

# PALESTINIAN ANESTHESIA AND INTENSIVE CARE RESIDENCY PROGRAM

## TRAINING CURRICULUM

### Palestinian Health Capacity Project (PHCP)

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## Contents

ACRONYMS .....	4
PALESTINIAN ANESTHESIA AND INTENSIVE CARE RESIDENCY PROGRAM TRAINING CURRICULUM .....	6
FOREWORD .....	7
PREFACE.....	8
BACKGROUND .....	9
ACKNOWLEDGEMENTS .....	10
INTRODUCTION TO THIS CURRICULUM.....	11
ORGANIZATION OF THE CURRICULUM.....	12
SECTION 1. OVERVIEW OF THE CURRICULUM.....	13
SECTION 3. INTRODUCTION TO ANESTHESIA .....	17
I.1. Preoperative Assessment.....	18
I.2. Premedication.....	19
I.3. Induction of General Anesthesia.....	19
I.4. Intra-operative Care .....	22
I.5. Postoperative Care.....	23
ESSENTIAL SKILLS CERTIFICATE ASSESSMENTS.....	27
SECTION 4. UNITS OF ANESTHESIA TRAINING .....	28
Anesthesia Unit Structure .....	28
1. Airway Management .....	29
2. Management of Emergencies/Trauma (Including Critical Incidents).....	32
3. Abdominal Surgery .....	35
4. Orthopedics and Regional Anesthesia .....	38
5. Head/Neck and Other Types of Surgery.....	42
6. Working Outside of Theater and Transfer Medicine.....	45
7. Pre- and Post-operative Care (Including Pain Management).....	48
8. Intensive Care Medicine .....	52
9. Cardiac and Thoracic Anesthesia .....	58
10. Neuro Anesthesia .....	61
13. Specialty Anesthesia: Ambulatory Surgery .....	69

14 . Vascular Anesthesia .....	71
SECTION 5. REGULATIONS AND REQUIREMENTS OF THE RESIDENCY PROGRAM .....	73
SECTION 6. TEACHING AND LEARNING METHODS .....	74
SECTION 7. ASSESSMENT METHODS AND SCHEDULES.....	75
Supervised Learning Events (SLE) .....	75
Multisource Feedback (MSF) .....	75
Logbook .....	75
Annual Review of Training.....	78
SECTION 8: ASSESSING THE CURRICULUM IN PRACTICE .....	79
SECTION 9: REFERENCES.....	80
ANNEXES .....	81
Initial Assessment of Essential Skills .....	82
Initial Assessment of Essential Skills.....	83
Essential Skills in Intensive Care Certificate .....	84
Essential Skills in Intensive Care Certificate .....	85
Essential Skills in Obstetric Anesthesia Certificate .....	87
Essential Skills in Obstetric Anesthesia Certificate .....	88
Completion of Unit of Training (CUT) Form.....	89
Completion of Unit of Training (CUT) Form.....	90
Resident End of Year Report .....	91
Resident End of Year Report (Part 2) .....	92
Case Report Diary instructions .....	95
Multi-Source Feedback Form for Residents.....	98

## ACRONYMS

<b>ALS</b>	Advanced Life Support
<b>APLS</b>	Advanced Pediatric Life Support
<b>ASA</b>	American Society of Anaesthesiologists
<b>ATLS</b>	Advanced Trauma Life Support
<b>CBD</b>	Case Based Discussion
<b>CEX</b>	Clinical Evaluation Exercise
<b>CSE</b>	Combined Spinal Epidural
<b>CT</b>	Computerized Tomography (Scan)
<b>CUT</b>	Completion of Unit Training
<b>DOP</b>	Directly Observed Procedures
<b>ECG/EKG</b>	Electrocardiogram
<b>ENT</b>	Ear, Nose, Throat
<b>HDU</b>	High Dependency Unit
<b>ICM</b>	Intensive Care Medicine
<b>ICU</b>	Intensive Care Unit
<b>IMC</b>	Intermediate Care
<b>IPPV</b>	Intermittent Positive Pressure Ventilation
<b>JMC</b>	Jordanian Medical Council
<b>LMA</b>	Laryngeal Mask Airway
<b>MRI</b>	Magnetic Resonance Imaging
<b>MSF</b>	Multi-source Feedback
<b>NGO</b>	Non-governmental Organization
<b>NIBP</b>	Non-invasive Blood Pressure
<b>NSAID</b>	Nonsteroidal Anti-inflammatory Drug
<b>ORIF</b>	Open Reduction Internal Fixation
<b>PCA</b>	Patient-controlled Analgesia

<b>PHCP</b>	Palestinian Health Capacity Project
<b>PMC</b>	Palestine Medical Council
<b>PMOH</b>	Palestinian Ministry of Health
<b>RSI</b>	Rapid Sequence Induction
<b>SLE</b>	Supervised Learning Event
<b>USAID</b>	United States Agency for International Development

# PALESTINIAN ANESTHESIA AND INTENSIVE CARE RESIDENCY PROGRAM TRAINING CURRICULUM

This document is the result of the combined efforts, commitment, and dedication of a small group of professionals who reviewed and revised the Palestinian Anesthesia and Intensive Care Residency Training Curriculum. The aim of this exercise was to raise the standard of post-graduate medical education in anesthesia and intensive care nationally and to meet the health needs of the Palestinian people.

These efforts have been supported by the Palestine Medical Council (PMC) and Palestinian Ministry of Health (PMOH) through the Palestinian Health Capacity Project (PHCP), funded by the United States Agency for International Development (USAID), and implemented by IntraHealth International.

This curriculum provides detailed technical information for the anesthesia and intensive care residency program managed by the Palestinian National Residency Program under the auspices of Palestine Medical Council (PMC). The curriculum is intended to enhance the uniformity and standardization of anesthesia and intensive care post-graduate medical education, according to evidence-based knowledge and practices, and ultimately contribute to improving the quality of care provided to Palestinian people.

Effective implementation of this curriculum is contingent upon the support of the PMC and clinical training institutions (e.g. the PMOH and non-governmental organizations (NGOs)) to ensure that sufficient resources (including, but not limited to materials, equipment, human resources, management, supervision, and monitoring) are available, and that residency program directors, clinical instructors, and residents are oriented to its content.

## FOREWORD


It is my great pleasure to introduce the revised anesthesia and intensive care residency curriculum to our anesthesia and intensive care educators and residents in the Palestinian Territories. This curriculum responds to a national priority, identified in 2014 by key stakeholders in the medical community, to strengthen and standardize medical residency curricula in the country.


This curriculum is the fourth of many curricula planned to be developed in the future. Previous curricula include the general surgery, pediatric medicine, and internal medicine residency programs that were completed over the last two years and launched in PMOH and NGO hospitals that offer general surgery, pediatric medicine, and internal medicine residency. The PMOH's vision is to standardize teaching programs for all residencies and become a beacon for medical education both locally and regionally.

This curriculum will standardize the anesthesia and intensive care residency teaching program and approach in the Palestinian Territories, and produce high-caliber, competent anesthesiologists. It establishes a road map for educators and residents to guide them through the needed knowledge, clinical skills, competencies, evidence-based medicine, communication skills, and ethics required for anesthesiologists to graduate from the residency program.

Development of the anesthesia and intensive care curriculum was a collaborative effort involving many parties under the leadership of the Palestine Medical Council, its anesthesia and intensive care scientific committee, and local consultants who worked hand-in-hand with an international expert from the Royal College of Anesthetists, with guidance from the PMOH. IntraHealth International provided the needed technical assistance through PHCP with USAID funding and support. Other key stakeholders, as well as anesthesia and intensive care experts in the medical community were also involved in the development of this curriculum.

It is my hope that the curriculum will be implemented by all anesthesia and intensive care residency teaching programs in the West Bank and Gaza in 2019 and onwards to improve the quality of education and health services offered to the Palestinian people.

  
**Dr. Jawad Awwad**  
Minister of Health



## PREFACE

In 2014, the PMC, the PMOH, and key stakeholders in the medical community identified the review of national medical residency programs as a priority issue. In response, the USAID-funded Palestinian Health Capacity Project, IntraHealth International, and the PMC coordinated to review and revise the first national curriculum in general surgery. After the success of the general surgery, pediatric medicine, and internal medicine revision, the anesthesia and intensive care residency training curriculum was selected for review and updating.

The revision process was done with significant input and involvement of the PMC headed by his Excellency the Minister of Health, and has been enthusiastically supported by the Secretary General and the Anesthesia and Intensive Care Scientific Committee, as well as the PMOH and other key stakeholders in the anesthesia and intensive care community. Review and elaboration of the residency training curriculum was led by Palestinian consultants supported by an international colleague from the United Kingdom, using international standards and competency frameworks, and the latest evidence-based knowledge and practices. The scientific committee and key stakeholders in the anesthesia and intensive care community played a major role in informing the content of the curriculum, providing feedback and suggestions, and ultimately endorsing the document.

The contents of this curriculum and further instructions related to the anesthesia and intensive care residency program may be clarified or expanded upon by the PMC in accordance with its mandate, through issuance of specific written communication and periodic notices.



## BACKGROUND

The PMC was formed in 1996 and its status as an independent scientific medical body was established by the Palestinian Legislative Council in Law Number 1 in 2006. The PMC offered the first Palestinian Board exam in November 2001 for six medical and has offered exams in several specialties on a regular basis since then. The Council has the authority to arrange Board examinations to certify physicians in all specialties and sub-specialties, even those not offered in local residency programs. Law Number 1 established the authority of the PMC to (among other powers) set criteria for specialty medical training and be the sole body to certify physicians as specialists (this applied from 2006 onwards and did not change the status of specialists recognized prior to then by either the PMC or the Jordanian Medical Council (JMC)). Certification by the PMC is a basic requirement of specialist physician licensing.

The Palestinian national residency program began in 2008 under the auspices of the PMC. Prior to the establishment of the national program, three Palestinian hospitals were accredited by the Jordanian Medical Council (JMC) as training centers. Al-Makassed Hospital in Jerusalem was the only center with a fully accredited residency in anesthesia and intensive care for all training years, having held accreditation from the JMC since 1988. The JMC system of recognition for training conducted at Al-Makassed and select West Bank hospitals continued until 2008.

In establishing the national residency programs, the PMC adopted the Arab Board of Health Specializations' accreditation criteria, including the criteria for anesthesia and intensive care. The Arab Board outlines the overall aims of anesthesia and intensive care residency training and specifies objectives per the five year training program.

A more detailed curriculum tailored to the Palestinian health context that standardizes knowledge and competencies for each residency year was needed to improve the quality and outcome of the anesthesia and intensive care residency program in the West Bank and Gaza. Therefore this curriculum provides residents, clinical preceptors, and the Palestine Medical Council with detailed technical content to assist in the implementation of the Palestinian Anesthesia and Intensive Care Residency Training Program while responding to both the Palestinian and Arab Board requirements.

## ACKNOWLEDGEMENTS

This curriculum could not have been developed without valuable contributions from the health professionals and experts who gave their precious time and expertise. The following individuals are hereby acknowledged for their significant contribution to the preparation, writing, and review of this curriculum:

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- Numerous Palestinian internists and specialists from the PMOH, private and NGO sectors who actively participated in discussion sessions and provided feedback and recommendations on the curriculum revision
- Anesthesia residents who shared their experiences in the local residency programs and provided valuable perspectives that informed the revision process



**Dr. Salwa Bitar**

Chief of Party

Palestinian Health Capacity Project

## INTRODUCTION TO THIS CURRICULUM

Anesthetists are doctors whose skills are used in all aspects of patient care. While the perioperative anesthetic care of the surgical patient is the core of their specialty work, many anesthetists have a much wider scope of practice which may include:

- Preoperative preparation of surgical patients
- Resuscitation and stabilization of patients in the emergency department
- Pain relief in labour and obstetric anesthesia
- Intensive care medicine
- Transport of acutely ill and injured patients

Anesthetists work in multi-disciplinary teams, have strong communication and interpersonal skills, share expertise effectively, and assume the responsibilities of teaching, leadership, and management roles where appropriate. Anesthetists ensure that they are up-to-date in their practice and promote evidence-based medicine where possible. They are committed to the highest standards of care and of ethical and professional behavior within their specialty and within the medical profession as a whole.

This document outlines the knowledge, skills, and behaviors that residents are expected to have acquired by the end of their specialty training in the Palestinian National Residency Program in anesthesia in order to be excellent anesthetists.

This curriculum provides a detailed guide for the content of the anesthesia residency training across all years of the program. The curriculum is for residents, instructors, training facilities, training program directors, the Palestine Medical Council, and others involved in anesthesia education.

Residents should carefully review this curriculum and ensure that they are meeting the required competencies, gaining the necessary knowledge, and acquiring the appropriate skills outlined in this document. As adult learners, residents are expected to take responsibility for their own progress and actively seek out opportunities to learn and benefit from the knowledge and experience of peers, instructors, and other health care professionals, as well as patients and their families. It is also expected that residents will engage in ongoing self-reflection and self-evaluation and direct their own learning to continually challenge themselves to excel as anesthetists. Residents should encourage constructive feedback from their instructors, peers, and other health care professionals, as well as patients and their families as an opportunity to grow professionally and improve their practice.

Instructors in the residency program should be thoroughly familiar with the knowledge and procedures on which the curriculum is based, skilled in the practices described, and have a positive attitude towards residents and their own work as educators. As mentors and

teachers of the next generation of Palestinian doctors, instructors should model the same high standards in professional practice and behaviors expected of their residents. Instructors have a responsibility to provide constructive feedback to residents that is timely, specific, and assists residents in improving their performance. It is highly recommended that instructors attend an “Educating the Educators” or other relevant course to hone their teaching skills.

Training facilities and program directors will find this curriculum useful to develop materials and set the teaching schedule for each year of the residency program.

