

Entrepreneurship/
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MGM INSTITUTE OF HEALTH SCIENCES

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(Deemed University u/s 3 of UGC Act, 1956)

Sector-01, Kamothe, Navi Mumbai - 410 209

Tel 022-27432471, 022-27432994, Fax 022 - 27431094

E-mail : registrar@mgmuhs.com ; Website : www.mgmuhs.com

COMPETENCY BASED MEDICAL EDUCATION (CBME)

(With effect from 2020-21 Batches)

Curriculum for MD Family Medicine

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Dr. Shashank D. Daivi
Vice Chancellor

MGM Institute of Health Sciences
Navi Mumbai - 410209

Dr. Rajesh B. Goel
Registrar

MGM Institute of Health Sciences
(Deemed University u/s 3 of UGC Act, 1956)
Navi Mumbai- 410 209

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GUIDELINES FOR COMPETENCY BASED POSTGRADUATE TRAINING PROGRAMME FOR MD IN FAMILY MEDICINE

Preamble

The purpose of PG education is to create specialists who would provide high quality health care and advance the cause of science through research & training.

The Indian health care scenario is very complex and heterogeneous covering a range from world-class private tertiary care facilities to deplorably inadequate public services at all levels, including primary disease care. A system to provide affordable, accessible and effective health care and disease care to all the citizens of the nation is an urgent requirement of the country and should be based on a strong foundation of primary care and Family Medicine/ General Practice. A well-trained family medicine practitioner with a specialist degree can bring some much-needed improvement in health delivery by offering integrated medical care at a lower cost than is happening today.

The purpose of this document is to provide teachers and learners illustrative guidelines to achieve defined outcomes through learning and assessment. This document was prepared by various subject-content specialists. The Reconciliation Board of the Academic Committee has attempted to render uniformity without compromise to purpose and content of the document. Compromise in purity of syntax has been made in order to preserve the purpose and content. This has necessitated retention of "domains of learning" under the heading "competencies".

SUBJECT SPECIFIC OBJECTIVES

Goal

The broad objectives of the course will be that, after qualifying the final examination, the post graduate student should be able to function as specialist in Family Medicine, rendering primary and secondary health care services to the community and to all members of a family

registered with them, becoming their the first contact family doctor. The doctor thus would become friend, philosopher, and guide to the families registered under them.

The objectives include:

- Promotion of health and prevention of diseases in the families under care.
- Effective medical management of common diseases in all age groups, in various clinical specialties within the limited resources of family practice setting.
- Identification of red flag signs and symptoms in any disease or health problem and their appropriate management or referral.
- Co-ordination of care with the specialists, follow up, continuity of care, domiciliary care, and palliative care.
- Awareness and implementation of National Health programmes.
- Ability to care for disadvantaged groups in the community such as the elderly, mentally and physically handicapped persons.
- Application of behavioral sciences related to family practice to develop a healthy relationship inside the family.
- Effectively communicate with patients, family, colleagues and other health care workers in the community.
- Management of a wide range of common medical emergencies in family practice, with evidence-based medicine.
- Develop ability to take decisions on appropriate and cost-effective use of investigations and interpret the results of these investigations.
- Effectively manage staff and equipments and learn stock/account keeping.
- Develop ability to solve patient problems within a particular socio-cultural setting, harnessing available community services.
- Be a role model in behavior and able to organize community care programmes, focusing on promotion and maintenance of health of the family and the community in general.
- Acquire competency in legal certification and documentation.
- Acquire competencies in medical records keeping and data management.
- Able to conduct research and submit the results as thesis.

SUBJECT SPECIFIC COMPETENCIES

The functioning of a family physician is based on nine core principles as listed below:

1. Person centred care
2. Family oriented care
3. Community based care
4. Comprehensive care
5. Continuous care
6. Health promotion and disease prevention
7. Collaborative, coordinated team based care
8. Resource management and health advocacy
9. Lifelong self-learning

To achieve this, the training must emphasize:

1. Clinical expertise in Family medicine
2. Scholarship
3. Social outlook and responsibilities
4. Collaborator and coordinator
5. Leadership
6. Communication skills
7. Professionalism

A. Cognitive domain

1. Clinical expertise in Family medicine:

The physician should be able to provide comprehensive and continuous clinical care during acute and chronic conditions to a population with wide variety of clinical problems.

At the end of the MD programme, the post graduate should also be able to:

- a) handle the *whole spectrum of diseases* presenting in the community at primary care level, both chronic and acute, affecting all age groups, including emergency and elective problems.

