

DPU

Dr. D. Y. PATIL VIDYAPEETH, PUNE
(DEEMED UNIVERSITY)

Syllabus
for
PG Medical Specilities

2014-15

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EMERGENCY
MEDICINE

Introduction

EM specialist is the first Doctor whom the patient meets on entering the hospital.

The kind of care patient receives in the ER becomes the mirror of the quality of the service for the patient in the rest of the hospital.

The EM specialist has to appreciate the importance of the Golden hour and Platinum minutes to minimize morbidity and mortality.

The EM specialist has to tackle

- Acute problems
- Mass Casualties
- Agonized patients and relatives
- Medico- legal issues

The patient spends 1st few minutes or hours only in the ER

The aim of this course is to train the Medical Graduate in the field of Emergency Medicine .

Knowledge & practical skills shall be acquired by the candidates in various specialties so that

the candidate will be competent & confident to manage all types of cases attending the Emergency room. He will be given special training of soft skills like

- Communication skill
- Crowd management
- Breaking a bad news
- Stress management for self & the patient's relatives
- Management of Stressful situation
- Social Problems

They should be well versed with all types of EM equipments

They will be trained in emergency ultrasound.

They will be trained in basic research methodology so as to enable them to conduct fundamental & applied research.

They will be trained in teaching methods so that they can take teaching assignments.

CURRICULUM

The curriculum is based on inputs from guidelines from society of academic EM, Council of EM residency directors and curriculum of George Washington University Curriculum also includes topics from primary text book of EM. A Comprehensive Study Guide 7th edition edited by J. E. Tintinalli. In addition, Rosen's Emergency Medicine Concepts and Clinical Practice. Clinical Procedures in emergency medicine by J. R. Roberts & Jerris Hedges will be used to teach the procedures in EM.

Goals

To transform the medical graduate into an all rounder who can handle all kinds of emergencies effectively.

Educational Objectives

To empower the EM student with knowledge, skill and tools required to handle the ER.

This will require

- ▶ Medical skills as well as
- ▶ Soft skills and
- ▶ Equipment handling

Soft Skills

- ▶ Cognitive and psychomotor skills
- ▶ Empathy
- ▶ Stress management for self as well as patient's relatives.
- ▶ Management of stressful situations
- ▶ Communication skills (e.g. Breaking bad news)
- ▶ Medico-Legal knowledge and skills
- ▶ Social skills

Integrated Teaching

The teaching will be integrated with all the Clinical Departments (by rotation) In addition we propose to integrate:

- ▶ Forensic Medicine
- ▶ Microbiology

Teaching Schedule

- ▶ Teaching days – 240 x3 including exams

Semesters – 6

Every semester

- Teaching Hours – Three hours per week
- Journals – One per week
- Seminar /lecture one per week
- Group Discussion –One hour per week

Clinical Rotations

- ▶ The Residents will rotate through Emergency department and other important clinical departments.
- ▶ Eight months in Emergency department
- ▶ Four months in other departments
- ▶ It will provide the resident the opportunity to further develop important knowledge and skills in core subjects.

Proposed Rotations

- ▶ First Year
 - Emergency medicine- 32 weeks
 - Surgery – 4 weeks
 - Medicine & MICU – 4 weeks
 - Radiology- 2 weeks
 - Microbiology- 2 weeks
 - Anaesthesia and SICU- 4weeks
- ▶ Second Year
 - Emergency Medicine – 32 weeks
 - ENT and Ophthalmology-2 weeks each
 - Obstetrics and Gynaecology-4 weeks

Orthopedics and Trauma-4 weeks
Paediatrics and PICU & NICU- 4 weeks

▶ Third Year

Emergency Medicine-32 weeks
Psychiatry- 2 weeks
Dermatology- 2 weeks
Medicine & MICU – 4 weeks
Trauma – 4 weeks
Surgery – 4 weeks

Surgery Rotation:-

- Evaluation of wounds
- Wound preparation
- Methods for wound closure
- Lacerations to the Face, scalp ,legs, foot
- Soft Tissue foreign Bodies
- Post Repair wound care
- Acute Abdominal pain
- Upper and lower GI bleeding
- Acute Appendicitis – conservative and surgical management
- Anorectal Disorders
- Bowel Obstruction and Volvulus
- Esophageal Emergencies, Swallowed Foreign Bodies
- Diverticulitis
- Acute urinary retention
- Obstructive Uropathy
- Blunt Trauma Abdomen
- Chest wall Injuries
- Inflammatory Swellings

