageal fistula

Inflammatory bowel disease

Gastroenteritis

Hepatic disorders

Jaundice

Interpretation of liver function tests

Hepatic failure

Hepatitis

### **Neurological**

Disorders of the cranial nerves

Facial nerve paralysis

Headache and facial pain

Indications for imaging (CT, MRI)

Migraine



Raised intracranial pressure  
Thrombotic CVA  
Altered mental state  
Coma  
Approach to ataxia and gait disturbances  
Seizures  
The floppy infant  
Status epilepticus  
Dystonic reactions  
Lumbar puncture  
Interpretation of CSF fluid biochemistry, cell count and microbiology  
**Infectious disorders of the CNS and PNS**  
**Meningitis /Encephalitis**  
Abscess  
Tuberculosis  
Toxoplasmosis  
Cryptococcal infection  
HIV  
Guillain-Barré syndrome  
Multiple sclerosis  
Botulism  
Diphtheria  
Tetanus  
Myopathy  
Periodic paralysis  
Hydrocephalus  
Complications of the central nervous system devices (V)  
Disorders of the spinal cord

### **Endocrine**

Hypoglycaemia  
Diabetic ketoacidosis  
Adrenal disorders  
Acute adrenal insufficiency (adrenal crisis)  
Congenital adrenal insufficiency  
Cushing's disease  
Conn's syndrome  
Pheochromocytoma  
Thyroid disorders – thyroid storm  
Pituitary disorders  
Panhypopituitarism

### **Haematological**

Interpretation of haematological investigations  
Anaemia  
Abnormal haemoglobins  
Disorders of haemostasis and coagulation  
Neutropenia  
Thrombocytopenia  
Disorders of white cells

### **Oncology**

Acute spinal cord compression  
Complications related to myelosuppression  
Febrile neutropenia  
Immunosuppression and opportunistic infections  
Thrombocytopaenia and haemorrhage

### **Renal**

Interpretation of urine dipstick microscopy and culture  
**UTI**  
Pyelonephritis  
Infected obstructed kidney  
Acute renal failure  
Chronic renal failure  
Hyperkalaemia in renal failure  
Renal dialysis  
Peritoneal  
Intermittent haemodialysis  
Continual renal replacement therapies  
Complications of renal dialysis  
Haemolytic uremic syndrome  
Polycystic kidney disease  
Rhabdomyolysis

### **Rheumatology**

Juvenile Chronic arthritis  
Approach to limping child

### **Dermatology**

Dermatitis and eczema  
Urticarial and allergic rashes



Viral exanthems  
Macular rashes  
Maculopapular lesions  
Erythema multiforme  
Erythema nodosum  
Petechial and purpuric rashes  
Vesicular and bullous rashes  
Pemphigus/ Pemphigoid  
**Staphylococcal scalded skin syndrome**  
**Stevens-Johnson syndrome**  
**Toxic epidermal necrolysis**  
Herpetic infections  
Dermatological manifestations of underlying systemic disease

### **Infectious disorders**

Febrile infant management  
**Bacteraemia**  
**Systemic inflammatory response syndrome**  
**Sepsis, severe sepsis and septic shock**  
Multiple organ dysfunction  
Toxic shock syndrome  
Infections in the returned traveller  
Malaria  
Dengue fever  
Haemorrhagic fevers  
Typhoid  
Food poisoning  
Meningococcaemia  
Tuberculosis and other mycobacterial infections  
Haemophilus influenzae  
Infectious mononucleosis  
Influenza/parainfluenza  
Herpes simplex /Herpes zoster  
Mycoplasma infections  
Fungal infections  
Tick-borne infections

### **Immunology**

Allergic reactions /Anaphylactoid reactions

### **Anaphylaxis**

### **Angioedema**

Drug allergies  
Systemic lupus erythematosus  
Vasculitis  
Polyarteritis nodosa  
Wegener's granulomatosis  
Kawasaki's disease  
Henoch Schonlein Purpura  
Sarcoidosis  
Complication of immunosuppressant agents

### **Metabolic**

Hypokalaemia /Hyperkalaemia  
Hyponatraemia/Hypernatraemia  
Hypocalcaemia /Hypercalcaemia  
Hypermagnesaemia /  
Hypomagnesaemia  
Hyperphosphataemia  
Hypochloraemia / Hyperchloraemia  
Inappropriate ADH syndrome  
Interpretation of the electrocardiograph in electrolyte disturbance

### **Acid Base Disorders**

As applied to paediatric metabolic disorders / DKA / Renal tubular acidosis / pyloric stenosis