- b) deal with *undifferentiated problems*, form provisional diagnoses, and formulate management plans in a step-wise manner, based on evolution of the clinical problem.
- c) deal with *multiple co-morbidities* in a variety of clinical situations. This will often involve integrating care between the family physician and many specialists, as well as between specialists.
- d) make logical and appropriate decisions regarding *referral to tertiary care* centres, acting as a gatekeeper to tertiary care (aids in preventing fragmentation of care and escalation of cost of care).
- e) employ a *patient-centred approach*, in contrast to a “disease-centred approach” in which the illness is dealt with in the specific patient’s unique socio-cultural context.
- f) practice a *multi-disciplinary approach to health-care*, and work as a leader of the health team comprising of ANM/ VHN (auxiliary nurse midwife/ voluntary health nurses), physiotherapists, nurses, occupational therapists and trained attendants.
- g) provide *continuity of care* by engaging in a two-way referral network between primary/secondary and tertiary levels, as well as by organizing an efficient access to health care facility.
- h) provide community oriented care to the defined population served by them.
- i) provide family oriented care to the individuals/families served by them.
- j) be involved in health promotion, disease prevention, rehabilitation and palliation.

The student should be able to elicit clinical history, perform a comprehensive physical examination and demonstrate problem-solving competencies like:

- a) ability to generate an initial list of differential diagnoses given a specific chief complaint and patient characteristics.
- b) ability to re-rank the differential diagnoses based on information gathered from the history, physical, and auxiliary studies.
- c) ability to explain a mechanism for each aspect of a patient’s problem, including biological, behavioural, and social aspects.
- d) ability to evaluate scientific/clinical information and critically analyze conflicting data and hypotheses.

- e) ability to identify and find information relevant to the clinical problem from print and electronic media
- f) ability to organise medical record keeping.
- g) be well versed in principles of bioethics, legal matters pertaining to health care, gender issues, social and cultural beliefs of the community.
- h) Continue to keep up to date with new information in all branches of clinical medicine with special relevance to primary care.
- i) be committed to cost-effective patient care.
- j) Able to organize medical data in oral and written presentations.
- k) Demonstrate use and interpretation of diagnostic procedures and laboratory data.

2. **Scholar**

The student should demonstrate a lifelong commitment to excellence in practice through continuous learning and teaching of others and be able to:

- a) analyse the quality and implications of medical literature and apply new knowledge in the delivery of health care.
- b) identify future areas of inquiry in medical research.
- c) demonstrate enthusiasm and positive attitude in the educational process and participate fully in educational activities.
- d) demonstrate familiarity with research methodology, epidemiology and information technology skills.
- e) plan protocol of thesis, its execution and thesis writing.
- f) review literature on evidence based medicine
- g) conduct clinical sessions for undergraduate medical students, nurses and paramedical workers.
- h) write and present a paper
- i) collect and analyse primary and secondary data and perform simple descriptive and inferential statistical analysis.

3. **Social outlook and responsibilities**

The trainee should be aware of the patient's problems, the social, cultural and environmental issues behind the diseases and the social and financial issues involved in management of the diseases; these include:

- a) ability to engage the patient family in diagnosis and therapeutic treatment planning recognizing its social and economic impact.
- b) practical, efficient and cost effective approach to diagnosis and management, and in choosing the health care delivery options.
- c) knowledge of evidence based medicine in making patient management decisions.
- d) knowledge of National Health Programmes and the epidemiology of common diseases.

4. Collaborator / coordinator

This is defined as the ability of the family physicians to work with patients, families, health care teams, other health professionals, government agencies and communities to achieve optimal patient care and education in a multi-professional environment and includes:

- a) understanding of the roles and competencies of other health care professionals and is able to work with them in a team approach.
- b) ability to sustain a relationship of trust and mutual respect with all stakeholders.
- c) ability to engage patients and their families as active participants in health care.
- d) ability to collaborate with other professionals in training of health professionals.
- e) ability to follow up and coordinate care of patients when referred to other professionals and when at home.

7. Leader

The trainee should take responsibility for providing optimum health care by acting as a leader in giving optimum health care and should initiate and participate in quality improvement processes in the area of practice (e.g. audits).

B. Affective domain

1. Communicator:

The student should be able to communicate effectively with family members, health professionals and the community, by the following mechanisms:

- Use of patient-centred interviewing techniques during consultations
- Provides effective education, counselling and guidance
- Demonstrates adaptable communication style

- Interacts effectively with allied health professionals so that multi-disciplinary care is delivered in a seamless comprehensive manner
- Demonstrates ability to communicate bad news and deal with conflict situations effectively.
- Demonstrates competence in *communicating effectively* with patients, relatives and with other members of the health team as outlined below:
 - knowledge of family and support systems,
 - identifying and addressing ethical, cultural, and spiritual issues associated with health care delivery
 - understanding of psychological, social, and economic factors which are pertinent to the delivery of health care.
 - Able to assess a patient's ideas, concerns and expectations about the illness and in accessing the health care system.

2. Professionalism and work ethics:

- Accepts personal responsibility for care of one's patients, consistent with good work ethics and empathy.
- truthfulness and honesty with colleagues, respect for colleagues and team members
- behaviour that reassures everyone that the physician is responsible, reliable, and trustworthy.
 - knows her/ his limits of clinical competence and seeks help appropriately.
 - make sure that her/ his personal beliefs and prejudices do not come in the way of providing service.
- Respecting patient confidentiality at all times in verbal and written communication with others.
- flexible open-minded approach when dealing with uncertainty.

