NATIONALMEDICALCOMMISSION
PostgraduateMedicalEducationBoard

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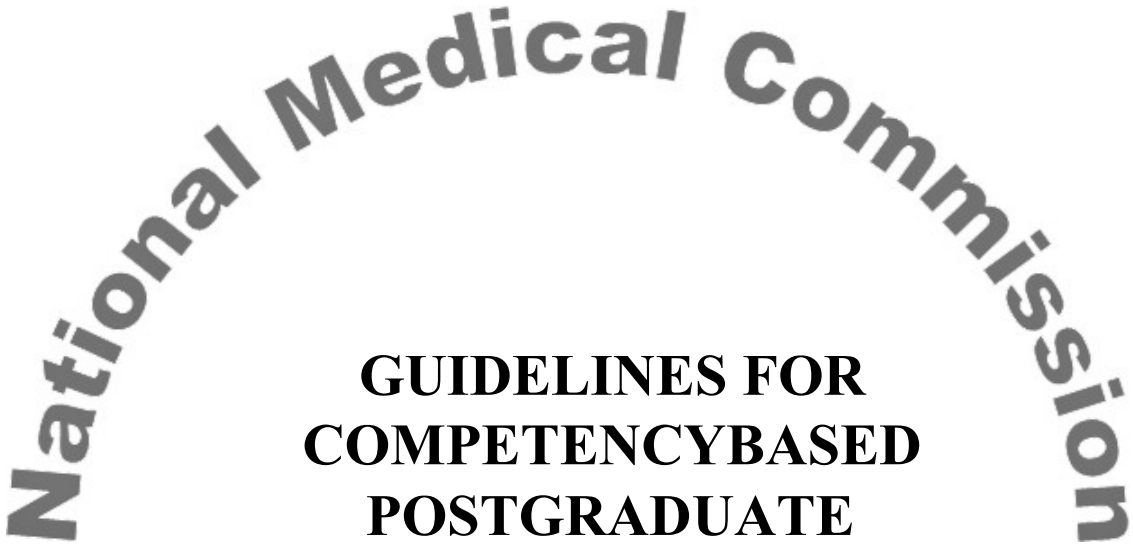

GUIDELINES FOR COMPETENCYBASED POSTGRADUATE TRAININGPROGRAMMEFOR M.D.INGENERALMEDICINE

GUIDELINES FOR COMPETENCY BASEDPOSTGRADUATE TRAINING PROGRAMME FOR MD INGENERALMEDICINE

Implementation of Revised Competency Based Post Graduate Training Programme for MD in General Medicine as per the guidelines prepared by the National Medical Commission through Subject Expert Groups{ Date of Bos 21.07.2022 Ref :SBKSMIRC/Dean/Outward No.1301/2021-22, Date of Academic council :29.07.2022 Ref :SVDU/NOTFN/O370/2021-22 dated 30.07.2022}

Preamble:

The purpose of post graduate (PG) education in General Medicine is to create specialists whowould provide appropriate health care to the community and advance the cause of sciencethroughresearch,trainingandteachingthe medicalfraternity.

The competency-based training programme aims to produce a postgraduate doctor who afterrequired training should be able to deal effectively with the medical needs of the community.The postgraduate specialist is also expected to know the principles of research methodologyand be able to update himself with advances and practice evidence-based medicine.Theyshould be trained to work in synchrony with faculty in super-speciality courses of Medicineandtofollowaholisticapproachtomedicalcarewhichwouldleadtothedevelopmentofgoodquality teachers.Thisdocumenthasbeenpreparedby subject-contentspecialistsof theNational Medical Commission. The Expert Group of the National Medical Commission hadattemptedtorenderuniformitywithoutcompromisetothepurposeandcontentofthedocument.Compromiseinpurityofsyntaxhasbeenmadeinordertopreservethepurposeandcontent.Thishasnecessitatedretentionof“domainsoflearning”undertheheading“competencies.

SUBJECTSPECIFICOBJECTIVES

Postgraduatetraining should enablethestudentto:

- Practiceinternalmedicinewithcompetence,withthehelpofscientificknowledgeinanevidencebasedfashion.
- Conductclinicalexaminationandrelevantinvestigations,diagnosemedicalconditionsandr

eferearlywhereindicated.

