

# OMAN MEDICAL SPECIALTY BOARD



# ANESTHESIOLOGY AND CRITICAL CARE RESIDENCY TRAINING PROGRAM

**2007**

## **OMAN MEDICAL SPECIALTY BOARD (OMSB)**

### **RESIDENCY PROGRAMS IN ANESTHESIOLOGY AND CRITICAL CARE**

A specialty committee representing the Department of Anesthesiology and Critical Care was established under Oman Medical Specialty Board on 6<sup>th</sup> of February 2007 to device a plan for an organization with the specific purpose of educating and training residents practicing in the field of anesthesiology and critical care. The formation of the Oman Medical Specialty Board of Anesthesiology and Critical Care, an affiliate of The Oman Medical Specialty Board was completed on \_\_\_\_\_ as a separate primary Board with the formation of the Scientific Committee.

**OMSB**  
**Anesthesiology and Critical Care**  
**Residency Program Curriculum**

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## **INTRODUCTION**

### ***UNDERLYING PRINCIPLES***

The principles of the OMSB Anesthesiology and Critical Care training program are that it:

- is competency based
- is planned
- is evaluated
- has clear objectives
- is supervised
- allows time for study
- accommodates the specific career needs of individuals.

There are certain generic professional skills, essential to the training of all specialists that should be covered. These include:

- attitude and behaviour
- communication
- presentation
- audit
- teaching, ethics and law
- management

### ***DEFINITION***

'Anesthesiology' is a medical specialty which includes patient assessment and provision of life support, amnesia, and analgesia for both surgical procedures and childbirth; assessment and management of critically ill patients; and the assessment and management of patients with acute and chronic pain.

A 'Board Certified Anesthesiologist' is a physician who provides medical management and consultation during the perioperative period, in pain medicine and in critical care medicine.

## **GENERAL OBJECTIVES**

- To enhance the recruitment of Omani graduates into the specialty of anesthesia and critical care.
- To train the graduates in the areas of knowledge, skills and attitude specific to anesthesiology, critical care medicine and pain management to current international standards.
- Upon completion of training, a resident is expected to be a competent specialist anesthesiologist, capable of functioning independently.

## **SPECIFIC OBJECTIVES**

Upon successful completion of the training program (Board Certified), a resident is expected to have the following capabilities and skills:

- Possess a sound knowledge of the basic sciences as applicable to anesthesia, critical care and pain management including anatomy, physiology, pharmacology, biochemistry, clinical measurements and physics.
- Demonstrate knowledge of age related variables in medicine as they apply to neonatal, pediatric, adult, and geriatric patient care.
- Establish a professional relationship with the patients and families; discuss appropriate information with them, and other members of the health care team.
- Able to undertake pre-operative assessment, obtain consent for anesthetic procedure and prescribe proper premedication.
- Adequate knowledge to use anesthetic equipment in a safe manner, and understand the interpretation and limitations of monitoring equipment.
- Be able to undertake routine induction, maintenance and recovery from general anesthesia and the safe discharge of the patient from the recovery room.
- Recognize ASA III, IV, V patients, the potential for difficult intubation and the timing and need for assistance and consultation.
- Able to assess, resuscitate and manage trauma/burn patients, and stabilize them and prepare for transfer if indicated.
- Sound knowledge of resuscitation of patients following respiratory or cardiac arrests.
- Possess theoretical knowledge and clinical skills to establish and manage different regional anesthetic techniques.
- Assessment and provision of appropriate care of the mother and neonate in obstetrics.
- Able to diagnose and manage critically ill patients and perform practical invasive procedures.
- Possess the necessary knowledge, skills and attitudes relevant to acute and chronic pain management.
- Be able to understand the statistical fundamentals upon which most clinical research is based.
- Possess high ethical and moral standards.

## **SPECIAL ADMISSION REQUIREMENTS**

1. A medical degree (MD/MBBS) or equivalent
2. Successful completion of rotating internship for 12 months
3. Passing an admission examination/interview
4. Provision of names of two consultant physicians as referees
5. Provision of a letter from a sponsoring organization giving approval of the candidate to join full time training, for the whole period of the program (4 years)
6. Signature of an obligation to abide by the rules and regulations of the training program of Oman Medical Specialty Board

## **TRAINING REQUIREMENTS**

1. Training is a full time commitment. Residents shall be enrolled in full time, continuous training for the whole period of the program.
2. Training is to be conducted in institutions accredited for training by the Oman Medical Specialty Board of Anesthesiology and Critical Care.
3. The training will be comprehensive in the specialties of Anesthesiology.
4. Trainees shall be actively involved in patient care with gradual progression of responsibility.
5. Trainees shall abide by the training regulations and obligations set by the Oman Medical Specialty Board of Anesthesiology and Critical Care.

## **STRUCTURE OF TRAINING PROGRAM**

### ***DURATION OF THE PROGRAM***

The training program will be of 5 years duration with an option of additional one year higher specialty training (Fellowship) after completion of Board Certification.

The duration of training is divided into two parts:

- First 24 months will be known as the **Basic Level Training (Junior Residency)**
- Final 36 months will be the **Advances Training (Senior Residency)**.

Each Residency year of training will be represented with the letter **R** followed by the number of year: **R1, R2, R3, R4** and **R5**.

### **Basic Level Training – Junior Residency (24 months – R1, R2)**

The normal duration of basic level training will be 2 years of which 21 months must be in Anesthesia and 3 months in Critical Care Medicine. Of 21 months of anesthesia, 18 months will be training in Core Anesthesia and 3 months in Obstetric Anesthesia.

Core Anesthesia includes General and Regional anesthesia for General Surgery, Urology, Gynecology, Orthopedics and Trauma, Plastic, ENT, Ophthalmology, Maxillofacial and Dental surgeries.

### **The First 6 Months**

After 6 months of training, residents must pass an initial assessment of competency comprising of:

- Preoperative assessment
- General anesthesia for ASA I or II patients (including equipment and anesthetic machine checks)
- Rapid sequence induction
- CPR skills
- Clinical judgment, attitude and behavior.

Until this initial assessment of competency is passed, trainees cannot practice anesthesia without immediate supervision.

During the first six months, trainees should learn the basic principles of safe and effective anesthesia, resuscitation, and both the treatment and prevention of pain. Emphasis should be placed on the role of the anesthetist in the peri-operative care of the surgical patient. Thus a guided introduction to the pre-operative assessment and post-operative care is just as important as the practice of anesthesia

### **Training in the Next 18 Months**

The following areas of basic training should be covered during this period:

- Obstetric analgesia and anesthesia
- The upper airway and its problems
- Peri-operative care of the patient for major surgery
- Anesthesia for day case surgery
- Specific medical problems and anesthesia
- Pediatric anesthesia (age 2 years and above)
- Anesthesia in the elderly
- Critical care medicine (2 months in general ICU plus 1 month in surgical HDU/ICU)

In this period, trainees will widen their experience to become eligible to sit for the Primary Specialty Examination (Part I OMSB) and proceed to Advanced Training (Senior Residency). By the end of this stage, trainees should be able to:

- Undertake the anesthetic care of most routine cases
- Assist in the anesthetic care for routine obstetric practice
- Provide anesthetic care for routine obstetric practice
- Organize with the surgical team, an emergency list; identify potential problems and seek appropriate help
- Understand the principles underlying the care of patients in critical care and high dependency units
- Understand the principles of acute pain management
- Participate in audit
- Pass the Primary Specialty Examination (Part I OMSB)

The Junior Residency period will be composed of 8 rotations each of which is 3 months (8 x 3 = 24 months). The Program Director may determine the sequencing of these rotations. The resident will be evaluated following each rotation, and the written evaluations should be maintained in each resident's file.

