



MODULE TITLE:	THE OPERATING THEATRE	Authors: Joanne Dale, Simon Bann, Ian Rebello, Sayed Hassen, Richard Turner, Chris Pyke, Steve Rodgers-Wilson
Rationale	<p>This module has been designed to introduce you to the theatre environment.</p> <p>As a general surgeon you must understand theatre protocols and observe and employ standards of behaviour in yourself and others in the team.</p> <p>Educational material provided within this module is not intended to be complete, and is not a textbook. The module forms the framework on which to build your knowledge and expertise in patient safety and competence in your overall performance in the operating theatre.</p> <p>You are expected to undertake further reading in order to complete the module successfully.</p>	
Objectives	<p>The objectives of the module are to:</p> <ul style="list-style-type: none">Introduce you to details of operating theatre management protocols and the basic science principles upon which these are basedUnderstand the role of all members of the theatre team including non-technical skillsUnderstand and apply the principles of safety, for staff and patientUnderstand theatre designUnderstand the principles of specimen handling and management of formalin spillsIntroduce you to surgical tools and techniquesIntroduce you to non-technical skills in safe surgery	
Topics and keywords	<p>Below is a list of topics and associated keywords covered in the eLearning module. Trainees are expected to undertake further learning to cover the broad spectrum of The Operating Theatre.</p> <ul style="list-style-type: none">Patient Safety - positioning, risks, nerve injuriesSpecimen Handling - specimen handling, formalin spillsTheatre Team - teamwork, surgical assistingTheatre Design - design, standard theatre, recoveryOperative Equipment - energy sources, instrumentation, tissue approximation, haemostasis agents	
Recommended Reading	<ul style="list-style-type: none">Skinner, I, Perry, R. Fundamental Skills for Surgery. McGraw-Hill Medical: Melbourne, 2008<i>A Surgical Safety Checklist for Australia and New Zealand</i> (Editorial). Gough, I. ANZJS, 2010; 80:1-2<i>World Health Organisation (WHO) (2009). WHO Surgical Safety Checklist.</i> http://www.who.int/patientsafety/safesurgery/checklist/en/Queensland Department of Health (2014). <i>Guideline for the management of occupational exposure to blood and body fluids.</i> www.health.qld.gov.au/qhpolicy/docs/gdl/gh-gdl-321-8.pdfDi Palma, C. (2004). Power at Work. J of Med Humanities, 25(4): 291-308.Mazzocco, K. et al (2009). Surgical team behaviors and patient outcomes. The American Journal of Surgery, 197: 678–685.Sexton, J.B. et al (2006). Teamwork in the operating room: frontline perspectives among hospitals and operating room personnel. Anesthesiology, 105(5): 877-84RACS. Bullying & Harassment. Recognition, Avoidance & Management. http://www.surgeons.org/policies-publications/publications/position-papers/#bRACS. Code of Conduct. http://www.surgeons.org/policies-publications/publications/position-papers/#cBridgefoot, R. Operating Theatre Design. Australian Publishing Resource Service, 2011.Harsoor, S.S., and Bala Bhaskar, S (2007). Designing an Ideal Operating Room Complex, Indian Journal of Anaesthesia, 2007	
Courses	Trainees are encouraged to complete the RACS ASSET Course, which complements much of the material in this module. The RACS ASSET Course is a mandatory requirement of the Surgical Education & Training (SET) Program in General Surgery.	