- Plananddelivercomprehensivetreatmentusingtheprinciplesofrationaldrugtherapy.
- Planand advisemeasuresforthepreventionand rehabilitationofpatients.
- ManageemergenciesefficientlybyprovidingBasicLifeSupport(BLS)andAdvancedLife Support(ALS).
- Recognizeconditionsthatmaybeoutsideofscopeofgeneralmedicineand refer toanappropriate specialist.
- Exerciseempathyandacaringattitudeandmaintainprofessionalintegrity,honestyandhighe thicalstandards.
- Documentcasedetails includingepidemiologicaldata.
- Playtheassigned roleintheimplementationofNationalHealthPrograms.
- Demonstratecompetenceinbasicconceptsofresearchmethodologyandclinicalepidemiol ogy;andpreventive aspects ofvarious disease states.
- Becomeamotivated‘teacher’-definedasonekeentoshareknowledgeandskillswitha colleagueorajuniororanylearner.
- Continuetoevincekeeninterestincontinuingeducationanduseappropriatelearningresourc es.
- Practicethemedico-legalresponsibilities.
- Undertake auditrelated topatientcare, morbidity andmortality,useinformationtechnology tools and carry out research - both basic and clinical, with the aim ofpublishingthe workandpresentingthe workatscientificforums.
- Participateinpublichealthemergencies(arisinginthecommunity).
- Estimate the financial burden of care and practice health economics and rationalapproachtoinvestigations.
- Communicateabout theillnesswithpatient’s/relativesatallstagesofcare.

SUBJECTSPECIFIC COMPETENCIES

By the end of the course, the student should have acquired knowledge (cognitivedomain),professionalism (affective domain)and skills (psychomotor domain)asgivenbelow:

A. Predominant inCognitiveDomain:

1. Describe clinical features of diseases of various aetiology affecting all systems inthe adultandgeriatricpopulation.

2. Apply the basic sciences knowledge in understanding and managing commondiseases.
3. DescribetheinvestigationstobeundertakenatvariouslevelslikeOPD,Ward,ICUetc.andchoosethemappropriatelydependingontheclinicalfeaturesandepidemiologic principles.
4. Describethepharmaco-therapeuticsofvariousdiseasesandcomplications.
5. Describeanddiscussthehealthissuesrelatedtoenvironmentalandecologicalfactors.
6. Describeanddiscussthemethodsandmechanismsofrehabilitationfollowingdiseases.
7. Describeanddiscusstheissuesrelatedtopalliativeandterminalcare.
8. Incorporatethenationalandinternationalguidelines relatedtovarious diseasesindaytodaypracticeandteaching.
9. Describeanddiscussthesocialandeconomicaspectsofillnesses,outbreaksandepidemics.
10. Analysetheobservationsofdiseasepatternsinpatientsandcommunityandmakesuggestionsforimprovementin managementandprevention.
11. Describeand discusstheNationalHealthPrograms.
12. Analyseandcritiquethepublicationsrelatedtovariousaspectsofillnessesandevidence basedmedicine.
13. Describeanddiscussthevariouslevelsofpreventionincommunicableandnon-communicablediseases.
14. Describeanddiscuss various legislationsrelatedtoorgantransplant, braindeath,informedconsent,humanrightsetc.
15. Beupdatedonrecentadvances ininternalmedicine.

B. AffectiveDomain:

1. Should be able to function as a part of a team, develop an attitude of cooperationwith colleagues, and interact with the patient, relatives, paramedical and medicalcolleaguestoprovide the bestpossible comprehensive care.
2. Alwaysadoptethicalprinciplesandmaintainprofessionaletiquetteindealingwithpatients, relativesandotherhealthpersonnelandtorespecttherightsofthepatientincludingthe righttoinformationandsecondopinion.

3. Developcommunicationskillstointeractwithpatients,relatives,peersandparamedical staff,withspecialemphasisonbreaking badnewsempathetically.

4. Shoulddemonstrateequityandequalitywhendealingwithindividualsofspecialgroups(differentlyabledandLGBTQIA+).

C. PredominantinPsychomotordomain:

Thepostgraduatestudent,attheendofthecourseshouldbeabletoperformthefollowingskills ,independently(PI)orundersupervision(PS):

ClinicalAssessmentSkills

- Elicitadetailedclinicalhistory(PI)
- Performathoroughphysicalexaminationofallthesystems(PI)

Proceduralskills

- Pleuraltap(PI)
- Lumbar puncture(PI)
- Arterialpuncture forABG(PI)
- Bonemarrowaspirationandbiopsy(PI)
- Abdominalparacentesis-diagnostic (PI)
- Aspirationofliverabscess(PI)

DESIRABLE

- Ultrasoundabdomenatpoint ofcare(PI)
- Fineneedleaspirationcytology(FNAC)frompalpablelumps(PI)
- Pericardiocentesis(PS)
- Jointfluidaspiration(PI)
- Liver biopsy(PI)
- Kidney biopsy(PS)
- Cardiac-TMT (PS)
  - Holtermonitoring(PS)
  - Echocardiography(pointofcare)(PS)
  - Dopplerstudies(PS)

Respiratorymanagement

- Non-invasiveand mechanicalventilation(PI)

Criticallyillperson

- Monitoringasickperson(PI)

- Endotrachealintubation (PI)
- Cardio-pulmonaryresuscitation(PI)
- Centralveincannulationand CVPmonitoring(PI)
- Usingadefibrillator(PI)
- Hemodialysis(PS)
- CertificationofBraindeath(PI)

InterpretationSkills

Interpretationofresultsofthefollowinginvestigations,consideringclinicaldata(history &examinationfindings).