Medicine Rotation

- ▶ Altered mental status and coma
- ▶ Ataxia and gait disturbances
- ▶ Acute peripheral neurological lesions
- ▶ Stroke and TIAs
- ▶ Syncope

- ▶ Tuberculosis
- ▶ Viral infections
- ▶ Tropical infections
- ▶ Bleeding & Coagulation disorders
- ▶ Anticoagulants, Antiplatelet agents and Fibrinolytics

Pediatrics Rotation

- Fever and Serious Bacterial Illness
- Rashes in children
- Strider and drooling
- Vomiting Diarrheas and Dehydration
- Oncology and Hematology Emergencies in Children
- Pediatric Heart Disease, Congenital and Acquired.
- Gastrointestinal Bleeding in children
- Ear, Mastoid Disorders in children.
- Headache in children.
- Sudden infant Death Syndrome.

List of Skills in pediatric rotation

1. PALS
2. NALS
3. History taking & examination in pediatric patient
4. Emergency care of children
5. Routine procedure –IV line central & peripheral
 - Intraosseous line
 - Airway, Intubation
 - Riles tube
 - Foley’s catheter
 - Eye examination
 - Ear & mastoid examination
 - Nose examination
6. Foreign bodies in children & infants

Orthopedics Rotation

- Initial Evaluation and Management of Orthopedic injuries
- Injuries to hand and digits
- Wrist injuries ,foot Injuries
- Injures to elbow and forearm

- Shoulder and Humerus Injuries
- Pelvic injuries
- Knee, Ankle Injuries
- Compartment syndrome
- Neck and Back pain
- Shoulder Hip , knee pain
- Acute disorders of the joints and Bursae
- Nontraumatic disorders of hand and foot.
- Initial Management of Spine injuries.

ENT Rotation :-

- ▶ Bleeding
- ▶ Foreign Bodies
- ▶ Acute inflammations
- ▶ Strider

Ophthalmology Rotation

- Eye examination
- Ocular Infections
- Corneal Ulcer
- Ophthalmic trauma and foreign body
- Acute painful and painless vision loss.

Dermatology Rotation

- ▶ Serious, Generalized skin disorders
- ▶ Disorders of the face and scalp
- ▶ Disorders of the hands, feet and extremities.
- ▶ Skin disorders common on the trunk
- ▶ Disorders of the groin and skin folds.

Psychiatry Rotation

- ▶ Management of violent patient
- ▶ Suicidal patients – evaluation and management
- ▶ Schizophrenia-acute symptoms.
- ▶ Anxiety Disorders
- ▶ Psychotropic medications
- ▶ Panic disorder

OBGY Rotation

- ▶ Normal Pregnancy
- ▶ Emergency delivery
- ▶ Co-morbid diseases in pregnancy
- ▶ Ectopic pregnancy & emergencies in first 20 weeks of pregnancy
- ▶ Pelvic inflammatory disease
- ▶ Vulvovaginitis.
- ▶ Vaginal bleeding in non pregnant patient

Radiology Rotation

- ▶ Emergency X-Ray interpretation
- ▶ Ultrasound Examination and interpretation along with the radiologist
- ▶ Emergency CT/MRI

Forensic Rotation

- ▶ Medico legal case History and examination
- ▶ Certification
- ▶ Evidence in Court
- ▶ Death Notification and Certification

Microbiology Rotation

- ▶ Collection of Samples for Culture
- ▶ Disinfection
- ▶ Culture Media

Progress Report Format

Dr. D. Y. Patil Medical College, Hospital & Research Centre
(A constituent college of Dr. D. Y. Patil Vidyapeeth)
(Deemed University)
Pimpri, Pune-411018

Term-wise Progress Report of Post Graduate Residents

Department of : _____

Part – I

(Students Profile)

1. Name of P. G. Resident : _____
2. Name of the PG Course : _____
3. Year of admission : _____
4. Term : From _____ to _____
5. Dissertation Topic : _____

(for Degree Course Only)

- _____
- _____
6. Name of P.G. Guide : _____
7. Name of the H.O.D. : _____
8. Leave availed during the : _____
period
9. Total percentage of attendance: _____

Part – II

Assessment according to Clinical/Academic Performance

Grading	A	-	Above 80%
	B	-	60% to 80%
	C	-	50% to 59%
	D	-	Less than 50%

(1) CLINICAL PERFORMANCE (Grading):

- (i) O.P.D. Work : _____

- (ii) Ward Work : _____

- (iii) O.T. Work : _____

- (iv) Other : _____

(2) PROGRESS OF DISSERTATION (Wherever applicable):

