COURSE CONTENTS
During this 1 year period training programme, the candidate must have gained experience in the
diagnosis and treatment of patients with serious medical and surgical diseases commonly seen in
the intensive care unit. The present document defines the minimum content of this 1 year of
training in critical care medicine and deals with the theoretical knowledge and the practical
experience that the candidate will be expected to have gained during this training.

Theoretical Knowledge
The candidate must understand the pathophysiology, construct a differential diagnosis and
apply the appropriate prophylactic and therapeutic intervention in the following disorders.
(This list is not comprehensive).

Respiratory
Management of airways, pulmonary edema, respiratory failure, adult respiratory distress
syndrome, severe, chest trauma, respiratory muscle fatigue, post-thoracic surgery care,
ventilatory management of various category of patients, ventilator settings and adjustments
based on patient data, monitoring on ventilator, interpretation of arterial blood gases.

Cardiovascular
Haemodynamic instability and shock, cardiac arrest, acute myocardial infarction, severe heart
failure, common arrhythmias and conduction disturbance, cardiac tamponade, pulmonary
embolism, aortic dissection, hypertensive crisis, peripheral vascular disease, Post-
cardiovascular surgery care, Cardio-pulmonary Resuscitation (CPR), Training in Basic Life
Support (BLS) and Advance Life Support (ALS)

Neurology
Coma, head trauma, intracranial hypertension, cerebrovascular accidents, meningo-
cephalitis, acute neuromuscular disease (including myasthenia & Guillian Barre syndrome)
post anoxic brain damage, acute confusional states, spinal cord injury, post-neurosurgery care,
brain death.

Renal
Oliguria, Acute renal failure, Renal replacement therapy
Metabolic and Nutritional
Fluid electrolyte and acid base disorder endocrine disorders (including diabetes), nutritional requirement, monitoring of nutrition.

Hematological
Disseminated intravascular coagulation and other coagulation disorders, hemolytic syndrome, acute and chronic anemia, blood component therapy.

Infections
Severe infection due to aerobic and anaerobic bacteria, viruses, fungal and parasites, nosocomial infection, care of immuno-compromised patients in ICU, tropical disease, antimicrobial therapy.

Gastro-intestinal
Inflammatory bowel diseases, pancreatitis, acute hepatic failure, prevention and treatment of acute G.I. Bleeding, peritonitis, mesenteric infarction, acute abdomen, abdominal trauma.

Obstetric
Toxemia (including in HELLP syndrome), amniotic fluid embolism, eclampsia and Post-partum hemorrhage.

Environmental Hazards
Burns, Hypo and hyperthermia, near-drowning, electrocution, radiations, chemical injuries, animal bites.

Toxicology, poisoning
Acute intoxications, drug overdose, serious adverse reactions, anaphylaxis.

General
Pharmacology, pharmacokinetics and drug interaction. Analgesia, sedation and muscle relaxants. Multiple traumas transport of the critically ill patient, multi organ dysfunction syndrome (MODS) and the Systemic Inflammatory Response Syndrome (SIRS), management of the organ donor.

Intervention and Procedure
The candidate must be able to perform a number of specific procedures such as endotracheal intubations, change of tracheotomy, insertion of Intercostal Tube, collection of radial artery blood, catheterization, insertion of arterial lines etc.

For all candidates experience is desirable but not mandatory in the following area

Respiratory
Maintenance of open airway, endotracheal intubation, suctioning of the airway, setting-up monitoring and readjusting of the ventilation, titration of oxygen therapy, use of Ambu bag, techniques of weaning from mechanical ventilation, placement of a Intercostal tube, implementation of respiratory pharmacological support, interpretation of arterial and mixed venous blood gases, assessment of gas exchange and respiratory mechanics.
Cardiovascular
Placement of a central venous catheter (subclavian, internal jugular etc), pulmonary artery catheter (desirable) and arterial catheter, measurement and interpretation of the haemodynamic variables, implementation of cardiovascular support, anti-arrhythmic therapy and thrombolysis.

Neurological
Basic interpretation of brain CT/ MRI scan, intracranial pressure monitoring (desirable).

Metabolic and Nutritional
Implementation of intravenous fluid therapy, enteral and parenteral nutrition. Monitoring on TPN.

Hematological
Correction of haemostatic and coagulation disorders, interpretation of coagulation profile, implementation of thrombolysis.

Renal
Bladder catheterization, renal replacement techniques (desirable).

Gastro-intestinal
Placement of gastric tube, an esophageal and gastric tamponade balloon.

General
PATTERN OF EXAMINATION

The examination will consist of 4 components:

1. Written test.
2. Viva.
3. OSCE (Objective structured Clinical examination)
4. Cases.

For the “Primary examination in Critical Care Medicine”:

1. Written test: MCQ pattern (120 MCQ in 90 minutes).
   a. Approximately 25% physiology.
   b. Approximately 25% pharmacology.
   c. 10-20% Monitoring.
   d. 30-40% Clinical
2. Viva.
   a. 6 tables. Each candidate will be examined at each table. 2 minutes will be given to go through clinical scenario/problem. Viva will be divided by systems e.g. cardiovascular, neurology, respiratory, renal etc.
3. OSCE (Objective structured Clinical examination):
   a. 6 tables with ECG/ Xray/ CT/MRI/ biochemistry/equipment/ procedure related device etc. There will be very specific questions asked related to the displayed item. Also section on communication skills
4. Cases:
   a. 2 cases for each candidate.

For the “Fellowship examination in Critical Care Medicine”:

1. Written test: MCQ/long question/ short notes
2. Viva.
   a. 6 tables. Each candidate will be examined at each table. 2 minutes will be given to go through clinical scenario/problem. Viva will be divided by systems e.g. cardiovascular, neurology, respiratory, renal etc.
3. OSCE (Objective structured Clinical examination):
   a. 12 tables with ECG/ Xray/ CT/MRI/ biochemistry/equipment/ procedure related device etc. There will be very specific questions asked related to the displayed item. Also section on communication skills.
4. Cases:
   a. 2 hot cases (ICU/ICCU) for each candidate.
   b. 2 Cold cases (medical/surgical/HDU) for each candidate

RECOMMENDED BOOKS

1. The ICU BOOK by Paul Marino
2. TEXTBOOK OF CRITICAL CARE By Shoemaker et Al
3. INTENSIVE CARE MANUAL By Teik E. Oh
4. INTENSIVE CARE MEDICINE By Irwin Rippe
5. PRINCIPLE OF CRITICAL CARE By Hall, Schmidt and Wood