### **Advanced Level Training – Senior Residency (36 months – R3, R4, R5)**

The aim of advanced level training undertaken during years 3, 4, and 5 is to prepare trainees for independent professional practice. These final 3 years will seek to develop:

- The transition from basic competency to become skilled in specific aspects of anesthesia
- The ability to manage patients with significant co-morbidities
- Organizational skills so that their contribution to an operating list (as part of a team) ensures continuity and smooth running of cases by anticipating problems and planning ahead.

The program allows for trainees to become skilled at a higher level in particular aspects of anesthetic practice. The candidates must complete the Advanced training (Senior Residency) period of 36 months, as detailed below:

|          |                                                                                 |
|----------|---------------------------------------------------------------------------------|
| 3 months | Pediatric Anesthesia                                                            |
| 3 months | Cardiovascular and Thoracic Anesthesia                                          |
| 6 months | Critical Care Medicine                                                          |
| 3 months | Neurosurgical Anesthesia                                                        |
| 3 months | Acute and Chronic Pain Management                                               |
| 3 months | Medical Specialties – 2 months<br>(Cardiology, Respiratory medicine, Radiology) |
|          | Diagnostic imaging, anesthesia and sedation – 1 month                           |
| 6 months | Core Anesthesia                                                                 |
| 3 months | Obstetric Anesthesia                                                            |
| 6 months | Elective rotation / Research                                                    |

The Advanced Level (Senior Residency) period is composed of 6 rotations each of which is 3 months (6 x 3 = 18 months) and 3 rotations of 6 months each (3 x 6 = 18 months). The exact timing and sequence of the rotations will be worked out by the Program Director according to the total number of trainees and available rotations at each training center.

After two years of advanced training (end of 4 years), candidates are allowed to proceed to Final Specialty Board Examination (Part II OMBS). The Board Certification in the Specialty of Anesthesia and Critical Care will be awarded after the successful completion of the final year (5<sup>th</sup> year) of training even though the trainees might have cleared their Part II OMSB a year earlier.

### **Higher Specialty Training - Fellowship (Optional)**

Some trainees will want to gain advanced training in specific special interest areas of anesthesia and critical care medicine. In the era of specialization, interested candidates will be encouraged to undergo additional training in areas like Cardio thoracic anesthesia, Neuro anesthesia, Pediatric anesthesia, Critical care medicine and Pain management. For these special interests a period of training at least 6 months and up to 12 months can be followed which will allow the trainee to become expert in that particular field and consequently be able to apply for a post with a significant clinical commitment in the special interest. The details of this will be charted out in due course.

### **Responsibilities**

1. The trainee shall be responsible for proper and logical peri-operative anesthetic management according to his/her level of training.
2. The trainee shall attend anesthetic out-patients clinics and day surgery, according to the planned rotation, in order to gain experience in each field.
3. Trainees shall attend, participate and perform anesthetic procedures for various surgical procedures and will be responsible for the well being of their patients in the recovery area as well.
4. Trainees shall attend and participate under supervision, in the active management of patients in the critical care units.
5. Trainees shall maintain patient confidentiality and ethics of the profession.
6. Trainees shall abide by the policies and procedures of the department and hospital.

## **CONTENTS OF THE TRAINING**

### **Academic and Clinical Activities**

Candidates are expected to attend didactic lectures provided by the program and participate actively in departmental presentations, symposia, conferences, workshops, training courses, etc.

Candidates are expected to attend regularly and punctually to their clinical duties in operating theatres, intensive care, or any other assigned clinical rotation.

### **Procedure and Skills in Anesthesiology**

Each candidate must complete sixteen hundred (1,600) cases in different fields of Anesthesiology and Critical care management which he/she has performed during the training period. The total number of cases achieved by the trainee is divided into nine hundred (900) anesthetic procedures cases in his/her Junior residency training period and seven hundred (700) cases during the Senior residency training period.

### **Logbook**

All trainees are required to maintain a log book to record all activities of training. This is mandatory. The activities must be dated and categorized to the period/rotation of the training and whether it was performed by the trainee, or as an assistant or an active participant. Each activity registered in the logbook must be countersigned by the trainer. An evaluation of the rotation is to be countersigned by the Program Director when it is deemed complete. A total of 1,600 anesthetic procedures must be completed.

Contents of the logbook include:

1. Anesthetic procedures and technical skills acquired during the training period.
2. Major invasive and non-invasive diagnostic monitoring procedures performed or learned, such as insertion of vascular lines, bronchoscopy, fiberoptic laryngoscopy, precutaneous tracheostomy, diagnostic and therapeutic pain management interventions, obstetric analgesia, various critical care unit procedures etc. Records of complications and other critical incidents are also equally important.
3. Participation and attendance in symposia, CME's, conferences, and workshops.

### **Auditing and Research Activity**

Research is regarded by the Specialty Board as being integral to the development of anesthesia, critical care and pain management. Every trainee should be able to evaluate new developments in their specialty. To achieve this, trainees require experience in research methods so they can:

- learn to pose relevant questions, formulate hypotheses, design simple research projects, understand the statistical evaluation of such projects, and know how to draw valid conclusions;
- develop and maintain a system of continuous learning in order to keep abreast of major clinical and research developments; and
- in the context of training, learn to apply audit principles to their own work, and to clinical practice.

## **RESIDENCY PROGRAM SYLLABUS 2007**

### **1. Preoperative Assessment**

- The ASA classification and GCS
- The interpretation of relevant preoperative investigations
- Restriction of food and fluid by mouth, cessation of smoking, correction of dehydration
- Assessment of difficulties in airway management and the importance of 'shared airway'
- Implications for anesthesia of common medical conditions (ischemic heart disease, hypertension, bronchial asthma, diabetes, rheumatoid arthritis, etc.)
- Anesthetic implications of current drug therapy and whether it should be continued, stopped or modified peri-operatively
- Need for and methods of pre-operative DVT prophylaxis
- The importance of anesthetic and genetic disease history with respect to suxamethonium apnoea, anaphylaxis, and malignant hyperthermia
- Post-operative analgesic needs
- Assessment of whether post-operative ICU or HDU care is required
- Importance of consent
- Dangers of repeat anesthesia

### **2. Premedication**

- Rationale use for premedicant drugs
- Choice of drugs, advantages and disadvantages
- Rationale for antacid and prokinetic premedication
- Rationale for DVT prophylaxis
- Understanding of causes of delayed gastric emptying

