

MODULE TITLE:	EMERGENCY (excluding Trauma and Emergencies defined by other subspecialties)	7-Nov-2016
DEVELOPED BY:	Graeme Campbell, Peter Danne, Philip Truskett	
REVIEWED BY:	Alan Saunder (2010) Ian Campbell, Michael Cox, Li Hsee, Michael Rodgers, Emma Secomb, Graham Stewart (2013). Priscilla Martin, Richard Turner (2016).	
Module Rationale and Objectives	<p>By its very nature, an emergency situation requires decisive decision-making and effective timing of any surgical intervention. This module addresses issues that need to be considered in both decision-making and surgical management. The trainee should have expertise in all aspects of the management of General Surgery emergency conditions.</p> <p>The graduating trainee will be able to:</p> <ul style="list-style-type: none"> ▪ describe common acute surgical pathologies of the abdomen, head and neck, chest, and limbs ▪ identify and recognise the symptoms and signs of these conditions ▪ efficiently and effectively examine the patient ▪ describe and select appropriate diagnostic testing ▪ order and interpret appropriate imaging investigations ▪ formulate a differential diagnosis based on investigative findings ▪ identify appropriate treatment options, and their indications and contraindications ▪ safely and effectively perform appropriate surgical procedures ▪ communicate information to patients (and their family) about procedures, outcomes, and risks associated with surgery in ways that encourage their participation in informed decision making (consent) ▪ appreciate the role of other disciplines in emergency care and team-based management 	
Anatomy, Physiology, Pathology	<p>Trainees should have thorough knowledge of the normal embryology, anatomy, physiology, and pathology, of:</p> <ul style="list-style-type: none"> ▪ the abdominal cavity and its contents ▪ head and neck ▪ the thorax and its contents ▪ the upper and lower limbs 	
Suggested Reading	<p>Trainees who are preparing to sit the Generic and Clinical Examinations need to refer to the recommended reading list on the RACS website at www.surgeons.org</p> <p>For the Fellowship examination, recommended text books:</p> <ol style="list-style-type: none"> (1) Current Surgical Diagnosis and Treatment (ISBN 9780071590877), 13th edition by L.W. Way and G.M. Doherty. (2) CCrISP Manual (3) War Surgery in Afghanistan and Iraq: A Series of Cases of 2003-2007 (ISBN 9780981822808), edited by S.C. Nessen, D.E. Lounsbury, and S.P. Hetz. <p>Trainees are expected to keep abreast of the current literature, including textbooks, journal articles, consensus guidelines and other on-line resources.</p>	
Learning Opportunities and Methods	<p>If state-based and/or local hospital courses/meetings are available, trainees are strongly advised to avail themselves of these opportunities. This also includes practising procedures on simulation equipment where applicable.</p> <p>Trainees are encouraged to present their research at national and/or accredited regional training days, in order to fulfil the research requirement.</p>	
How this module will be assessed	<p>The Generic and Clinical Examinations; Fellowship examination (written and viva voce sections); Trainee evaluation forms and logbooks; SEAM (where applicable).</p>	
Definitions	<p><i>Operative Management - Knows:</i> Trainees are required to be familiar with the indications, benefits and limitations of the procedure; trainees should be able to describe the relevant operative techniques involved in performing the procedure; trainees are encouraged to at least observe and preferably assist in these procedures.</p> <p><i>Operative Management - Does:</i> In addition to the above, trainees must be competent at performing the procedure.</p>	

