

Appendix 3

147 topics / procedural skills identified through grey literature review (organised into 12 domains)

Topic / procedural skill	
Anatomy	Post-operative topics
Airway	Emergence from anaesthesia
Cardiovascular	PACU assessment
Respiratory	PACU complications
Renal	Infection control
Neuroanatomy	Promoting recovery / Enhanced Recovery After Surgery (ERAS)
Physiology	Subspecialties
Cardiovascular	Principles of paediatric anaesthesia
Respiratory	Principles of neonatal anaesthesia
Renal	Principles of obstetric anaesthesia
Fluid balance and electrolytes	Principles of cardiothoracic anaesthesia
Acid-base physiology	Principles of neuro anaesthesia
Neurophysiology	Principles of orthopaedic anaesthesia
Neuroendocrine response to surgery	Principles of ENT anaesthesia
Autonomic nervous system physiology	Paediatric anaesthesia complications
Pain pathways physiology	Miscellaneous
Nutrition and nutritional assessment	Safety / systems (e.g. stop before you block, WHO checklist, consent etc.)
Measurement of blood glucose	Global Surgery and anaesthesia
Interpretation of standard laboratory blood results	Non-technical skills (communication, leadership, situational awareness, teamwork, prioritisation etc.)
Interpretation of electrocardiogram	History of surgery and anaesthesia
Pregnancy physiology	Consent and ethics
Paediatric physiology	Managing risk
Abnormal physiology	Controlled substance handling
Airway obstruction - diagnosis and management	Critical care
Circulation management	Palliative care and end-of-life care
Arrhythmias	Treatment limitations and withdrawal of life sustaining care
Advanced Life Support and cardiopulmonary resuscitation	Turning an immobilized patient
Paediatric Life Support	C-spine immobilization
Advanced Trauma Life Support	Ventilator modes / management
Acute and chronic pain	Nutrition in ICU
Arterial blood gas analysis and interpretation	Bowel care in ICU

Post-Operative Nausea and Vomiting (PONV)	Prevention of delirium
Surgical Site Infections	Recognition of the critically ill or deteriorating patient
Management of abnormal blood glucose	Management of the trauma patient
Airway obstruction in children	Head injuries and their management
Equipment and physics	Reduced Glasgow Coma Scale (GCS)
Principles of ultrasound scanning	Transplant and organ donation
Airway equipment	Hypotension
Breathing systems (Mapleson's and circle)	Hypertension
Administering oxygen	Shock
Pharmacology	Sepsis
Intravenous induction agents	Organ failure and organ support
Volatile anaesthetics	Burns and resuscitation
Ketamine	Hypoxia
Muscle relaxants	Respiratory failure
Reversal agents i.e. Neostigmine	Seizures
Intravenous fluids	Skills
Opioids	Peripheral IV line
Clonidine	Intubation
Tramadol	Arterial line
Paracetamol / Acetaminophen	Central line
Non-Steroidal Anti-Inflammatory Drugs	Epidurals
Local anaesthetics	Spinals
Pre-medication	Bag mask ventilation
Drugs acting on the autonomic nervous system including Adrenaline	Insertion of oropharyngeal airway
Antibiotics	Insertion of nasopharyngeal airway
Antiemetics	Insertion of Laryngeal Mask Airway
General pre-operative topics	Electrocardiogram interpretation
General anaesthesia overview (hypnosis / analgesia / relaxation)	Patient positioning
Pre-morbid conditions (diabetes, obesity, ischaemic heart disease, chronic obstructive pulmonary disease, chronic kidney disease etc)	Parenteral drug constitution and administration
Pre-operative assessment and evaluation	Intramuscular drug administration
Preoperative optimization	Subcutaneous drug administration
Fasting guidelines	Patient moving and handling
Intra-operative topics	Use of IV anaesthetic agents
Airway assessment	Calculation and administration of emergency drugs
Patient positioning	Intraosseous access

Keeping a patient warm
Basic airway management (airway manoeuvres etc.)
Tracheal intubation
Venous access - peripheral venous line
Venous access - central venous line
Venous access - arterial line
Perioperative medicine
Perioperative care
Rapid Sequence Induction (indication and procedure)
Total Intravenous Anaesthesia (TIVA)
Monitoring (heart rate, blood pressure, oxygen saturations, ventilation, temperature, depth of anaesthesia)
End-tidal carbon dioxide interpretation / capnography
Mechanical ventilation
Invasive monitoring
Care of the unconscious patient
Intraoperative complications
Spinal anaesthesia
Epidural anaesthesia
Brachial plexus block
Ring blocks
Haematoma blocks
Bier's blocks
Femoral nerve / Fascia-Iliaca blocks
Other peripheral nerve blocks
Blood transfusions - components and indications
Blood transfusions - reactions
Management of anaesthetic emergencies (Malignant Hyperpyrexia, Local Anaesthetic Toxicity, Can't Intubate Can't Oxygenate)