How this module will be assessed	<p>The Operating Theatre will be assessed through twenty (20) Multi-choice Questions.</p> <p>The questions may cover areas of the Operating Theatre outside of the Topics and Keywords listed above. Trainees are expected to undertake further learning to cover the broad spectrum of The Operating Theatre.</p>	



MODULE TITLE:	HAEMATOLOGY	Authors: Sayed Hassen, Chris Pyke, Steve Rodgers-Wilson, Alan Saunder, Richard Turner
Rationale	<p>This module has been designed to introduce you to the topics of blood cell disorders, disorders of haemostasis, and principles of transfusion.</p> <p>The practising surgeon needs an adequate knowledge of the various components of blood and their function, in health as well as in disease.</p> <p>The module is not a text book of haematology. You are expected to undertake further reading in order to complete the module successfully.</p>	
Objectives	<p>The objectives of the module are to:</p> <ul style="list-style-type: none">Understand disorders of blood cellsUnderstand disorders of haemostasisUnderstand principles of transfusion	
Topics and keywords	<p>Below is a list of topics and associated keywords covered in the eLearning module. Trainees are expected to undertake further learning to cover the broad spectrum of Haematology.</p> <ul style="list-style-type: none">Disorders of blood cells – anaemia, polycythaemia, leucocytosis, leucopaenia, thrombocytosis, thrombocytopaenia, platelet, infections, neutrophiliaDisorders of haemostasis – DVT, patterns of bleeding, warfarin, clopidogrel, heparin, oral anticoagulants, fibrinolytic agentsPrinciples of transfusion – massive blood transfusion, haemoglobin, risk, assessing blood loss, parameters, haemorrhage control	
Recommended Reading	<ul style="list-style-type: none">Robbins, SL., Cotran, RS., (Eds). Robbins and Cotran pathologic basis of disease. 8th edition. Elsevier Saunders: Philadelphia, c2009.The Australia & New Zealand Working Party on the Management and Prevention of Venous Thromboembolism (VTE). Best Practice Guidelines for Australia & New Zealand, 4th editionAustralian Red Cross Blood Service. Patient Blood Management GuidelinesNational Blood Authority Australia. Patient Blood Management Guidelines: Module 1: Critical Bleeding/Massive Transfusion	
Courses	N/A	
How this module will be assessed	<p>Haematology will be assessed through twenty (20) Multi-choice Questions.</p> <p>The questions may cover areas of Haematology outside of the Topics and Keywords listed above. Trainees are expected to undertake further learning to cover the broad spectrum of Haematology.</p>	



MODULE TITLE:	ANATOMY	Authors: Sayed Hassen, Norman Eizenberg, Peter Cosman, Alan Saunder, Richard Turner, Fiona Reid, Luigi Sposato
Rationale	The module is clinically orientated and requires supplementation from anatomical textbooks and atlases. This module is not intended as a textbook of anatomy but merely as a guide to the relevant areas of anatomy that are of interest to General Surgery.	
Objectives	Understand the various aspects of anatomy outlined in the “early” SET Program in General Surgery curriculum: <ul style="list-style-type: none">Clinically based scenarios are used to guide you to the relevant anatomyA series of diagrams and/or images are included to assist with your learningYou are expected to refer to the list of further, in-depth reading in gross anatomyThe module includes anatomical variants and their relevance	
Topics and keywords	Below is a list of topics and associated keywords covered in the eLearning module. Trainees are expected to undertake further learning to cover the broad spectrum of Anatomy. <ul style="list-style-type: none">Thyroid and parathyroid glands - thyroid, strap muscles, arterial supply, recurrent laryngeal nerveSubmandibular gland - submandibular gland, facial artery, lingual nerveParotid gland - parotid gland, cranial nerve, parotidectomyThe triangles of the neck - anterior and posterior triangles, carotid sheathSurgical airway - airway, tracheostomy, tracheal ringsAbdominal wall - incisional hernia, rectus muscle, umbilical hernia, falciform ligamentInguinal canal - inguinal hernia, inguinal canal, numbnessFemoral canal - femoral canal, medial boundaryTestis & epididymis - testis, embryology, blood supply, lymphatics, lymphatic drainage, undescended testesFemale breast - breast, lymphatic drainage, blood supplyAxilla - axilla, pectoralis minor, nervesOesophagus - oesophagus, blood supply, lymphatics, dysphagia, thoracic ductStomach - stomach, arterial supply, venous drainage, lymphatics, lesser sac, vagus nervesCisterna chyli & abdominal lymphatics - lymph nodes, lymphatic drainage, cisterna chyli, thoracic ductLiver - liver, segments, epiploic foramen, common hepatic arteryGallbladder & bile ducts - laparoscopic cholecystectomy, cystic duct, variationsDuodenum - duodenum, arterial supply, ampulla, lymphaticsSmall bowel - superior mesenteric artery, blood supply, lymphatics, small bowel mesenteryPancreas - pancreas, splenic artery, blood supply, lymphatics, common bile duct, uncinate processSpleen - splenectomy, blood supply, lymphaticsKidneys, ureters & urinary bladder - ureter, ureteric injury, gonadal vesselsRetroperitoneum - abdominal aorta, IVC, adrenal glands, blood supplyAnal canal - anal canal, anal fissure, sphincter, dentate lineColon & rectum - colon, mesocolon, arterial anatomy, blood supply, nerve supply, lymphatics, greater omentum, rectum, mesorectumThe appendix - appendix, appendicectomy, variations, blood supplyPelvic wall, floor & cavity - pelvic floor, levator ani, broad ligament, round ligamentFemoral triangle & contents - femoral triangle, inguinal lymph nodesArteries, veins and nerves of the upper & lower limbs - ischaemia, femoral artery, peripheral pulses, carpal tunnel, median nerveThoracic wall and cavity - thoracotomy, neurovascular bundle, intercostal catheterThe diaphragm, heart & lungs - diaphragm, nerve supply, para-oesophageal hernia, vagal trunks	
Recommended Reading	<ul style="list-style-type: none">Anatomedia online (in progress). McGraw Hill Education, 2014.Agur, AM, Dalley, AF. Grant's Atlas of Anatomy. Lippincott Williams & Wilkins, 13th edition: Philadelphia, 2012.Last, RJ. Last's Anatomy: Regional and Applied. Sinnatamby, CS. (Ed). Churchill Livingstone, 11th edition: Edinburgh, 2006.Netter, FH. Atlas of Human Anatomy. Saunders/Elsevier 5th edition: Philadelphia, 2011.Rohen, JW., Yokochi, C., Lutjen-Drecoll, E. Color Atlas of Anatomy: A Photographic Study of the Human Body. Lippincott Williams & Wilkins, 5th edition: Baltimore, 2002.	
Courses	N/A	
How this module will be assessed	Anatomy will be assessed through twenty (20) Multi-choice Questions. The questions may cover areas of Anatomy outside of the Topics and Keywords listed above. Trainees are expected to undertake further learning to cover the broad spectrum of Anatomy.	



MODULE TITLE:	ACUTE ABDOMEN	Authors: Sayed Hassen, Meron Pitcher, Michael Donovan, Joanne Dale, Alan Saunder, Ian Rebello, Steve Rodgers-Wilson
Rationale	<p>This module has been designed to introduce you to the fundamental aspects and diagnosis of acute abdomen.</p> <p>Assessing, diagnosing and managing the acute abdomen are integral and essential aspects of general surgical training.</p> <p>The general surgeon must have a very good grasp of the nuances of various pathological processes affecting the various abdominal organs.</p> <p>The aim of this module is to familiarise you with those pathological process and provide you with a "road map" that will help you throughout your professional career as a general surgeon.</p>	
Objectives	<p>The objectives of the module are to:</p> <ul style="list-style-type: none">Understand the pathophysiological processes of abdominal painRecognise patterns in the presentation of an acute abdomenList the relevant causes of abdominal pain and their clinical featuresUnderstand visceral pain and its distributionUnderstand the causes of diaphragmatic irritationRecognise peritonitis as a cause of parietal painPrioritise the resuscitation and subsequent management principles of the acute abdomenList relevant investigations in the management of acute abdomenUnderstand inflammatory processes and the various pathways by which they can occur, e.g. bacterial, chemical etc.	
Topics and keywords	<p>Below is a list of topics and associated keywords covered in the eLearning module. Trainees are expected to undertake further learning to cover the broad spectrum of Acute Abdomen.</p> <ul style="list-style-type: none">An analysis of abdominal pain - visceral pain, parietal pain, referred pain, omentum, mesenteryPathophysiological processes and pattern recognition - luminal organs, solid organs, inflammation, obstruction, ischaemia, distensionInvestigations and treatment - management, history, examination, diagnosis	
Recommended Reading	<ul style="list-style-type: none">Bailey, H. Hamilton Bailey's emergency surgery. Dudley, HAF. (Ed). 11th edition. Wright: Bristol, 1986.Bailey, H., Love, RJM. Bailey and Love's short practice of surgery. Russell, RCG., Williams, NS., Bulstrode, CJK. (Eds). 24th edition. Arnold: London, 2004.Cox, M. R. Acute Abdominal Pain, in Clinical Gastroenterology. Talley, N. J. (Ed). 3rd edition: Elsevier Australia, 2011.Kumar, V., Abbas, AK., Fausto, N., Robbins, SL., Cotran, RS., (Eds). Robbins and Cotran pathologic basis of disease. 7th edition. Elsevier Saunders: Philadelphia, c2005.Last, RJ. Last's Anatomy: Regional and Applied. Sinnatamby, CS. (Ed). Churchill Livingstone, 11th edition: Edinburgh, 2006.	