SET LEVEL	MEDICAL EXPERTISE	JUDGEMENT / CLINICAL DECISION MAKING			TECHNICAL EXPERTISE	
	ANATOMY PHYSIOLOGY PATHOLOGY	CLINICAL ASSESSMENT	INVESTIGATIONS	PRINCIPLES OF MANAGEMENT	OPERATIVE MANAGEMENT - KNOWS -	OPERATIVE MANAGEMENT - DOES -
ABDOMINAL						
Acute Appendicitis						
Early SET	<ul style="list-style-type: none"> Describe anatomy and embryology including variations Describe pathophysiology 	<ul style="list-style-type: none"> Describe the clinical symptoms and signs 	<ul style="list-style-type: none"> Outline the appropriate use of and interpret laboratory and imaging 	<ul style="list-style-type: none"> Outline the principles of pre-operative, post-operative and non-operative management Recognise and manage post-operative complications 		<ul style="list-style-type: none"> Open appendicectomy Laparoscopic appendectomy
Mid SET				<ul style="list-style-type: none"> Synthesise strategy for unexpected pathology Management of appendiceal tumours Laparoscopic versus open 		<ul style="list-style-type: none"> Drainage of appendiceal abscess Conversion to hemicolectomy
Peritonitis of various aetiologies, pancreatitis, cholangitis and gastro intestinal bleeding						
<i>See also Upper GI/HPB, Colorectal, Small Bowel, and Transplantation Modules</i>						
Abdominal haemorrhage						
<ul style="list-style-type: none"> abdominal wall intra-peritoneal retroperitoneal 						
Early SET	<ul style="list-style-type: none"> Describe anatomy Describe pathophysiology 	<ul style="list-style-type: none"> Describe the clinical symptoms and signs Understand coagulation disorders 	<ul style="list-style-type: none"> Outline the appropriate use of and interpret laboratory and imaging 	<ul style="list-style-type: none"> Describe the management of each condition 		
Mid SET				<ul style="list-style-type: none"> Appreciate role of interventional radiology in management 	<ul style="list-style-type: none"> Drainage and control of retroperitoneal haemorrhage 	<ul style="list-style-type: none"> Extra-peritoneal drainage of collection
Late SET				<ul style="list-style-type: none"> Intra-abdominal haemorrhage control 		
Spontaneous bacterial peritonitis						
Early SET	<ul style="list-style-type: none"> Describe pathophysiology including microbiology 	<ul style="list-style-type: none"> Describe the clinical symptoms and signs Differential diagnosis 	<ul style="list-style-type: none"> Outline the appropriate use of and interpret laboratory and imaging 			
Mid SET				<ul style="list-style-type: none"> Describe the management of peritonitis in the presence of liver disease Basic understanding of antibiotics <ul style="list-style-type: none"> clearance resistance 	<ul style="list-style-type: none"> Removal and insertion of peritoneal dialysis catheter 	<ul style="list-style-type: none"> Laparotomy

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UROLOGICAL						
Urinary retention and urinary tract infection						
Early SET	<ul style="list-style-type: none"> Describe appropriate anatomy, aetiology and, patho-physiology of urinary retention 	<ul style="list-style-type: none"> Assess and diagnose urinary retention 	<ul style="list-style-type: none"> Arrange and interpret ultrasound if required 	<ul style="list-style-type: none"> Manage the condition of urinary retention Appropriate antibiotics for UTI Role of suprapubic catheters and know how to insert one in detail 		<ul style="list-style-type: none"> Catheterisation Suprapubic catheterisation
Phimosis and paraphimosis						
Early SET	<ul style="list-style-type: none"> Differentiate between normal and abnormal anatomy of penis and foreskin Explain the pathology of balanitis (acute and chronic) and foreskin adhesions (in children) 	<ul style="list-style-type: none"> Identify symptoms and examination findings 		<ul style="list-style-type: none"> Identify the medical indications for circumcision Contraindications 		<ul style="list-style-type: none"> Perform non-operative reduction of paraphimosis
Mid SET				<ul style="list-style-type: none"> Describe details of surgical management, including possible complications and postoperative care 		<ul style="list-style-type: none"> Circumcision <ul style="list-style-type: none"> elective acute
Epididymo-orchitis						
Early SET	<ul style="list-style-type: none"> Explain the etiology/pathogenesis Discuss the microbiology 	<ul style="list-style-type: none"> Recognise symptoms and examination findings 	<ul style="list-style-type: none"> Interpret microbiological investigations Select and interpret appropriate medical imaging modalities where indicated 	<ul style="list-style-type: none"> Plan medical management Provide details of medical management 		
Mid SET				<ul style="list-style-type: none"> Identify indications for surgical management Role of exploration of scrotum Describe details of drainage of scrotal abscess, including postoperative care 		<ul style="list-style-type: none"> Incision and drainage of scrotal abscess
Testicular torsion						
Early SET	<ul style="list-style-type: none"> Describe the variations in testicular/epididymal anatomy that may predispose to torsion Describe the pathology of testicular infarction 	<ul style="list-style-type: none"> Recognise symptoms and signs 	<ul style="list-style-type: none"> Discuss the appropriate use of ultrasound in diagnosis 	<ul style="list-style-type: none"> Identify indication for urgent surgical management, including basic procedural details Describe details of acute surgical management, including possible complications (of surgery and of delay to surgery) and how to deal with them 		<ul style="list-style-type: none"> Scrotal exploration of testes and orchidopexy Trans-scrotal orchidectomy (where indicated)