## ORGANIZATION OF THE CURRICULUM

The curriculum is organized into the following sections:

Section	Description
<b>Section 1 Overview of the Curriculum</b>	Knowledge and competencies required per each year of the residency program
<b>Section 2 Expectations of the Curriculum</b>	Details of the general competencies, clinical knowledge, skill competencies, and procedural competencies by segment of the residency period
<b>Section 3 The Introductory Period of Training</b>	Overview of the knowledge, skills and behaviours taught and assessed during the first six months of training
<b>Section 4 Detailed Content of the Residency Program</b>	Required knowledge, skills and behaviours categorized by relevant clinical areas of practice by phase of the residency program (basic, intermediate, advanced)
<b>Section 5 Regulations and Requirements of the Residency Program</b>	PMC regulations and admission requirements.
<b>Section 6 Teaching and Learning Methods</b>	Overview of the teaching and learning methods to support delivery of the curriculum
<b>Section 7 Assessment Methods and Evaluation Tools</b>	Overview of the methods used to assess residents' performance
<b>Section 8 Assessing the Implementation of the Curriculum</b>	How the implementation of this curriculum will be assessed
<b>Section 9 References</b>	List of the references upon which this curriculum is based as well as other useful resources

## SECTION 1. OVERVIEW OF THE CURRICULUM

Training in anesthesia is achieved by undertaking a five-year competency-based program. This time is subdivided into four levels of training as outlined below. For each level of training, there are both generic and specific knowledge, skills, and behaviors to be learned and demonstrated.

Phase	Duration	Contents
Introduction to Anesthesia	6 months	Essential Skills of an Anesthetist
Basic Anesthesia	18 months	9 months: Anesthesia
		3 months: Intensive Care Medicine
		3 months: Emergency Anesthesia
		3 months: Obstetric Anesthesia
Intermediate Anesthesia	18 months	6 months: Anesthesia
		2 months: Specialist Modules in Cardiac & Thoracics, Neuro, Obstetrics, Children, Emergency Anesthesia & Perioperative Care
Advanced Practice	18m	12 months: Anesthesia
		6 months: Specialist Practice in Chosen Area

### Introductory Period

Anesthesia is very different to other specialities in medicine. This six month introductory period allows doctors to adapt to the new knowledge, skills, and behaviors required in anesthetic practice.

### Basic Anesthesia

This 18-month period allows residents to develop a solid foundation in the safe practice of anesthesia.

### Intermediate Anesthesia

This 18-month period allows the resident to consolidate their anesthesia skills and begin practicing in an increasingly independent way.

### Advanced Practice

During this period of training, the resident becomes ready for solo and specialist practice. This part of training is, to a certain extent, focused on the interests and needs of the individual resident and provides the scope for the development of subspecialist interests.

## SECTION 2. EXPECTATIONS OUTLINED IN THE CURRICULUM

The table below outlines the core areas of knowledge and skills that a resident is to achieve over the course of the residency program. Further details are provided in the subsequent sections of the curriculum.

Area	Basic Anesthesia	Intermediate Anesthesia	Advanced Practice
<b>Professional Values and Behaviors</b>	<p>Demonstrate probity in personal and professional life</p> <p>Demonstrate a responsibility for their own health in so far as it might affect the welfare and safety of patients</p> <p>Demonstrate a commitment to the highest standards of care and ethical and professional behavior within their specialty and within the medical profession as a whole</p> <p>Understand the limitations of their competence, in their clinical practice and in their relationships with patients</p> <p>Know where and when to ask for help, support, and supervision</p> <p>Demonstrate a reflective approach to their practice and a commitment to continual learning and improving their practice through reflection</p> <p>Show a commitment to their continuing professional development and respond positively to requests for enquiries or critical incident reports and to outcomes of reviews, assessments, and appraisals of their performance</p> <p>Understand the importance of cultural diversity</p> <p>Understand the need for honesty and know the procedures to follow where there is concern about the professional conduct of a colleague who might be putting the health of a patient at risk</p>		
<b>Communication with Patients and Colleagues</b>	<p>Develop effective verbal and written communication skills</p> <p>Develop careful medical record keeping</p> <p>Be able to perform an anesthetic assessment</p>	<p>Use analytical and informed clinical reasoning</p> <p>Initiate appropriate investigations and management plans</p> <p>Use careful and appropriate</p>	<p>Be responsible for effective management of common acute and chronic conditions as relevant to anesthetic practice.</p> <p>Be able to take responsibility for effective perioperative management</p>

	accurately and sensitively	language in difficult and challenging circumstances	
<b>Professional Knowledge</b>	Knowledge of the basic sciences as applied to anesthesia	Knowledge of clinical practice in anesthesia  An ability to apply basic science to clinical problems	Advanced specialist knowledge in areas of specialist interest
<b>Clinical Skills in Anesthesia</b>	Learn and perform anesthesia technical skills as outlined in Part D	Further enhancement of these skills	Regular unsupervised practice of clinical skills and an ability to teach these skills to others
<b>Leadership in Healthcare</b>	Demonstrate the ability to work effectively in multi-disciplinary teams and with colleagues from a wide range of specialities  Have effective time management skills in their professional roles  Have developed confidence to make decisions within a team	Be able to prioritize tasks in personal and professional contexts, such as during medical emergencies  Have developed effective organizational skills for themselves and in leading others in prioritization and delegation	Take on a leadership role in multi- disciplinary teams  Have developed effective problem-solving strategies in clinical and management contexts, for example where there is a shortage of medical staff or other resources
<b>Improving Quality of Healthcare</b>	An understanding of clinical audit in medical practice	An understanding of Quality Improvement methods and strategies	Positive involvement in audit and QI activity
<b>Competence in Teaching and Training Others</b>		Have developed some effective teaching and learning skills in a range of clinical contexts	Participate in departmental teaching programs Understand the importance of a positive and constructive approach to mentoring when giving

		<p>Develop a sound understanding and a commitment to the principles and practice of effective teaching and learning in clinical contexts</p> <p>Contribute to the training of medical students and post graduate trainees and other professionals</p>	<p>guidance, support, and feedback to trainees under their supervision</p>
<b>Competence in Understanding and/or Undertaking Research</b>	<p>An understanding of an evidence-based approach to medical practice</p> <p>Understand basic concepts in medical research</p> <p>Understand the difference between research and audit</p> <p>Understand simple statistical tests</p>	<p>Begin to develop critical appraisal skills and apply reading of the literature, including systematic reviews</p>	<p>Understand the process of the Ethical Committee approval for research studies</p> <p>Be able to plan a quality improvement or research project effectively under supervision</p>



## SECTION 3. INTRODUCTION TO ANESTHESIA

Training in anesthesia begins with a six-month introductory period which aims to provide the doctor with the essential knowledge, skills, and behaviors for practice in anesthesia. The first six months of anesthesia training culminates in the acquisition of the Essential Skills Certificate [see ANNEX].

Initially, it is expected that doctors will be unable to work unsupervised until such time that they have acquired and demonstrated sufficient competence by obtaining the Essential Skills Certificate. The Essential Skills Certificate **must** be accomplished by the end of this period of training.

**Sub-Units** included in Introduction to Anesthesia:

- I.1 Preoperative assessment
- I.2 Premedication
- I.3 Induction of general anesthesia
- I.4 Intra-operative care
- I.5 Post-operative and care
- I.6 Management of emergencies/trauma (including critical incidents)

The learning objectives and skills for each introductory sub-unit follow:

## I.1. Preoperative Assessment

### Learning Objectives:

- To perform a structured preoperative anesthetic assessment of a patient prior to surgery and recognize when further assessment/optimization is required
- To plan anesthesia and post-operative care for common surgical procedures, to recognize own limitations, and reliably determine the level of supervision required
- To explain options and risks of routine anesthesia to patients in a way they understand and obtain their consent for anesthesia
- To formulate a plan for the management of common co-existing diseases, in particular the perioperative plan for patients with diabetes
- To document the anesthetic assessment, plan, and consent accurately and legibly

### Skills:

- Identifies and overcomes barriers to effective communication; interprets and uses non-verbal communication to and from patients and carers
- Focuses on relevant aspects of history; manages time and draws consultations to a close appropriately
- Assimilates history from the available information from the patient and other sources
- Performs an examination relevant to the presentation and risk factors that is valid, targeted, and time efficient
- Actively elicits important clinical findings and performs relevant additional examinations
- Interprets and acts upon basic investigations with relevance to anesthesia and surgery
- Makes and documents appropriate plans for anesthesia:
  - Reviews current medication and seeks advice where appropriate
  - Plans appropriate anesthetic technique(s)

- Secures consent for anesthesia
- Recognizes the need for additional investigation and acts accordingly
- Discusses issues of concern with relevant members of the team
- Reliably predicts the level of supervision they will require

## I.2. Premedication

### Learning Objective:

- To prescribe premedication when indicated

### Skills:

- Understands the indications for prescription of pre-medication
- Prescribes appropriate agents to reduce the risk of regurgitation and aspiration
- Explains, in a way the patient understands, the benefits and possible risks of sedative premedication
- Prescribes appropriate anxiolytic/sedative premedication when indicated

## I.3. Induction of General Anesthesia

### Learning Objective:

- To demonstrate safe practice behaviors including briefings, checklists, and debriefs
- To demonstrate correct pre-anesthetic check of all equipment required ensuring its safe functioning
- To demonstrate safe induction of anesthesia, using preoperative knowledge of individual patients' co-morbidity to influence appropriate induction technique
- To recognize and treat immediate complications of induction, including tracheal tube misplacement and adverse drug reactions

- To manage the effects of common complications of the induction process
- To confidently conduct safe induction of anesthesia in ASA grade 1-2 patients

### **Skills:**

- Demonstrates safe practice in checking the patient in before induction
- Demonstrates appropriate checking of equipment prior to induction, including equipment for emergency use
- Demonstrates the functions of the anesthetic machine including
  - Performing proper pre-use checks
  - Changing/checking the breathing system
  - Replenishing the vaporiser
  - Changing the vaporiser
- Selects, checks, draws up, dilutes, labels, and administers drugs safely
- Obtains intravascular access using appropriately sized cannulae in appropriate anatomical locations
- Demonstrates appropriate placement of monitoring, including ECG electrodes and NIBP cuff
- Uses monitors appropriately and demonstrates proficiency in the interpretation of monitored parameters
- Demonstrates effective pre-oxygenation
- Demonstrates correct use of oropharyngeal, laryngeal, and tracheal suctioning
- Demonstrates failed intubation drill

### **In respect to intravenous induction:**

- Explains induction to the patient
- Prepares drugs for the induction of anesthesia
- Administers drugs at induction of anesthesia
- Manages the cardiovascular and respiratory changes associated with induction of general anesthesia

**In respect to inhalational induction of anesthesia:**

- Satisfactorily communicates with the patient during induction
- Satisfactorily conducts induction

**In respect to airway management:**

- Positions the patient for airway management
- Maintains the airway with oral/nasopharyngeal airways
- Ventilates the lungs with a bag and mask
- Inserts and confirms placement of a laryngeal mask airway (LMA)
- Successfully places nasal/oral tracheal tubes using direct laryngoscopy
- Confirms correct tracheal tube placement
- Uses bougies correctly
- Secures and protects LMAs/tracheal tubes during movement, positioning, and transfer

- Correctly conducts RSI
- Correctly demonstrates the technique of cricoid pressure

#### I.4. Intra-operative Care

##### **Learning Objectives:**

- To safely maintain anesthesia and show awareness of potential complications and their management during elective and emergency surgery
- To use anesthesia monitoring systems to guide the progress of the patient and ensure safety
- To consider the effects that co-existing disease and planned surgery may have on the progress of anesthesia
- To plan for the management of significant co-existing diseases perioperatively
- To recognize the importance of working as a member of the theater team

##### **Skills:**

- Communicates with the theater team in a clear, unambiguous style
- Demonstrates role as a team player and, when appropriate, leader in the intra-operative environment
- Directs the team to safely transfer and position patient on the operating table and is aware of the potential hazards including, but not exclusively, nerve injury, pressure points, ophthalmic injuries
- Manages the intra-operative progress of spontaneously breathing and ventilated patients
- Maintains anesthesia with a face mask in the spontaneously breathing patient

- Uses a nerve stimulator to assess the level of neuromuscular blockade
- Manages common co-existing medical problems (with appropriate supervision) including but not limited to: diabetes, hypertension, ischaemic heart disease, asthma, and COPD
- Responds in a timely and appropriate manner to events that may affect the safety of patients (e.g. hypotension, massive hemorrhage)
- Maintains accurate, detailed, legible anesthetic records and relevant documentation

## I.5. Postoperative Care

### Learning Objectives:

- To manage the recovery of patients from general anesthesia
- To safely manage emergence from anesthesia and extubation
- To understand, identify, and manage common postoperative complications in patients with a variety of co-morbidities
- To prescribe and manage appropriate postoperative fluid regimes
- To assess and manage postoperative pain
- To assess and manage postoperative nausea and vomiting

### Skills:

- Evaluates neuromuscular blockade using a nerve stimulator
- Performs safe tracheal extubation
- Transfers an unconscious patient from the operating theater to the recovery room

- Makes a clear handover to recovery staff of perioperative management and the postoperative plan
- Prescribes appropriate postoperative fluid regimes
- Assesses postoperative pain and prescribes appropriate postoperative analgesia
- Manages postoperative nausea and vomiting
- Assesses postoperative confusion
- Recognizes when discharge criteria have been met for patients going home or to the ward
- Undertakes follow-up visits to patients after surgery in the ward



## I.6. Management of Emergencies/Trauma (Including Critical Incidents)

### Learning Objectives:

- To conduct anesthesia for ASA 1E and 2E patients requiring emergency surgery for common conditions
- To show awareness of the additional hazards associated with induction of anesthesia in unusual places (e.g. emergency room)
- To show awareness of the conduct of anesthesia in special circumstances including, but not exclusively: brain injury, full stomach, sepsis, and upper airway obstruction
- To have gained a thorough understanding of the pathophysiology of respiratory and cardiac arrest and the skills required to resuscitate patients
- To resuscitate a patient in accordance with the latest resuscitation guidelines
- To acquire good working practices in the use of aseptic techniques

### Skills:

- Manages rapid sequence induction for the acutely ill patient
- Is able to discuss the methods available to manage difficult intubation and failed intubation
- Demonstrates failed intubation drill
- Explains how to identify patients who are at increased risk of regurgitation and pulmonary aspiration and knows the measures that minimize the risk
- Categorizes the signs of pulmonary aspiration and the methods for its emergency management
- Is able to describe the management of common anesthetic emergencies

- Is able to resuscitate a patient in accordance with the latest resuscitation guidelines
- Follows local infection control protocols and uses aseptic techniques when necessary

## ESSENTIAL SKILLS CERTIFICATE ASSESSMENTS

All of the following assessments to evaluate mastery of competencies must be completed to earn the Essential Skills Certificate within the first six months of the residency program.