Courses	N/A	
How this module will be assessed	<p>The Acute Abdomen will be assessed through twenty (20) Multi-choice Questions.</p> <p>The questions may cover areas of the Acute Abdomen outside of the Topics and Keywords listed above. Trainees are expected to undertake further learning to cover the broad spectrum of Acute Abdomen.</p>	



MODULE TITLE:	NUTRITION		Authors: Peter Cosman, Sayed Hassen, Christopher Pyke, Steve Rodgers-Wilson, Richard Turner
Rationale	<p>This module has been designed to introduce you to nutrition and the principles that underpin the delivery of nutritional care to surgical patients.</p> <p>Educational material provided within this module is not intended to be complete, and is not a textbook. The module forms the framework on which to build your knowledge and expertise in nutrition.</p> <p>You are expected to undertake further reading in order to complete the module successfully.</p>		
Objectives	<p>The objectives of the module are to:</p> <ul style="list-style-type: none">Understand nutrition as it relates to health and disease states relevant to surgeryUnderstand the principles of nutritional assessmentUnderstand the role of nutritional support in different clinical situationsUnderstand specific nutritional issues related to obesity		
Topics and keywords	<p>Below is a list of topics and associated keywords covered in the eLearning module. Trainees are expected to undertake further learning to cover the broad spectrum of Nutrition.</p> <ul style="list-style-type: none">Food and metabolism - carbohydrates, proteins, fats, vitamins, mineralsDeficiencies and starvation - deficiencies, diseaseAssessing nutritional status of patients - Body Mass Index, malnutrition, MST, SGADisease states - pancreatitis, malabsorption, diabetes, hyperglycaemia, malignancyNutritional requirements of the patient - nutritional support, feeding, nutritional statusAccess for feeding - enteral, parenteral, access, jejunal, PEGNutritional products - formula, guidelines, re-feeding syndrome, dumping syndromeObesity - BMI, WHO, factors, mortality, non-surgical, surgical, complications		
Recommended Reading	<ul style="list-style-type: none">Agarwal, E., et. al. (2013). Malnutrition and poor food intake are associated with prolonged hospital stay, frequent readmissions, and greater in-hospital mortality: Results from the Nutrition Care Day Survey 2010. Clinical Nutrition 32; 737-745Dieticians Association of Australia (DAA) (2011). Parenteral nutrition manual for adults in health care facilities. http://daa.asn.au/wp-content/uploads/2011/10/Parenteral-nutrition-manual-September-2011.pdfDieticians Association of Australia (DAA) Malnutrition Guideline Steering Committee (2009). Evidence based practice guidelines for the nutritional management of malnutrition in adult patients across the continuum of care. Nutrition and Dietetics: Volume 66 Supplement 3National Health and Medical Research Council (NHMRC) (2013). Clinical Practice Guidelines for the Management of Overweight and Obesity in Adults, Adolescents and Children in Australia. http://www.nhmrc.gov.au/guidelines/publications/n57The European Society for Clinical Nutrition and Metabolism: ESPEN Guidelines. http://www.espen.org/education/espen-guidelines Generic Principles: ESPEN Guidelines for adult enteral nutrition & ESPEN Guidelines for adult parenteral nutrition Supplementary Reading: All other guidelinesNational Institute for Clinical Excellence (NICE) (2006). Nutrition Support for Adults, Oral Nutrition Support, Enteral Tube, Feeding, and Parenteral Nutrition: Methods, Evidence, and Guidance. http://www.nice.org.uk/guidance/cg32Nightingale, J., and Woodward, J.M. on behalf of the Small Bowel and Nutrition Committee of the British Society of Gastroenterology (2007). Guidelines for management of patients with a short bowel. Gut 2006; 55 (SupplIV): iv1-iv12Parry, B. R. and Hill, A. G. (2008) Nutrition and the Surgical Patient, in Textbook of Surgery, Third Edition (eds J. J. Tjandra, G. J.A. Clunie, A. H. Kaye and J. A. Smith), Blackwell Publishing Ltd, Oxford, UK.Stroud, M., Duncan, H., and Nightingale, J. (2003). Guidelines for enteral feeding in adult hospital patients. http://gut.bmj.com/content/52/suppl_7/vii1.full.pdf+htmlSubjective Global Assessment (SGA). http://subjectiveglobalassessment.com/ and http://www.health.qld.gov.au/nutrition/resources/hphe_sga.pdfTouli, J. et. al. (2010). Management of pancreatic exocrine insufficiency: Australasian Pancreatic Club recommendations. MJA 193; 461-467		