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Ureteric obstruction, including calculi and pyonephrosis						
Early SET	<ul style="list-style-type: none"> Describe the aetiology and pathophysiology of ureteric obstruction and sepsis 	<ul style="list-style-type: none"> Assess and diagnose ureteric obstruction and its causes 	<ul style="list-style-type: none"> Analyse: <ul style="list-style-type: none"> ultrasound CT scan urinary cultures biochemical tests of renal function 	<ul style="list-style-type: none"> Describe and demonstrate principles of management of: <ul style="list-style-type: none"> ureteric obstruction 		
Mid SET					<ul style="list-style-type: none"> Emergency ureteric stenting for infected obstructed kidney 	
GYNAECOLOGY						
Ectopic pregnancy						
Early SET	<ul style="list-style-type: none"> Describe the underlying anatomy and pathophysiology of ectopic pregnancy 	<ul style="list-style-type: none"> Diagnose and inform patient of differential diagnosis of ectopic pregnancy 	<ul style="list-style-type: none"> Arrange and interpret: <ul style="list-style-type: none"> pelvic ultrasound pregnancy tests 	<ul style="list-style-type: none"> Discuss the principles of management of ectopic pregnancy and haemorrhage 		
Mid SET					<ul style="list-style-type: none"> Operations for ectopic pregnancy, repair of Fallopian tube 	<ul style="list-style-type: none"> Salpingectomy
Ovarian cysts						
Early SET	<ul style="list-style-type: none"> Indicate causes of ovarian cysts 	<ul style="list-style-type: none"> Differential diagnosis 	<ul style="list-style-type: none"> Pelvic ultrasound 			
Mid SET			<ul style="list-style-type: none"> Management of adnexal masses 	<ul style="list-style-type: none"> Discuss the principles of management of cystic lesions of the ovary Management of rhesus isoimmunisation 	<ul style="list-style-type: none"> Oophorectomy 	<ul style="list-style-type: none"> Ovarian cystectomy
ENT						
Epistaxis						
Early SET	<ul style="list-style-type: none"> Anatomy of nasal cavity 	<ul style="list-style-type: none"> Determine significance and when to refer 	<ul style="list-style-type: none"> Appropriate haematology investigations 	<ul style="list-style-type: none"> Control of haemorrhage (including interventions) Control medical factors 	<ul style="list-style-type: none"> Nasal packing 	

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SEPSIS						
Focal Sepsis						
Early SET	<ul style="list-style-type: none"> Describe the anatomy and pathophysiology of focal sepsis as it relates to skin, the limbs, solid organs, and body cavities Fournier's gangrene: See Skin & Soft Tissue Module 	<ul style="list-style-type: none"> Assess and diagnose focal sepsis 	<ul style="list-style-type: none"> Arrange and interpret: <ul style="list-style-type: none"> CT Scans Ultrasound Plain X Rays 	<ul style="list-style-type: none"> Demonstrate an ability to assess the level of severity of sepsis Demonstrate an ability to provide appropriate resuscitation Demonstrate an understanding of the appropriate choice of antibiotics and their side effects Demonstrate an ability to choose appropriate methods of drainage, either open or image guided percutaneous drainage Demonstrate an understanding of the managements of drainage tubes Understanding necrotising conditions Use of appropriate antibiotics 		<ul style="list-style-type: none"> Drainage of an abscess
Mid SET						<ul style="list-style-type: none"> Debride necrotising fasciitis: See Skin & Soft Tissue Module Open drainage of abscesses of the abdominal cavity and abdominal solid organs Fournier's gangrene: See Skin & Soft Tissue Module
Sepsis Syndrome						
<i>See also Sepsis Module and CCriSP Manual</i>						
Early SET	<ul style="list-style-type: none"> Describe the pathophysiology of the Sepsis Syndrome 	<ul style="list-style-type: none"> Assess and diagnose the Sepsis Syndrome 		<ul style="list-style-type: none"> Demonstrate an understanding and indication in the use of antibiotics, resuscitative fluids, and vasoactive agents Understanding organ dysfunction 		<ul style="list-style-type: none"> Gain access for central line placement