C. Psychomotor domain

At the end of the course, the student should have acquired the following psychomotor skills:

General Medicine

At the end of the course, the family physician should be able to perform the following skills in a community health centre:

1. Cardio-pulmonary resuscitation: adults and children
 - a. Basic life support and advanced cardiac life support, stabilisation and referral
 - b. Use of defibrillator including Automatic external defibrillator
2. Interpret an ECG, and X-ray of chest, abdomen, spine and limbs, basic antenatal ultrasound; understand the indications for CT scan and MRI, and be able to act on their reports.
3. Chest-tube drainage with under-water seal
4. Abdominal paracentesis
5. Pleural fluid aspiration
6. Naso-gastric intubation
7. Intravenous access
8. Urinary bladder catheterization
9. Estimation of haemoglobin, total count, differential count, ESR, preparing and staining of blood smears, AFB
10. Lumbar puncture
11. Cerebrospinal fluid examination.
12. Health Promotion/ disease prevention for the following
13. Maintain accurate records of all patient consultations, procedures and outcomes.
14. Record of Family Profiles – The post graduate student will maintain the profiles of at least five families in which at least one member of the family has a health problem, eliciting its impact on the family and the role of family, taking into account their social, cultural and economic backgrounds.

The student should be able to educate all patients, independently or in liaison with health care professionals on the following general aspects of health promotion:

- Nutrition
- Exercise

- Smoking cessation
- Alcohol de-addiction
- Stress reduction

Child health

1. Intravenous access
2. Lumbar puncture
3. Neonatal resuscitation
4. Assessment of the newborn
5. Assessment of nutritional status and management of the malnourished child including preparation of a diet sheet
6. Use the IMNCI guidelines to manage childhood diseases
7. Management of common childhood emergencies including seizures, burns, poisoning, dehydration, acute severe breathlessness.

Adolescent health

1. History taking for adolescents
2. Assessment and management of common behavior problems in adolescents with appropriate referral

General Surgery

1. Recognition and evaluation of conditions requiring surgical intervention
2. Management and appropriate referral of primary surgical emergencies including burns, haemorrhage, shock, sepsis, acute abdomen, head injuries
3. Management of minor trauma, injuries, including immediate and resuscitative treatment of acute injuries, management of electrolyte and fluid requirements, blood transfusion.
4. Foreskin dorsal slit
5. Fine needle aspiration cytology (FNAC)
6. Proctoscopy
7. Incision & drainage abscess
8. Suturing, wound dressing/bandage
9. Circumcision

10. Reduction of paraphimosis
11. Vasectomy
12. Hydrocelectomy
13. excision and biopsy of superficial swellings
14. Venesection
15. Suprapubic cystostomy

Orthopaedics

1. Emergency care of patients with multiple injuries, transportation of trauma patients, splinting, application of casts, diagnosis and management of injuries, sprains, control of external haemorrhage, fractures and dislocations with proper referral.
2. Management of Colle' s fracture, fracture clavicle, shoulder dislocation
3. Provide health education for prevention of injuries.

Maternal and Women's Health

1. Antenatal care
2. Conduct of a normal delivery
3. Detect high-risk ante-natal cases, and perform LSCS or refer when necessary
4. Vacuum and forceps delivery
5. Manage post-partum haemorrhage and refer appropriately
6. Care of the new-born
7. Pap smear
8. Cervical and endometrial biopsy
9. Dilatation and curettage
10. Insertion and removal of IUCD
11. Provide contraceptive advice
12. Medical termination of pregnancy.

Community Health:

1. Investigation of an epidemic
2. Implementation of National health programmes
3. Provide health education for schools, health workers and the community

Otorhinolaryngology:

1. removal of wax from external auditory canal, foreign body removal, nasal packing, Ear lobe repair, ear syringing, tracheostomy, cricothyroidotomy

Ophthalmology:

1. Fundus examination with an ophthalmoscope
2. Vision screening
3. Epilation
4. Removal of superficial foreign body
5. Fluorescent dye examination of cornea

Dermatology:

1. Minor surgical procedures in dermatology including electrocautery, chemical cauterization, skin-biopsy.

Geriatrics:

1. Assessment for risk of falls
2. Assessment and management of depression in the elderly patients
3. Management of the agitated elderly patient

Mini Mental Status Examination

Comprehensive geriatric assessment

Physical Medicine and Rehabilitation

1. Co-ordinate the following rehabilitation and palliation care aspects with respective health care professionals.
 - a. Stroke rehabilitation
 - b. Cardiovascular rehabilitation
 - c. Post-trauma rehabilitation
 - d. Musculoskeletal diseases
2. Assessment and management of patients with disabilities
3. Prevention and management of bed sores

Pain and Palliative care:

1. Management of common symptoms in terminally ill patients and its management

2. management of pain
3. Provide end of life care
4. Management of grief
5. Breaking bad news

Emergency Medicine:

1. Initiate management of patient in shock, status epilepticus, poisoning, acute respiratory distress, coma
2. Skills for life-saving procedures in medical, obstetric, paediatric, including neonatal resuscitation, surgical and trauma emergencies
3. Management of common emergencies seen in family practice including cardio - vascular, respiratory, gastrointestinal, neurological, metabolic and others like snake bite and heat stroke
4. Basic and advanced life support, cardio-pulmonary resuscitation,
5. Endotracheal intubation
6. Intravenous access (peripheral and central lines, venesection, intravenous infusion)
7. Disaster management.

