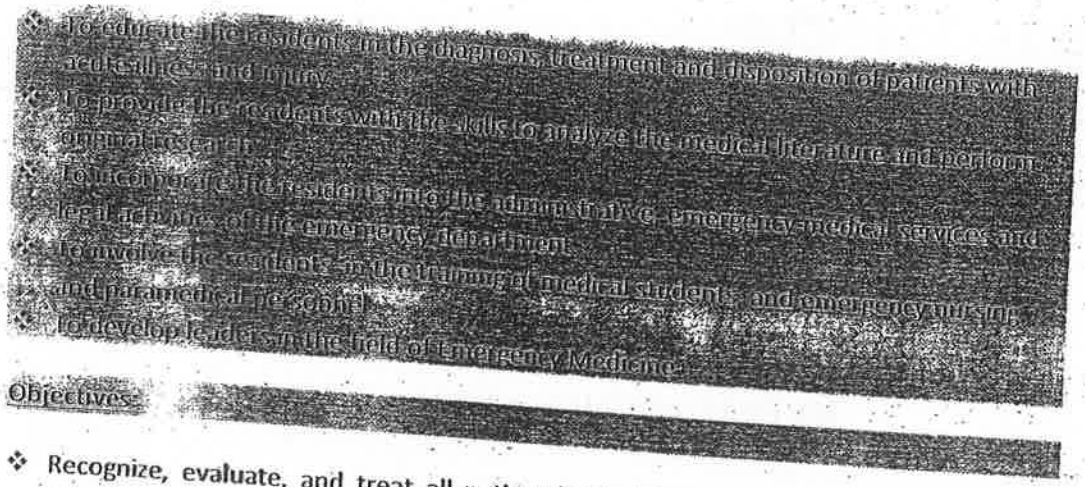
MD Emergency Medicine

Program Outcomes & Course Outcomes

The underlying philosophy of the residency is that optimal learning comes first and foremost by evaluating and treating patients. This clinical experience is strongly supplemented by formalized didactics and case-directed readings. The MGM Emergency Medicine Residency realizes these goals and philosophy through a comprehensive mixture of clinical exposure (both in and out of the ED) and instructive lectures. Training is provided in the administration of emergency departments and Emergency Medical Services systems

1. **Goal :**



Objectives:

- Recognize, evaluate, and treat all patients with life or limb threatening conditions presenting to the ED. This includes the ability to simultaneously manage multiple patients as well as direct or supervise resuscitation efforts
- Make a timely and appropriate disposition for all patients presenting to the ED. This includes the ability to effectively interact with the patients, family members, and consulting or private physicians.
- Manage and direct mass casualty situations and participate in disaster planning.
- Develop teaching skills suitable to disseminate information to all levels of care providers, particularly prehospital personnel.
- Interact effectively with prehospital care providers and function as a Base Station physician.
- Effectively perform administrative tasks necessary to manage an emergency medicine service including scheduling, risk management, continuous quality improvement, and the handling of patient complaints.
- Develop competence in evaluating the medical literature and understanding research methodology.
- Develop a system for life-long learning to meet your professional goals after residency.

2. Course Description
Post Graduate degree course in M.D. (EM)
MD (Emergency Medicine)
Duration : 3 Yrs.
Eligibility : MBBS and completion of 1 year. Compulsory rotation housemanship /internship
: Entry after PGCET MGMIHS

3. Rotations: Intramural and extramural
MD (Emergency Medicine)
Adult Emergency Medicine 18 months and Paediatrics 1month.
Critical care (MICU, PICU, NICU, SICU) 6 months.
Rest in rotation in allied including –
General Medicine -1 months,
ED based trauma Surgery -1 month,
ED based orthopaedics-1 month,
OB/Gyn-1 month,
Anaesthesia-1 month,
Ophthalmology-2 weeks,
Skin-2 weeks
ENT-2 weeks,
ED based Psychiatry-2 weeks,
Radiology -2 weeks
Forensic Medicine-2 weeks,
Community medicine- 2 Weeks
Respiratory medicine-1 month
Elective-6 weeks

First year rotation plan : Emergency medicine 6 months, Anesthesia 1 Month, Respiratory medicine 1 Month, General medicine 1 Month, OBGY 1 month, Forensic medicine 2 Weeks, ENT 2 weeks, Radiology and Ophthalmology 2 Weeks Each.
Second year rotation plan: Emergency medicine 6 Months, Critical care (MICU,SICU,NICU,PICU) total duration of 6 months.
Third year rotation plan: Emergency medicine 6 months, ED based General Surgery 1 month, Orthopedics 1 Months, Pediatrics 1 month, Dermatology 2 weeks, Psychiatry 2 weeks and elective for 6 weeks duration.