- Treadmilltesting(PI)
- ABGanalysis(PI)
- Ultrasonography(PI)
- CTscanchestand abdomen(PI)
- CTscanheadandspine(PI)
- MRI-Brainandspine (PI)
- Bariumstudies-desirable(PI)
- Pulmonaryfunctiontests(PI)
- Immunologicalinvestigations (PI)
- NerveConductionstudies/EMG(PI)
- EEG(PI)
- Evoked Potentialinterpretation(PI)

Communicationskills (PI)

Whileelicitingclinicalhistoryandperformingphysicalexamination,emphasizeon:

- Communicating healthanddisease,
- Pre-testandpost-testcounselingforHIV,
- Pedagogy:teachingstudents,otherhealthfunctionaries:lectures,bedsideclinics,discussions,
- Healtheducation:preventionofcommonmedicalproblems,promotinghealthylife-style,immunization,periodichealthscreening,counselingskillsinriskfactorsfor

commonmalignancies,cardiovasculardisease,AIDSetc.

- Dietarycounselingin healthanddisease,
- Linking patientswithcommunityresources,
- Providingreferral,
- Geneticcounseling,
- Communicatingbadnewstothepatientandrelatives.

Others

- **Demonstrationof thefollowing:(PI)**
  - professionalism
  - ethicalbehavior(humaneandprofessionalcaretopatients)
- **Utilization ofinformationtechnology**
  - Medlinesearch,Internetaccess,computerusage
- **Researchmethodology**
  - designing a study
  - interpretationand presentationofscientificdata
- **Self-directedlearning**
  - identifyingkeyinformationsources
  - literaturesearches
  - informationmanagement
- **Therapeuticdecision-making**
  - managingmultipleproblemssimultaneously
  - assessingrisks,benefitsandcostsoftreatmentoptions
  - involvingpatientsindecision-making
  - selectingspecificdrugswithinclasses
  - rationaluseofdrugs

Syllabus

Coursecontents:

A:Cognitivedomain:

BasicSciences

1. Basicsofhumananatomyasrelevanttoclinicalpractice:

- Surfaceanatomyofvarious viscera

- Neuro-anatomy
- Importantstructures/organ'slocationindifferentanatomicallocationsinthe body
- Histologyoforgans
- Bloodsupply,nervesupplytovariousorgans

2. Appliedphysiologyofvariousorgansystems:
    - Basicfunctioningofvariousorgan-system, controlofvitalfunctions.
    - pathophysiologicalalterationindiseased states.
    - interpretationofsymptomsandsigns inrelationtopathophysiology.
    - Physiologyoftemperature,sleepregulation.
3. Appliedbiochemicalbasisofvariousdiseasesincludingfluidandelectrolytedisorders:
    - Acid-basedisorders,disordersofcarbohydrate,fat,protein,calcium,phosphorousandiron metabolism.
    - Interpretationandclinicalapplicationofvariousbiochemicaltests.
4. Appliedpathologyofdifferentdiseases.
    - Commonpathologicalchangesinvariousorgansassociatedwithdiseasesandtheircorrelationwithclinicalsigns.
    - Understanding of various pathogenic processes and possible therapeuticinterventions,and
    - Preventivemeasuresatvariouslevelstoreverseorarresttheprogressionofdiseases.
5. Knowledgeaboutvariousmicroorganisms,theirspecialcharacteristicsimportantfortheirpathogeneticpotentialorofdiagnostichelp:
    - Importantorganismsassociatedwithtropicaldiseases,theirgrowthpattern/life-cycles,
    - Levelsoftherapeuticinterventionspossibleinpreventingand/oreradicatingtheorganisms,
    - Antimicrobialresistance,
    - Antibioticstewardship,
    - Hospitalinfectioncontrol,
    - Biomedicalwaste management,
    - Vaccinology.