(3) **ACADEMIC PERFORMANCE:**

(i) **Written Tests:-**

Date	Marks obtained

(ii) ***Seminar/Symposia:-**

Date	Topic	Evaluation

(iii) ***Case Presentation:-**

Date	Topic	Evaluation

(iv) ***Journal Club:-**

Date	Topic	Evaluation

(v) **Practical /Viva:-**

Date	Marks obtained

(vi) *Microteaching:-

Date	Topic	Evaluation

(*May be assessed on a scale of 1 to 10)

(4) Papers/Posters Presented:-

Sr. No.	Title of Presentation	Paper/Poster	Event	Month/Year	Venue

Overall Grading: _____

Part – III

Remarks of Post-Graduate Guide

Certified that Dr. _____ has a total attendance of ___ % (For duration _____ to _____). His/her overall performance has been _____ (satisfactory/average/unsatisfactory)

Date: _____ Name & Signature of PG Guide _____

Remarks of Head of Department

Progress of Dr. _____ has
been _____ (Satisfactory / Unsatisfactory)

Date: _____ Name &
Signature of HOD _____

Remarks of Dean

(a) Progress _____ (Satisfactory /
Unsatisfactory)

(b) Term granted _____ (Yes / No)

Date: _____ Signature of Dean _____

Emergency Medicine:- Workshops

The Students shall complete following workshops during the Tenure

- ▶ BLS
- ▶ ACLS
- ▶ ATLS
- ▶ PALS
- ▶ NALS
- ▶ Emergency USG
- ▶ Disaster Management
- ▶ Behavioral Sciences

DISSERTATION –

AIM

To Orient the students to various methodologies of research, induce them to get acquainted with them and facilitate fruitful research, which will add to existing body of knowledge in the field of Emergency Medicine.

Objectives

- ▶ Identify a relevant research question
- ▶ Conduct critical review of literature
- ▶ Formulate a hypothesis
- ▶ Determine most suitable study design
- ▶ state the objectives of the study
- ▶ Prepare a study protocol
- ▶ Get approval from the Ethics Committee
- ▶ Conduct the study, compile the data
- ▶ Analyze & interpret the data
- ▶ Draw conclusions, declare results
- ▶ Write two research papers and publish in peer reviewed journal
- ▶ Present paper/ poster at state/ national level conference

Guidelines

- ▶ Student : Teacher Ratio of 1:1 must be strictly maintained
- ▶ Scope of the study should be such that it is possible to conduct within the resources & time available
- ▶ More emphasis should be given on methodology rather than results
- ▶ Ethical issues & consideration must be given priority.

SYNOPSIS FORMAT



**Dr. D. Y. Patil Medical College, Hospital & Research Centre
Pimpri, Pune- 18**

To,

The Dean

Dr. D.Y. Patil Medical College, Hospital & Research Centre.
Pimpri, Pune.

SUBJECT:-SUBMISSION OF SYNOPSIS

Respected sir,

I, _____ registered for _____ (April 2013 session) am Submitting Synopsis titled _____ for scientific and Ethics Committee approval. The study will be done under the guidance of _____.

Thanking you,

Signature & Name of PG student

Signature & Name of PG Guide

Prof. & HOD

Dept. of Emergency Medicine

Evaluation of Students for PG Degree

- ▶ For Postgraduate Degree the overall evaluation of the students will consist of internal assessment and the university examinations at the end of the course.

Titles Of Theory Papers

1. Paper – I Basic Sciences
2. Paper – II Medicine & Allied Subjects
3. Paper - III Surgery & Allied Subjects
4. Paper - IV Recent Advances

Each theory paper – 100 marks

5 SAQ of 10 marks each – 50 marks

2 LAQ of 25 marks each – 50 marks

Total - 100 marks

Practicals

- ▶ This will be 1 day duration
- ▶ Clinical – one long case - 100 Marks
- ▶ two short cases 50 marks each 100 Marks
- ward round 4 cases (25 Marks each) 100 Marks
- Viva – Voce (Table Viva) 100 Marks
- Equipment, X ray, ECG, ABG, ... etc

List of Seminar

- Treatment of hypertension –Urgency and emergency.
- Pharmacologic agents used in Anesthesia
- Principles of pain management.
- Rationality of Lab. Test in critically ill patient.
- Detailed neurological examination.
- D/D visual loss
- Acute psychosis
- Acid –base disorders
- Blood gases: pathophysiology and Interpretation

- Tuberculosis
- H.I.V.infection.
- Antibiotics in emergency department
- Blood Transfusions
- Blood component therapy
- Ventilator basics
- Electrolyte imbalance
- Drugs used in hypertension
- Drugs used in Diabetes
- Thyroid emergencies
- Lactic acidosis
- DIC
- ARDS