Courses	N/A		
How this module will be assessed	<p>The Nutrition module will be assessed through twenty (20) Multi-choice Questions.</p> <p>The questions may cover areas of Nutrition outside of the Topics and Keywords listed above. Trainees are expected to undertake further learning to cover the broad spectrum of Nutrition.</p>		



MODULE TITLE:	PERI-OPERATIVE CARE	Authors: Joanne Dale, Sayed Hassen, Christopher Pyke, Steve Rodgers-Wilson, Alan Saunder, Richard Turner
Rationale	<p>This module has been designed to introduce you to the Peri-operative care of the patient. As a General Surgeon you must understand theatre protocols and observe and employ standards of behaviour in yourself and others in the team.</p> <p>Educational material provided within this module is not intended to be complete, and this is not a textbook. The module forms the framework on which to build your knowledge and expertise to facilitate patient safety during surgery along with a safe work practices for all surgical team members.</p> <p>You are expected to undertake further reading in order to complete the module successfully.</p>	
Objectives	<p>The objectives of the module are to:</p> <ul style="list-style-type: none">Understand the principles of aseptic technique and infection controlUnderstand the ergonomic and safety principles of operating equipment and theatre designUnderstand the needs and requirements of the anaesthetist, and basic anaesthesia practicesUnderstand the role of ‘check-lists’, documentation and clinical handover in patient safetyUnderstand fluid balance in normal physiology as well as in pathological states	
Topics and keywords	<p>Below is a list of topics and associated keywords covered in the eLearning module. Trainees are expected to undertake further learning to cover the broad spectrum of Peri-operative Care.</p> <ul style="list-style-type: none">Infection Control - hand hygiene, decontamination, cleaning, sterilisation, aseptic technique, draping, skin preparationOccupational Safety - surgical hazards, prevention strategies, needlestick injury, bodily fluids exposure, personal protective equipment, smoke safety, radiation safety, cytotoxicsDocumentation - operating reports, informed consent, capacity, surgical safety checklistsAnaesthesia - risks, ASA classification, triad of anaesthesia, adrenaline, toxicityFluid Balance (Electrolyte Disorders) - normal physiology, pathological states, gastrointestinal secretions, replacement fluid	
Recommended Reading	<ul style="list-style-type: none">Skinner, I, Perry, R. <i>Fundamental Skills for Surgery</i>. McGraw-Hill Medical: Melbourne, 2008. [Chapter 4].Anderson, DJ. Surgical Site Infections. <i>Infect Dis Clin N Am</i>. 2011; 25: 135-153 http://cs6vv2ph4u.search.serialssolutions.com/?V=1.0&sid=PubMed:LinkOut&pmid=21315998Hebert C, Weber, SG. Common Approaches to the Control of Multidrug-resistant Organisms Other Than Methicillin-resistant Staphylococcus aureus (MRSA). <i>Infect Dis Clin N Am</i>. 