During the month of MAY all PGs is begin their residency experience in the emergency department. At the beginning of the month there are shifts in the emergency department where the residents work with nursing staff and other ancillary personnel in their roles to learn how the ED functions as a team. Later in the month residents begin their physician roles with clinical shifts in the EMD.

In medical institutions having superspeciality departments, the students should be uniformly rotated through various super specialties namely Cardiology, Neurology, Nephrology, Trauma Surgery, Neurosurgery, etc. for minimum of 2 weeks each. The duration of training in the above mentioned superspecialties shall be deducted out of the training period allocated for the allied broad specialties viz. General Medicine/General Surgery respectively.

4. Syllabus

i) Resuscitation, Prehospital Care & Disaster Preparedness
   - Sudden cardiac death
   - Basic cardiopulmonary Resuscitation adult / Neonates / Children / Pregnant patients
   - Acid base, disorder, blood gases, cardiac rhythm disturbances, fluid & blood resuscitation
   - Pharmacology of arrythmics & vasopressor agents
   - Approach to a patient of shock, Anaphylaxis acute allergic reaction, Angioedema
   - Emergency medical services
   - Disaster preparedness & response, Natural disaster, Bomb blast & crush casualties
   - Bioterrorism recognition and response – implication for the emergency clinicians
   - Radiation injuries

ii) Emergency wound management
   - Evaluation and wound preparation and postrepair wound care
   - Methods of wound closure
   - Laceration of face sclap, leg &I foot
   - Injuries to arm hands, fingertips & nail
   - Soft tissue foreign body
   - Puncture wounds & bites

iii) Analgesia Anaesthesia and procedural sedation

iv) Resuscitative procedures

v) Cardiovascular disease
   - Evaluation of chest pain & management
   - Acute coronary syndrome
   - Cardiogenic shock
   - Syncope, CHF
   - Valvular Emergencies
   - Cardiomyopathies and pericardical effusion
   - Systemic & pulmonary embolism
   - Dissection of aorta & aneurysms
   - Occulusive arterial disease

vi) Pulmonary Emergencies
   - Respiratory distress / URT I / Acute bronchitis
   - Hemoptysis / Tuberculosis
   - CAP aspiration pneumonia, Noninfections Pulmonary infiltrates
   - Spontaneous / iatrogenic pneumothorax
   - Empyema & lung abscess
   - Asthma / COPD

vii) Gastrointestinal emergencies
   - Pain in Abdoman, Nausea, Vomiting / Diarrhea, constipation
   - GERD, upper & lower GI bleeding, PUD & Gastritis
   - Pancreatitis, Cholecystistis, Diverticulitis, Appendicitis
   - Hepatic disorders
   - Bowel obstruction, volvulus, hernias
   - Anorectal disorders
   - Complication & general surgical procedures

viii) Renal & genitourinary disorders
- ARF, emergencies in RF & dialysis patients
- Acute urinary retention / Male genital problems, UTI hematuria
- Rhabdomyolysis : Urologic stone disease
- Complication of urologic procedures and devices

ix) OBGYN
- Vaginal bleeding – Abdominal and pelvic pain in non pregnant patient
- Normal pregnancy and co-morbid disease in pregnancy / emergency delivery
- Ectopic pregnancy and emergencies in the 1st 20 wks & post partum period.
- PID / vulvovagnitis, breast disorders
- Complications of gynecologic procedures

x) Paediatrics
- Emergencies care of children, neonatal emergencies and common Neonatal problems
- SIDS, fever and bacterial illness
- Ear, Mastoid, eye problems in infants & children.
- Nose, mouth, sinuses, Throat, neck masses in children
- Stridor, drooling, wheezing, vomiting, diarrhea dehydration in children
- Paediatric heart disease – congenital and acquired urologic & gynaecologic problems in infants & children
- Renal emergencies
- Headaches, Scizures, attered mental status, Minor head injury in infants and children
- Musculoskeletal disorder in children
- Oncology & hematology emergencies in children sick cell
- Flypoglycaemia & metabolic emergencies in infants & children
- Synocope & sudden death in children
- Fluid, Electrolyte therapy in infants & children
- Behavioral & psychiatric disorder in children & infants

xi) Infectious disease
- STDs, HIV infection & AIDS, soft tissue infections
- Toxic shock syndrome & septic shock, disseminated viral infections
- Infective endocarditis teannus, Rabbies, Malaria, Food & waterbome, zoonotic diseases
- Occupational exposures, infection control & standard precautions
- Pharmacology Antimicrobials, Antifungals & Antivirals