EMERGENCY MEDICINE DEPARTMENT

List of Didactic lectures

List of lectures by Emergency Medicine faculty

- Cardio-Pulmonary Resuscitation and assessment.
- D/D of Cardiac symptoms.
- Treatment of Acute LVF / CCF.
- Treatment of Acute MI.
- Interpretation of ECG.
- Interpretation of X-ray chest.
- Interpretation of echocardiography.
- Central Venous pressure monitoring.
- Pericardiocentesis.
- Inotropic agents.
- Approach to Coma.
- Treatment of status epileptics.
- Treatment of status asthmatics.
- Diabetic emergencies.
- Management of Shock.
- Airway management.

- Standard monitoring techniques.
- Pre-Operative Cardio-Pulmonary assessment.
- Principles of pain management.
- Pathophysiology of trauma.
- Diagnostic and Therapeutic interventions in critically ill patients.
- Rationality of Lab. test in critically ill patient.
- Arrhythmias and treatment.
- AHA recommendation in resuscitative procedures.
- Cardiac arrest.
- Ageing process.
- Principles to manage geriatric patient
- CSF Physiology & shunt malfunction.
- Acute poisoning – General management.
- Approach to trauma patient.
- Acid-base disorders.
- Blood gases: Pathophysiology and interpretation.
- Syncope.
- ocular emergencies.
- Acute myocarditis.
- Aortic dissection and Aneurysms.
- Tuberculosis.
- Rabies.
- Reportable communicable diseases.
- Antibiotics in emergency department.
- Acute and chronic pain management in musculoskeletal pain.
- H.I.V. infection..
- Blood Transfusions.
- Blood component therapy.
- Ataxia & gait disturbances..
- Emergencies in rheumatic diseases.
- Pre-hospital equipment and Adjuncts.

Medicine Emergencies.

- A. Poisoning & Bites.
 - O.P. Poisoning
 - Diazepam poisoning.
 - Acid poisoning.
 - Snake bite.
 - Scorpion bite.
- B. C.V.S. & Respiratory emergency.
 - Acute MI & Unstable Angina.
 - LVD with Pulmonary edema.
 - AF with fast VR.
 - Ventricular tachycardia.
 - Acute exacerbation of Asthma / COPD.
 - Pneumothorax.
 - Hypertensive encephalopathy.
 - Acute respiratory failure.
- C. G.I.T./G.O.T.
 - Acute Gastroenteritis with severe dehydration.
 - Haematemesis.
 - Hepatic encephalopathy, Acute fulminant Hepatitis.
 - Acute Renal failure
 - Acute Mesenteric ischemia.
 - Acute pancreatitis
- D. Hematological emergencies.
 - Severe Anemia with C.C.F.
 - Thrombocytopenia.
 - P-falciparum Malaria with complication.
 - Thalasemia.
 - Hemophilia.
 - Disseminated intra vascular coagulation.
 - Acute hemolytic crisis.
 - Acute hemorrhagic fever.
- E. Electrolytes and Metabolic emergencies.
 - Hyperkalemia and Hypokalemia
 - Hypocalcaemia.
 - Hyponatremia and Hyponatremia
 - Metabolic acidosis.
 - Metabolic alkalosis.

F. Neurology.

- Stroke with unstable vitals.
- GTCS & Status epileptics.
- Meningitis / Encephalitis.
- Myasthenia crisis.
- GBS
- Intracranial Hypertension.

G. Endocrine:

- Hypoglycemia.
- Diabetic ketoacidosis.
- Nonketotic hyperosmolar coma.
- Myxedema coma
- Acute adrenal insufficiency.
- Thyrotoxicosis-Storm.

Miscellaneous.

- Neuroleptic Malignant Syndrome.
- Tetanus.
- Lactic acidosis.
- Shock.
- Burns.
- Electrical injuries.
- Anaphylactic reaction.
- Rhabdomyolysis.
- Spinal cord injury.
- Multiple fractures.

EMRGENCY MEDICINE DEPARTMENT

List of Didactic lectures

List of lectures by surgery faculty

- Management of renal calculi.
- Management of renal and genitor-urinary trauma.
- Pathophysiology of wound healing.
- Wound evaluation and management.
- Closure techniques.
- Complications of traumatic wounds. Penetrating and blunt neck trauma.

