Appendix Three -

Learning outcomes mapped to the initial assessment of anaesthetic competence questions (IAACQ)

The initial assessment of anaesthetic competence comprises two components:

- Workplace-based assessment
- Initial assessment of anaesthetic competence questions (IAACQ)

The learning outcomes listed on the following pages are those from the introductory training period for the ANZCA Clinical Fundamentals that have been mapped to the IAACQ.

The supervisor of training will ask the trainee a set of questions, based on these learning outcomes, to test the trainee's knowledge in the role of medical expert. These questions will form part of the IAACQ, which forms the second component of the initial assessment of anaesthetic competence.

Airway management

By the completion of introductory training, the trainee will be able to identify issues that may lead to difficulty in airway management. The trainee will be able to manage the normal airway, with distant supervision where appropriate, in both spontaneously breathing and ventilated patients and demonstrate an ability to maintain oxygenation when the airway is threatened.

By the end of the introductory training core study unit, a trainee will be able to:

Code	Learning outcome	Role	Assessment
Medical expert – knowledge			
IT_AM 1.1	Describe the basic structural anatomy of the upper airway including the larynx	ME	IAACQ, PEx
IT_AM 1.2	Discuss the important features of history and examination that may identify a potentially difficult airway	ME	IAACQ, FEx
IT_AM 1.3	Outline preoperative fasting requirements and the common measures employed to decrease the risk of pulmonary aspiration	ME	IAACQ, FEx
IT_AM 1.4	Describe an appropriate airway strategy for anaesthesia taking account of patient and procedural factors in patients with a normal airway, including indications for rapid sequence induction.	ME	IAACQ, FEx
IT_AM 1.5	Describe the indications for manual in-line stabilisation of the neck and the implications for airway management	ME	IAACQ, FEx
IT_AM 1.6	Outline the equipment required to be immediately available for basic airway management and the 'can't intubate, can't oxygenate' (CICO) situation	ME	IAACQ, PEx
IT_AM 1.7	Describe the optimal patient position for intubation	ME	IAACQ, FEx
IT_AM 1.8	Describe the common complications of intubation	ME	IAACQ, FEx
IT_AM 1.9	Describe preoxygenation, including its physiological basis	ME	IAACQ, PEx
IT_AM 1.10	Outline an appropriate ventilation strategy suitable for routine elective and emergency patients	ME	IAACQ, FEx
IT_AM 1.11	Outline potential management plans to ensure oxygenation of the patient with an unexpected difficult airway	ME	IAACQ, FEx
IT_AM 1.12	Outline the clinical features, possible causes, physiological consequences and management of perioperative upper airway obstruction	ME	IAACQ, FEx
IT_AM 1.13	Describe a 'can't intubate, can't oxygenate' drill, including the technique for performing an emergency surgical airway	ME	IAACQ, FEx

Code	Learning outcome	Role	Assessment
Medical expert – knowledge			
IT_AM 1.14	Describe and classify the view obtained at direct laryngoscopy according to a common grading scale (Cormack-Lehane)	ME	IAACQ, FEx
IT_AM 1.15	Describe the features of oesophageal and endobronchial intubation and outline appropriate management	ME	IAACQ, FEx
IT_AM 1.16	Describe the clinical features and outline a management plan for a patient with aspiration of gastric contents	ME	IAACQ, FEx
IT_AM 1.17	Describe the clinical features that indicate a patient can be extubated safely	ME	IAACQ, FEx
IT_AM 1.18	Describe potential complications at extubation	ME	IAACQ, FEx
IT_AM 1.19	Describe optimisation of the patient for extubation	ME	IAACQ, FEx
IT_AM 1.20	Outline the important airway considerations in determining the suitability of a patient for discharge to recovery	ME	IAACQ, FEx

General anaesthesia and sedation

By the completion of introductory training, the trainee will be able to anaesthetise or sedate a low-risk patient having low-risk surgery with distant supervision, applying an appropriate technique for the clinical situation. They will begin studying applied pharmacology underpinning anaesthetic practice.