### **3. Anesthesia, HDU and ICU Equipment; Monitoring and Safety**

- Physical principles underlying the function of the anesthetic machine, pressure regulators, flowmeters, vaporizers, breathing systems
- Chemistry of absorption of carbon dioxide
- Principles of lung ventilators, disconnection monitors
- Manufacture and storage of oxygen, nitrous oxide, carbon dioxide, compressed air, gas cylinders
- Pipeline and suction systems
- Basis of pre-use check of anesthetic machines, breathing circuits and monitors
- Airways, tracheal tubes, tracheostomy tubes, emergency airways, laryngeal masks, oxygen therapy equipments, self-inflating bags
- The content of an anesthetic record
- Function and use of resuscitation equipment, transfusion devices
- Humidification devices
- Anesthetic gas scavenging systems, humidity
- Sterilization and cleaning of equipment

- Electrical safety
- Characteristics of intravenous cannulae, spinal and epidural needles

#### **4. Induction of General Anesthesia**

- Intravenous and inhalational induction – advantages and disadvantages
- Indications of tracheal intubation
- Selection of tube type (oral, nasal, armoured etc), diameter and length
- Management of difficult intubation and failed intubation
- Methods of confirming endotracheal tube placement; oesophageal and endobronchial intubation, complications
- Insertion and use of oral airways, face masks and laryngeal mask airway
- Causes of regurgitation and vomiting during induction, prevention and management of pulmonary aspiration
- Cricoid pressure
- Induction of anesthesia in special circumstances (head injury, full stomach, upper airway obstruction, shock)
- Drugs: pharmacology and dosages of induction agents, relaxants, analgesics and inhalation agents
- Side effects of drug used and their interactions
- Monitoring during induction
- Recognition and management of anaphylactic and anaphylactoid reactions including follow-up and patient information
- Management of intra-arterial injection of harmful substances (antibiotics, thiopentone etc.)
- Management of asthma, COPD, hypertension, IHD, rheumatoid arthritis
- Problems of the obese patient

#### **5. Intraoperative Care including Sedation**

- Techniques of maintenance of general anesthesia involving both spontaneous and controlled ventilation
- Definition and methods of sedation
- Management of the shared airway
- Effects and hazards of induced pneumoperitoneum for laparoscopy
- Pharmacology of drugs used for maintenance: analgesics, relaxants, inhalational agents
- Methods of producing muscle relaxation
- Choice of spontaneous and controlled ventilation and monitoring them
- Minimum monitoring standards
- Additional monitoring for sick patients (CVP, urine flow)
- Detection and prevention of awareness
- Management of important critical incidents during anesthesia
- Diagnosis and treatment of pneumothorax
- Principles of fluid balance

- Blood and blood products, synthetic colloids, crystalloids
- Management of massive haemorrhage
- Intraoperative positioning, nerve injuries, prevention
- Management of asthma, COPR, hypertension, IHD, jaundice, steroid therapy, diabetes, rheumatoid arthritis
- Modification of technique in repeat anaesthesia
- Understanding basic surgical operations

## **6. Postoperative and Recovery Care**

- Causes and treatment of failure to breathe at end of operation
- Distinguishing between opiate excess, continued anaesthetic effect and/or residual paralysis
- Care of the unconscious patient
- Monitoring the patient in the recovery
- Interpretation of nerve stimulator patterns
- Oxygen therapy, indications and techniques
- Management of cyanosis, hype and hypertension, shivering and stridor
- Postoperative fluid balance and prescribing
- Assessment of pain and methods of pain management
- Methods of treating of post operative nausea and vomiting
- Causes and management of post operative confusion
- Management of the obese patient
- Management of asthma, IHD, COPD, steroid therapy
- Recovery room equipment
- Prevention, diagnosis and management of postoperative pulmonary atelectasis, deep vein thrombosis and pulmonary embolus
- Criteria for discharge of day-stay patients

## **7. Regional Anaesthesia**

- Pharmacology of local anaesthetics and spinal opioids
- Anatomy of spine, nerve roots, cauda equine, intercostals nerves, brachial plexus, femoral nerve, inguinal canal, nerved at wrist and ankle, nerve supply of larynx
- Dermatomes and levels for common operations (e.g. Inguinal hernia, haemorrhoids)
- Technique of spinal and epidural (including caudal) anaesthesia: single shot and catheter techniques
- Management of the complications of spinal and epidural/caudal analgesia (associated hypotension, shivering, nausea and anxiety)
- Management of accidental total spinal blockade
- Management of dural tap
- Techniques and complications of intravenous regional anaesthesia (IVRA)
- Toxicity of local anaesthetics and its management
- Management of failed/deteriorating regional block
- Methods of sedation
- Absolute and relative contraindications of regional blockade

## **8. Management of Trauma**

- Performance and interpretation of primary and secondary survey
- Emergency airway management
- Anatomy and technique of cricothrotomy/tracheostomy/mini-tracheotomy
- Establishing IV access: interosseous cannulation
- Immediate specific treatment of life-threatening illness or injury, with special reference to abdominal and thoracic trauma
- Recognition and management of hypovolemic shock
- Effects of trauma on gastric emptying
- Central venous access: anatomy and techniques
- Central venous pressure monitoring
- Arterial pressure monitoring
- Pleural drain monitoring
- Peritoneal lavage
- Principles of the management of head injury
- Methods of preventing the 'second insult' to the brain
- Principles of anesthesia in the presence of a recent head injury
- Management of cervical spine injuries
- Principles of the safe transfer of patients
- Understanding portable monitoring systems
- Factors affecting intra ocular pressure

## **9. Obstetric Anesthesia and Analgesia**

- Physiological changes associated with a normal pregnancy
- Functions of the placenta: placental transfer: feto-maternal circulation
- Pain pathways relevant to labour
- Effect Gastrointestinal physiology and acid aspiration prophylaxis
- Methods of analgesia during labour: indications and contraindications
- Effect of pregnancy on the technique of general and regional anesthesia
- Emergencies in obstetric anesthesia: pre-eclampsia, eclampsia, major haemorrhage, maternal resuscitation, amniotic fluid embolus, total spinal
- Management of difficult or failed intubation
- Maternal and neonatal resuscitation
- DVT prophylaxis
- Use of Magnesium sulphate
- Principles of anesthesia for incidental surgery during pregnancy
- Maternal morbidity and mortality

## **10. Pediatric Anesthesia**

- Anatomical differences in the airway, head and spinal cord from the adult
- Physiological differences from the adult
- Starvation and hypoglycemia

- Preoperative assessment and psychological preparation
- Anesthetic equipment and the difference from adult practice
- Estimation of blood volume and replacement of fluid loss
- Modification of drug dosages
- Analgesia for children
- Premedication, including local anesthesia for venepuncture
- Calculation of tube sizes, selection of masks and airways
- Upper respiratory tract infections and when to cancel cases
- Anesthetic problems and management of important congenital anomalies including those requiring surgical correction in the neonatal period (tracheoesophageal fistula, diaphragmatic hernia, exomphalos, gastroschisis, intestinal obstruction, pyloric stenosis)
- Resuscitation of the newborn
- Management of acute airway obstruction including croup and epiglottitis