- Abdominal injuries.
- Genito-urinary trauma.
- Wound Ballistics
- Lacerations to the face and scalp.
- Fingertips and Nail injuries.
- Lacerations of the extremities and joints.
- Soft tissue foreign bodies.
- Puncture wounds and bites.
- Swallowed foreign bodies.
- Appendicitis.
- Peptic ulcer disease and gastritis.
- Intestinal obstruction.
- Acute Cholecystitis.
- Complications of General surgical procedures.
- Complications of gastro-intestinal devices.
- Acute abdominal pain Medical / Surgical.
- Principles of care of the pre-operative patient.
- Common surgical procedures.

EMERGENCY MEDICINE DEPARTMENT

List of Didactic lectures

List of lectures by OBGY faculty

- Management of labour complicated /uncomplicated
- Diagnosis of vaginal bleeding
- Resuscitation issues in pregnancy.
- Management of emergent complications of pregnancy
- Diagnosis of vaginal bleeding
- Resuscitation issues in pregnancy.

EMERGENCY MEDICINE DEPARTMENT

List of Didactic lectures

List of lectures by Ophthalmology faculty

- D/D visual loss.
- Principles of ocular trauma management.

EMERGENCY MEDICINE DEPARTMENT

List of Didactic lectures

List of lectures by ENT faculty

- Jaw emergencies & Nasal emergencies.
- Management of facial trauma.
- Evaluation of upper airway disorders.
- Dental emergencies.
- Strangulation.

EMERGENCY MEDICINE DEPARTMENT

List of Didactic lectures

List of lectures by orthopedic faculty

- Evaluation of musculoskeletal trauma, Early evaluation and management of orthopedic injuries.
- Injuries to Hand and digits.
- Injuries to Elbow and forearm.
- Wrist injuries.
- Injuries to Shoulder complex and Humerus.
- Trauma to pelvis, Hip and femur.
- Knee injuries.
- Ankle injuries.
- Compartment syndromes

EMERGENCY MEDICINE DEPARTMENT

List of Didactic lectures

List of lectures by Pediatric faculty

1. Fever, bacteraemia, sepsis, meningitis
2. Neonatal emergencies
3. Respiratory emergencies (Pharyngitis) (Lower respiratory)
4. Pneumonia, Asthma, bronchiolitis

5. Seizures & status epileptics in child
6. Altered mental status & headache in children
7. Vomiting ,diarrhea
8. Pediatric abdominal emergencies
9. Syncope & sudden death
10. G I bleed
11. UTI
12. Renal Emergencies
13. Head injury

EMERGENCY MEDICINE DEPARTMENT

List of Didactic lectures

List of lectures by Forensic faculty

- Death notification.
- Medico legal Examinations
- Certification
- Court Evidence

EMERGENCY MEDICINE DEPARTMENT

List of Didactic lectures

List of lectures by Psychiatry faculty

- Principles of management of violent patient.
- Acute psychosis.

EMERGENCY MEDICINE DEPARTMENT

List of Didactic lectures

List of lectures by skin faculty

- Approach to Dermatologic patient in EMD.

EMERGENCY MEDICINE DEPARTMENT

List of Didactic lectures

List of lectures by Neurosurgery faculty

- Head injury.

EMERGENCY MEDICINE DEPARTMENT

List of Didactic lectures

List of lectures by Radiology faculty

- ▶ Emergency Ultrasound
- ▶ X ray Reading
- ▶ Indications for CT and MRI

EMERGENCY MEDICINE DEPARTMENT

List of Didactic lectures

List of lectures by Microbiology faculty

- ▶ Sample collection
- ▶ Culture Media
- ▶ Disinfection
- ▶ Waste Disposal

Conclusion

At the end of this program we hope to create a fine set of EM Specialists and teachers who will serve the society as good human beings

Teaching program for Interns:-

- 1 .ECG interpretation & management
2. Central venous canulation
- 3.Acute breathlessness, causes & Management
4. Acute chest pain –management
- 5.Acute abdomen
6. urinary retention
7. Pregnancy with P/V bleeding
8. P/V bleeding (Non pregnant)
9. Medico legal case
- 10.Burns

11. Headache
12. Head trauma
13. Gastroenteritis
14. Convulsions
15. Fever
16. Dehydration
17. Electrolyte imbalance
18. Bites
19. Poisoning

Teaching Programme for Under Graduates

- Initial management of trauma victim
- Cardiac arrest – BLS and ACLS algorithms
- Respiratory Obstruction
- Chest pain
- Valvular heart emergencies
- Hypertensive Emergencies
- Status Asthmaticus
- Acute abdomen
- Antepartum and postpartum haemorrhage
- Stroke
- Management of Poisoning
- Snake bite
- Diabetic ketoacidosis
- Burns
- Acute renal failure
- Shock – Types and management
- Orientation – multipara monitors, ventilator, defibrillators