Assessment	Detail
<b><i>Clinical Evaluation Exercise (CEX)</i></b>	
A01	Preoperative assessment of a patient who is scheduled for a routine surgery
A02	Manage anesthesia for a patient who is not intubated and is breathing spontaneously
A03	Administer anesthesia for acute abdominal surgery
A04	Demonstrate Rapid Sequence Induction
A05	Recover a patient from anesthesia
<b><i>Directly Observed Procedures (DOPS)</i></b>	
D01	Demonstrate functions of the anesthetic machine
D02	Transfer a patient onto the operating table and position them for surgery
D03	Demonstrate cardio-pulmonary resuscitation on a mannequin
D04	Demonstrate technique of scrubbing up and donning gown and gloves
D05	Demonstrate core competencies for pain management
D06	Demonstrate the routine for dealing with failed intubation on a mannequin
<b><i>Case Based Discussion (CBD)</i></b>	
C01	Discuss the steps taken to ensure correct identification of the patient, the operation, and the side of operation
C02	Discuss how the need to minimize postoperative nausea and vomiting influenced the conduct of the anaesthetic
C03	Discuss how the airway was assessed and how difficult intubation can be predicted
C04	Discuss how the choice of muscle relaxants and induction agents was made
C05	Discuss how the trainee's choice of post-operative analgesics was made
C06	Discuss how the trainee's choice of post-operative oxygen therapy was made
C07	Discuss the problems emergency intra-abdominal surgery causes for the anesthetist and how the trainee dealt with these
C08	Discuss the routine to be followed in the case of failed intubation

## SECTION 4. UNITS OF ANESTHESIA TRAINING

The following table indicates the contents of the residency program following the introductory training period. Content within each unit progresses from basic through intermediate and advanced phases over the course of the residency program. Learning objectives and skills to be mastered at each level are described subsequently for each unit.

### Anesthesia Unit Structure

Unit (Examples)	Basic	Intermediate	Advanced
1. Airway Management	✓	✓	✓
2. Management of Emergencies/Trauma (Includes Critical Incidents)	✓	✓	✓
3. Abdominal Surgery	✓	✓	✓
4. Orthopedics and Regional Anesthesia	✓	✓	Optional
5. Head/Neck and Other Types of Surgery	✓	✓	✓
6. Working Outside of Theatre and Transfer Medicine	✓	✓	✓
7. Pre and Post-Operative Care (Including Pain Management)	✓	✓	✓
8. ICM	✓	Optional	Optional
9. Cardiac & Thoracic	-	✓	Optional
10. Neuro	-	✓	Optional
11. Pediatrics	-	✓	Optional
12. Obstetrics	✓	✓	Optional
13. Ambulatory Surgery	✓	✓	✓
14. Vascular	-	✓	Optional

# 1. Airway Management

Learning Objectives:		
Basic	Intermediate	Advanced
<ul style="list-style-type: none"> <li>- To predict difficulty with an airway at preoperative assessment and obtain appropriate help</li> <li>- To maintain an airway and provide definitive airway management as part of emergency resuscitation</li> <li>- To demonstrate the safe management of the "can't intubate can't ventilate" scenario</li> <li>- To maintain anesthesia in a spontaneously breathing patient via a facemask for a short surgical procedure</li> </ul>	<ul style="list-style-type: none"> <li>- To develop knowledge, skills, and experience of safe airway management in more complex cases undergoing major elective and emergency surgery including fiber optic intubation</li> <li>- To recognize the specific problems encountered with the airway</li> <li>- To demonstrate the ability to perform elective fiber optic intubation, either for an awake or an anesthetized patient, with local supervision</li> </ul>	<ul style="list-style-type: none"> <li>- To demonstrate skill in managing more complex airways by building upon intermediate knowledge, skills, and experience</li> <li>- To manage patients with complex airway disorders safely and proficiently</li> <li>- To perform elective fiber optic intubation in patients, safely and proficiently, in awake or anesthetized patients</li> </ul>
Skills:		
Basic	Intermediate	Advanced
<p>Demonstrates:</p> <ul style="list-style-type: none"> <li>- Satisfactory proficiency in performing a relevant clinical examination and assessment of the airway and dentition</li> <li>- Ability to reliably predict the level of supervision they will require to undertake the clinical case</li> <li>- Effective pre-oxygenation, including</li> </ul>	<p>Demonstrates:</p> <ul style="list-style-type: none"> <li>- Ability to identify normal appearances and significant abnormalities in radiographs including: cervical spine and chest x-rays, head CT and MRIs</li> <li>- Effective teaching of basic airway manoeuvres, direct laryngoscopy, and endotracheal intubation to others</li> </ul>	<p>Demonstrates:</p> <ul style="list-style-type: none"> <li>- Ability to use a variety of advanced airway management techniques</li> <li>- Ability to perform awake elective fiber optic intubation, including obtaining consent</li> <li>- Ability to perform fiber optic intubation for elective cases including those with</li> </ul>

<p>correct use of the mask, head position, and clear explanation to the patient</p> <ul style="list-style-type: none"> <li>- Optimal patient position for airway management, including head tilt, chin lift, jaw thrust</li> <li>- Ability to manage airway with mask and oral/nasopharyngeal airways</li> <li>- Hand ventilation with bag and mask</li> <li>- Ability to insert and confirm placement of a laryngeal mask airway</li> <li>- Correct head positioning, direct laryngoscopy, and successful nasal/oral intubation techniques and confirms correct tracheal tube placement</li> <li>- Proper use of bougies</li> <li>- Correct securing and protection of LMAs/tracheal tubes during movement, positioning, and transfer</li> <li>- Ability to correctly conduct RSI sequence</li> <li>- Correct technique of cricoid pressure</li> </ul>	<ul style="list-style-type: none"> <li>- Use of supraglottic airways for IPPV</li> <li>- Elective fiber optic intubation under anesthesia with or without LMAs or other airway adjuncts</li> <li>- Double lumen endo bronchial tube placement and lung isolation, including the use of bronchial blockers and the use of clinical/endoscopic methods to confirm correct position</li> </ul>	<p>airway pathology under distant supervision</p> <ul style="list-style-type: none"> <li>- Ability to perform fiber optic intubation for emergency cases including for those with airway pathology under direct supervision</li> <li>- Management of an operating list involving multiple patients for airway related surgery, including patients with predicted difficult airway, with appropriate airway management decision making</li> <li>- Correct use of high frequency jet ventilation</li> </ul>
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<ul style="list-style-type: none"> <li>- Ability to maintain anesthesia with a face mask in the spontaneously breathing patient</li> <li>- Failed intubation drill</li> <li>- Management of "can't intubate, can't ventilate" scenario</li> <li>- Correct use of oropharyngeal, laryngeal, and tracheal suctioning</li> <li>- Appropriate management of tracheal extubation, including; <ul style="list-style-type: none"> <li>• Assessment of return of protective reflexes</li> <li>• Assessment of adequacy of ventilation</li> <li>• Safe practice in the presence of a potentially full stomach</li> </ul> </li> <li>- Surgical cricothyrotomy</li> </ul>		
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## 2. Management of Emergencies/Trauma (Including Critical Incidents)

Learning Objectives:		
Basic	Intermediate	Advanced
<ul style="list-style-type: none"> <li>- To deliver safe perioperative care to adult ASA 1E and/or 2E patients requiring uncomplicated emergency surgery</li> <li>- To gain knowledge of the principle causes, detection, and management of critical incidents that can occur in theater</li> <li>- To recognize critical incidents early and manage them with appropriate supervision</li> <li>- To recognize the importance of personal non-technical skills and the use of simulation in reducing the potential harm caused by critical incidents</li> <li>- To understand the principles of prioritizing the care of patients with multi-trauma including airway management</li> </ul>	<ul style="list-style-type: none"> <li>- To demonstrate leadership in the management of critical incidents as and when they arrive</li> <li>- To provide assistance/leadership to more inexperienced colleagues if called to assist in the management of critical incidents</li> <li>- To learn how to follow through on a critical incident with reporting, presentation at audit meetings, and discussions with patients</li> <li>- To be an effective member of the multi-disciplinary trauma team and take responsibility for the initial airway management of the multiply injured patient with distant supervision</li> <li>- To manage acute life-threatening airway problems safely and effectively with distant supervision</li> <li>- To provide safe perioperative anesthetic care for ASA 1-3 patients with multiple injuries with distant supervision, while demonstrating understanding of knowing</li> </ul>	<ul style="list-style-type: none"> <li>- The safe management of patients with multiple injuries from arrival in hospital and onwards through definitive treatment</li> <li>- To acquire knowledge, skills, and experience in treating the most complex of clinical cases</li> <li>- To supervise more junior colleagues providing anesthetic care to the multiply injured patient from arrival in the emergency department and on through definitive treatment</li> <li>- To demonstrate the ability to lead a multidisciplinary resuscitation team in the initial assessment and management through to definitive care in the intensive care unit</li> </ul>



	when to seek senior help	
<b>Skills:</b>		
<b>Basic</b>	<b>Intermediate</b>	<b>Advanced</b>
<p>Demonstrates:</p> <ul style="list-style-type: none"> <li>- Good non-technical skills such as: effective communication, teamwork, leadership, decision-making, and maintenance of high situational awareness</li> <li>- Ability to recognize a deteriorating situation early by careful monitoring</li> <li>- How to perform the primary survey in a trauma patient</li> <li>- Correct emergency airway management in the trauma patient including those with actual or potential cervical spine damage</li> <li>- How to manage a tension pneumothorax</li> <li>- How to insert a chest drain</li> <li>- Assessment of patients with brain injury including the use of the GCS</li> <li>- Initial resuscitation of patients with trauma and preparation for further interventions</li> </ul>	<p>Demonstrates:</p> <ul style="list-style-type: none"> <li>- Leadership in resuscitation room/simulation when practicing response protocols with other healthcare professionals</li> <li>- Ability to communicate effectively</li> <li>- Ability to lead the multi-disciplinary trauma team to ensure that the primary survey, resuscitation, and secondary surveys are conducted appropriately in non-complex trauma patients</li> <li>- Advanced airway management skills in trauma patient (including those with suspected unstable cervical spine) including surgical airway techniques</li> <li>- Safe perioperative anesthetic management of patients with multiple injuries requiring early surgery, including the management of major blood loss and associated coagulopathy, hypothermia, and acidosis</li> </ul>	<p>Demonstrates:</p> <ul style="list-style-type: none"> <li>- Ability to lead a multi-disciplinary trauma team, co-ordinating and delivering the early hospital care of all types of complex multiply injured patients including the primary survey, resuscitation, and secondary survey, and appropriate HDU/ICU admission</li> <li>- Ability to lead and/or deliver safe perioperative anesthetic care to all multiply injured patients</li> <li>- Ability to gain a surgical airway</li> <li>- Team leadership and the ability to make end of life decisions, and when to cease active treatment in a compassionate and caring manner, including leading the discussion on the appropriateness, or otherwise, of withdrawing treatment with both staff and relatives</li> </ul>

<p>including emergency surgery</p> <ul style="list-style-type: none"> <li>- Provision of safe perioperative anesthetic management of ASA 1 and 2 patients with multiple trauma</li> <li>- How to perform a secondary survey in a trauma patient</li> <li>- Ability to undertake intra-hospital transfer of patients from the emergency department for further management</li> <li>- Ability to recognize when a crisis is occurring</li> <li>- Ability to manage common anesthetic crises</li> <li>- How to obtain the attention of others and obtain appropriate help when a crisis is occurring</li> </ul>	<ul style="list-style-type: none"> <li>- Correct preparation of patients for safe transfer including ensuring adequate resuscitation, appropriate accompanying personnel, and the use of checklists</li> <li>- Safe inter-hospital transfer of stable trauma patient(s), including those with brain injury, while also ensuring the safety of accompanying personnel</li> <li>- Ability to interpret imaging relevant to the primary survey</li> <li>- Ability to differentiate the causes of loss of consciousness</li> <li>- Ability to list the causes of hypotension</li> <li>- Ability to differentiate types of shock</li> <li>- Ability to read ECGs and treat abnormalities</li> </ul>	
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### 3. Abdominal Surgery