By the end of the introductory training core study unit, a trainee will be able to:

Code	Learning outcome	Role	Assessment
Medical expert – knowledge			
IT_GS 1.1	Outline the basic pharmacology of sedative/hypnotic agents (propofol, thiopentone, midazolam, ketamine), inhalational agents, opioids, muscle relaxants, reversal drugs and anti-emetic agents relevant to their clinical practice	ME	IAACQ, PEx
IT_GS 1.2	Outline the process of induction, maintenance and emergence from anaesthesia	ME	IAACQ
IT_GS 1.3	Outline preoperative fasting requirements, identify patients at risk of aspiration and outline common measures employed to decrease the risk of pulmonary aspiration (also refer to the *Airway management* clinical fundamental)	ME	IAACQ
IT_GS 1.4	Discuss indications for rapid sequence induction of anaesthesia (also refer to the *Airway management* clinical fundamental)	ME	IAACQ
IT_GS 1.5	Describe the chemical composition of crystalloids and colloids used in clinical practice and their effects when used in volume replacement	ME	IAACQ, PEx
IT_GS 1.6	Calculate intravenous fluid requirements and choose intravenous fluid therapy appropriate to the clinical situation for low-risk patients having low-risk surgery	ME	IAACQ, FEx
IT_GS 1.7	Describe the clinical situations when anxiolytic or sedative premedication may be indicated or contraindicated	ME	IAACQ, FEx
IT_GS 1.8	Outline the physiological changes that occur with and the implications for anaesthetic management of pneumoperitoneum	ME	IAACQ, PEx
IT_GS 1.9	Outline the physiological changes that occur with and the implications for anaesthetic management of the following patient positions: • Supine • Trendelenberg and reverse trendelenberg • Lateral • Lithotomy • Prone (Also refer to the *Safety and quality in anaesthetic practice* clinical fundamental)	ME	IAACQ, PEx

Code	Learning outcome	Role	Assessment
Medical expert – knowledge			
IT_GS 1.10	Outline a strategy for the management of postoperative nausea and vomiting	ME	IAACQ, FEx
IT_GS 1.11	Describe the clinical features that indicate a patient can be extubated safely (also refer to the *Airway management* clinical fundamental)	ME	IAACQ, FEx
IT_GS 1.12	Outline a strategy for the management of failure to wake from anaesthesia	ME	IAACQ, FEx
IT_GS 1.13	Outline a strategy for the management of postoperative delirium	ME	IAACQ, FEx
IT_GS 1.14	Outline a strategy for the management of postoperative analgesia for patients in their care (also refer to the *Pain medicine* clinical fundamental)	ME	IAACQ, FEx

Pain medicine

By the completion of introductory training, the trainee will be able to manage simple acute pain and recognise clinical situations where consultation with supervisors is required to formulate a pain management plan.

By the end of the introductory training core study unit, a trainee will be able to:

Code	Learning outcome	Role	Assessment
Medical expert – knowledge			
IT_PM 1.1	Define pain, acute pain and chronic pain	ME	IAACQ, FEx
IT_PM 1.2	Outline the elements of a basic pain history	ME	IAACQ, FEx
IT_PM 1.3	Outline the basic concepts of multimodal analgesia and pre-emptive analgesia	ME	IAACQ, PEx
IT_PM 1.4	Outline the basic pharmacology and clinical use of available analgesic agents	ME	IAACQ, PEx
IT_PM 1.5	Outline clinical situations where the use of analgesic agents may be associated with increased risk to the patient and requires consultation with supervisors for the initiation of therapy	ME	IAACQ
IT_PM 1.6	Outline the principles of acute pain management and the assessment of analgesic efficacy and adverse effects as contained in the College professional document *PS41 Guidelines on Acute Pain Managemen*t	ME	IAACQ, FEx
IT_PM 1.7	Outline a protocol for the management of pain in recovery	ME	IAACQ, FEx
IT_PM 1.8	Outline a pain management plan for patients having day surgery procedures	ME	IAACQ, FEx
IT_PM 1.9	Outline the risks associated with and the monitoring requirements for patients receiving patient-controlled analgesia (PCA), opioid infusions or continuous regional analgesia for acute pain management	ME	IAACQ, FEx
IT_PM 1.10	Outline the problems in managing acute pain for patients with chronic prior exposure to opioids	ME	IAACQ, FEx
IT_PM 1.11	Describe the assessment and adjustment of continuous regional techniques for acute pain control	ME	IAACQ, FEx

Code	Learning outcome	Role	Assessment
Medical expert – knowledge			
IT_PM 1.12	Describe the advantages and disadvantages of patient-controlled analgesia (PCA), continuous infusion and intermittent prescription of opioids for acute pain management	ME	IAACQ, FEx
IT_PM 1.13	Outline the management of hypotension associated with a central neuraxial block	ME	IAACQ, FEx
IT_PM 1.14	Outline the management of 'high spinal' block (also refer to the *Regional and local anaesthesia* and *resuscitation, trauma and crisis management* clinical fundamentals)	ME	IAACQ, FEx
IT_PM 1.15	Outline a plan to transition patients with acute pain from parenteral to oral analgesic therapies (in low complexity cases)	ME	IAACQ, FEx
IT_PM 1.16	Outline the contribution of psychosocial factors to the patient's experience of pain	ME	IAACQ, FEx

Perioperative medicine

By the completion of introductory training, the trainee will be able to perform a pre-operative assessment of patients to inform discussion of perioperative management with supervisors and recognise when further assessment and optimisation and/or referral is required.