Anaesthesia

1. Administer local, spinal and regional anaesthesia including field , digital , wrist, penile and ankle blocks

Mental Health

1. Recognition and management of depression and anxiety states
2. Recognition and referral of patients with psychosis
3. Follow-up care of patients with psychosis
4. Care of patients with unexplained symptoms without organic basis
5. Care of patients undergoing bereavement, social and family stress
6. Diagnosis, detoxification and team based management of patients with substance abuse
7. Assessment of suicide risk

Medical Jurisprudence

1. Document injuries

2. Provide appropriate medical certificates

Academic Skills

1. Collect and analyse primary and secondary data and perform simple descriptive and inferential statistical analysis.
2. Read and analyse published literature pertaining to primary care.
3. Teach undergraduate students and allied health professional students.

Syllabus

Description of primary-care setting

A family physician should possess the core content of knowledge, skills and attitude which would enable him/her to address effectively all the problems of patients at the point of first contact. This highly individualized patient-centred approach is the hallmark of a Family Medicine specialist as opposed to a disease-centred approach of other specialists. Primary care is thus performed by a personal physician who also coordinates the care when required by referral to other specialists and health care professionals and follows up the patient as the physician whose aim is to keep the person healthy as the entry point for their health needs. In the existing Indian health care delivery system the Family Medicine specialist can function effectively at the Community Health or PHC where he/she can take up the role of multiple specialists and to enable early diagnosis and to make treatment cost effective.

During the training of the post graduate students in each rotation, the focus and emphasis should be on development of clinical skills, ability to make a correct clinical diagnosis, and to provide cost effective, and conservative management for the illnesses they encounter.

Course contents:

A: Applied Basic Science (as relevant to Family Medicine)

Anatomy:

- Gross applied anatomy of the upper and lower limb, musculoskeletal system, brain, heart, lungs, abdominal and pelvic organs and embryology.

Physiology:

- Clinically relevant physiology of heart, lungs, endocrine, gastro-intestinal, genito-urinary, and CNS reproductive physiology

Biochemistry:

- Carbohydrate, lipid, protein, bone and renal metabolism

Pharmacology:

- Mode of action and therapeutic uses of drugs commonly used in clinical practice in common diseases.

Pathology/microbiology:

- Review of clinical pathology of common diseases relevant to Family Medicine and an understanding of the basis of common investigations.

Radiological and imaging:

- Interpretation of conventional X-rays, and ultrasound reports in making clinical decision making. The physician should have knowledge of the indications for CT scan and MRI scan in various clinical contexts, and be able to act on the reports furnished by the radiologist.

Electrocardiographic interpretation

- Understanding on the utility of treadmill and ECHO reports

2. Accident and Emergency medicine (Common emergencies including shock, acute respiratory distress, status epilepticus, acute myocardial infarction, trauma, poisonings, acute renal failure, spine injury, disaster management, triaging).

3. Surgical conditions: (diagnosis and treatment or stabilisation and referral of common surgical conditions including acute abdomen, burns, ulcers, superficial soft tissue trauma, abscess, wound and ulcer management, electrolyte and fluid requirements, blood transfusion, suture methods and materials, universal precautions. Cancer screening, disorders of thyroid, diseases of the breast; neck swellings, varicose veins, deep vein thrombosis, peripheral vascular disease; abdominal pain, dysphagia, nausea, vomiting, haematemesis and melena, peptic ulcer, GORD, gastritis, disorders of gall bladder and

pancreas. intestinal obstruction, specific and non specific infections. Common cysts, swellings, sinuses, fistulae, abscess, ulcers and tumours. Lymphadenopathy. Hernia, inguino-scrotal swellings, hydrocoele, prostate diseases, renal and genitor-urinary tract disorders; anorectal disorders including fissure in ano, haemorrhoids, pilonidal sinus, phimosis, paraphimosis, ingrowing toe nail, diabetic foot.

4. Child health

- Care of new born, growth and development, nutrition including protein energy malnutrition and obesity
- vitamin deficiency diseases
- immunization
- recognition and referral of common birth anomalies
- common childhood infections including measles, mumps, rubella, poliomyelitis, diphtheria, pertussis, acute respiratory infections, tuberculosis, H. Influenza, hepatitis, meningitis, chicken pox, acute diarrhoeal diseases, cholera, food poisoning, worm infestations
- Bronchial asthma, congenital heart disease, rheumatic fever, hypothyroidism, nephritic syndrome, glomerulonephritis
- Behaviour disorders, mental retardation, learning disabilities, child abuse issues, sudden infant death syndrome (SIDS), genetic disorders, school health programme, breast feeding
- National Immunisation Programme
- Integrated Management of Childhood and Neonatal Illnesses

5. Adolescent Health

Puberty: male and female, adolescents and the law, behavioural problems/stress/psychosocial problems, nutrition and exercise.