## **11. Cardiac/Thoracic Anesthesia**

### Cardiac

- Preoperative assessment and perioperative care of patients with cardiac disease
- Induction and maintenance of anesthesia for high risk cardiac procedures
- Antibiotic prophylaxis against subacute bacterial endocarditis
- Problems of cardio pulmonary bypass, myocardial protection and the weaning of patients from CPB
- Management of cardiac tamponade
- Interpretation of ECG and chest X-ray
- Interpretation of non-invasive and invasive cardiovascular monitoring
- Cardiac pacing models/different pacemakers
- Intra-aortic balloon counter pulsation
- Postoperative cardiac critical care

### Thoracic Anesthesia

- Preoperative pulmonary function tests
- Local and general anesthesia for bronchoscopy including techniques of ventilation
- Understanding of fiberoptic bronchoscopic techniques for airway management
- Principles of one lung anesthesia
- Anesthetic management of tracheo-esophageal fistula
- Principles of underwater seals and chest drains
- Postoperative care and analgesia after thoracic surgery

## **12. General Surgery, Gynaecology, Urology, Transplantation**

### General Surgery

- Relevant anatomy and physiology of common surgical procedures

- Anesthesia for complex GI surgery including intrathoracic procedures
- Emergency anesthesia for general surgery
- Diseases relevant to hepatobiliary, pancreatic, splenic surgery
- Management of thyroid (and parathyroid) surgery
- Starvation / obesity

#### Gynaecology

- Relevant anatomy and physiology
- Preoperative assessment
- Laparoscopic surgery
- Gynecological procedures during surgery

#### Urology

- Anatomy of the renal tract
- Blood flow, GFR, plasma clearance
- Tubular function, urine formation, and micturition
- Assessment of renal function
- Disturbances of fluid balance, oedema and dehydration
- Acid-base abnormalities
- Renal failure and its management
- Plasma electrolyte disturbances
- Anesthesia on spinal injury patients for urology procedures
- TUR syndrome

#### Transplantation

- Principles and complications of immunosuppression
- Specific anesthetic problems associated with renal transplantation
- Anesthetic management of patients with transplanted organs

### **13. Neuroanesthesia**

- Preoperative assessment and management of patients with neurological diseases
- Anesthesia for imaging relevant to the CNS
- Anesthesia for MRI including problems of magnetic fields
- Anatomy, physiological control and effect of drugs on CBF, ICP and CMRO<sub>2</sub>
- Principles of anesthesia for craniotomy – vascular disease, cerebral tumours and posterior fossa lesions
- Anesthetic implications of pituitary disease and trans-sphenoidal surgery
- Anesthesia for spinal column surgery and anesthetic implications of spinal cord trauma
- Principles of immediate post-operative management including pain relief and special considerations with narcotics
- Neurological monitoring
- Guillian-Barre Syndrome
- Myasthenia gravis, Thymectomy
- Dystrophia myotonica, Muscular dystrophy, Parkinsonism
- Paraplegia and long-term spinal cord damage

- Control of convulsions including status epilepticus
- Tetanus

#### **14. Vascular Anesthesia**

- Management of the patient for major vascular surgery
- Management of carotid artery surgery
- Management of pheochromocytoma
- Postoperative management and critical care of vascular patients including postoperative analgesia
- Anesthesia for non-cardiac surgery in patients with cardiac disease
- Massive blood transfusion
- Aortic cross-clamping and renal protection

#### **15. Day Surgery**

- Pre-anesthetic Assessment Clinic (PAC)
- Instructions to patients
- Regional anesthesia appropriate to day cases
- General anesthesia appropriate to day cases
- Drugs for day cases
- Recovery assessment
- Postoperative analgesia

#### **16. Ear, Nose and Throat (Otorhinolaryngology)**

- Preoperative assessment – prediction of difficult intubation
- Management of patients of all ages
- Local techniques and surface analgesia
- Acute ENT emergencies (bleeding tonsils, croup, epiglottitis, foreign bodies)
- Laryngoscopy and bronchoscopy
- Knowledge of special tubes, gags and equipment for microlaryngeal surgery, laser surgery and bronchoscopy (venture devices, ventilating bronchoscope)
- Emergency airway management including tracheostomy, use of Helium
- Postoperative management

#### **17. Ophthalmic Anesthesia**

- Preoperative assessment with particularity of those with co-morbidities
- Choice of local or general anesthetic techniques in relation to the patient and surgery with particular reference to:
  - Strabismus surgery, cataract surgery, detached retina
  - Penetrating eye injury
  - Control of intra ocular pressure
  - Action of anesthetic drugs on the eye
  - Anatomy relevant to LA blocks
  - Local anesthetic techniques
  - Problems of glaucoma surgery
  - Postoperative care

## **18. Maxillo-Facial and Dental Anesthesia**

- Preoperative assessment
- Day case/impatient requirements
- Resuscitation facilities
- Anesthesia for dental extractions (include sedation and analgesic techniques)
- Pediatric anesthesia
- Assessment and management of the difficult airway including the perioperative management of the fractured jaw and other major facial injuries
- Postoperative management

## **19. Plastic and Burns**

- Preoperative assessment with particular reference to difficult airway
- Pediatric cases: cleft lip and palate
- Physiology of tissue blood flow
- Benefits and risks of hypotensive anesthesia
- Pathophysiology of the patient with burns
- Assessment and resuscitation of patient with burns: fluid management
- Heat and smoke inhalation injury: management

## **20. Orthopedic Anesthesia**

- Preoperative assessment – pediatrics, elderly, congenital syndromes, rheumatoid arthritis of vertebral fractures
- Problems of cervical spine injury
- Emergency anesthesia for fractures
- Routine anesthesia for joint replacement surgery, arthroscopy, fractures bones, dislocations, tendon repair
- Problems of use of tourniquets, cement, prone position
- Anesthesia for spinal surgery including scoliosis
- Prevention, diagnosis and management

## **21. Critical Care Medicine**

- Understanding the potential benefits of critical care
- Common causes/indications of admission to HDU/ICU
- Methods of examination of the unconscious patient
- Monitoring in ICU: invasive and non-invasive
- Understanding sepsis, septic shock and multi-organ failure (MOF)
- Common causes of cardiac and respiratory arrest
- Pathophysiology of cardiogenic and hypovolemic shock
- Acute coronary syndrome, cardiac failure
- Pulmonary embolism
- Management of acute and chronic respiratory failure
- Mechanical ventilation: non-invasive and invasive
- Management of tracheostomy and decannulation
- Management of severe asthma, COPD
- Traumatic and non-traumatic coma, CNS infection, encephalopathies, status epilepticus, acute polyneuropathy, stroke
- Diagnosis, prevention and management of acute renal failure

- Renal supportive measures: HD, CVVH
- Fluids and electrolyte balance
- Acid base management
- Nutrition
- Microbiology, infection, antibiotics
- Hematological disorders: coagulopathies, hemolysis, blood transfusion
- Gastrointestinal disorders: acute liver failure, acute pancreatitis, gut bleeding
- Pharmacology of cardiovascular drugs, sedatives, muscle relaxants: indications
- Management of acute poisoning
- ICU record, scoring systems and Audit
- Ethics, end of life care
- Communication skills with patients, their relatives and staff
- Cardiopulmonary resuscitation
- Management of immunocompromised and HIV patients
- Brain death: brain stem function assessment
- Transport of the critically ill