By the end of the introductory training core study unit, a trainee will be able to:

Code	Learning outcome	Role	Assessment
3. Medical expert – knowledge			
IT_PO 1.1	Outline the ASA physical status classification system and the implications for anaesthesia	ME	IAACQ, FEx
IT_PO 1.2	Outline the functional assessment of patients based on exercise capacity and performance of activities of daily living	ME	IAACQ, FEx
IT_PO 1.3	Outline how functional assessment is used in perioperative risk assessment	ME	IAACQ, FEx
IT_PO 1.4	Outline the implications for anaesthetic management and perioperative risk of a range of medical conditions including but not limited to: Cardiovascular - Coronary artery disease - Valvular heart disease - Cardiac conduction abnormalities/pacemakers - Left heart failure (CCF) - Hypertension - Cerebrovascular disease (embolic and haemorrhagic) - Peripheral vascular disease Respiratory - Chronic obstructive pulmonary disease - Asthma - Respiratory tract infection - Obstructive sleep apnoea - Chronic tobacco use Metabolic/Endocrine - Obesity (including morbid obesity) - Diabetes - Electrolyte and acid base disorders - Steroid dependence Haematological/Immunological - Anaemia - Thrombocytopenia - Thromboembolic disease (DVT/PE) - Coagulopathy/anticoagulant use - Immunocompromised patient GastrointestinalI/Renal - Renal impairment (acute and chronic) - Gastro-oesophageal reflux - GIT haemorrhage	ME	IAACQ, FEx

Regional and local anaesthesia

Bt the completion of Introductory training, the trainee will have acquired the initial knowledge and skills for the safe conduct of regional anaesthesia including selection of appropriate patients and procedures, knowledge of aseptic techniques and management of complications.	

By the end of the introductory training core study unit, a trainee will be able to:

Code	Learning outcome	Role	Assessment
2. Medical expert – knowledge			
IT_RA 1.1	Describe the principles for the safe conduct of major regional anaesthesia as outlined in College professional document as outlined in College professional document *PS03 Guidelines for the Management of Major Regional Analgesia*	ME	IAACQ, FEx
IT_RA 1.2	Outline the pre-operative assessment of the patient necessary before performing any regional technique	ME	IAACQ, FEx
IT_RA 1.3	Describe the sterile technique necessary for the performance of regional anaesthesia	ME	IAACQ, FEx
IT_RA 1.4	Outline the skills required for the safe performance of regional blockade, including: • Confirming and marking site of surgery and site of regional technique • Positioning of patient • Identification of anatomical landmarks • Use of aseptic technique • Selection of appropriate needle • Selecting, checking, drawing up, diluting, and labelling of drugs for injection • Checking for inadvertent intravenous and intraneural administration	ME	IAACQ, FEx
IT_RA 1.5	Outline the clinical features and management of local anaesthetic toxicity (also refer to the *Resuscitation, trauma and crisis management* clinical fundamental)	ME	IAACQ, FEx
IT_RA 1.6	Outline the management of hypotension associated with a central neuraxial block.	ME	IAACQ, FEx
IT_RA 1.7	Outline the management of 'high spinal' block	ME	IAACQ, FEx
IT_RA 1.8	Describe the absolute and relative contraindications of a central neuraxial block	ME	IAACQ, FEx
IT_RA 1.9	Describe how to assess the adequacy of a regional technique	ME	IAACQ, FEx
IT_RA 1.10	Describe the measures to be taken when a regional technique is not working completely	ME	IAACQ, FEx
IT_RA 1.11	Outline the complications of a central neuraxial block	ME	IAACQ, FEx

Resuscitation, trauma and crisis management

By the completion of introductory training, the trainee will be able to recognise clinical situations which are life threatening or have the potential for major patient morbidity. They will call for assistance and when appropriate initiate management of these conditions.