6. Knowledge about pharmacokinetics and pharmaco-dynamics of the drugs used for themanagement of common problems in a normal person and in patients with diseases ofkidneys/liver/systemic disorders whichmay need alteration in doses due toabnormalmetabolism/excretionofthedrugs:
    - pharmacokineticsandpharmaco-dynamicsofdrugs:principlesandmethodology
    - Rationaluseofavailabledrugs.
    - Principlesofdrugtherapy,
    - Adversedrugreactions,
    - Druginteraction,
    - Pharmacovigilance,
    - Drugabuseandaddiction,
    - Drugdevelopment,
    - Pharmacoeconomics,
    - Pharmacogenomics.
7. Research methodology, study designs, clinical epidemiology and biostatistics relevant tomedicalsciences.
8. NationalHealthProgrammes:
    - investigationofcommunityoutbreak,
    - publichealthpolicy,
    - healthpromotion,
    - preventionofcommunicableandnon-communicablediseases.
    - Internationalhealthregulations,
    - Travelmedicine.
9. Knowledgeaboutvariouspoisonswithspecificreferencetodifferentgeographicalandclinicalsettings-theirdiagnosisandmanagement.
    - Knowledgeaboutsnakebite,otherbitesandstings,
    - medicolegalaspects.

SystemicMedicine

10. Preventiveandenvironmentalissues,includingprinciplesofpreventive healthcare,immunizationand occupational,environmentalmedicineandbioterrorism,
    - Healthtourism,

- Rehabilitation,
- Drowning,
- Heatandaltituderelateddisorders.

11. GeriatricMedicine:

- Physiologyandbiologyofaging andvariousorganchangesinelderly.
- Principlesofgeriatricmedicineanduniquenessofgeriatricpresentation.
- Physicalexamination ofgeriatricpatient.
- drugmetabolism,laboratorytestsinelderly.
- Managementofuniqueproblemsrelatedtoelderlysuchasnutrition,falls,gaitdisorders,neuro-psychiatricproblemsetc.
- Mentalhealthdisorders,
- Elderlyneglectandabuse,
- Socialandfamilysupportandrehabilitationofelderly.
- Assessmentoffunctionalandcognitiveaspects,counselingandcommunicationwithelderly.
- Appropriate medicationandavoidanceofpoly-pharmacy.

12. Genetics:

- Overviewoftheparadigmofgeneticcontributionto healthanddisease
- PrinciplesofHumanGenetics
- Geneticbasisofmedicaldisorders
- Singlegeneandchromosomaldisorders
- Geneticcounseling
- Preventionofgeneticdisorders
- Geneticanalysis
- Genetherapy

13. Immunology:

- Innateandadaptiveimmunesystems
- Mechanismsofimmunemediatedcellinjury
- HLAsystem,primaryand secondaryimmune-deficiency,
- Allergicdisorders:urticaria,angioedema,anaphylaxisandotherallergicdisorders.
- Transplantationimmunology,immunocomplexdisorders,organspecificandmultisystemimmunedisorders,monoclonalantibodies.

14. Cardio-vasculardiseases:

- Approachtothepatientwithpossiblecardio-vasculardiseases
- Investigativecardiology
- Heartfailure
- Arrhythmias
- Hypertension
- Coronaryarterydisease
- Valvularheart disease
- Infectiveendocarditis
- Diseasesofthemyocardiumand pericardium
- Diseasesoftheaortaand peripheralvascularsystem
- Congenitalheartdiseases
- Pulmonaryarterialhypertension
- Corpulmonale

15. Respiratorysystem:

- Approachtothepatientwithrespiratorydiseases
- Investigativepulmonology
- Disordersofventilation
- Asthma
- ChronicObstructivePulmonaryDisease(COPD)
- Bronchiectasis
- Occupationallungdiseases
- Interstitiallungdiseases
- HypersensitivityPneumonitis
- Pneumoniaandsuppurative lungdiseases
- Pulmonaryembolism
- Cysticfibrosis
- Obstructivesleepapnoeasyndromeanddiseasesofthechestwall,pleuraandmediastinum
- Pulmonarymanifestationsofsystemicdiseases

16. Nephrology:

- Approachtothepatientwithrenaldiseases
- Acutekidneyinjury

- Chronickidneydisease
- Glomerulardiseases
- Nephroticsyndrome
- Renovascularhypertension
- CysticDiseasesofthekidney
- Tubulo-interstitialdiseases
- Nephrolithiasis
- Urinarytractinfectionandpyelonephritis
- Diabetesandthekidney
- Obstructiveuropathyandtreatmentof irreversiblerenalfailure
- Dialysis
- Renalinvolvementinsystemicdiseases

17. Gastro-intestinaldiseases:

- Approachtothepatientwithgastrointestinaldiseases
- Gastrointestinalendoscopy
- Motilitydisorders
- Diseasesoftheesophagus
- Acidpepticdisease
- Functionalgastrointestinaldisorders
- Diarrhea
- Malabsorptionsyndromes
- Irritablebowelsyndrome
- Inflammatoryboweldiseases
- Mesentericvascularinsufficiency
- Diverticulardisease
- Acuteintestinalobstruction
- Peritonitis
- Diseasesofthe rectumandanus

18. Diseasesoftheliverand gallbladder:

- Approachtothepatientwithliverdisease
- