# TATA MEMORIAL CENTRE

## Office of the Director Academics
## Fellowship Program in Critical Care Medicine

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| Unit / Department | : | Critical Care Medicine |
| Duration | : | 1 Year |
| Eligibility | : | Minimum Qualification- MD/DNB Anaesthesia/Pulmonarymedicine/Emergency medicine/Medicine |

**Goals:**

This course is designed with the goal of providing exposure and training to the Critical Care and hopes to provide the candidate with adequate training to manage common cancers in a secondary level institute. The course will expose the candidate to the basic principles of diagnosis, staging, surgery and postoperative management of common cancers. The candidates will also be exposed to the basics of adjuvant treatment and preventive oncology. The course is by no means comprehensive and specialty training in any of the subspecialties is beyond the scope of the program.

**Aims :**

1. To develop skills, knowledge and expertise in managing complex critically ill patients.
2. To gain experience in management of acute, serious and life threatening medical and surgical diseases.
3. To encourage and develop expertise at organization, analysis if data and contribute to clinically relevant research.
4. To encourage ethical and evidence-based practice.
5. To help develop administrative skills and insights required for leadership and excellence in patient care.
6. To be able to work as a team member of health care providers, teaching and supervision of junior colleagues.

**Experience duringTwo Year training:**
Core ICU TMH and ACTREC

**I. Clinical**

**DOMAINS OF COMPETENCIES**
**Resuscitation and disease management of acutely ill patients**
**Diagnosis: Assessment, Investigation, Monitoring and Data interpretation**
**Practical procedures**
**Peri-operative care**
**End of life care**
**Transport**
**Patient safety and health systems**
**Professionalism**

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**Domain 1. Resuscitation and Initial management of the acutely ill patient**

1.1 Adopts a structured and timely approach to the recognition, assessment and stabilization of the acutely ill patient with disordered physiology
1.2 Manages cardiopulmonary resuscitation
1.3 Manages the patient post-resuscitation

**Domain 2. Diagnosis: Assessment, Investigation, Monitoring and Data Interpretation**

2.1 Obtains a history and performs an accurate clinical examination
2.2 Undertakes timely and appropriate investigations
2.3 Describes indications for echocardiography
2.4 Performs electrocardiography (ECG / EKG) and interprets the results
2.5 Obtains appropriate microbiological samples and interprets results
2.6 Obtains and interprets the results from blood gas samples
2.7 Interprets chest x-rays
2.8 Liaises with radiologists to organize and interpret clinical imaging
2.9 Monitors and responds to trends in physiological variables
2.10 Integrates clinical findings with laboratory investigations to form a DD

**Domain 3. Disease Management**

Acute Disease:
3.1 Manages the care of the critically ill patient with specific acute medical conditions Chronic Disease:
3.2 Identifies the implications of chronic and co-morbid disease in the acutely ill patient Organ System Failure:
3.3 Recognizes and manages the patient with circulatory failure
3.4 Recognizes and manages the patient with, or at risk of, acute renal failure
3.5 Recognizes and manages the patient with, or at risk of, acute liver failure
3.6 Recognizes and manages the patient with neurological impairment
3.7 Recognizes and manages the patient with acute gastrointestinal failure
3.8 Recognizes and manages the patient with acute lung injury syndromes (ARDS)
3.9 Recognizes and manages the septic patient
3.10 Recognizes and manages the patient following intoxication with drugs or environmental toxins
3.11 Recognizes life-threatening maternal per partum complications and manages care under supervision

**Domain 4. Therapeutic interventions/Organ support**

4.1 Prescribes drugs and therapies safely
4.2 Manages antimicrobial drug therapy
4.3 Administers blood and blood products safely
4.4 Uses fluids and vasoactive/inotropic drugs to support the circulation
4.5 Describes the use of mechanical assist devices to support the circulation

4.6 Initiates, manages, and we ans patients from invasive and non-invasive ventilation
4.7 Initiates, manages and weans patients from renal replacement therapy
4.8 Recognizes and manages electrolyte, glucose and acid-base disturbances
4.9 Co-ordinates and provides nutritional assessment and support

**Domain 5. Practical Procedures**
**Respiratory system:**

5.1 Administers oxygen using a variety of administration devices
5.2 Performs fibreoptic laryngoscopy under supervision
5.3 Performs emergency airway management
5.4 Performs difficult and failed airway management according to local protocols
5.5 Performs endotracheal suction
5.6 Performs FOB and BAL in the intubated patient under supervision
5.7 Performs percutaneous tracheostomy under supervision
5.8 Performs thoracocentesis via a chest drain
Cardiovascular system:
5.9 Performs peripheral venous catheterisation
5.10 Performs arterial catheterization
5.11 Describes a method for surgical isolation of vein / artery
5.12 Describes ultrasound techniques for vascular localization
5.13 Performs central venous catheterisation
5.14 Performs defibrillation and cardioversion
5.15 Performs cardiac pacing (transvenous or transthoracic)
5.16 Describes how to perform pericardiocentesis
5.17 Demonstrates a method for measuring cardiac output and derivedhaemodynamic variables
Central Nervous System:
5.18 Performs lumbar puncture under supervision
5.19 Manages the administration of analgesia via an epidural catheter Gastrointestinal System:
5.20 Performs nasogastric tube placement
5.21 Performs abdominal paracentesis
5.22 Describes Sengstaken tube (or equivalent) placement
5.23 Describes indications for, and safe conduct of gastroscopy Genitourinary system:
5.24 Performs urinary catheterization Domain