### **Neonates and Infants**

Apnoea of prematurity  
Hyperbilirubinaemia  
Feeding problems  
Congenital heart disease  
Diaphragmatic hernia  
Congenital syndromes  
Gastroesophageal reflux  
Metabolic disease  
Necrotising enterocolitis  
Respiratory distress  
Seizures  
Infections/sepsis / Occult bacteraemia  
Sudden infant death syndrome



## SURGICAL

### Trauma – expert level knowledge expected

#### Assessment and management of head trauma

##### Minor head injury

Post concussive syndrome

Chest trauma

Abdominal trauma

Genitourinary trauma

Pelvic trauma

Spinal cord injury

Cord syndromes / SCIWORA

Neck trauma

Maxillofacial trauma

Trauma in children and differences in management

##### NAI

### Burns

Assessment and management of trauma in children

Paediatric aspects of trauma management

Non-accidental injury

### Thoracic

Mediastinal masses

Oesophageal foreign body

Tracheobronchial foreign body

### Abdominal

#### Assessment and management of abdominal pain

Non-traumatic splenic rupture

Bowel obstruction

Malrotation / Volvulus

Congenital pyloric stenosis

Intussusception

##### NGT insertion

Meckel's diverticulum

Acute appendicitis

Constipation

Anal fissure

### Orthopaedic and Hand

Salter-Harris classification

Injuries about the elbow

The child with a limp

Osgood-Schlatter disease

Perthe's disease

Slipped capital femoral epiphysis

Transient synovitis

Developmental hip dislocation

Elbow

##### Pulled elbow

Forearm bones

Wrist

Supracondylar fractures

### Neurosurgical

Cerebral tumours

Shunt complications

Intracranial abscesses

Cerebral venous thrombosis

### Urology

Urinary catheter insertion

Vesico-ureteric reflux

Acute scrotum/ Epididymitis / Orchitis

Testicular torsion / Torsion of the testicular appendage

Phimosis/paraphimosis

### ENT

Otitis media / mastoiditis/ Sinusitis

Stomatitis /Pharyngitis / Tonsillitis /

Peritonsillar abscess/ Retropharyngeal abscess

Epiglottitis /Laryngitis /Tracheitis

Post-tonsillectomy bleed

Foreign bodies

### PSYCHIATRY

Deliberate self-harm /Adolescent issues /Depression /

Eating disorders/ Anxiety disorders

The “challenging” ED patient /Frequent presenter / Munchausen's by proxy



Involuntary detention of the child

**LEGAL**

Consent / Capacity to consent Children  
and adolescents

Guardianship Board

Privacy and confidentiality

Reporting Child abuse/child at risk.



## Suggested PEM Reference List for the Exam

### Textbooks:

**Rosen's Textbook Emergency Medicine,**

**Tintinelli: Emergency Medicine A Comprehensive Study Guide.**

For 'Expert' & 'High level' topics. Good for Core knowledge (MCQ) and 'approach' questions as well as generating differentials or lists. Useful for 'Outline' questions in SAQ format.

**Textbook of Pediatric Emergency Medicine.**

(6<sup>th</sup> edition. Fleisher GR & Ludwig S. Lippincott Wilkins & Williams.)

Excellent for 'Expert' & 'High level' topics. Good for Core knowledge (MCQ)

**Dunn: The Emergency Medicine Manual**

Great for framework and structure for SAQ, revision for MCQ. Many chapters not up to date and not great for detail for paediatric topics.

**Cameron: Textbook of Paediatric Emergency Medicine**

Good general guide only.

**Nelson's Textbook of Pediatrics** (via Clinician Knowledge Network CKN)

Reference for 'Expert' & 'High Level' topics. For core knowledge for SAQ/MCQ. Not good for bedtime reading!

**Emergency Medicine MCQ's**

Yolande Weiner, Waruna De Alwis

Excellent resource for MCQ and covering the core curriculum in PEM (and adults)

### Clinical Guidelines:

**Queensland Health – Child Health Services Guidelines 2011/2012**

**Royal Children's Melbourne Clinical Practice Guidelines**

**NICE Guidelines program**

All Available via the internet

UpToDate / Emedicine

Available via CKN on hospital intranet or private subscriptions.

Great for 'Expert' & 'High level' topics. Core knowledge – SAQ / MCQ answers

Specific Review articles

E.g. Lancet / EMA / Clinical Pediatric Emergency Medicine / Journal of Paediatrics & Child Health / Paediatrics / Circulation etc

Important for Ex & H topics, for 'discuss' higher level knowledge consultant knowledge for SAQ and 'fireside chats'.

Atlases

Vital revision for dermatology, radiology atlases, paediatrics, emergency medicine – for VAQ revision.