



## MGM MEDICAL COLLEGE, NAVI MUMBAI

### PROGRAMME OUTCOMES FOR MS IN TRAUMATOLOGY & SURGERY

The programme aims to generate exclusively trained specialists to manage all aspects of head-to-toe traumatic injuries along with Acute Surgical conditions in an effective manner. A post graduate attaining the course shall in the duration of 3 years acquire the following skills and knowledge along with effective communication and systematic functioning of a trauma team.

#### **PO1 - COGNITIVE/KNOWLEDGE SKILLS**

- PO1.1. Ability to resuscitate and elaborate the principles of cardiopulmonary resuscitation
- PO1.2 Enumerate, classify and describe the Physiology, Patho-physiology basis of disorders of the various systems
- PO1.3 Define and describe the various aspects and types of Shock and thorough understanding of management of Shock due to various etiologies along with management of hematological & coagulation disorders.
- PO1.4. Understand the metabolic, nutritional and endocrine effects of Trauma and critical illness and it's stress on the human body.
- PO1.5. Ability to diagnose and manage acute surgical patients including trauma, in all situations including Obstetric patients, Geriatric, Pediatric and mentally disabled patients.
- PO1.6. Describe the pharmacokinetics and dynamics of drug metabolism, excretion in critical illness and management and understanding of microbial infections and septic conditions.
- PO1.7. Demonstrate ability to organize emergency trauma & acute care services in the country including ambulance facilities
- PO1.8. Understand ethical and legal aspects of surgical critical care and acute trauma care
- PO1.9. Thorough understanding and ability to manage Surgical ICU patients and critical care of Trauma/Acute Surgical illness.

- PO1.10. Demonstrate ability to establish priorities in the initial management of victims of life-threatening and potentially life-threatening surgical emergencies. Ability to rapidly and thoroughly assess victims of major and minor trauma along with effective history taking skills.
- PO1.11. Ability to manage the airway and ventilation of acutely ill patients.
- PO1.12. Ability to manage fluid resuscitation of acutely ill surgical patients.
- PO1.13 Manage, assess and make informed decisions for the continuing care of the surgical patient, including anaesthesia, operative, post-operative and rehabilitative phases of care.
- PO1.14. Ability to interpret radiographs and CT Scans on surgical patients, including chest, abdominal, neck, cervical-thoracic and lumbar spine, pelvis and extremity films, and also the point of care Ultrasonography in both trauma and non-trauma patients. Demonstrate the ability to assess and initially manage patient with acute non-traumatic surgical conditions such as Intra-Abdominal Catastrophes, Hollow Visceral Surgical Emergencies, Hepato-biliary Surgical Emergencies, Pancreatitis, Abdominal Wall Hernias and acute complications, acute upper and lower GI bleedings etc.
- PO1.15 Demonstrate ability to manage soft tissue infections and injuries including, lacerations, avulsions and high-pressure injuries.
- PO1.16 Discuss the diagnosis and emergent management of compartment syndromes.
- PO1.17 Discuss the diagnosis and emergency management of trauma related uro-genital emergencies
- PO1.18 Demonstrate appropriate use of analgesics and sedatives in emergency surgical patients.
- PO1.19 Demonstrate appropriate use of antibiotics in emergency surgery and trauma patients.
- PO1.20 Demonstrate ability to arrange appropriate consultation and disposition of trauma patients from the ED.
- PO1.21 Demonstrate ability to direct the care of acutely ill victims in the pre-hospital setting.
- PO1.22 Discuss principle of disaster management and participate in disaster drills.
- PO1.23 Demonstrate the ability to manage the acutely burned patient, including minor and major injuries.
- PO1.24 Discuss indications and procedures for safe transfer of an emergency patient to another center.
- PO1.25 Demonstrate skills in Advanced Trauma Life Support, Basic life support, advanced cardiac life support,



PO 1.26 Demonstrate the ability to determine priorities of treatment care in a patient with multiple injuries including spinal injuries and plan definitive care with appropriate specialists

PO 1.27. Demonstrate the ability to manage non-trauma acute surgical emergencies both as acute care and definitive surgical management

## **PO2 – COMMUNICATION/TEAM WORK SKILLS**

PO2.1 Ability to function as a part of a team, develop an attitude of cooperation with colleagues, and interact with the patient and the clinician or other colleagues to provide the best possible diagnosis or opinion.

PO2.2 understanding of ethical principles and proper etiquette in dealings with patients, relatives and other health personnel and to respect the rights of the patient including the right to information and second opinion. Additional care towards breaking bad news and interacting with relatives regarding poor prognostic cases.

PO2.3 Develop communication skills to word reports and professional opinion as well as to interact with patients, relatives, peers and paramedical staff, and for effective teaching of juniors under mentorship.

## **PO3 – PSYCHOMOTOR SKILLS**

- Airway management including Endotracheal intubation and difficult airway
- Surgical airway / Cricothyroidotomy/Tracheostomy
- Venous access
- Intraosseous access
- Needle thoracocentesis/Chest drain insertion/Pericardial drainage
- Focussed Assessment Sonography in Trauma (FAST) and Diagnostic Peritoneal Lavage (DPL)
- Suprapubiccystostomy
- Splinting of fractures
- Immobilisation of pelvic fractures in ED
- Application of plaster slab for various extremity fractures
- Fasciotomy
- Control of oromaxillofacial bleeding

**Major Operative procedures (for Trauma):**

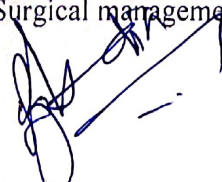
- Laparotomy for trauma
- Thoracotomy for trauma
- Craniotomy for trauma: When neurosurgeon is not available
- Emergency amputation for crush limbs
- Application of external fixator
- Emergency vascular procedures for limb salvage
- Neck surgeries for trauma
- Surgeries for crush injuries, wound management including debrediment.

**Critical Care:**

- Monitoring in ICU including ICP monitoring
- Ventilatory support techniques
- Inotropic support
- Nutritional support
- Massive transfusion protocols
- Renal support including dialysis
- Thromboprophylaxis
- Pain management
- Management of abdominal compartments syndrome

**Non-trauma emergencies:**

- Laparotomy for acute abdomen – obstruction, perforation, ischaemia, inflammation and non trauma haemoperitoneum
- Surgical control of upper GI bleed including emergency surgical management of variceal bleed
- Surgical control of lower GI bleed
- Surgical management of skin and soft tissue infections
- Embolectomy for thromboembolism
- Surgical management of acute scrotum
- Surgical management of ovarian torsion, pelvic sepsis and ruptured ectopic gestation



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