6. Gender specific and sexual health

Menopausal woman, reproductive and sexual health, domestic violence/gender-related health issues, erectile dysfunction, sexual abuse and rape.

7. Community Health

Aspects of community medicine relevant for Family Medicine

- Concept of health and disease, primary health care and its implementation, principles of epidemiology and epidemiological methods.
- Epidemiology of communicable diseases, hospital acquired infections, emerging and reemerging infectious diseases, epidemiology of chronic non-communicable diseases and conditions.
- Environment and health, basic principles of household waste management, sanitation, safety and availability of drinking water.
- Health care of the community, health services at centre, state and district levels National health programmes and policies
- Demography and family planning
- Health information and basic medical statistics, health education
- Principles of health education and methods
- Health planning and five year plans
- National Health insurance schemes and other private schemes
- School health programmes
- Management of epidemics and national disasters
- Role of NGOs
- Research in community medicine and interaction with other fields of medicine.
- Preventive medicine in Obstetrics, Paediatrics and Geriatrics, medical sociology, genetics and health, international health, public health aspects of disaster management.
- Hospital waste management.

8. Maternal and Women's Health

- Physiological changes in pregnancy, antenatal care, normal labour and post natal care
- Common problems during pregnancy including hyperemesis gravidarum, urinary tract infections, low back ache
- Obstetric complications including hypertensive disorders, obstetric hemorrhage, anaemia in pregnancy, gestational diabetes, multiple pregnancy

- Antenatal care, preconception counselling, prenatal care, ectopic pregnancy, gestational trophoblastic diseases, abortion, teratology, medications during pregnancy, intrapartum assessment
- Medical termination of pregnancy
- Family planning
- Physiology of menstruation and its deviations
- Common problems in Gynaecology including genital tract infections
- Dysfunctional uterine bleeding
- Common disorders of uterus and ovary including fibroid uterus, genital prolapse, ovarian tumours, polycystic ovarian disease
- Sexually transmitted diseases including HIV, gonorrhoea, chlamydia, bacterial vaginosis, trichomonas, candidiasis, human papilloma virus, herpes infection
- Genital tract malignancies
- Preventive oncology- screening and early diagnosis of genital tract malignancies

9. Otorhinolaryngology

- Anatomy of ear, nose and throat, recognition and first line management of common diseases of ear, nose and throat like acute and chronic otitis media, otalgia, rhinitis, sinusitis, pharyngitis, tonsillitis, laryngitis, foreign body, epistaxis, nasal polyps, vertigo, tinnitus, hoarseness of voice, stridor, deafness, ear wax, dysphagia, snoring, allergic disorders, temporomandibular joint disorders, otitis externa, facial nerve paralysis, hearing loss, hearing assessment, tumours.
- Emergencies in ENT

10. Oral cavity and dental

- Oral hygiene, oral ulcers, gingivitis, stomatitis, premalignant lesions.

11. Ophthalmology:

- Common eye diseases including conjunctivitis, corneal ulcer, inflammatory disorders of eyelids, allergic conditions of eye, red eye, dry eye, painful eye, cataract, glaucoma, diabetic retinopathy, hypertensive retinopathy
- Emergencies in eye including eye injuries

- National Programme for Prevention of Blindness, Vitamin A deficiency
- Refractive errors, indications, contraindications and advantages of contact lens and Intra Ocular Lenses (IOL)
- Ocular side effects of commonly used pharmacological agents.

12. Geriatrics:

- Common health problems and diseases in the old age & their management eg. vascular, musculoskeletal, oncological, psychological, neurological, hearing and vision problems
- Special attention to nutrition, falls in elderly, incontinence, constipation, delirium, dementia, aches and pains, pruritus
- Drug therapy in elderly
- Rehabilitation, management of terminally ill patients
- Communication skills in bereavement, problems of the family after death
- Caregiver support, care of elderly, social and psychological problems in elderly, elderly abuse.

13. Physical Medicine and Rehabilitation:

- Basics of rehabilitation and basic physiotherapy advice
- Role of Family Physician in management of patients with disabilities
- Bladder care
- Team concept in rehabilitation
- Management of the bed ridden patient; Bed sores
- Community based rehabilitation.

14. Pain and Palliative care

- Common symptoms in terminally ill patients and its management
- Management of pain, opioid analgesics, Co-analgesics, hospice care
- End of life care
- Management of grief
- Breaking bad news

15. Anaesthesia:

- Basic principles of local anaesthesia, regional anaesthesia, intravenous sedation, relaxants in anaesthesia, spinal anaesthesia, epidural anaesthesia, pre-anaesthetic health check up.

16. Medical Jurisprudence:

- Knowledge of health legislation and duties of doctor attending to cases
- Knowledge of medical ethics and principles of good practice
- Medical negligence
- Medical certificates
- Examination of injury cases and its medico-legal importance
- Legal certification and documentation.