By the end of the introductory training core study unit, a trainee will be able to:

Code	Learning outcome	Role	Assessment
Medical expert – knowledge			
IT_RT 1.1	Outline a systematic approach to identifying the cause and describe the initial management of the following, when occurring in association with anaesthesia or sedation: • Dyspnoea • Hypoxia • Hypocapnoea/hypocarbia • Hypercapnoea/hypercarbia • Tachycardia • Bradycardia • Hypotension • Hypertension • High airway pressures • Oliguria/anuria • Failure to wake from anaesthesia (also refer to the *General anaesthesia and sedation* clinical fundamental)	ME	IAACQ, FEx

Code	Learning outcome	Role	Assessment
Medical expert – knowledge			
IT_RT 1.2	Outline the clinical features and describe the initial management of patients with the following life-threatening conditions: • Cardiac arrest • Respiratory arrest • Shock ○ Hypovolaemic ○ Distributive ○ Cardiogenic ○ Obstructive • Cardiac tamponade • Acute myocardial ischaemia • Acute pulmonary oedema • Aortic dissection • Arrhythmias causing haemodynamic compromise • Aspiration of gastric contents • Severe bronchospasm • Tension pneumothorax • Massive haemoptysis • Coma • Raised intra-cranial pressure • Prolonged seizures • Local anaesthetic toxicity (also refer to the *Regional and local anaesthesia* clinical fundamental) • Anaphylaxis (refer to endorsed guidelines by ANZAAG *Anaphylaxis Management Guidelines)* • Malignant hyperthermia (refer to endorsed guidelines on *Malignant Hyperthermia Crisis Manangent*) • Pulmonary embolism • Gas embolism • Coagulopathy in association with surgery or trauma • Hyper/hypokalemia	ME	IAACQ, FEx
IT_RT 1.3	Outline the personnel, equipment and drugs available for crisis management in anaesthetising locations	ME	IAACQ, FEx
IT_RT 1.4	Describe the primary survey of the trauma patient	ME	IAACQ, FEx
IT_RT 1.5	Describe techniques for the immobilisation of patients with spinal injuries during transport and transfer	ME	IAACQ, FEx

Safety and quality in anaesthetic practice

By the completion of introductory training, the trainee will be able to outline the standards required for the safe provision of anaesthesia and sedation and apply them in situations appropriate for a new trainee. They will demonstrate a patient-centred approach to practice, collaboration in multidisciplinary teams to ensure patient safety and the application of ethical principles to their practice.

By the end of the introductory training core study unit, a trainee will be able to:

Code	Learning outcome	Role	Assessment
Medical expert – knowledge			
IT_SQ 1.1	Outline and apply the College guidelines and recommendations for standards of safe practice: • Ensure appropriate standards are met in terms of equipment, monitoring and staffing when providing anaesthesia and sedation. Refer to College professional document *PS55 Recommendations on Minimum Facilities for Safe Administration of Anaesthesia in Operating Suites and Other Anaesthetising Locations* • Perform a level two and three check of the anaesthetic machine and related equipment. Refer to College professional document *PS31 Recommendations on Checking Anaesthesia Delivery Systems* • Apply appropriate monitoring for each case. Refer to College professional document *PS18 Recommendations on Monitoring* • Safely draw up, label and store drugs. Refer to College professional document *PS51 Guidelines for the Safe Administration of Injectable Drugs in Anaesthesia* • Demonstrate safe handover of care during and after anaesthesia. Refer to College professional document *PS53 Statement on the Handover Responsibilities of the Anaesthetist* • Outline the planning staffing and equipment required for the safe intra-hospital transfer of patients. Refer to College professional document *PS52:* Guidelines for *Transport of Critically ill Patients* • Outline and apply the surgical safety checklist (including time-out procedure). Refer to *endorsed guideline WHO Surgical Safety Checklist Australian and New Zealand edition*	ME	Outline IAACQ, FEx Apply CEX, DOPS
IT_SQ 1.2	Describe safe transfusion practices including: • Safe storage and handling of blood and blood products • Protocols for checking prior to transfusing	ME	IAACQ, FEx
IT_SQ 1.3	Outline measures to minimise the risk of injury or complications resulting from the use of a tourniquet	ME	IAACQ, FEx
IT_SQ 1.4	Outline the recommended vaccinations for healthcare workers. Refer to College professional document *PS28 Guidelines on Infection Control in Anaesthesia*	ME	IAACQ, FEx

Code	Learning outcome	Role	Assessment
Medical expert – knowledge			
IT_SQ 1.5	Outline the standards to which reusable anaesthetic equipment needs to be cleaned and/or treated. Refer to College professional document *PS28 Guidelines on Infection Control in Anaesthesia*	ME	PEx
IT_SQ 1.6	Outline the risk of peripheral nerve injury and measures to minimise this risk during procedures	ME	IAACQ, FEx
IT_SQ 1.7	Outline steps to minimise the risk of eye injury during perioperative care	ME	IAACQ, FEx
IT_SQ 1.8	Outline measures to minimise the risk of injury or complications resulting from the following patient positions: • Supine • Trendelenberg and reverse trendelenberg • Lateral • Lithotomy • Prone	ME	IAACQ, FEx