2011; 25: 181-200 http://cs6vv2ph4u.search.serialssolutions.com/?V=1.0&sid=PubMed:LinkOut&pmid=21316000Australian Radiation Protection and Nuclear Safety Agency (2008).Safety Guide: Radiation Protection in Diagnostic and Interventional Radiology. http://www.arpansa.gov.au/pubs/rps/rps14_1.pdfNew Zealand Ministry of Health. Codes of Safe Practice for Radiation Use. http://www.health.govt.nz/our-work/radiation-safety/users-radiation/codes-safe-practice-radiation-useNational Health and Medical Research Council (NHMRC) (2010). Australian Guidelines for the Prevention and Control of Infection in Healthcare. http://www.nhmrc.gov.au/guidelines-publications/cd33Coventry, B.J., et al. Ensuring Radiation Safety to Staff in Lymphatic Tracing and Sentinel Lymph Node Biopsy Surgery – Some Recommendations. J Nucl Med Radiat Ther. S:2, 2012. http://omicsonline.org/ensuring-radiation-safety-to-staff-in-lymphatic-tracing-and-sentinel-lymph-node-biopsy-surgery-some-recommendations-2155-9619.S2-008.pdfCenters for Disease Control and Prevention Guidelines and Recommendations http://www.cdc.gov/HAI/prevent/prevent_pubs.htmlSkinner, I, Perry, R. Fundamental Skills for Surgery. McGraw-Hill Medical: Melbourne, 2008. [Chapters 1 & 3].Royal Australasian College of Surgeons (RACS) (2014). Informed Consent Position Paper. http://www.surgeons.org/media/312206/2014-08-29_pos_fes-pst-042_informed_consent.pdfMedical Council of New Zealand (2012). Information, choice of treatment and informed consent. https://www.mcnz.org.nz/assets/News-and-Publications/Statements/Information-choice-of-treatment-and-informed-consent.pdfWorld Health Organisation (WHO), World Alliance for Patient Safety (2008). Implementation Manual Surgical Safety Checklist (First Edition): Safe Surgery Saves Lives http://www.surgeons.org/media/19461/WHO_Surgical_Safety_Checklist_Implementation_Manual.pdfTreadwell JR, Lucas S, Tsou AY. Surgical checklists: a systematic review of impacts and implementation. BMJ Quality & Safety 2014;23(4):299-318 http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3963558/Kwok AC, et al. Implementation of the World Health Organization surgical safety checklist, including introduction of pulse oximetry, in a resource-limited setting. Ann Surg. 2013 Apr; 257(4):633-9. http://cs6vv2ph4u.search.serialssolutions.com/?V=1.0&sid=PubMed:LinkOut&pmid=23207242Australian Commission on Safety and Quality in Health Care. Ensuring Correct Patient, Correct Site, Correct Procedure Protocol for Surgery: Review of implementation and proposals for action. http://www.safetyandquality.gov.au/wp-content/uploads/2012/02/19793-ReviewCPCSCP.pdfHealth Quality & Safety Commission. Cost benefit analysis of the surgical safety checklist. http://www.srgexpert.com/Surgical%20safety%20checklist%20-%20CBA%20report%2018%20June%202012.pdfRogers v Whitaker and Chappel v Hart, Patient Education Briefings with comment and analysis by Dr Paul Nisselle http://www.mitec.com.au/briefingBarrett, K.E., Barman, S.M., Boitana, S. Brooks, H.L. (Eds). Ganong’s Review of Medical Physiology, 24th Edition. McGraw-Hill Medical: 2012. [Chapter 38: Regulation of Extracellular Fluid Composition & Volume]. http://accessmedicine.mhmedical.com/book.aspx?bookid=393	
Courses	N/A	
How this module will be assessed	<p>The Peri-operative Care module will be assessed through twenty (20) Multi-choice Questions.</p> <p>The questions may cover areas of Peri-operative Care outside of the Topics and Keywords listed above. Trainees are expected to undertake further learning to cover the broad spectrum of Peri-operative Care.</p>	



MODULE TITLE:	CRITICAL CARE AND TRAUMA	Authors: Ros Pochin, Alf Deacon, Li Hsee, Kate Martin, James Moore
Rationale	<p>This module has been designed to introduce you to trauma and critical care management protocols and the basic science on which these are based.</p> <p>This module will take you through the important aspects and key points. It is not an exhaustive review but highlights the key themes with which you need be familiar.</p> <p>Please note:</p> <ul style="list-style-type: none">The module is relevant to early years in surgical trainingThis module is not a text book - further reading is required and key reference articles are cited throughout the module <p>The topics are applicable to the care of all of your general surgical patients</p> <p>You are expected to undertake further reading in order to complete the module successfully.</p>	