B. Common diseases in the community

The student should be able demonstrate theoretical competencies in order to deliver appropriate health care in a Family Practice setting for **all age groups in the following types of common illnesses.**

1. **Infections** ((Tropical diseases and common infections including viral, bacterial rickettsial, mycobacterial, malaria, filariasis, rabies, leptospirosis, dengue fever, enteric fever, hepatitis, poliomyelitis, meningitis, encephalitis, HIV/AIDS, sexually transmitted infections, common fungal infections, skin infections, varicella, herpes zoster, rickettsia, Chikungunya fever newer emerging infections: avian influenza and Zika virus)
2. **Cardiovascular diseases** (hypertension, ischemic heart disease, rheumatic fever & rheumatic heart disease, cardiac failure, pulmonary edema, infective endocarditis, pericardial diseases, cerebrovascular disorders, peripheral vascular diseases, common cardiac arrhythmias, valvular heart disease, ischemic heart disease and common congenital heart diseases)
3. **Common skin diseases** (Prevention, diagnosis and management of common dermatological conditions including acne vulgaris, dermatitis, fungal infections, skin diseases due to bacterial infection, scabies, pediculosis, wart, corn, pityriasis rosea, lichen planus, psoriasis, H. zoster; principles of dermatological therapy; principles of rehabilitation of chronic dermatological patients; principle of diagnosis and management of sexually transmitted

diseases, leprosy, skin disorders in diabetes, urticaria, hypopigmentation and hyperpigmentation, photodermatitis, allergies, eczema's, nutritional skin disorders skin manifestations of systemic diseases and autoimmune disorders)

- 4 **Gastro-intestinal diseases** (Jaundice, hepatitis, cirrhosis of liver, portal hypertension, hepatic encephalopathy, hematemesis, non-alcoholic fatty liver disease, cholecystitis, pancreatitis, peptic ulcer disease, non-ulcer dyspepsia, gastrointestinal bleeding, gastritis, dyspepsia, GORD, inflammatory bowel disease, irritable bowel syndrome, malabsorption syndromes, acute and chronic diarrhea, acute infectious diarrhoeal diseases, food poisoning, parasitology including amebiasis/ giardiasis/worm infestations, and investigations in gastro-intestinal diseases)
- 5 **Neurological diseases** (headache, memory loss, peripheral neuropathy, seizures, dizziness, vertigo, syncope, migraine, transient loss of consciousness, cerebro-vascular accidents, hemiparesis, hemiplegia, paraplegia, quadriplegia, strokes, Parkinsons' disease, neuropathies and myopathies)
- 6 **Metabolic and endocrine diseases** (Common endocrine diseases related to pancreas, thyroid, pituitary and adrenal gland, glucose metabolism, glucose tolerance test, diabetes mellitus, dyslipidaemia, iodine metabolism, thyroid function tests, hypothyroidism, hyperthyroidism, metabolic syndrome, obesity, osteoporosis, Vitamin D deficiency and undernutrition)
- 7 **Substance abuse** (alcohol, tobacco, drugs including performance enhancing drugs)
- 8 **Poisoning** (general emergency measures, poisoning caused by paracetamol, organo-phosphorous compounds, alcohol, kerosene, barbiturates, corrosives, insecticides, organophosphorus compounds, carbon monoxide, sedatives, phosphide, snakebite, scorpion sting and Cerebra Odollum)
- 9 **Haematological diseases** (Anemias, Iron deficiency, B12 and folic deficiency, polycythemia, and common disorders of RBC, WBC and platelets, coagulopathies, leukaemias, lymphomas)
- 10 **Common cancers** (cervical, breast, prostate, haematological, gastro-intestinal, head and neck, lung, cancer screening)
- 11 **Orthopaedic and musculoskeletal diseases** (inflammatory and degenerative arthritis, osteoporosis, common fractures, dislocations, osteomyelitis. Low back ache. Common bone and joint diseases, entrapment neuropathies and neuromuscular disorders including arthritis, cervical spondylosis, intervertebral disc prolapse, bursitis, ganglion, tenosynovitis, plantar

- fasciitis, carpal tunnel syndrome, tennis elbow, osteomyelitis, degenerative disorders. Volkmans ischemia, bone tumours, fibromyalgia)
- 12 **Common renal disorders** (acute and chronic renal failure, glomerular and tubular renal pathologies, renal replacement therapy. Renal failure, hematuria, proteinuria, urinary tract infections, glomerulonephritis, pyelonephritis, genitourinary infections)
 - 13 **Common mental health problems** (Common psychiatric problems and their management: depression, anxiety, somatization, substance abuse, medically unexplained symptoms, personality disorders, psychosis, delirium, suicide, grief, stress, eating disorders, behavioral disorders in children and adolescents, adjustment disorders, bipolar disorders, dementia, organic disorders presenting with psychiatric symptoms, basic principles of psychotherapy, rational use of psychotherapeutic medication)
 - 14 **Common genetic/hereditary diseases** (Haemophilia, Haemoglobinopathies, Down's syndrome, muscular dystrophy)
 - 15 **Common respiratory diseases** (Diagnostic methods in pulmonary medicine, principles of the pulmonary function tests, approach to chest pain, bronchial asthma, chronic obstructive pulmonary disease (COPD), acute and chronic bronchitis, pneumonia, pleural effusion, pneumothorax, atelectasis, bronchiectasis, allergic disorders, smoking cessation, occupational lung diseases, tuberculosis, bronchodilators and steroids in respiratory medicine, carcinoma lung, sleep apnoea, management of acute exacerbation of bronchial asthma and COPD, sarcoidosis, interstitial lung diseases, chronic cough)