## **22. Pain Management, Acute & Chronic**

- Anatomy, physiology, pharmacology relevant to pain management
- Mechanisms of pain: somatic, visceral and neuropathic pain
- Assessment and measurement of pain
- Techniques for control of acute pain in all age groups
- Non-pharmacological methods of pain relief
- Pharmacology of opioids, NSAID's
- The analgesic ladder
- Principles of neural blockade for pain relief
- Local anesthetic agents: drugs and mechanisms
- Organization and objectives of an acute pain service

## **23. Critical Incidents**

### *Principles of the causes, detection and management of:*

- Cardiac and respiratory arrest
- Unexpected hypoxia with or without cyanosis
- Unexpected increase in peak airway pressure
- Progressive fall in minute volume during spontaneous respiration or IPPV
- Fall in end tidal CO<sub>2</sub>
- Rise in end tidal CO<sub>2</sub>
- Rise in inspired CO<sub>2</sub>
- Unexpected hypotension
- Unexpected hypertension
- Sinus tachycardia
- Arrhythmias
- Convulsions
- Regurgitation / aspiration
- Laryngospasm, Bronchospasms

- Tension pneumothorax
- Gas / Fat / Pulmonary embolus
- Adverse drug reactions
- Anaphylaxis
- Transfusion of mismatched blood or blood products

#### **24. Anesthesia and the Elderly**

- Physiological changes with age
- Altered pharmacological response
- Erosion of physiological response
- Frequent co-morbidities
- Positioning difficulties
- Communication difficulties (eye sight, hearing, CVA's)
- Causes of postoperative confusion

#### **25. Management of Respiratory and Cardiac Arrest**

- Patient assessment: diagnosis of causes of cardio-respiratory arrest
- Causes of cardio-respiratory arrest during induction, maintenance and recovery from anesthesia
- Importance of non-cardiac causes of cardio-respiratory arrest
- Methods of airway management (mouth to mouth/nose, bag mask, LMA, intubation)
- Recognition and management of life threatening of arrhythmias including defibrillation and drug therapy
- Knowledge of specific problems of pediatric resuscitation
- Ethical aspects of resuscitation

#### **26. Diagnostic Imaging, Interventional Radiology: Anesthesia / Sedation**

- Problems of remote area
- Pre-anesthetic preparation
- Sedation and GA techniques for pediatric and adults: angiography, interventional procedures, CT scanning
- Magnetic resonance imaging: problems of isolated patient, magnetic field, monitoring
- Hypothermia
- Postoperative care

#### **27. Miscellaneous**

- Cardiac catheterization: Pediatrics and adults
- ERCO
- Lithotripsy
- Radiotherapy
- Electro convulsive therapy
- Stereotactic surgeries

#### **28. Anatomy**

##### Respiratory System

- Mouth, nose, pharynx, larynx, tracheo bronchial tree, lungs; also blood supply and innervation of these structures
- Pleura, mediastinum and its contents
- Diaphragm, other muscles of respiration, innervation
- The thoracic inlet and 1<sup>st</sup> rib
- Interpretation of a normal chest X-ray

#### Cardiovascular System

- Heart, chambers, conducting system, blood and nerve supply
- Pericardium
- Great vessels, main peripheral arteries and veins
- Fetal and feto-maternal circulation

#### Nervous System

- Brain and its subdivisions
- Spinal cord, meninges, subarachnoid and epidural space, contents
- CSF and its circulation
- Spinal nerves, dermatomes
- Brachial plexus, nerved of arm
- Intercostal nerves
- Nerves of abdominal wall
- Nerves of leg and foot
- Autonomic nervous system
- Stellate ganglion
- Cranial nerves, base of skull, Trigeminal ganglion
- Innervation of the larynx
- Eye and orbit

#### Vertebral Column

- Cervical, thoracic, and lumbar vertebrae
- Sacrum and sacral hiatus
- Ligaments of vertebral column

#### Surface Anatomy

- Structures in antecubital fossa
- Structures in axilla; identifying the brachial plexus
- Large veins and anterior triangle of neck
- Large veins of leg and femoral triangle
- Arteries of arm and leg
- Landmarks of tracheostomy, cricothyrotomy

### **29. Physiology and Biochemistry**

#### General

- Function of cells, genes and their expression
- Cell membrane characteristics, receptors

#### Biochemistry

- Acid base balance and buffers
- Electrolytes

- Cellular metabolism, Enzymes

### Body Fluids and their Functions

- Capillary dynamics and interstitial fluid
- Osmolarity, osmolality, partition of fluids across membranes
- Lymphatic system
- Special fluids especially CSF, pleural fluid and peritoneal fluid

### Hematology

- Red blood cells: hemoglobin and its variants
- Blood groups
- Haemostasis and coagulation
- WBC, Inflammatory response

### Muscle

- Action potential generation and transmission
- Neuromuscular junction and transmission
- Muscle types
- Motor unit
- Skeletal muscle contraction
- Smooth muscle contraction

### Heart and Circulation

- Cardiac muscle contraction
- The cardiac cycle
- Regulation of cardiac function
- Control of cardiac out put (including the Starling relationship)
- Fluid challenge and Heart failure
- Electrocardiogram and Arrhythmias
- Control of systemic blood pressure (rest, exercise, hypovolemia, Valsalva manoeuvre)
- Peripheral circulation
- Special circulations: pulmonary, coronary, cerebral, renal, portal, foetal

### Renal System

- Blood flow, GFR, and plasma clearance
- Tubular function and urine formation
- Assessment of renal function
- Regulation of fluid and electrolyte balance
- Regulation of acid-base balance
- Pathophysiology of acute renal failure

### Respiration

- Gaseous exchange: O<sub>2</sub> and CO<sub>2</sub> transport, hypoxia, hyper and hypocapnia, hyper and hypobaric pressures
- Haemoglobin: O<sub>2</sub> carriage and acid-base equilibrium
- Pulmonary ventilation: volumes, flows, dead space
- Effect of IPPV on lungs

- Ventilation perfusion abnormalities
- Control of breathing
- Non-respiratory functions of lungs

### Nervous System

- Functions of neurons: actions potentials, conduction, synaptic transmission
- Intracranial pressure: CSF and blood flow
- Autonomic nervous system
- Neurological reflexes
- Motor function: spinal and peripheral
- Pain: receptors, pathways (periphery to central), visceral pain
- Spinal cord: functional anatomy, blood supply, transaction

### Gastrointestinal

- Gastric function: secretions, nausea, vomiting
- Gut motility, sphincters and reflex control
- Digestion function

### Metabolism

- Metabolic pathways, energy production
- Body temperature and its regulation

### Endocrinology

- Hypothalamic and pituitary function
- Adrenocortical hormones
- Adrenal medulla
- Pancreas: insulin, glucagon
- Thyroid and Parathyroid hormones

### Pregnancy

- Physiological changes associated with pregnancy

## **30. Pharmacology**

### Applied chemistry

- Laws of diffusion
- Solubility and partition coefficients
- Ionisation of drugs
- Drug isomerism
- Protein binding
- Oxidation, reduction, hydroxylation

### Mode of Action of Drugs

- Dynamics of drug-receptor interaction
- Agonist, antagonist, partial agonists, inverse agonists
- Efficacy and potency, tolerance
- Receptor function and regulation

- Metabolic pathways, drug: enzyme interactions, Michaelis-Menten equation
- Enzyme inducers and inhibitors
- Mechanisms of drug action
- Ion channels, types, Gating mechanisms
- Signal transduction
- Action of gases and vapours
- Osmotic effects, pH effects. Adsorption and chelation
- Mechanisms of drug interactions

#### Pharmacokinetics and pharmacodynamics

- Drug uptake from: GIT, lungs, transdermal, subcutaneous, I/M, I/V, epidural
- Bioavailability
- Factors affecting the distribution of drugs: perfusion, molecular size, solubility, protein binding
- Distribution of drugs in body compartments
- Tissue binding and solubility
- Materno-fetal distribution
- Modes of drug elimination: direct excretion, phase I and II mechanisms, renal excretion and urinary pH, Hoffman's elimination
- Pharmacokinetics: pharmacokinetic compartments, apparent volume of distribution, clearance concepts, effect of organ blood flow, Fick principle
- Pharmacodynamics: concentration-effect relationships
- Pharmacogenetics
- Adverse reactions to drugs: hypersensitivity, allergy, anaphylaxis, anaphylactoid

#### Systematic Pharmacology

- Anesthetic gases and vapours
- Hypnotic, sedatives and intravenous anesthetic agents
- Simple analgesics
- Opioids and other analgesics; and opioid antagonists
- Non-steroidal anti-inflammatory drugs
- Neuromuscular blocking agents and anticholinesterases
- Drugs acting on the autonomic nervous system: cholinergic and adrenergic agonists and antagonists
- Cardiovascular drugs: inotropes, vasodilators, vasoconstrictors, antiarrhythmics
- Drugs acting on respiratory system: respiratory stimulants and bronchodilators
- Anti-hypertensives: Anti-diabetics; Anticonvulsants; Diuretics; Antibiotics; Antacids; Antiemetic agents; Steroids; Antihistamines; Antidepressants; Anticoagulants; Local Anesthetic agents; Plasma volume expanders, Vitamins

### **31. Physics and Clinical Measurement**

- Concepts only of exponential functions: wash-in, wash-out

- Basic measurement concepts: linearity, drift, hysteresis, signal, noise ratio
- SI units; Other system of units if applicable (e.g. mmHg, Bar, Atmosphere)
- Mass, Force, Work, Power
- Heat: freezing point, melting point, latent heat
- Conduction, convection, radiation
- Mechanical equivalent of heat
- Measurement of temperature and humidity
- Physics of gases and vapours
- Absolute and relative pressure
- The gas laws; triple point; critical temperature and pressure
- Density and viscosity of gases
- Laminar and turbulent flow; Poiseuille's equation, the Bernoulli principle
- Vapour pressure, Saturated vapour pressure
- Measurement of volume and flow in gases and liquids
- The pneumatacograph and other respirometers
- Principles of surface tension
- Basic concepts of electricity and magnetism
- Capacitance, inductance and impedance
- Amplifiers: bandwidth, filters
- Amplification of biologic potentials: ECG, EEG, EMG
- Processing, storing and display of physiological measurements
- Bridge circuits
- Basic principles and safety of lasers
- Ultrasound and Doppler effect
- Cardiac pacemakers and Defibrillators
- Electrocutation, Fire and Explosions
- Diathermy and its safe use
- Principles of pressure transducers
- Resonance and damping, frequency response
- Measurement and units of pressure

## **VACATION, HOLIDAYS and ON-CALL**

1. Residents are entitled for four (4) weeks vacation annually.
2. Sick and maternity leaves will be compensated for, during or at the end of training
3. On call duty will be an average of one call every five nights (minimum of five calls per months) of 24 hours per call. Until the Initial Assessment of Competency has been proved (end of 6 months), trainees will be taking on call duties under direct supervision – along with another doctor on duty. The candidate is expected to perform the pre-operative clinical assessment of patients listed for operation the following day and report to the concerned consultants or consultant on call.

## **ASSESSMENT**

Throughout the anesthetic training program all trainees undergo summative assessments designed to assess whether they have reached specified standards in the training program, to quantify experience, and to estimate the individual trainee's eligibility to progress to further stages of training, or to a career post.

### **Initial Assessment of Competency**

Before any trainee can work without direct supervision they must pass the Initial Assessment Competency

### **End of Rotation Evaluation**

At the end of each training rotation, the supervising consultant team shall provide the Training Committee with a completed evaluation of the resident's performance during that period of rotation. The candidate's must be made aware of the evaluation report.

### **Annual Review and Promotion**

Evidence of the quality, quantity and variety of work will be reviewed annually and a decision regarding further progress and training needs will be made. This will be done by the Specialty Training Committee.

Promotion to Advanced Level of Training (Senior Residency) depends on satisfactory annual overall evaluation and passing the Primary Specialty Examination (Part I OMSB).

## **SPECIALTY EXAMINATION**

The Board Evaluation consists of two parts:

### **Primary Specialty Board Examination (Part I OMSB)**

The Primary Examination will be held once a year. It consists of:

- Multiple Choice Questions (MCQ) paper
- OSCE (Objective Structures Clinical Examination)
- Two Oral Examinations

The examination will focus on applied anatomy, physiology, clinical biochemistry, physics, clinical measurement, pharmacology and basic principles of anesthesiology. Candidates are allowed to sit the Primary examination for a maximum of three attempts.

### **Final Specialty Board Examination (Part II OMSB)**

The examination is given to candidates after the successful completion of training, as evidenced by an acceptable final in-training evaluation. Examinations will be held once per annum. Candidates are allowed a total of four attempts to pass the examination after completion of training.

The examination consists of:

- Written part (MCQ's and Short answer paper)
- Two Oral examinations
- Clinical examination / Case scenarios

The written part is designed to evaluate clinical knowledge, clinical judgment and basic sciences.

Oral and Clinical part is designed to test the trainee's skills and abilities to interpret various clinical conditions describing the proper and accurate anesthetic and/or critical care management. The candidates will also be tested on the use of different equipments/instruments and procedures in the operating room, critical care situations and pain management.

## **CERTIFICATION**

Candidates passing the final specialty examination and successfully completing five years of training will awarded the Oman Specialty Certificate of Anesthesiology and Critical Care.