Objectives	<p>The objectives of the module are to:</p> <ul style="list-style-type: none">Understand the pathophysiology of shock and its management in trauma patientsRecognise injury patternsRecognise when patients should be transferred to another specialist centreUnderstand the principles of immediate trauma managementUnderstand the principles of definitive trauma careUnderstand the key presentations in the critically ill surgical patientRecognise organ dysfunction in the ICU patient	
Topics and keywords	<p>Below is a list of topics and associated keywords covered in the eLearning module. Trainees are expected to undertake further learning to cover the broad spectrum of Critical Care and Trauma.</p> <ul style="list-style-type: none">Pathophysiology of Trauma - hypovolemic, obstructive, distributive, cardiogenic, fluid resuscitationResuscitation - volume resuscitation, massive transfusion, damage control resuscitation, burns, head trauma, crush injury, fat embolism, imagingBasic Trauma Management and Resuscitation Principles - primary survey, airway control, breathing and ventilation, circulation, disability, exposure/environmental control, shock, abdomen and pelvis, trauma laparotomy, traumatic brain injury, spine, burns and thermal injury, definitive careCritical Care - surgical disease in the ICU, SIRS, sepsis, acute pancreatitis, intra-abdominal hypertension, traumatic brain injury, GI bleedingOrgan Dysfunction in the ICU Patient - organ failure, respiratory failure, cardiovascular failure, acute kidney injury, gut and nutrition, metabolic dysfunction, liver failure, coagulation, neurological dysfunction	
Recommended Reading	<ul style="list-style-type: none">ATLS: Advanced Trauma Life Support for Doctors (Student Course Manual) 9th edition American College of SurgeonsCare of the Critically Ill Patient 3rd Edition, Ian LoftusManual of Definitive Surgical Trauma Care 3rd Edition, Kenneth D BoffardN Engl J Med ICU Review series: 2013-14 as follows:<ul style="list-style-type: none">369: 669-670, Finfer, S & Vincent, J-L: Critical Care - An All-Encompassing Specialty369: 840-851, Angus, DC & van der Poll, T: Severe Sepsis and Septic Shock369: 1243-1251, Myburgh, JA & Mythen, MG: Resuscitation Fluids369: 1726-1734, Vincent, J-L & Backer, D: Circulatory Shock369: 2126-2136, Slutsky, AS & Ranieri, VM: Ventilator-Induced Lung Injury369: 2525-2534, Bernal, W & Wendon J: Acute Liver Failure370: 444-454, Reade, MC & Finfer, S: Sedation and Delirium in the Intensive Care Unit370: 847-859, Hunt, BJ: Bleeding and Coagulopathies in Critical Care370: 1227-1236, Casaer, MP & Van den Berghe, G: Nutrition in the Acute Phase of Critical Illness370: 1626-1635, Kress, JP & Hall, JB: ICU-Acquired Weakness and Recovery from Critical Illness370: 2121-2130, Stocchetti, N & Maas, AIR: Traumatic Intracranial Hypertension370: 2506-2514, Cook D & Rocker, G: Dying with Dignity in the Intensive Care UnitMiller, PR et al. Associated injuries in blunt solid organ trauma: Implications for missed injury in non-operative management. <i>J Trauma</i> 2002; 53: 238-244Neurosurgical Society of Australasia Inc. <i>The Management of Acute Neurotrauma in Rural and Remote Locations</i> 3rd edition, 2009Stocchetti, N & Maas, AIR: Traumatic Intracranial Hypertension. <i>New Engl J Med</i>, 370: 2121-2130.	
Courses	It is strongly recommended that you have successfully completed CCrISP and EMST before embarking on this module	
How this module will be assessed	<p>The Critical Care and Trauma module will be assessed through twenty (20) Multi-choice Questions.</p> <p>The questions may cover areas of Critical Care and Trauma outside of the Topics and Keywords listed above. Trainees are expected to undertake further learning to cover the broad spectrum of Critical Care and Trauma.</p>	