TEACHING AND LEARNING METHODS

Teaching methodology

Traditionally teaching has been done by didactic methods, namely lectures and bedside clinics. It is advised that a variety of other methods should form the core of the training process. These methods are characterized by being student-directed and therefore active, more analytical, rather than teacher-directed passive methods.

The suggested teaching and learning activities should include:

1. Lecture cum demonstration

2. Small group discussion
3. Seminars, case presentations
4. Bedside- Case-Based Learning
5. Role Play
6. Simulated Patient Lab
7. Electronic and Computer Simulators
8. Web Based

The teaching and learning activities should be organized primarily around the clinical case material being seen on a daily basis. Clinical case-discussions both during regular clinical ward rounds, and as special academic sessions will ensure that the learning is contextual, and that it is continuous. Clinical service and training must be a seamless integrated process.

1. Small group teaching /learning activities are the main methods to be used. Case-based discussions, seminars, bedside clinics, assignments, projects, and problem-solving activities are other examples. These are best organized in the teaching hospitals, but if the district hospitals have the trained faculty then teaching can be planned there as well.
2. Didactic teaching is required for basic science concepts as well as core topics in clinical subjects as deemed necessary. Lectures may be used to teach concepts and approaches to clinical situations, rather than factual details which should be left to the student to self-learn.
3. Self-learning methods are to be encouraged. Students should be directed to explore subjects and topics, which they are relevant to their clinical work, thus providing context to the learning. Internet, and library facilities should be available. Assignments and project work is to be encouraged.
4. **Research:** Each student has to engage in original research with the purpose to learning research methodology. Thesis on a topic relevant to primary care must be undertaken and completed as partial fulfillment of the course. Thesis should incorporate study of patients in ambulatory care rather than hospitalized patients. Recognized experts should impart a brief training on research methodology to the students.

5. **Log book** shall be maintained to keep record of activities undertaken, must be accurate and authentic and should be checked and assessed periodically by the faculty members imparting the training.
6. A post graduate student of a post graduate degree course in broad specialities/super specialities would be required to present one poster presentation, to read one paper at a national/state conference and to present one research paper which should be published/accepted for publication/sent for publication during the period of his post graduate studies so as to make him eligible to appear at the postgraduate degree examination.
7. The post graduate students shall be required to participate in the teaching and training programme of undergraduate students and interns.
8. The student should undergo training on research methodology in the first year.
9. Department should encourage e-learning activities.

Rotation:

Posting in Community based hospitals: District/ Taluk Hospital/ Community Health Centers (CHCs)/ PHCs : Total duration: 3 months

1. **Out patient service:** The students should be posted to these peripheral hospitals and the faculty of the teaching hospital should conduct out-patient clinics in anyone community based teaching hospital some days of the week, along with the staff of the concerned hospital, and should use this opportunity to supervise and mentor the PG student who is posted there.
2. **In-patient beds:** The faculty of the teaching department, along with the students will be involved in the care of these patients. The students will also do emergency on-call duty along with the staff of the hospital.

The three-year course may be divided into the following postings, with the duration indicated alongside.

Postings in other departments

To sustain their identity and training as family medicine specialists, they will **come back to the Family Medicine department one day every week** during the postings in other departments.

This day will be utilized for

- Student seminars
- Follow up of their patients in the family medicine out-patients
- Experiencing the long term relationship with patients which is a fundamental principle of family medicine
- Scholarly work including thesis work and teaching under-graduate and paramedical students

Distribution of Postings for 3 years

Foundation course at Family Medicine department	2 months
General Medicine	3 months
Obstetrics & Gynaecology	3 months
(Including 1 month of labour room)	
Paediatrics (Including one month of paediatric casualty)	3 months
Orthopaedics	1 month
Surgery	1 month
Dermatology	1 month
Psychiatry	1 month
Ophthalmology	1 month
ENT	1 month
Emergency services	2 months
*Elective	1 month
Family Medicine Department	16 months

(Including **3 months in Community based hospital posting** in PHC/CHC/Taluk/ District Hospital)

* During the elective posting, the student can spend more time in any of the above specialties, or choose a new area such as Haematology, Endocrinology, Cardiology, Neurology, Gastroenterology, Geriatrics, Palliative care, PMR, TB and chest diseases or Academic Family Medicine in Medical education department/Unit.

During the training programme, patient safety is of paramount importance; therefore, skills are to be learnt initially on the models, later to be performed under supervision followed by performing independently; for this purpose, provision of skills laboratories in medical colleges is mandatory.