## Log Book Summary

|                        |                  |    |    |    |
|------------------------|------------------|----|----|----|
| Period of Report       | From             |    | To |    |
| <b>Name</b>            |                  |    |    |    |
| <b>Grade</b>           | R1               | R2 | R3 | R4 |
| <b>(Tick app. box)</b> | Others (specify) |    |    |    |
| <b>Reg. No.</b>        |                  |    |    |    |
| <b>Hospital</b>        |                  |    |    |    |

## Log Book Data

### *Summary for Period*

|                                                   |  |  |
|---------------------------------------------------|--|--|
| <b>Total No. of Anaesthetics given</b>            |  |  |
| <b>Total sessions in ICU</b>                      |  |  |
| <b>Total sessions in acute &amp; chronic pain</b> |  |  |

### *Urgency & Level of Supervision*

|                  |           |       |         |        |
|------------------|-----------|-------|---------|--------|
|                  | Immediate | Local | Distant | Remote |
| <b>Scheduled</b> |           |       |         |        |
| <b>Urgent</b>    |           |       |         |        |
| <b>Emergency</b> |           |       |         |        |
| <b>Total</b>     |           |       |         |        |

### *ASA Grade*

|                                   |   |   |   |   |   |
|-----------------------------------|---|---|---|---|---|
| <b>ASA</b>                        | 1 | 2 | 3 | 4 | 5 |
| <b>Supervised Immediate/Local</b> |   |   |   |   |   |
| <b>Supervised Distant/remote</b>  |   |   |   |   |   |
| <b>Total Cases</b>                |   |   |   |   |   |

### *Time of Day*

|                                |               |               |              |
|--------------------------------|---------------|---------------|--------------|
| <b>Time</b>                    | 07:30 - 14:30 | 14:00 - 24:00 | 00:00 - 7:30 |
| <b>No. of Cases for Period</b> |               |               |              |

*Specialty / Age*

| Age          | <6m | 6m-2 yr | 3-7 yr | 8-16 yr | 17-79 yr | >80 yr | Total (specialty) |
|--------------|-----|---------|--------|---------|----------|--------|-------------------|
| Gen Surgery  |     |         |        |         |          |        |                   |
| Paed Surgery |     |         |        |         |          |        |                   |
| Neurosurgery |     |         |        |         |          |        |                   |
| CardioTh     |     |         |        |         |          |        |                   |
| Plastic      |     |         |        |         |          |        |                   |
| Burns        |     |         |        |         |          |        |                   |
| ENT          |     |         |        |         |          |        |                   |
| Maxfacial    |     |         |        |         |          |        |                   |
| Eye          |     |         |        |         |          |        |                   |
| Ob/Gyn       |     |         |        |         |          |        |                   |
| Urology      |     |         |        |         |          |        |                   |
| Vasculat     |     |         |        |         |          |        |                   |
| Ortho/Tr     |     |         |        |         |          |        |                   |
| ICU          |     |         |        |         |          |        |                   |
| Pain         |     |         |        |         |          |        |                   |
| Other        |     |         |        |         |          |        |                   |
| Total By Age |     |         |        |         |          |        |                   |

*Supervising / Teaching*

| Grade        | Nurse | Med Student | R1 | R2 | R3 | R4 |
|--------------|-------|-------------|----|----|----|----|
| No. of Cases |       |             |    |    |    |    |

## *Procedures*

| <b>Description</b>      | <b>No. of cases</b> | <b>Description</b>           | <b>No. of cases</b> | <b>Description</b>            | <b>No. of Cases</b> |
|-------------------------|---------------------|------------------------------|---------------------|-------------------------------|---------------------|
| <b>Vascular Access</b>  |                     | <b>Anaesthetic Technique</b> |                     | <b>Respiratory Management</b> |                     |
| Internal Jugular        |                     | GA                           |                     | Facemask                      |                     |
| Subclavian              |                     | Gaseous Induction            |                     | Laryngeal mask                |                     |
| Other CVL               |                     | Spinal                       |                     | Tracheal Intubations          |                     |
| Arterial                |                     | Epidural                     |                     | Fibreoptic Intubations        |                     |
| PA Catheter             |                     | CSE                          |                     | Blind Nasal Intubations       |                     |
| Picco line              |                     | Caudal                       |                     | Cricothyrotomy                |                     |
|                         |                     | Field Block                  |                     | Percutaneous Tracheostomy     |                     |
| <b>Resuscitation</b>    |                     | Peri Nerve Block             |                     | Double Lumen Tube             |                     |
| Cardiorespiratory (CPR) |                     | Brachial Plexus Block        |                     | Bronchoscopy                  |                     |
| Trauma                  |                     | TIVA                         |                     | Initial Ventilatory Support   |                     |
| Neonatal                |                     | IVRA                         |                     | Non Invasive ventilation      |                     |
| Maternal                |                     | Sedation                     |                     | Jet Ventilation               |                     |
| <b>Advanced Support</b> |                     |                              |                     | FastTrach                     |                     |
| Chest Drain             |                     |                              |                     |                               |                     |
| Inotropic Support       |                     |                              |                     |                               |                     |
| Renal Replacement       |                     |                              |                     |                               |                     |
| Nutritional             |                     |                              |                     |                               |                     |
| Interhospital Transfer  |                     |                              |                     |                               |                     |

***Other Professional Development***

|                             |  |
|-----------------------------|--|
| Examinations Passed         |  |
| Meetings Attended           |  |
| Courses Attended            |  |
| Research                    |  |
| Audit                       |  |
| Publications                |  |
| Presentations               |  |
| Teaching                    |  |
| Positions of Responsibility |  |
| Management                  |  |
| Administration              |  |
| Other Training Experience   |  |
| Out of Program Experience   |  |

**Signature of Resident:**

**Signature of Program Director:**

# EVALUATION FORMS

## RESIDENT MONTHLY EVALUATION FORM

Name: ..... OMSB #: ..... Program: .....

Resident Level: R I  R II  R III  R IV  R V  R VI

| No                                                                                                                                  | Criteria                                                              | To:.....Resident level:..... |                          |                          |                          |                          |                          |
|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|                                                                                                                                     |                                                                       | Unsatisfactory<br>1          | Borderline<br>2          | Satisfactory<br>3        | Above<br>Average<br>4    | Outstanding<br>5         | N/A                      |
| <b>I. Patient Care</b>                                                                                                              |                                                                       |                              |                          |                          |                          |                          |                          |
| 1-                                                                                                                                  | History and physical examination.                                     |                              |                          |                          |                          |                          |                          |
| 2-                                                                                                                                  | Interpretation and differential diagnosis.                            |                              |                          |                          |                          |                          |                          |
| 3-                                                                                                                                  | Decision making and management plan.                                  |                              |                          |                          |                          |                          |                          |
| 4-                                                                                                                                  | Organization of work and time management.                             |                              |                          |                          |                          |                          |                          |
| 5-                                                                                                                                  | Maintains patient confidentiality                                     |                              |                          |                          |                          |                          |                          |
| 6-                                                                                                                                  | Verbal and written communication.                                     |                              |                          |                          |                          |                          |                          |
| 7-                                                                                                                                  | Provides comprehensive care.                                          |                              |                          |                          |                          |                          |                          |
| 8-                                                                                                                                  | Ability to manage emergency conditions.                               |                              |                          |                          |                          |                          |                          |
| 9-                                                                                                                                  | Consultation skills.                                                  |                              |                          |                          |                          |                          |                          |
| <b>II. Medical Knowledge &amp; Attitudes</b>                                                                                        |                                                                       |                              |                          |                          |                          |                          |                          |
| 10-                                                                                                                                 | Punctuality.                                                          |                              |                          |                          |                          |                          |                          |
| 11-                                                                                                                                 | Basic and clinical knowledge.                                         |                              |                          |                          |                          |                          |                          |
| 12-                                                                                                                                 | Works effectively in a team environment                               |                              |                          |                          |                          |                          |                          |
| 13-                                                                                                                                 | Technical skills and procedures.                                      |                              |                          |                          |                          |                          |                          |
| 14-                                                                                                                                 | Reports facts accurately, including own errors                        |                              |                          |                          |                          |                          |                          |
| 15-                                                                                                                                 | Attitude to patient and staff.                                        |                              |                          |                          |                          |                          |                          |
| 16-                                                                                                                                 | Ability to supervise.                                                 |                              |                          |                          |                          |                          |                          |
| 17-                                                                                                                                 | Recognizes own limitations                                            |                              |                          |                          |                          |                          |                          |
| 18-                                                                                                                                 | Maintains code of ethics & honesty.                                   |                              |                          |                          |                          |                          |                          |
| <b>III. Scholarly Contributions</b>                                                                                                 |                                                                       |                              |                          |                          |                          |                          |                          |
| 19-                                                                                                                                 | Attends and contributes to rounds, seminars and other learning events |                              |                          |                          |                          |                          |                          |
| 20-                                                                                                                                 | Accepts and acts on constructive feedback                             |                              |                          |                          |                          |                          |                          |
| 21-                                                                                                                                 | Teaching skills (Peers)                                               |                              |                          |                          |                          |                          |                          |
| 22-                                                                                                                                 | Ability for self directed learning                                    |                              |                          |                          |                          |                          |                          |
|                                                                                                                                     | <b>Overall Assessment</b>                                             | <input type="checkbox"/>     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>General Comments</b> (including strengths, weakness and needs for special attention)<br><br><br><br><br><br><br><br><br><br><br> |                                                                       |                              |                          |                          |                          |                          |                          |