xii) Toxicology and environmental injuries

xiii) Endocrine, hematologic and oncologic emergencies

xiv) Eyes, Ears, Nose, Throat and oral surgery & skin disorder

xv) Trauma & injuries to the bones and joints
- Trauma in adults, Paediatric geriatric & pregnant patients
- Trauma to face, neck, spine & spinal cord, abdominal cardiac, pulmonary, genitourinary & penetrating trauma
- Wound ballistics and forensics
- Initial evaluation and management of orthopaedics injuries
- Compartment syndromes
- Orthopaedics devices and reconstruction

xvi) Muskuloskeletal disorder

xvii) Psychosocial disorders, Abuse & assault
- Behavioural disorders – emergency assessment
- Child abuse & neglect
- Female & male sexual assault
- Intimate partner violence an abuse
- Abuse of elderly & impaired
- Violent patient

xviii) Special situations
- Infections drug users
- The transplant patient
- Grief, death and dying DNR/DNI orders. Delivering effect death notification in emergency department
- Legal issues in emergency department
- Management of prisioners attending the emergency department

xix) Principles of imaging
- Emergency ultrasonography, MRI, CT. Noninvassive mycocardical imaging

5. List of skills :
a) Elicitation of history from parents, guardians, relatives and patients regarding complaint, previous disease and therapy, development , diet, immunization, social and educational and economics background
b) Thorough physical examination with due regards to bedside manners and skin
c) Provide advice to parents and children regarding health and hygienic practices with a view to prevent disease, disorders, injuries, accidents and poisoning.
d) Develop a diagnostic approach to any problem in adult, paediatric, geriatrics patients
e) Develop communication skills between doctors & patients
   - To undertake relevant investigations for diagnostic and prognostic evaluation talking into considerations the risks, benefits & costs involved.
   - To convience patients to guardians regarding undertaking investigations and obtain their co-operation & valid informed legal consent
f) Interpretation of lab reports ECG, EEG, USG counseling relative and parents
g) Performance of diagnostics and therapeutic procedures
   - Venepuncture
   - Intranenous, intraosseous access for administration of drug and intravenous fluids
   - Lumbar puncture for cerebrospinal fluid evaluation
   - Ascitic tap for diagnostic & therapeutic purpose
   - Aterinal blood collection for analysis of blood gases
   - Obtaining central vorons access
   - Wound repair and post repair care
   - Non invasive airway management
   - Paediatrics airway management
   - Tracheal intubation and mechanical ventilation
   - Surgical airway management (perentaneous trachostomy & cricotherodotomy)
   - Hemodynamic monitoring with arterial cannulation
   - Cardiac pacing
   - Debibrillation and cardiovecsion
   - Pericardio centesis, Thoracocentesis
   - Slit lamp / nasal packing

- Arthocentesis, umbrilical vain catherisation
- Vanous cut down
- Bedside ultrasound in emergency
- Fracture reduction of splinting, jt reduction
- Nasogastric aspiration, orgastric lavage, paracentesis, oebophagela balloon tamponade, Anoscopy, Hernia reduction, transabdominal feeding tube
- Normal Delivery
- Nursemaids elbow reduction
- Suprapubic catheterisation
- Bone marrow aspiration & biopsy – Tube thoracostomy, FB removal

6. Teaching / learning activities and opportunities
   - Management of in & out patients
   - Presentation of cases on clinical rounds
   - Topic/Case presentation : once a week
   - Mortality meeting review : once a month.
   - Journal club article view : once a week.
   - Simulation excercises
   - Guest speakers form senior consultants : once in three months
   - Lectures on the modular topic of the month – classroom and online :once a week
   - Evidence based medicine
   - Grand rounds : once a week
   - Follow up cases discussion on patients admitted through the emergency department : once a week.
   - Procedure and skill seminar
   - Presentation by the residents
   - Multidisciplinary case discussions
   - Conferences
   - Tutorials : once a week
   - Seminars : once a week
   - CME session, paper presentations
   - Participation in workshops
   - Teaching undergraduate students and paramedical staff
   - Use & maintenance of biomedical equipments and gadgets
   - Group discussion
   - Assisting and performing diagnostic and therapeutic procedures

7. Research

   Student will be encourage to initiate and conduct research projects pertinent to EM to write scholarly article that is worthy of publication. They will be expected to work on research project with the faculty and they will be required to submit one paper to a journal for potential publication.

   A candidate registered for MD (EM) will be submitting a dissertation to the university. This will be a pre-requisite for appearing for MD examination. The dissertation will be done under the guidance and full satisfaction of the postgraduate teacher under whom the candidate is registered.

8. Fundamentals of programme