Learning Objectives:		
Basic	Intermediate	Advanced
<ul style="list-style-type: none"> <li>- To gain knowledge, skills, and experience of the perioperative anesthetic care of patients requiring elective and emergency general, urological, and gynecological surgery</li> <li>- To gain understanding of the perioperative management of patients requiring intra-abdominal laparoscopic surgery and the particular issues related to anesthetic practice, demonstrating the ability to manage such straightforward cases in adults under distant supervision</li> <li>- To recognize and manage the perioperative complications associated with intra-abdominal surgery that are relevant to anesthesia</li> <li>- To gain understanding of special peri-operative needs of frail elderly patients</li> <li>- To deliver safe perioperative anesthetic care to uncomplicated ASA 1-3 adult patients requiring elective and emergency surgery under distant supervision</li> </ul>	<ul style="list-style-type: none"> <li>- To deliver safe perioperative anesthetic care to complex ASA 1-3 adult patients requiring elective and emergency intra-abdominal surgery with distant supervision</li> <li>- To manage a list with complex ASA 1-3 adult patients for elective and emergency surgery in all disciplines with distant supervision</li> <li>- To manage the peri-operative care of an elderly patient</li> <li>- To gain knowledge of the anesthetic management of patients with transplanted organs for non-transplant surgery</li> </ul>	<ul style="list-style-type: none"> <li>- To demonstrate the necessary communication, teamwork, leadership, professional, and practical skills needed to manage patients on elective and emergency general surgery, urology, and gynecology lists, safely and effectively</li> <li>- To demonstrate the ability to provide safe and effective peri-operative anesthetic care for patients requiring complex abdominal surgery</li> <li>- To demonstrate the ability to provide safe and effective peri-operative anesthetic care to high-risk emergency surgical cases, including those with potential for massive hemorrhage</li> </ul>

<ul style="list-style-type: none"> <li>- To manage a list with uncomplicated ASA 1-3 adults for similar elective surgery under distant supervision</li> </ul>		
<b>Skills:</b>		
<b>Basic</b>	<b>Intermediate</b>	<b>Advanced</b>
<p>Demonstrates:</p> <ul style="list-style-type: none"> <li>- Ability to form an appropriate perioperative management plan for ASA 1-3 surgical patients requiring all types of surgery</li> <li>- Ability to recognize when more complex perioperative assessment and/or optimization is required</li> <li>- Ability to identify the high-risk emergency surgical patient and initiate early management/optimization</li> <li>- Ability to deliver safe perioperative anesthetic care to ASA1-3 patients for straightforward surgical procedures</li> <li>- Ability to manage an elective surgical list with uncomplicated ASA 1-3 adults for straightforward body surface and lower abdominal surgery under distant supervision</li> </ul>	<p>Demonstrates:</p> <ul style="list-style-type: none"> <li>- Ability to manage safely and effectively the peri-operative care of patients requiring elective and/or emergency resection of the lower bowel or similar complexity urological and/or gynecological cases with distant supervision</li> <li>- Ability to manage the effects of sudden major blood loss effectively</li> <li>- Ability to work with all members of the theater and surgical teams to effectively manage an operating list with a mixture of ASA 1-3 cases</li> <li>- Ability to lead the theater team in the perioperative management of surgical patients requiring emergency surgery, including understanding of when to seek help appropriately</li> </ul>	<p>Demonstrates:</p> <ul style="list-style-type: none"> <li>- Focused preoperative evaluation of patients of all ASA grades who are at risk of post-operative morbidity, including the implementation of risk stratification methods such as scoring systems</li> <li>- Effective contribution to surgical decision making including the risks and benefits of surgery and futility issues</li> <li>- Safe and effective peri-operative anesthetic care to patients of all ASA grades requiring major intra-abdominal surgery</li> <li>- Safe and appropriate use of equipment used to manage major blood loss during surgery, including but not limited to rapid infusion and cell saver devices</li> <li>- Ability to be an effective member of a multi-disciplinary team managing elective</li> </ul>

<ul style="list-style-type: none"> <li>• Examples of such cases on lists include:             <ul style="list-style-type: none"> <li>○ General surgical: hernia repair, 'superficial lumps/bumps,' non-complex appendectomy</li> <li>○ Gynecology: non-complex total abdominal hysterectomy, hysteroscopy, minor superficial surgery</li> </ul> </li> <li>- Sensitive handling of patients with cognitive disturbances/communication problems</li> <li>- Ability to administer intravenous fluids and blood products appropriately</li> <li>- Ability to use non-invasive and invasive monitoring appropriately</li> <li>- Ability to employ effective techniques to minimize the risk of aspiration of gastric contents in at-risk patients</li> <li>- Ability to employ effective strategies to maintain normal body temperature intraoperatively</li> </ul>	<ul style="list-style-type: none"> <li>- Ability to present a balanced judgement to the patient and their relatives of the risks and complications of anesthesia and surgery</li> </ul>	<p>and emergency general surgery, urology, and gynecology lists safely and effectively</p> <ul style="list-style-type: none"> <li>- Ability to participate effectively in the post-operative care of the patient as part of a multi-disciplinary team</li> </ul>
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## 4. Orthopedics and Regional Anesthesia

Learning Objectives:		
Basic	Intermediate	Advanced
<ul style="list-style-type: none"> <li>- To gain knowledge, skills and experience of the perioperative anesthetic care of patients requiring orthopedic surgery</li> <li>- To recognize and manage the perioperative complications of orthopedic surgery relevant to anesthesia</li> <li>- To deliver perioperative anesthetic care to uncomplicated ASA 1-3 adult patients for straightforward elective and emergency orthopedic/trauma surgery to both upper and lower limbs, under distant supervision</li> <li>- To demonstrate safety at all times during performance of blocks including: marking side of surgery and site of regional technique; meticulous attention to sterility; selecting, checking, drawing up, diluting, and the adding of adjuvants; labelling and administration of local anesthetic agents</li> <li>- To demonstrate the ability to establish safe and effective spinal and lumbar epidural blockade and manage immediate complications in ASA 1-2 patients under distant supervision</li> </ul>	<ul style="list-style-type: none"> <li>- To deliver safe perioperative anesthetic care to complicated ASA 1-3 adult patients for all elective orthopedic surgery</li> <li>- To become skilled in performing some simple nerve blocks with distant supervision</li> <li>- To increase the range of regional block techniques practiced and become skilled in performing some more complex blocks under direct supervision</li> </ul>	<ul style="list-style-type: none"> <li>- To provide comprehensive safe perioperative anesthetic care to all ASA 1-4 adult patients for all types of elective and emergency orthopedic/trauma surgery to the limbs, pelvis, and spine</li> <li>- To demonstrate the ability to perform both lower and upper limb plexus/regional blocks</li> <li>- To become skilled in performing more complex blocks with supervision</li> <li>- To always consider the option of regional anesthesia in appropriate clinical contexts and take appropriate opportunities to use regional anesthesia as part of the anesthetic technique when clinically indicated</li> </ul>

<ul style="list-style-type: none"> <li>- To demonstrate the ability to establish a simple nerve block safely and effectively</li> </ul>		
<b>Skills:</b>		
<b>Basic</b>	<b>Intermediate</b>	<b>Advanced</b>
<p>Demonstrates:</p> <ul style="list-style-type: none"> <li>- Provision of perioperative anesthetic care for patients requiring orthopedic surgery to the upper and lower limbs including but not exclusively: <ul style="list-style-type: none"> <li>o ORIF surgery including internal fixation of fractured neck of femur</li> <li>o Lower limb primary arthroplasty including patients in the lateral position</li> </ul> </li> <li>- Sensitive handling of the patient with cognitive disturbance or communication problems</li> <li>- Correct assessment and perioperative management of the elderly patient with a hip fracture</li> <li>- Safe and correct checking of the contents of epidural/spinal packs</li> <li>- How to undertake a comprehensive and structured pre-operative assessment of</li> </ul>	<p>Demonstrates:</p> <ul style="list-style-type: none"> <li>- Provision of safe perioperative anesthetic care for a variety of orthopedic surgical procedures in elderly patients and those with significant co-morbidities including: primary and revision lower limb arthroplasties, upper limb surgery in the head-up and sitting positions, ORIF surgery</li> <li>- Ability to manage elective and emergency orthopedic and trauma theater sessions safely and effectively</li> <li>- Safe perioperative management of patients receiving regional techniques</li> <li>- Ability to recognize and manage adverse effects and complications of the more complex regional anesthesia described at this level</li> <li>- Ability to perform central nerve blocks including caudal and thoracic epidural and</li> </ul>	<p>Demonstrates:</p> <ul style="list-style-type: none"> <li>- Ability to critically evaluate the pre-operative condition, plan appropriate optimization, and deliver safe perioperative anesthetic care to all adult patients, however complex, requiring routine and emergency orthopedic surgery</li> <li>- Team leadership and communication skills necessary to manage major orthopedic surgical emergencies</li> <li>- Ability to supervise and teach less experienced trainees in all aspects of elective and emergency orthopedic surgery</li> <li>- Ability to develop a peri-operative management plan and safely and effectively perform a range of regional blocks under distant supervision using either peripheral nerve stimulation or ultrasound guidance</li> </ul>

<p>patients requiring a subarachnoid blockade; performs the block and manages side effects/complications correctly</p> <ul style="list-style-type: none"> <li>- How to undertake a comprehensive and structured pre-operative assessment of patients requiring a lumbar epidural blockade; performs the block and manages side effects/complications correctly</li> <li>- Management of hypotension, nausea, anxiety, and shivering induced by spinal or epidural blockade</li> <li>- Correct post-operative care following spinal or epidural block</li> <li>- How to perform some simple nerve blocks from among the following: femoral, sciatic, ankle, elbow, wrist, and/or digital, rectus sheath</li> <li>- How to use sedation correctly during surgery under regional blockade</li> <li>- List planning to allow time for the conducting of a block and for it to take effect</li> </ul>	<p>CSE</p> <ul style="list-style-type: none"> <li>- Ability to perform major nerve blocks including: femoral, sciatic and brachial plexus</li> <li>- Ability to perform minor nerve and other blocks including as many of these as possible: trunk (penile, rectus sheath, intercostal, and inguinal blocks), upper limb (elbow and distal), lower limb (ankle and distal)</li> </ul>	<ul style="list-style-type: none"> <li>- Clinically relevant sonoanatomy of the brachial plexus with reference to performing recommended regional anesthetic techniques</li> <li>- Use of ultrasound to show local anesthetic injection and circumferential spread around the intended nerve/plexus</li> <li>- Use of ultrasound to show correct needling technique using either an in or out of plane approach</li> <li>- Good communication skills when managing patients who require regional blockade, and the staff responsible for surgical and nursing care</li> <li>- Ability to lead discussions on appropriateness of a regional technique for surgery and post-operative analgesia</li> <li>- Ability to coordinate and manage a list with suitable patients for regional blockade including liaising with surgeons, theater nursing staff, and anesthetic staff</li> <li>- Ability to supervise and teach regional anesthetic techniques to less experienced</li> </ul>
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<ul style="list-style-type: none"> <li>- Sensitive handling of patient with cognitive impairment in anesthetic room</li> <li>- Safety practices including: meticulous attention to sterility during performance of blockade; selecting, checking, drawing up, diluting, and adding adjuvants; and labelling and administration of local anesthetic agents</li> <li>- Ability to recognize patients in whom a block would be difficult to perform and patients that are unsuitable for regional blockade</li> <li>- Ability to manage patients with combined general and regional anesthesia</li> <li>- Consideration for the views of patients, surgeons, and theater team with regard to surgery under regional blockade</li> <li>- Ability to correctly manage the theater environment with an awake or sedated patient</li> <li>- Good communication skills towards the patients and staff during the use of regional blockade</li> </ul>		<p>residents, while recognizing the limitations of their expertise</p>
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<ul style="list-style-type: none"> <li>- Due care and sensitivity to the patient's needs during the performance of a regional block</li> </ul>		
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## 5. Head/Neck and Other Types of Surgery

Learning Objectives:		
Basic	Intermediate	Advanced
<ul style="list-style-type: none"> <li>- To gain knowledge and skills of the perioperative anesthetic care of patients undergoing minor to intermediate ear, nose, and throat (ENT), maxilla-facial, and dental surgery</li> <li>- To be able to recognize the specific problems encountered with a 'shared airway' and know the principles of how to manage these correctly</li> <li>- To deliver perioperative anesthetic care to ASA 1-3 adults, and ASA 1-2 children over 5, for non-complex ear, adenotonsillar and nasal surgery under direct supervision</li> </ul>	<ul style="list-style-type: none"> <li>- To recognize the specific problems encountered with the 'shared airway' and manage correctly</li> <li>- To demonstrate clinical judgement and skills to organize and manage the anesthesia for routine ENT, dental, and maxillo-facial operating lists involving ASA 1-3 patients requiring minor to intermediate surgery</li> <li>- To deliver safe perioperative anesthetic care to ASA 1-3 adult patients requiring non-complex routine and emergency ENT and maxillo-facial surgery</li> </ul>	<ul style="list-style-type: none"> <li>- To provide comprehensive safe perioperative anesthetic care to ASA 1-4 adult patients requiring ENT, maxillo-facial, and dental surgery of greater complexity</li> <li>- To anesthetize ASA 1-3 adult patients for major reconstructive plastic surgery</li> <li>- To provide comprehensive anesthetic care to all ASA 1-4 adult patients for all types of elective and emergency ophthalmic surgery with distant supervision</li> <li>- To perform sub-Tenon's and peribulbar blocks with distant supervision</li> </ul>
Skills:		
Basic	Intermediate	Advanced
Demonstrates:	Demonstrates:	Demonstrates:

<ul style="list-style-type: none"> <li>- Personal development of preoperative assessment and preparation/optimization knowledge and skills</li> <li>- Provision of safe perioperative anesthetic care for a wide range of commonly performed procedures</li> <li>- Correct use of a variety of specialized airway devices, including RAE tubes, LMAs, and throat packs</li> <li>- Awareness of the increased risk of airway complications postoperatively and takes precautions to assist in their early recognition and prompt management</li> <li>- Ability to manage anesthesia so as to achieve smooth emergence, with minimal airway disturbance, laryngospasm, and bronchospasm</li> </ul>	<ul style="list-style-type: none"> <li>- Ability to develop and modify skills of preoperative assessment and optimization, and the administration of anesthesia for this group of patients</li> <li>- <a href="#">Correct</a> use of a variety of advanced airway devices</li> <li>- Use of hypotensive techniques where indicated</li> <li>- How to interpret CT and MRI scans of the head and neck</li> <li>- Ability to work with all members of the theater and surgical teams to manage an operating list with a mixture of ASA 1-3 non-complex minor/intermediate cases effectively, along with the ability to provide safe perioperative anesthetic care for patients</li> <li>- Safe perioperative anesthetic management of head, neck, maxillo-facial, and dental emergencies including: bleeding tonsil, obstructed upper airway, obstructed lower airway, and mandibular and maxillary fractures</li> </ul>	<ul style="list-style-type: none"> <li>- Ability to critically evaluate the pre-operative condition and plan appropriate optimization for patients with significant ENT pathology and/or concomitant disease (ASA 3 or 4) requiring complex surgery</li> <li>- Safe perioperative anesthetic management of more complex head, neck, and maxillo-facial procedures including, but not limited to: laser surgery, bronchoscopy, surgery on the middle ear, thyroid surgery, and maxillary and mandibular osteotomies</li> <li>- Ability to manage both elective and emergency list of complex cases, such as thyroidectomy or middle ear surgery; possibly mixed with more common procedures, intermediate supervision, and a mixture of adults and children</li> <li>- Ability to induce anesthesia by the inhalational route for a significant number of both adult and pediatric patients</li> <li>- Provision of safe peri-operative anesthetic care for patients where preservation of the facial nerve is required (e.g. parotid surgery)</li> </ul>
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		<ul style="list-style-type: none"> <li>- Effective communication with and understanding of the needs of the surgeon for optimal operating conditions</li> </ul>
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## 6. Working Outside of Theater and Transfer Medicine

Learning Objectives:		
Basic	Intermediate	Advanced
<ul style="list-style-type: none"> <li>- To correctly assess the clinical status of patients and decide whether they are in a suitably stable condition to allow transfer</li> <li>- To safely undertake the intra-hospital transfer of the stable critically-ill adult patient for diagnostic imaging</li> <li>- To understand the risks for the patient of having procedures in remote sites</li> <li>- To maintain anesthesia for stable critically-ill adult patients requiring diagnostic imaging under distant supervision</li> <li>- To gain a fundamental understanding of what is meant by conscious sedation and the risks associated with deeper levels of sedation</li> </ul>	<ul style="list-style-type: none"> <li>- To deliver safe and efficient transfer of complex patients for intra-hospital transfers</li> <li>- To deliver safe and efficient transfer of uncomplicated ventilated patients for inter-hospital transfer by land</li> <li>- To provide safe and effective sedation to any adult patient using multiple drugs if required</li> <li>- To deliver safe peri-procedure anesthesia/sedation to adult patients outside the operating theater, but within a hospital setting, for painful or non-painful therapeutic procedures</li> </ul>	<ul style="list-style-type: none"> <li>- To demonstrate the ability to lead a multidisciplinary team undertaking the initial assessment and stabilization of patients, prioritizing their early treatment</li> <li>- To demonstrate the leadership and clinical management skills needed to lead teams delivering safe and effective intra-/inter hospital transfer of any patient, however complex</li> <li>- To understand the limitations of working in the isolation of the non-hospital environment</li> <li>- To deliver safe peri-procedure anesthesia/sedation to adult patients outside the operating theater, including remote sites</li> </ul>

<ul style="list-style-type: none"> <li>- To provide safe and effective sedation to ASA 1 and 2 adult patients, less than 80 years of age, using a maximum of two short acting agents</li> </ul>		<ul style="list-style-type: none"> <li>- To demonstrate understanding of providing the best care possible whatever the environment</li> <li>- To develop the necessary skills and knowledge to use conscious sedation techniques appropriately</li> <li>- To demonstrate mastery in the peri-procedural care of patients when using standard conscious sedation techniques (including an ability to teach less experienced residents)</li> </ul>
<b>Skills:</b>		
<b>Basic</b>	<b>Intermediate</b>	<b>Advanced</b>
<p>Demonstrates:</p> <ul style="list-style-type: none"> <li>- Necessary organizational and communication skills to plan, manage, and lead the intra-hospital transfer of a stable patient</li> <li>- How to set up the ventilator and confirm correct functioning prior to commencing transfer</li> <li>- Safety in securing the tracheal tube securely prior to commencing the movement/transfer</li> </ul>	<p>Demonstrates:</p> <ul style="list-style-type: none"> <li>- Ability to determine when patients are in their optimum clinical condition for transfer</li> <li>- Ability to optimally package a patient for inter-hospital transfer to minimize risks</li> <li>- Ability to establish appropriate ventilation and monitoring required of a critically-ill patient for inter-hospital transfer</li> <li>- Ability to safely sedate a patient for inter-hospital transfer</li> </ul>	<p>Demonstrates:</p> <ul style="list-style-type: none"> <li>- Leadership in the clinical management of any patient requiring transfer to another area/hospital for further management</li> <li>- Necessary organizational and communication skills required to effect the transfer of patients in a timely and efficient manner</li> <li>- Ability to teach the basic competencies of intra-hospital transfer to residents</li> <li>- Ability to supervise residents undertaking</li> </ul>

<ul style="list-style-type: none"> <li>- Ability to calculate oxygen and power requirements for the journey</li> <li>- Safety in securing patient, as well as monitoring and therapeutics before transfer</li> <li>- How to check the functioning of drug delivery systems</li> <li>- Appropriate choices of sedation, muscle relaxation, and analgesia to maintain the patient's clinical status during transfer</li> <li>- Ability to maintain monitoring of vital signs throughout transfer</li> <li>- Ability to maintain clinical case recording during transfer</li> <li>- Ability to provide safe anesthesia for a stable adult patient for diagnostic imaging</li> <li>- Ability to manage a stable ventilated adult patient for diagnostic imaging</li> <li>- Ability to select patients for whom sedation is an appropriate part of clinical management</li> </ul>	<ul style="list-style-type: none"> <li>- Ability to know when the patient's needs exceed the local resources available/that specific expertise is required</li> <li>- Ability to integrate patient diagnosis with the physiological effects of transport</li> <li>- Ability to manage sudden loss of airway control, vascular access and monitoring in patients during transfer</li> <li>- Necessary organizational and communication skills in managing inter-hospital transfers safely and effectively, recognizing the importance of maintaining contact with base/receiving units if necessary while on transfer</li> <li>- Appropriate situational awareness</li> <li>- Ability to select sedation techniques appropriate to management in patients above 5 years of age</li> <li>- Ability to administer and monitor sedation techniques to all patients for appropriate clinical procedures, safely and effectively</li> <li>- Ability to deliver safe peri-procedure</li> </ul>	<p>transfers</p> <ul style="list-style-type: none"> <li>- Ability to communicate effectively when organizing transfers</li> <li>- Team leadership and communication skills necessary to effectively manage cases/lists in any non-theater environment</li> <li>- Ability to critically evaluate the pre-operative condition and suitability of patients with significant co-morbidities for procedures in any non-theater environment</li> <li>- Ability to select sedation techniques appropriate to management in patients of all ages, including those with significant co-morbidities</li> <li>- Ability to administer and monitor sedation techniques to all patients for appropriate clinical procedures, safely and effectively</li> </ul>
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<ul style="list-style-type: none"> <li>- Ability to explain sedation to patients and to obtain consent</li> <li>- Ability to administer and monitor inhalational sedation</li> <li>- Ability to administer and monitor intravenous sedation to patients</li> <li>- Ability to recognize and manage the complications of sedation techniques appropriately</li> </ul>	<p>anesthesia/sedation to adult patients outside the operating theater, but within a hospital setting, for painful or non-painful therapeutic procedures</p>	
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## 7. Pre- and Post-operative Care (Including Pain Management)

Learning Objectives:		
Basic	Intermediate	Advanced
<ul style="list-style-type: none"> <li>- To deliver high-quality preoperative assessment, investigation, and perioperative management of ASA 1-3 patients for elective and emergency surgery with emphasis on the perioperative management of co-existing medical conditions</li> <li>- To read ECG and differentiate abnormalities</li> <li>- To explain the main patient, anesthetic, and surgical factors influencing patient</li> </ul>	<ul style="list-style-type: none"> <li>- To deliver high quality preoperative assessment, investigation, and management of patients for elective and emergency surgery</li> <li>- To deliver high quality individualized anesthetic care to patients, focusing on optimizing patient experience and outcome</li> <li>- To plan and implement high quality individualized post-operative care for patients</li> </ul>	<ul style="list-style-type: none"> <li>- To deliver high quality preoperative assessment, investigation, and management of all patients for elective and emergency surgery</li> <li>- To deliver high quality individualized anesthetic care to all patients, focusing on optimizing patient experience and outcome</li> <li>- To plan and implement high-quality individualised post-operative care for all patients</li> </ul>



<p>outcomes</p> <ul style="list-style-type: none"> <li>- To be competent in the assessment and effective management of acute pain</li> <li>- To acquire knowledge necessary to provide a basic understanding of the management of chronic pain in adults</li> <li>- To recognize the special circumstances in assessing and treating pain in children</li> </ul>	<ul style="list-style-type: none"> <li>- To be competent in the assessment and management of acute surgical and non-surgical pain in most patient groups and circumstances</li> <li>- To understand the importance of managing acute or chronic pain in a timely manner</li> <li>- To have knowledge of assessment and management of chronic and cancer pain</li> </ul>	<ul style="list-style-type: none"> <li>- To be fully competent in the assessment and management of acute surgical, acute non-surgical, and acute chronic pain in all patients</li> <li>- To have knowledge and skills in the management of chronic and cancer pain</li> </ul>
<b>Skills:</b>		
<b>Basic</b>	<b>Intermediate</b>	<b>Advanced</b>
<p>Demonstrates:</p> <ul style="list-style-type: none"> <li>- Ability to conduct a comprehensive preoperative assessment</li> <li>- Ability to assess patient suitability for day case admission</li> <li>- Ability to evaluate co-morbidity in ASA 1-3 patients</li> <li>- Ability to organize appropriate investigations</li> <li>- Ability to work in a multi-professional team and ensure effective communication</li> </ul>	<p>Demonstrates:</p> <ul style="list-style-type: none"> <li>- Ability to assess patient with complex comorbidities, taking into account their individual needs and requirements</li> <li>- Ability to liaise effectively with colleagues in Intensive Care to plan care</li> <li>- Ability to explain risks and benefits of available anesthetic techniques to patients in a manner they can understand</li> <li>- Ability to formulate an individualized perioperative plan with the patient, using an evidence-based approach</li> </ul>	<p>Demonstrates:</p> <ul style="list-style-type: none"> <li>- Ability to make complex clinical decisions in the face of uncertainty</li> <li>- Use of risk scoring systems to inform communication with patients and colleagues</li> <li>- Ability to discuss treatment options and risks with patients, including those with complex comorbidities</li> <li>- Taking a collaborative approach to perioperative decision making with colleagues</li> </ul>

<p>with other members</p> <ul style="list-style-type: none"> <li>- Ability to communicate anesthetic options with patients effectively</li> <li>- Ability to synthesize relevant information to develop a safe anesthetic plan, taking the patient's wishes into consideration</li> <li>- Ability to recognize limits of competence and seek advice where appropriate when managing complications</li> <li>- Ability to manage postoperative nausea and vomiting effectively</li> <li>- Ability to manage coexisting disease and medications in the immediate postoperative period in ASA 1-3 patients</li> <li>- Ability to recognize common anesthetic and surgical complications</li> <li>- A multidisciplinary approach by ensuring effective handover of care to other professionals</li> <li>- Appropriate and safe drug prescribing</li> <li>- Ability to assess, manage, and monitor</li> </ul>	<ul style="list-style-type: none"> <li>- Ability to balance the need for early surgery against the need for further investigation, pre-habilitation, and pre-optimisation</li> <li>- Ability to respond appropriately to investigation results when planning perioperative care</li> <li>- Ability to communicate with other specialists as part of integrated care</li> <li>- Ability to conduct a comprehensive preoperative assessment for a patient with multiple co-morbidities in the outpatient pre-assessment clinic</li> <li>- Ability to manage existing medications and make appropriate changes</li> <li>- Ability to discuss the risks and benefits of the transfusion of blood products with patients</li> <li>- Ability to manage common anesthetic and surgical complications safely as part of a multidisciplinary team</li> <li>- Ability to plan appropriate postoperative</li> </ul>	<ul style="list-style-type: none"> <li>- Ability to communicate effectively with patients and colleagues as part of integrated care</li> <li>- Mastery of anesthetic techniques for patients with complex comorbidities</li> <li>- Ability to anticipate and act to pre-empt complications during surgery</li> <li>- Taking steps to minimize the risk of accidental awareness under general anesthesia</li> <li>- Implementing strategies to avoid post-operative cognitive dysfunction</li> <li>- Leadership and communicating sensitively with patients regarding complications and adverse events, and co-ordinate appropriate actions</li> <li>- Ability to prescribe postoperative medications and therapy to optimize recovery and minimize length of stay</li> <li>- Taking an active role in the post-operative multidisciplinary team</li> </ul>
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<p>acute pain and side effects of medication</p> <ul style="list-style-type: none"> <li>- Safe use of equipment used to manage pain including equipment used for PCA, epidurals, and inhalational techniques</li> <li>- Safe and effective use of local anesthetic peripheral and regional neural blockade techniques</li> <li>- Ability to manage severe unrelieved acute pain and distress in a timely, safe, and effective manner</li> <li>- Importance of regular ongoing monitoring of pain management/follow-up</li> <li>- Recognition of acute neuropathic pain</li> </ul>	<p>analgesia using multimodal techniques, including those required for patients with complex analgesic needs</p> <ul style="list-style-type: none"> <li>- Ability to assess and manage acute pain for all surgery</li> <li>- Ability to assess and manage acute non-surgical pain</li> <li>- Ability to assess and manage acute pain for special groups to include children, infants, the older person, the cognitive impaired, those with communication difficulties, the unconscious, and the critically-ill patient</li> <li>- Proficiency in techniques for the management of acute pain in those on background large dose opioids</li> </ul>	
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## 8. Intensive Care Medicine