Date of Rotation: From ..... To .....

Name and Signature of Supervising Consultant ..... Date .....

Name of Resident: ..... Signature: ..... Date: .....

Official Use:-

$$\frac{\text{Total Score}}{\text{No of items evaluated}} \times 20 = \dots\dots\dots \%$$

**CONSULTANT/ STAFF EVALUATION**

Name of Consultant / Staff: .....

Program: ..... Resident Level: .....

Rotation: ..... Hospital: .....

Date of Rotation: From:..... To: .....

1. How many weeks did you work with this consultant / staff?  
 Up to 2  3 or 4  5 or 6  7 or 8  8+
  
2. The frequency of your contacts with the teaching consultant / staff was: (per week)  
 1 or less  2  3  4  5 or more

| Consultant                                                              | Strongly Disagree<br>1 | Disagree<br>2 | Neutral<br>3 | Agree<br>4 | Strongly Agree<br>5 | N/A |
|-------------------------------------------------------------------------|------------------------|---------------|--------------|------------|---------------------|-----|
| 1. Made rounds regularly.                                               |                        |               |              |            |                     |     |
| 2. Provided quality teaching.                                           |                        |               |              |            |                     |     |
| 3. Was well organized.                                                  |                        |               |              |            |                     |     |
| 4. Stimulated enthusiasm for knowledge.                                 |                        |               |              |            |                     |     |
| 5. Demonstrated breadth of knowledge.                                   |                        |               |              |            |                     |     |
| 6. Established good rapport with resident.                              |                        |               |              |            |                     |     |
| 7. Provided direction and feed back.                                    |                        |               |              |            |                     |     |
| 8. Was approachable for help and feedback.                              |                        |               |              |            |                     |     |
| 9. Encouraged resident to take appropriate responsibility.              |                        |               |              |            |                     |     |
| 10. Promoted a comprehensive approach to patient care.                  |                        |               |              |            |                     |     |
| 11. Provided a good role model as a physician.                          |                        |               |              |            |                     |     |
| 12. Was available with enough time for resident support and supervision |                        |               |              |            |                     |     |
| 13. Allowed resident protected teaching time.                           |                        |               |              |            |                     |     |
| 14. Provided opportunity for performing procedure and techniques.       |                        |               |              |            |                     |     |

**An Average Score:** < 30% Unsatisfactory, 30-60% Satisfactory, 60-80% V. Good, > 80% Excellent

**Name of resident (optional)** ..... **Date:** .....

**Office Use:-**

$$\frac{\text{Total Score}}{\text{Number of evaluation items}} \times 20 = \dots\dots\dots \%$$

**ROTATION EVALUATION FORM**

Please tick applicable one  6 months Progress Report

**Name (Optional) :** .....**OMSB # :** .....

**Program :** ..... **Hospital:** ..... **Rotation:**.....

**Date of Rotation: From:**..... **To:** ..... **Resident Level:**.....

| <b>Rotation:</b>                                                     | <b>Unsatisfactory</b>    | <b>Deficient</b>         | <b>Good</b>              | <b>V. Good</b>           | <b>Outstanding</b>       | <b>N / A</b>             |
|----------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|                                                                      | <b>1</b>                 | <b>2</b>                 | <b>3</b>                 | <b>4</b>                 | <b>5</b>                 |                          |
| 1. The number of in-patients cases seen was appropriate.             |                          |                          |                          |                          |                          |                          |
| 2. Inpatients cases demonstrated a broad range of clinical problems. |                          |                          |                          |                          |                          |                          |
| 3. The number of out-patients cases seen was appropriate.            |                          |                          |                          |                          |                          |                          |
| 4. Outpatient cases demonstrated a broad range of clinical problems. |                          |                          |                          |                          |                          |                          |
| 5. The opportunity to see acute emergency cases.                     |                          |                          |                          |                          |                          |                          |
| 6. The opportunity to see consultations.                             |                          |                          |                          |                          |                          |                          |
| 7. Ward rounds.                                                      |                          |                          |                          |                          |                          |                          |
| 8. Clinical Meetings / Lectures.                                     |                          |                          |                          |                          |                          |                          |
| 9. Journal Club                                                      |                          |                          |                          |                          |                          |                          |
| 10. Audit ( e.g. Morbidity / Mortality )                             |                          |                          |                          |                          |                          |                          |
| 11. Clear learning objectives.                                       |                          |                          |                          |                          |                          |                          |
| 12. The number of procedures adequate.                               |                          |                          |                          |                          |                          |                          |
| 13. Demonstration & Supervision of techniques.                       |                          |                          |                          |                          |                          |                          |
| 14. Level of responsibility in patient care.                         |                          |                          |                          |                          |                          |                          |
| 15. Patient management.                                              |                          |                          |                          |                          |                          |                          |
| 16. Quality / quantity of teaching on rotation.                      |                          |                          |                          |                          |                          |                          |
| 17. My total workload was appropriate for the time available.        |                          |                          |                          |                          |                          |                          |
| 18. Adequate feedback from consultant / staff on performance.        |                          |                          |                          |                          |                          |                          |
| 19. Support and supervision was available and adequate.              |                          |                          |                          |                          |                          |                          |
| 20. Opportunity to do research.                                      |                          |                          |                          |                          |                          |                          |
| <b>21. Overall quality of rotation</b>                               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**Signature of Resident:** ..... **Date:** .....

**Official Use:-**

Total Score

\_\_\_\_\_ X 20 = ..... %

Of items evaluated



المجلس العماني للإختصاصات الطبية  
OMAN MEDICAL SPECIALTY BOARD