**6. Peri-operative care**

6.1 Manages the pre-and post-operative care of the high risk surgical patient
6.2 Managesthecareofthepatientfollowingcardiacsurgeryundersupervision
6.3 Manages the care of the patient following craniotomy under supervision
6.4 Manages the care of the patient after organ transplantation under supervision
6.5 Manages the post-operative care of the trauma patient under supervision Domain

**7. Comfort and Recovery**

7.1 Identifies and attempts to minimize the physical and psychosocial consequences of critical illness for patients and families
7.2 Manages the assessment, prevention and treatment of pain and delirium
7.3 Manages sedation and neuromuscular blockade
7.4 Communicates the continuing care requirements of patients at ICU discharge to health care professionals, patients and relatives
7.5 Manages the safe and timely discharge of patients from the ICU

**Domain 8. End of life care**

8.1 Manages the process of withholding or withdrawing treatment with the multidisciplinary team
8.2 Discusses end of life care with patients and their families / surrogates
8.3 Manages palliative care of the critically ill patient
8.4 Performs brain-stem death testing
8.5 Manages the physiological support of the organ donor

**Domain 9. Transport**

9.1 Undertakes transport of the mechanically ventilated critically ill patient outside the ICU

**Domain 10. Patient safety and health systems management**

10.1 Leads a daily multidisciplinary ward round
10.2 Complies with local infection control measures
10.3 Identifies environmental hazards and promotes safety for patients & staff
10.4 Identifies and minimizes risk of critical incidents and adverse events
10.5 Organizes a case conference
10.6 Critically appraises and applies guidelines, protocols and care bundles
10.7 Describes commonly used scoring systems for assessment of severity of illness
10.8 Demonstrates an understanding of the managerial &administrative responsibilities of the ICM specialist

**Domain 11. Professionalism Communication Skills**

11.1 Communicates effectively with patients and relatives
11.2 Communicates effectively with members of the health care team
11.3 Maintains accurate and legible records / documentation Professional relationships with patients and relatives
11.4 Involvespatients(ortheirsurrogates)indecisionsaboutcareandtreatment

11.5 Demonstratesrespectofculturalandreligiousbeliefsandanawarenessof
their impact on decision making
11.6 Respects privacy, dignity, confidentiality and legal constraints on the use of patient data Professional relationships with members of the health care team
11.7 Collaborates and consults; promotes team-working
11.8 Ensures continuity of care through effective hand-over of clinical information
11.9 Supports clinical staff outside the ICU to enable the delivery of effective care
11.10 Appropriately supervises, and delegates to others, the delivery of patient care Self governance
11.11 Takes responsibility for safe patient care
11.12 Formulates clinical decisions with respect for ethical and legal principles
11.13 Seeks learning opportunities and integrates knowledge into clinical practice
11.14 Participates in multidisciplinary teaching
11.15 Participates in research or audit under supervision

The candidates will rotate through various ICUs at TMH and ACTREC. The procedures listed above are indicative and may not reflect the actual experience he/she may receive.

II. **EDUCATION**
To attend all the clinical meetings happening in the institute like seminars, lectures, case presentations, conferences, journal and video clubs, and other didactic activities. All students shall maintain a logbook of the work carried out by them.

III. **RESEARCH**
The candidate is encouraged to publish at least one research paper and complete one research project.

IV. **LEADERSHIP**
To Lead ICU rounds, Lead adult and paediatric cardiac arrest, lead trauma team, family meeting, multidisciplinary meeting and end of life care.

**V. CLINICAL GOVERNACE**
Regular attendance at hospital morbidity and mortality meetings. Participation in hospital infection control program.

**Supervision:** The trainee will be supervised during all patient encounters and operations by a qualified faculty (Mentor) to ensure quality patient care and adequate Training

**Evaluations:** At the end of each year the senior faculty will evaluate each trainee's performance by an exit oral and written appraisal examination and provide face to face feedback about the performance and any remedial plans required.

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Formative assessments assess medical knowledge, patient care, procedural and academic skills, interpersonal skills, professionalism, self-directed learning and ability to practice in the system. There will be an exit examination.

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| Assessments | : | Intra-Departmental. |
| Completion Certificate | : | Will be issued upon successful completion of tenure. |

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Contacts

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