Learning Objectives:		
Basic	Intermediate	Advanced
<ul style="list-style-type: none"> <li>- To gain knowledge and understanding of the underlying principles of Intensive Care Medicine</li> <li>- To obtain the "Essential Skills in Intensive Care Medicine" Certificate</li> <li>- To gain experience in the relevant Clinical skills required for practice in Intensive Care Medicine</li> </ul>	Optional: Further training	Optional: Further training
Skills:		
Basic	Intermediate	Advanced
<p>The "Essential Skills in Intensive Care Medicine" <b>MUST</b> be completed in full.</p> <p>In addition, demonstrates:</p> <ul style="list-style-type: none"> <li>- Ability to manage cardiopulmonary resuscitation – ALS recommended</li> <li>- Ability to manage the patient post-resuscitation</li> <li>- Ability to assess and provide initial management of the trauma patient</li> <li>- Ability to perform electrocardiography</li> </ul>	Optional	Optional

<p>(ECG/EKG) and interprets the results</p> <ul style="list-style-type: none"> <li>- Ability to obtain and interpret the results from blood gas samples</li> <li>- Ability to interpret imaging studies</li> <li>- Ability to monitor and respond to trends in physiological variables</li> <li>- Ability to recognize and manage the patient with respiratory failure</li> <li>- Ability to recognize and manage the patient with circulatory failure</li> <li>- Ability to manage the patient with, or at risk of, acute renal failure</li> <li>- Ability to recognize and manage the patient with neurological impairment</li> <li>- Ability to recognize and manage the patient with, or at risk of, acute liver failure</li> <li>- Ability to recognize and manage the patient with acute gastrointestinal failure</li> <li>- Ability to recognize and manage the patient following intoxication with drugs</li> </ul>		
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<p>or environmental toxins</p> <ul style="list-style-type: none"> <li>- Ability to recognizes life-threatening maternal peripartum complications and manage care</li> <li>- Ability to prescribe drugs and therapies safely</li> <li>- Ability to administer blood and blood products safely</li> <li>- Use of fluids and vasoactive/inotropic drugs to support circulation</li> <li>- Ability to coordinate and provide nutritional assessment and support</li> <li>- Ability to administer oxygen using a variety of administration devices</li> <li>- Ability to perform emergency airway management</li> <li>- Ability to perform difficult and failed airway management according to local protocols</li> <li>- Ability to performs endotracheal suction</li> </ul>		
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<ul style="list-style-type: none"> <li>- Ability to perform chest drain insertion</li> <li>- Ability to perform arterial catheterisation</li> <li>- Ability to perform ultrasound techniques for vascular localization</li> <li>- Ability to perform central venous catheterization</li> <li>- Ability to perform defibrillation and cardioversion</li> <li>- Ability to describe how to perform pericardiocentesis</li> <li>- Method for measuring cardiac output and derived hemodynamic variables</li> <li>- Ability to perform lumbar puncture (intradural/'spinal') under supervision</li> <li>- Ability to manage the administration of analgesia via an epidural catheter</li> <li>- Ability to describe Sengstaken tube (or equivalent) placement</li> <li>- Ability to perform nasogastric tube placement</li> </ul>		
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<ul style="list-style-type: none"> <li>- Ability to perform urinary catheterization</li> <li>- Ability to manage pre- and post-operative care of the trauma patient</li> <li>- Ability to manage sedation and neuromuscular blockade</li> <li>- Ability to discuss end of life care with patients and their families/surrogates</li> <li>- Ability to identify environmental hazards and promote safety for patients and staff</li> <li>- Ability to identify and minimize risk of critical incidents and adverse events, including complications of critical illness</li> <li>- Ability to critically appraise and apply guidelines, protocols, and care bundles</li> <li>- Ability to describe commonly used scoring systems for assessment of severity of illness, case mix, and workload</li> <li>- Ability to communicate effectively with patients and relatives</li> <li>- Ability to communicates effectively with</li> </ul>		
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<p>members of the health care team; promote teamwork</p> <ul style="list-style-type: none"> <li>- Ability to maintain accurate and legible records/documentation</li> <li>- Ability to involve patients (or their surrogates if applicable) in decisions about care and treatment</li> <li>- Respect of cultural and religious beliefs and an awareness of their impact on decision making</li> <li>- Respect for privacy, dignity, confidentiality, and legal constraints on the use of patient data</li> <li>- Ability to support clinical staff outside the ICU to enable the delivery of effective care</li> <li>- Taking responsibility for safe patient care</li> </ul> <p><i>Note: It is anticipated that multiple competencies will be assessed during each single supervised learning event.</i></p>		
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## 9. Cardiac and Thoracic Anesthesia

Learning Objectives:		
Basic	Intermediate	Advanced
Not covered at this level	<ul style="list-style-type: none"> <li>- To deliver safe and effective perioperative anesthetic care to patients undergoing elective coronary artery surgery and minor thoracic investigative procedures under direct supervision</li> <li>- To gain knowledge and understanding of the underlying principles of anesthesia for cardiac surgery, both 'on' and 'off' pump, and thoracic surgery</li> <li>- To understand the pathophysiology and presentation of advanced cardiac disease to better understand the peri-operative management of such patients who undergo coincidental surgery</li> </ul>	Optional
Skills:		
Basic	Intermediate	Advanced
	<p>Demonstrates:</p> <ul style="list-style-type: none"> <li>- Ability to assess and give a risk assessment for patients presenting for cardiac surgery including those with valvular and ischemic heart disease</li> <li>- Safe delivery of perioperative anesthesia for a patient undergoing elective coronary</li> </ul>	Optional

	<p>bypass</p> <ul style="list-style-type: none"> <li>- Ability to form postoperative care plans appropriate to the surgery and the patient's condition including postoperative analgesia and respiratory support</li> <li>- Correct use of invasive and non-invasive monitoring in patients with cardiac or respiratory disease</li> <li>- Understanding of effective and evidence based use of inotropes and vasodilators</li> <li>- Ability to provide anesthesia for procedures in cardiac intensive care including re-sternotomy, re-intubation, tracheostomy, and cardioversion</li> <li>- Ability to assess and recommend treatments to optimize a patient about to undergo thoracic surgery</li> <li>- Safe delivery of perioperative anesthetic care to patients for minor thoracic procedures, in particular bronchoscopy</li> <li>- Correct selection of appropriate airway management for the intended procedure</li> </ul>	
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	<p>and the ability to correctly insert single or double lumen endobronchial tubes and bronchial blockers</p> <ul style="list-style-type: none"> <li>- Correct use of clinical and endoscopic methods to confirm correct endotracheal tube placement</li> <li>- Safe delivery of perioperative anesthetic care for major thoracic procedures, including correct airway and ventilatory management, positioning, and patient protection</li> <li>- Ability to manage a patient undergoing one lung ventilation</li> <li>- Ability to formulate correct post-operative care plans, taking into account the patient's condition and the surgical procedure, including an assessment of the need for management in intensive care or high-dependency</li> </ul>	
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## 10. Neuro Anesthesia

Learning Objectives:		
Basic	Intermediate	Advanced
Not covered at this level	<ul style="list-style-type: none"> <li>- To be an effective team member for resuscitation, stabilization, and transfer of adult patients with brain injury with distant supervision</li> <li>- To develop and modify the skills of administering general anesthesia to include a focus on the special difficulties presented by neurosurgery</li> <li>- To deliver safe perioperative anesthetic care to uncomplicated ASA 1-3 adult patients undergoing non-complex elective intracranial and spinal surgery</li> </ul>	Optional
Skills:		
Basic	Intermediate	Advanced
	Demonstrates: <ul style="list-style-type: none"> <li>- A full and focused preoperative assessment, followed by optimization, of patients presenting with neurological disease</li> <li>- Understanding of the problems of obtaining consent in patients who are not competent, including those with impaired consciousness</li> </ul>	Optional

	<ul style="list-style-type: none"> <li>- Provision of safe perioperative anesthetic care for a variety of neurosurgical procedure</li> <li>- Ability, via physiological and pharmacological manipulation, to improve intra-cranial homeostasis in pathological states</li> <li>- Ability to manage patients with acute head injuries</li> <li>- Safe patient positioning</li> <li>- Ability to safely resuscitate, stabilize, and transfer patients with brain injury</li> <li>- Sensitivity in giving support to patients and relatives during end of life care</li> <li>- Ability to communicate well with the surgical team including ensuring the exchange of relevant information</li> <li>- Ability to select and use appropriate invasive monitoring when indicated in patients undergoing neurosurgical procedures</li> <li>- Ability to manipulate blood pressure as</li> </ul>	
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	<p>appropriate for the clinical situation</p> <ul style="list-style-type: none"> <li>- Ability to manage emergence from anesthesia in a smooth and controlled way</li> <li>- Ability to manage neurosurgical patient in the immediate postoperative period</li> </ul>	
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## 11. Pediatric Anesthesia

Learning Objectives:		
Basic	Intermediate	Advanced
<ul style="list-style-type: none"> <li>- To obtain knowledge of the principles underlying the practice of anesthesia for children</li> <li>- To demonstrate correct management of the pediatric airway</li> <li>- To ventilate an apnoeic child using a bag and mask +/- an oral airway</li> <li>- To intubate a child correctly, using the most appropriate size tracheal tube, placed at the correct length</li> <li>- To maintain anesthesia in a spontaneously breathing patient via a facemask for a short surgical procedure</li> </ul>	<ul style="list-style-type: none"> <li>- To develop in-depth knowledge and understanding of the anesthetic needs of children and neonates</li> <li>- To understand the potential hazards associated with pediatric anesthesia and to have obtained practical skills in the management of such events</li> <li>- To deliver safe perioperative anesthetic care to ASA 1 and 2 children aged 5 years and over for minor elective and emergency surgery</li> </ul>	<ul style="list-style-type: none"> <li>- To resuscitate and stabilize a sick baby or child prior to transfer to a specialist center</li> <li>- To independently provide perioperative anesthetic care for common surgical conditions, both elective and emergency, for children aged 3 years and older</li> <li>- To be competent at managing complications that arise in pediatric anesthesia</li> </ul>

<b>Skills:</b>		
<b>Basic</b>	<b>Intermediate</b>	<b>Advanced</b>
<p>Demonstrates:</p> <ul style="list-style-type: none"> <li>- Satisfactory preoperative assessment of fit children aged 5 and over</li> <li>- Ability to anesthetize fit children aged 5 and over for elective and urgent minor surgery</li> <li>- How to manage the environment during the induction of anesthesia in children</li> <li>- Ability to secure peripheral venous access in children aged 5 and over</li> <li>- Ability to perform intraosseous cannulation</li> <li>- Ability to manage the airway correctly including selection of the correct masks, airways, laryngeal mask airways, and tracheal tubes</li> <li>- Ability to perform both intravenous and gaseous induction of general anesthesia in children</li> <li>- Management of laryngospasm in children</li> </ul>	<p>Demonstrates:</p> <ul style="list-style-type: none"> <li>- Ability to resuscitate all ages, both basic and advanced</li> <li>- Correct preoperative assessment in all ages down to 1 year</li> <li>- Ability to use the correct technique for induction, maintenance and monitoring for elective and emergency anesthesia</li> <li>- Correct selection, management, and monitoring of children requiring diagnostic and therapeutic procedures carried out under sedation</li> <li>- Ability to maintain perioperative physiology (e.g. glucose, fluids, and temperature) in children down to 5 years of age</li> <li>- Strategies for, and the practical management of, anesthetic emergencies in children (e.g. loss of airway, laryngospasm, failed venous access, anaphylaxis including latex allergy)</li> </ul>	<p>Demonstrates:</p> <ul style="list-style-type: none"> <li>- Ability to provide safe perioperative anesthetic care (including both inhalational and intravenous induction techniques) for children over the age of 3 years</li> <li>- Ability to provide safe peri-operative anesthetic care for children less than 3 years of age with supervision</li> <li>- Ability to manage children with difficult venous access</li> <li>- Ability to manage the airway in children and babies of all ages safely and effectively</li> <li>- Correct management of fluids, electrolytes, glucose, and temperature peri-operatively</li> <li>- Ability to manage acute pain in children safely and effectively, including the use of local and regional anesthetic techniques, the use of opioids (including infusions and PCA/NCA where these are used), adjuvant</li> </ul>



<ul style="list-style-type: none"> <li>- Ability to stabilize and manage the sick or injured child aged 5 or over until senior help arrives</li> <li>- Ability to perform pediatric resuscitation</li> <li>- Sensitivity when communicating with children and their parents/carers</li> </ul>	<ul style="list-style-type: none"> <li>- Correct postoperative pain management, including the use of regional and local anesthetic techniques, simple analgesics, NSAIDs, and opioids</li> <li>- Ability to communicate clearly with children, young people, parents, and carers</li> </ul>	<p>NSAIDs and simple analgesics</p> <ul style="list-style-type: none"> <li>- Ability to provide safe and effective caudal epidural and peripheral nerve blockade without direct supervision</li> <li>- Ability to provide safe and effective anesthetic management of the young child with a full stomach</li> <li>- Ability to provide safe and effective anesthesia for children over the age of 3 years for diagnostic radiological procedures</li> <li>- Effective management of anesthetic emergencies in children (e.g. acute airway obstruction, croup, acute epiglottitis, inhaled foreign body, loss of airway, laryngospasm, malignant hyperthermia, and anaphylaxis)</li> <li>- Ability to provide safe transport of critically-ill children and babies</li> <li>- Appropriate engagement in compassionate, authoritative discussions with patients, parents, and/or carers and gives a balanced judgement of the estimated risks and likely complications of</li> </ul>
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## 12. Obstetric Anesthesia

Learning Objectives:		
Basic	Intermediate	Advanced
<ul style="list-style-type: none"> <li>- To obtain the formal essential skills in obstetric anesthesia certificate</li> <li>- To provide analgesia and anesthesia as required for the majority of the women in the delivery suite</li> <li>- To understand the management of common obstetric emergencies and be capable of performing immediate resuscitation and care of acute obstetric emergencies (e.g. eclampsia, pre-eclampsia, hemorrhage) under distant supervision but recognizing when additional help is required</li> </ul>	<ul style="list-style-type: none"> <li>- To provide emergency and non-emergency obstetric anesthetic care in the majority of patients including those with co-morbidities and obstetric complications with distant supervision</li> <li>- To perform immediate resuscitation of acute obstetric emergencies</li> </ul>	Optional
Skills:		
Basic	Intermediate	Advanced
<p>The "Essential Skills in Obstetric Anaesthesia Certificate" <b>MUST</b> be completed in full.</p> <p>In addition demonstrates:</p> <ul style="list-style-type: none"> <li>- Ability to undertake satisfactory</li> </ul>	<p>Demonstrates:</p> <ul style="list-style-type: none"> <li>- Satisfactory assessment of pregnant woman presenting for anesthesia/analgesia including those with concurrent disease</li> </ul>	

<p>preoperative assessment of the pregnant patient</p> <ul style="list-style-type: none"> <li>- Ability to clearly explain and prepare an obstetric patient for surgery</li> <li>- Use of techniques to avoid aortocaval compression</li> <li>- Ability to provide epidural analgesia in labour</li> <li>- Ability to provide spinal anesthesia for caesarean section</li> <li>- Ability to convert epidural analgesia to epidural anesthesia for surgical intervention</li> <li>- Ability to provide general anesthesia for caesarean section</li> <li>- Appropriate choice of anesthesia/analgesia for instrumental delivery</li> <li>- Appropriate choice of anesthesia for retained placenta</li> <li>- Safe and effective management of post-</li> </ul>	<ul style="list-style-type: none"> <li>- Ability to communicate a balanced view of the advantages, disadvantages, risks, and benefits of various forms of analgesia and anesthesia appropriate to individual patients</li> <li>- Appropriate use of CSE, subarachnoid, and epidural analgesia for labor</li> <li>- Ability to provide intravenous opiate analgesia including PCA for labor</li> <li>- Ability to manage complications of regional block including failure to achieve an adequate block</li> <li>- Ability to provide CSE for an operative delivery</li> <li>- Ability to choose the most appropriate regional technique for an operative delivery and justify the decision</li> <li>- Appropriate management of accidental dural puncture and post-dural puncture headache</li> <li>- Ability to provide intra uterine resuscitation for the "at risk" baby</li> </ul>	
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<p>delivery pain relief</p> <ul style="list-style-type: none"> <li>- Ability to recognize when an obstetric patient is sick and the need for urgent assistance</li> <li>- Ability to provide advanced life support for a pregnant patient</li> <li>- Ability to provide basic neonatal life support</li> </ul>	<ul style="list-style-type: none"> <li>- Ability to provide appropriate anesthesia for a caesarean section for placenta praevia under direct supervision</li> <li>- Ability to manage a high-dependency obstetric patient with distant supervision</li> </ul>	
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### 13. Specialty Anesthesia: Ambulatory Surgery

Learning Objectives:		
Basic	Intermediate	Advanced
<ul style="list-style-type: none"> <li>- To gain knowledge, skills and experience of the perioperative anesthetic care of ASA 1 and 2 patients</li> <li>- To understand and apply agreed protocols with regard to patient selection and perioperative care of day surgery patients</li> <li>- To understand the importance of minimizing postoperative complications, such as nausea and pain, in patients who are returning home the same day</li> </ul>	<ul style="list-style-type: none"> <li>- To deliver safe perioperative anesthetic care to ASA 1-3 patients having more extensive or specialized day surgery procedures with supervision</li> </ul>	<ul style="list-style-type: none"> <li>- To deliver safe perioperative anesthetic care to ASA 1-3 patients having more extensive or specialized day surgery procedures</li> </ul>
Skills:		
Basic	Intermediate	Advanced
<p>Demonstrates:</p> <ul style="list-style-type: none"> <li>- Appropriate selection and preoperative assessment of day surgery patients</li> <li>- Appropriate anesthetic management of ASA 1 and 2 patients requiring day surgery</li> <li>- Appropriate postoperative care of patients who have undergone day surgery including control of pain, nausea, fluid management, and assessment of fitness</li> </ul>	<p>Demonstrates:</p> <ul style="list-style-type: none"> <li>- Delivery of safe perioperative anesthetic care to ASA 1-3 patients including those with significant co-morbidities</li> </ul>	<p>Demonstrates:</p> <ul style="list-style-type: none"> <li>- Delivery of safe perioperative anesthetic care to ASA 1-3 patients having more extensive or specialized day surgery procedures</li> </ul>

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## 14 .Vascular Anesthesia

Learning Objectives:		
Basic	Intermediate	Advanced
Not covered at this level	<ul style="list-style-type: none"> <li>- To gain knowledge of the perioperative anesthetic management of patients undergoing elective and emergency abdominal aortic surgery and newer stenting techniques</li> <li>- To anesthetize patients for carotid endarterectomy and aortic aneurysm surgery with supervision</li> </ul>	Optional
Skills:		
Basic	Intermediate	Advanced
	<p>Demonstrates:</p> <ul style="list-style-type: none"> <li>- Pre-operative assessment of vascular patients with coexisting disease</li> <li>- Performs the pre-operative optimization of high-risk vascular patients</li> <li>- Manages the effects of aortic clamping, including the implications of supra-renal or thoracic aortic clamping with distant supervision</li> <li>- Safe peri-operative anesthetic care of patients having combined surgical/radiological procedures,</li> </ul>	

	<p>including those performed in isolated sites using either regional or general anesthesia</p> <ul style="list-style-type: none"> <li>- Ability to perform either general or regional anesthesia safely and effectively for carotid artery surgery</li> <li>- Ability to perform safe and effective regional anesthesia for vascular surgery including placement and management of thoracic and lumbar epidural, spinal, and combined spinal-epidural</li> </ul>	
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## SECTION 5. REGULATIONS AND REQUIREMENTS OF THE RESIDENCY PROGRAM

Residents' admission requirements are according to Palestine Medical Council regulations, which can be found on the PMC website: <http://www.pmc.ps>.

Residents must complete medical school and pass the admission exam in order to participate in the anesthesia and intensive care residency program. Residents are required to be proactive in their approach to learning and are responsible for keeping and maintaining their own record of training which should contain:

- Logbook of clinical cases and procedures undertaken
- Portfolio of leadership, teaching, audit, quality improvement, and research work
- Records of:
  - Multi-source Feedback (MSF) & Supervised Learning Events (SLEs) undertaken
  - Unit completion
  - Educational meetings with supervisors
  - Reflective learning
  - Exam results
  - Courses attended

## SECTION 6. TEACHING AND LEARNING METHODS

Teaching and learning should be through a variety of methods. It is essential that the resident is self-motivated to learn. Acquiring and reading appropriate text books, online resources such as websites, courses, and webinars, and observation of more senior staff should all contribute to personal learning. In the portfolio, interesting cases should be recorded so that the presentation and management can be researched for further learning.

The training facilities will provide many local, less formal opportunities for learning, including daily morning report and in-patient ward round. Anesthesia departments should hold clinical education meetings including weekly tutorials, weekly journal club, and a monthly morbidity and mortality meeting. Audit and critical appraisal should be part of all clinical education meetings.

Some courses will be compulsory, including ALS, ATLS, and APLS. It may be possible for other courses to be arranged and the resident is encouraged to identify other relevant courses and attend them.

Learning and teaching should be supported by protected time for all scientific activities. It is a two-way process and both the trainers and the trainee should be actively involved in the scientific activities. Mentorship should be facilitated, which will help the trainees achieve their goals.

## SECTION 7. ASSESSMENT METHODS AND SCHEDULES

To assess the level of competence achieved at different stages of the residency program requires a range of assessment methods. While examinations provide an assessment of knowledge, clinical skills require assessment in the workplace. Therefore, assessment by training consultants in the form of supervised learning events within the local hospitals will be important.

Clinical skills will be assessed during supervised learning events using Clinical Evaluation Exercises (CEX) and Directly Observed Procedures (DOPs). Non-clinical skills will be assessed using multi-source feedback (MSF) in addition to the annual End of Year report.

### **Supervised Learning Events (SLE)**

It is expected that residents will undertake at least 4 supervised learning events per month. These can be in any suitable mix providing that the breadth of assessments completed enables the resident to demonstrate they have met the relevant curriculum competencies.

Residents will complete Directly Observed Procedures (DOPs) when performing practical procedures and Clinical Evaluation Exercises (CEX) as a structured way to assess progress in clinical competency.

Cased Based Discussions (CBD) will enable residents to discuss the management and management options of a particular clinical case. The SLE form can be found in the annex.

### **Multisource Feedback (MSF)**

The multisource feedback (MSF) tool is used to collect colleagues' opinions on the resident's clinical performance and professional behavior. The MSF should be conducted yearly for each resident and placed in his/her file. The consultant who supervises the resident will collect anonymous MSF from the resident's colleagues including nurses, peers, and consultants involved in training the resident. The PMC will provide further guidance on the MSF methodology and tool to the training institutions in writing.

### **Logbook**

Each resident should keep a logbook of procedures completed. The supervising consultant should sign the logbook at the end of the rotational placement. Review of the logbook will be incorporated into the end of year report.

A standard logbook will be developed and utilized.

A summary of the assessment methods used across the competencies is set out in next table.

	<b>Teaching Methods</b>	<b>Introduction</b>	<b>Basic Anesthesia</b>	<b>Intermediate</b>	<b>Advanced</b>
<b>Professional Values and Behaviors</b>	Clinical practice and reflective self-directed learning	MSF, End of Year Report	MSF, End of Year Report	MSF, End of Year Report	MSF, End of Year Report
<b>Communication with Patients and Colleagues</b>	Clinical practice and tutorials	MSF, End of Year Report, DOP, and CEX	MSF, End of Year Report, DOP, and CEX	MSF, End of Year Report, DOP, and CEX	MSF, End of Year Report, DOP, and CEX
<b>Professional Knowledge</b>	Clinical practice, tutorials, and self-directed learning	Local assessment	Local assessment and Board Exam	Local assessment and Board Exam	Local assessment
<b>Clinical Skills in Anesthesia</b>	Clinical practice and appropriate courses	Essential skills assessment	Completion certificate	Completion certificate	Completion certificate
<b>Leadership in Healthcare</b>	Clinical practice, lectures, self-learning, online courses	MSF, End of Year Report, DOP, and CEX	MSF, End of Year Report, DOP, and CEX	MSF, End of Year Report, DOP, and CEX	MSF, End of Year Report, DOP, and CEX
<b>Improving Quality of Healthcare</b>	Clinical practice, lectures, self-learning, online courses	End of Year Report	End of Year Report	End of Year Report	End of Year Report
<b>Competence in Teaching and Training Others</b>	Clinical practice, lectures, self-learning, online courses	End of Year Report	End of Year Report	End of Year Report	End of Year Report
<b>Competence in Understanding and/or Undertaking Research</b>	Clinical practice, lectures, self-learning, online courses	End of Year Report	End of Year Report	End of Year Report	End of Year Report

## **Examinations**

Residents must complete a formal two-part examination under the auspices of the PMC in order to complete training in anesthesia.

The Part 1 exam is undertaken at the PMC in the second year of training and must be successfully accomplished before the resident can enter the third year of training.

The Part 2 exam is completed in the last year of training and must be successfully accomplished in order to complete the training program.

## Annual Review of Training

At the end of each year, the supervising consultant will write an annual 'End of Year' report for the Palestine Medical Council with a copy in the file of the resident in the training hospital.

The report must be discussed with the resident each year. An 'End of Year' report template is included in the ANNEX.

The program director will conduct interviews with each of the residents in the training program at the end of years 2 and 4. These interviews allow the resident and committee to review the training progress together, using the annual reports, examination outcomes, portfolio, logbook, courses, supervised learning events, and multisource feedback. The interview should provide an opportunity for open and constructive dialogue of the resident's progress.

The End of Year report will be compiled from evidence from the resident's record of training. The record should have the following sections:

- Logbook of clinical cases and procedures undertaken
- Records of:
  - MSF (It is expected that a MSF will be conducted at least once per year)
  - SLEs undertaken (It is expected that at least **4** are undertaken per month)
  - Unit completion
  - Educational meetings with supervisors
  - Reflective learning
  - Exam results
  - Courses attended
- Portfolio of leadership, teaching, audit, quality improvement, and research work

The whole portfolio with proper authorized signatures should be submitted to the PMC at the end of the residency period as a condition of successful completion of the training program.

## SECTION 8: ASSESSING THE CURRICULUM IN PRACTICE

Technical clarifications and minor revisions of this curriculum may be issued periodically by the Palestine Medical Council. Updates to the curriculum will be made in line with the latest scientific information and evidence-based updates in the field, as well as any updates to the Arab Board guidelines.

Every five years the Anesthesia Medicine Scientific Committee of the Palestine Medical Council will initiate a comprehensive review of the curriculum's technical content, involving local stakeholders and possibly external experts.

Ongoing assessment of the program will be completed by the Anesthesia Medicine Scientific Committee following interviews with residents in years two and four of training. The information gathered in these interviews will allow the committee to summarize trends based on residents' experiences, identify strengths and areas for improvement, and identify actions for follow up.

The Anesthesia Medicine Scientific Committee will also conduct a yearly meeting with stakeholders from teaching institutions to gather their comments and feedback on the strengths and challenges of the program, and take appropriate action.