ASSESSMENT

FORMATIVE ASSESSMENT, ie., during the training

Formative assessment should be continual and should assess medical knowledge, patient care, procedural & academic skills, interpersonal skills, professionalism, self directed learning and ability to practice in the system.

Quarterly assessment during the MD training should be based on:

1. Journal based / recent advances learning
2. Patient based /Laboratory or Skill based learning
3. Self directed learning and teaching
4. Departmental and interdepartmental learning activity
5. External and Outreach Activities / CMEs

The student to be assessed periodically as per categories listed in postgraduate student appraisal form (Annexure I).

2. SUMMATIVE ASSESSMENT, ie., assessment at the end of training:

The summative examination would be carried out as per the Rules given in POSTGRADUATE MEDICAL EDUCATION REGULATIONS, 2000.

The examination shall be in three parts:

1. Thesis

Thesis shall be submitted at least six months before the Theory and Clinical / Practical examination. The thesis shall be examined by a minimum of three examiners; one internal and two external examiners, who shall not be the examiners for Theory and Clinical examination. A post graduate student shall be allowed to appear for the Theory and Practical/Clinical examination only after the acceptance of the Thesis by the examiners.

2. Theory Examination:

There shall be four papers each of three hours duration.

- Paper I:** Principles of Family Medicine, basic sciences and laboratory sciences relevant for Family Medicine
- Paper II:** General Medicine including Nutrition, Infections, Lifestyle Diseases, Non-communicable disease & Allied Sciences including psychiatry, geriatrics, dermatology, pulmonology [As applied to Family Medicine].
- Paper III:** Surgery and Allied Sciences including ENT, Ophthalmology, Orthopedics, pain, and palliative care, emergency care [As applied to Family Medicine]
- Paper IV:** Obstetrics and gynecology, pediatrics, community medicine, Recent advances [As applied to Family Medicine]

3. Clinical/ practical & Viva Voce Examination:

Practical:

- a) Long case: 02 semi-long cases 30 minutes each (Medicine, Obstetrics & Gynecology, Pediatrics). The aim of this assessment is to test communication skills, ability to take history, do clinical examination, diagnose and management plan.
- b) 02 short cases: 15 minutes each (Dermatology, Eye, ENT, surgery, Psychiatry). The aim of this assessment is to test the ability to elicit short relevant history, clinical findings and arrive at a diagnosis, and knowledge of appropriate management plan.
- c) 02 ward rounds cases: (acute case pertaining to any discipline). A short case history will be given at bedside. The student will do a focused examination under the observation of the examiners, in 10 minutes, and then propose a diagnosis and line of management. (The student will also discuss the test results available). The aim is to test the ability to manage acute cases and decide about necessity for referral.

Care must be taken to test each post graduate student on the whole spectrum of cases so that a post graduate student does not get all cases from one specialty alone.

Oral/Viva voce should incorporate all clinical domains (ECG, X rays, communication skills, data interpretation, clinical case scenarios, instruments, CPR etc). At least four stations should be kept as given below. OSCE/spotters can be incorporated into this and stations can be increased if feasible. The aim of this is to test ability to interpret investigations, communication skills, procedural skills, and overall skills.

Examples of stations

- Station 1 – Family medicine case scenarios with charts and case histories
- Station 2 - , ECG,, Radiographs, laboratory results from biochemistry, pathology, microbiology, CT scan/ MRI/ Ultrasound reports
- Station 3 – Drugs & Routinely used Instruments
- Station 4 – Thesis, Recent trends Portfolio including log book

Recommended reading:

Books (latest edition)

1. John Murtagh's Textbook of General Practice
2. Practice tips – John Murtagh
3. Oxford Hand book of General Practice
4. Textbook of Family Medicine- Ian. R. McWhinney, Thomas Freeman
5. Text book of Family Medicine: Robert. E. Rakel, David. P. Rakel
6. Clinical methods: Mac Leod
7. Swanson's Family Medicine Review

Journals:

Three international and two national (all indexed) journals.

**Postgraduate Students Appraisal Form
Clinical Disciplines**

Name of the Department/Unit :

Name of the PG Student :

Period of Training : FROM.....TO.....

Sr. No.	PARTICULARS	Not Satisfactory			Satisfactory			More Than Satisfactory			Remarks
		1	2	3	4	5	6	7	8	9	
1.	Journal based / recent advances learning										
2.	Patient based /Laboratory or Skill based learning										
3.	Self directed learning and teaching										
4.	Departmental and interdepartmental learning activity										
5.	External and Outreach Activities / CMEs										
6.	Thesis / Research work										
7.	Log Book Maintenance										

Publications

Yes/ No

Remarks*

*REMARKS: Any significant positive or negative attributes of a postgraduate student to be mentioned. For score less than 4 in any category, remediation must be suggested. Individual feedback to postgraduate student is strongly recommended.

SIGNATURE OF ASSESSEE

SIGNATURE OF CONSULTANT

SIGNATURE OF HOD