## SECTION 9: REFERENCES

For additional information and materials, residents can reference the following resources:

### **Basic Resources:**

1. Clinical Anaesthesia; Seventh Edition  
Paul G. Barash
2. Morgan and Mikhail's Clinical Anaesthesiology

### **Additional Resources:**

1. Basic Physics and Measurement in Anaesthesia; Fifth Edition  
PD Davis; GN C Kenny
2. Anatomy for Anaesthetics; Sixth Edition
3. Essentials of Anaesthetic Equipment; Fourth Edition  
Baha Al-Shaikh; Simon Stacey



## ANNEXES

# Initial Assessment of Essential Skills

This is to certify that:

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has satisfactorily passed the workplace assessments and demonstrated the following clinical learning outcomes for the initial assessment of competence:

- Safe general anesthesia with spontaneous respiration to ASA 1-2 patients for uncomplicated surgery in the supine position
- Safe rapid sequence induction for ASA 1-2 patients aged 16 or older and failed intubation routine
- Safe perioperative care to ASA 1E – 2E patients requiring uncomplicated emergency surgery

On \_\_\_\_/\_\_\_\_/\_\_\_\_(day/month/year).

**Final signoff must be completed by two supervising Consultants**

Signed:\_\_\_\_\_Name (Print):\_\_\_\_\_

Date:\_\_\_\_\_

Signed:\_\_\_\_\_Name (Print):\_\_\_\_\_

Date:\_\_\_\_\_

# Initial Assessment of Essential Skills

## Record of Assessments

Assessment	Completion Date	Competent Signed/Dated
<b>CEX</b>		
A01		
A02		
A03		
A04		
A05		
<b>DOPS</b>		
D01		
D02		
D03		
D04		
D05		
D06		
<b>CBD</b>		
C01		
C02		
C03		
C04		
C05		
C06		
C07		
C08		

# Essential Skills in Intensive Care Certificate

This is to certify that:

---

has satisfactorily passed the workplace assessments and demonstrated the following clinical learning outcomes for the initial assessment of competence in Intensive Care Medicine:

1. Resuscitation and management of the acutely-ill patient
2. Diagnosis, assessment, investigation, monitoring, and data interpretation
3. Disease management
4. Therapeutic interventions/organ support in single or multiple organ failure
5. Practical procedures
6. Perioperative care
7. Comfort and recovery
8. End of life care
9. Transport

On\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_(day/month/year).

**Final signoff must be completed by two supervising Consultants**

Signed:\_\_\_\_\_Name (Print):\_\_\_\_\_

Date:\_\_\_\_\_

Signed:\_\_\_\_\_Name (Print):\_\_\_\_\_

Date:\_\_\_\_\_

# Essential Skills in Intensive Care Certificate

## Record of Skills Assessed

	Assessment	Completion Date	Signed
1	Adopts a structured and timely approach to the recognition, assessment, and stabilization of the acutely-ill patient with disordered physiology		
1	Triages and prioritizes patients appropriately, including timely admission to ICU		
2	Obtains a history and performs an accurate clinical examination		
2	Undertakes timely and appropriate investigations		
2	Obtains appropriate microbiological samples and interprets results		
2	Integrates clinical findings with laboratory investigations to form a differential diagnosis		
3	Manages the care of the critically-ill patient with specific acute medical conditions		
3	Identifies the implications of chronic and co-morbid disease in the acutely-ill patient		
3	Recognizes and manages the patient with respiratory failure		
3	Recognizes and manages the patient with circulatory failure		
3	Manages the patient with, or at risk of, acute renal failure		
3	Recognizes and manages the patient with neurological impairment		
3	Recognizes and manages the septic patient		
4	Manages antimicrobial drug therapy		
4	Initiates, manages, and weans patients from invasive and non-invasive ventilatory support		
4	Recognizes and manages electrolyte, glucose, and acid-base disturbances		
5	Is competent to perform arterial line insertion as required		

	<b>Assessment</b>	<b>Completion Date</b>	<b>Signed</b>
5	Is competent to perform central venous cannulation as required		
6	Manages the pre- and post-operative care of the surgical patient		
7	Identifies and attempts to minimize the physical and psychosocial consequences of critical illness for patients and families		
7	Manages the assessment, prevention, and treatment of pain and delirium		
7	Communicates the continuing care requirements, including rehabilitation, of patients at ICU discharge to health care professionals, patients, and relatives		
8	Understands and can contribute to the process of withholding or withdrawing treatment with the multi-disciplinary team		
9	Undertakes transport of the mechanically ventilated critically-ill patient outside the ICU		

**Final signoff must be completed by two supervising Consultants**

Signed:\_\_\_\_\_Name (Print):\_\_\_\_\_

Date:\_\_\_\_\_

Signed:\_\_\_\_\_Name (Print):\_\_\_\_\_

Date:\_\_\_\_\_

Comments:

# Essential Skills in Obstetric Anesthesia Certificate

This is to certify that:

---

has satisfactorily passed the workplace assessments and demonstrated the following clinical learning outcomes for the initial assessment of competence in obstetric anesthesia:

1. Safe administration of epidural/CSE for pain relief in labor
2. Safe administration of epidural top-up for an emergency caesarean section
3. Safe administration of spinal/CSE for elective or emergency caesarean section
4. Safe administration of general anesthesia for elective or emergency caesarean section and is now suitable for on-call duties in obstetrics

On\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_(day/month/year).

**Final signoff must be done by two supervising Consultants**

Signed:\_\_\_\_\_Name (Print):\_\_\_\_\_

Date:\_\_\_\_\_

Signed:\_\_\_\_\_Name (Print):\_\_\_\_\_

Date:\_\_\_\_\_

# Essential Skills in Obstetric Anesthesia Certificate

## Record of relevant assessments

Assessment	Completion date	Competent Signed/date
<b>CEX</b>		
Conduct epidural analgesia for labor		
Conduct regional anesthesia for caesarean section		
Conduct general anesthesia for caesarean section		
<b>DOPS</b>		
Top up epidural for labor analgesia		
Top up epidural for caesarean section		
Perform spinal anesthesia		
<b>CBD</b>		
Discuss how changes in the anatomy and physiology due to pregnancy influenced the conduct of anesthesia		
Discuss whether pregnancy influenced the choice of drugs used during anesthesia		
Discuss how the conduct of general anesthesia is affected by late pregnancy		
Examine the case records of a patient that the trainee has anesthetized for operative delivery in a situation where major hemorrhage might be expected. Discuss the factors that influence the likelihood of major obstetric hemorrhage, the precautions that should be taken to deal with it, and the principles of its management.		
Examine the case records of a patient with pregnancy associated hypertension that the trainee has treated. Discuss how this influences anesthetic management.		
Examine the case records of a patient for whom the trainee provided extradural analgesia for normal labor. Discuss the methods of pain relief available for normal delivery.		



# Completion of Unit of Training (CUT) Form

Please complete the question using a cross (x). Please use black ink and CAPITAL LETTERS.

Resident \_\_\_\_\_

Assessor Name \_\_\_\_\_

Assessor Signature \_\_\_\_\_

Date (DD/MM/YYYY)   /   /

Unit of Training (Please indicate level and unit)	
--	--

Learning Outcomes	
I have reviewed the Learning Outcomes for this Unit	Yes      No
Resident has achieved the Learning Outcomes for this Unit	Yes      No

Logbook Review	
Is the case mix and number appropriate for the stage of training?	Yes      No
Has the resident done an appropriate mix of elective/emergency work in this unit of training?	Yes      No
Has the resident attended an appropriate number and mix of sessions for the stage of training?	Yes      No

Consultant Feedback	
Have the consultants with whom the resident worked during completion of this unit given feedback?	Yes      No
Having considered the consultant feedback, does it support sign off of the unit?	Yes      No

## Completion of Unit of Training (CUT) Form

SLEs	
Type	Date
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	

*Please add further SLEs on the back of the form*

Comments *

Points you may wish to comment on:

*	<i>Professional attitudes (commitment, compassion, honesty, personal integrity, respect for others), team working, leadership and management, innovation, safety in practice, medical ethics and confidentiality, relationship with patients, legal framework, use of information technology</i>
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# Resident End of Year Report

Resident Name: \_\_\_\_\_ Training year: 1<sup>st</sup> 2<sup>nd</sup> 3<sup>rd</sup> 4<sup>th</sup> 5<sup>th</sup>

Department: \_\_\_\_\_

<b>General Competencies</b> 5 marks for each competency	Unsatisfactory (1,2)	Satisfactory (3,4)	Superior (5)
Professional Values and Behaviors			
MSF Results			
<b>Communication with Patients and Colleagues</b>			
Professional Knowledge (Local Assessment)			
Professional Knowledge (Board Exam)			
Logbook of Cases			
Logbook of Procedures			
SLEs Undertaken			
Unit Completion (CUT Forms)			
Leadership in Healthcare			
Improving Quality of Healthcare			
Competence in Teaching and Training Others			
Competence in Understanding and/or Undertaking Research			

## IV. Recommendations:

	Appointment to next year of training with no reservation
	Appointment to year of training with accompanying letter of deficiency
	Extend year: Repeat year

Resident Signature	Department Chief Signature
Date:	Date:

## Resident End of Year Report (Part 2)

### Recommendations for next year of practice

	Recommendation (if any)
Professional Values and Behaviors	
Communication with Patients and Colleagues	
Professional Knowledge	
Clinical Skills in Anesthesia	
Leadership in Healthcare	
Improving Quality of Healthcare	
Competence in Teaching and Training Others	
Competence in Understanding and/or Undertaking Research	
Resident Signature	Department Chief Signature
Date:	Date:

## Structured Learning Event Assessment Form

Type of Assessment DOPS / CEX / CBD

Date (DD/MM/YYYY) □□/□□/□□□□

Resident's Name \_\_\_\_\_

Supervisor \_\_\_\_\_

Signature of supervising doctor

\_\_\_\_\_

--

### Observation

Clinical setting:

Theatre	
ICU	
ED	
Delivery Suite	
Pain Clinic	
HDU	
Transfer	
Other	

Special Focus of Discussion

What went well?

What could have gone better?

Plan for learning and development

Other Feedback:

## Case Report Diary instructions

Each resident should write up a case report diary. The purpose of this exercise is to encourage self-reflection on patient management and background reading on disease and its treatment. The cases should be relevant to the curriculum and placement for the resident that year. The resident should have been involved in the patient's care whether at the ward or at outpatient level. The cases should be agreed between the consultant trainer and the resident. At least one case per year must involve morbidity or mortality.

One case should be written up every three months and should be submitted to the consultant trainer for written feedback before the end of the three months. Copies of the cases and the feedback should then be submitted to the program director or administrator at the end of each year with the Annual Report.

A proforma is attached. Please use these headings, but you will need to expand the boxes to allow enough space for typing. The commentary should cover some aspect of the diagnosis, investigation or treatment of this problem and should be around one A4 page in length (<500 words). During year three and four the history and examination sections should be brief and there should be a longer commentary considering the options for treatment and defending the chosen option.

The consultant trainer should read the account of the case and discuss it with the resident before the end of each three month period. The feedback given should be recorded and the case graded as Outstanding/Satisfactory/Needs Development.

The consultant trainer may delegate the supervision of the case reports to a fourth year resident, but remains responsible for the supervision overall.

<b>RESIDENT NAME:</b>	<b>YEAR of TRAINING:</b>	<b>HOSPITAL:</b>
<b>CASE NUMBER:</b>	<b>TITLE:</b>	<b>DATE:</b>
<b>My involvement in this case:</b>		
<b>History</b>		
<b>Examination</b>		
<b>Investigation</b>		
<b>Treatment</b>		
<b>Progress</b>		



<b>Commentary</b>	1- Please mention <b><u>one challenge</u></b> you faced with this case:	
	2- Please mention two things you learned from this case:	
<b>TRAINER'S NAME + COMMENTS</b>		<b>GRADE</b> Outstanding Satisfactory Needs Development

# Multi-Source Feedback Form for Residents

Resident's Name .....

Hospital.....

Year of Training.....

Date.....

Your assessment should be undertaken without discussion with either the resident or other assessors and should be judged against the standard set by other doctors at the same level with whom you work, or have worked. Your scoring and comments will be anonymised.

بدون ذكر الاسم / مجهول الهوية

Please return this form to.....

How do you rate this resident in their:	Outstanding	Satisfactory	Development required	Not observed by me
<b>Specialty</b>				
Clinical knowledge				
Diagnosis				
Management planning				
Prescribing				
<b>Interpersonal and Communications</b>				
Communication with patients + relatives				
Communication with colleagues				
Record Keeping				
<b>Teamwork and Inter-professional Collaboration</b>				
Active involvement with your team				
Accessibility and reliability				
Awareness of own limitations				
<b>Leadership Promotion</b>				
Decision making and implementation skills				
Initiative and leadership skills				
<b>Teaching and Learning</b>				
Keeping knowledge and skills up to date				
Reviewing and reflecting on own performance				
Teaching (students, trainees,				

others)				
Supervising junior colleagues				
<b>Professional + Ethics</b>				
Commitment to care and well-being of patients				
Focus on patient safety				
Ability to manage time				
Ability to work under pressure				
Probity (الالتزام) and honesty				
<b>Summary</b>				
Overall, how do you rate this doctor compared to other doctors at the same level with whom you have worked?				

Your **anonymized** comments will be passed on to the resident. بدون ذكر الاسم/ مجهول الهوية

Please give specific examples relating to any area in which you feel this resident is outstanding	Please give specific examples relating to any area in which you feel this resident requires development

Your position ..... Please circle

Self-rater/Nurse/Radiologist/Other Resident/Consultant Trainer/Other Consultant

Trainees should complete a self- assessment and ensure that 6 other forms are submitted to include:

Consultant trainer

Other Consultant

Nurse

Radiologist

A peer – another resident

This may necessitate asking more than 6 people to complete forms to ensure that a sufficient number are submitted.

**Please return this form to.....**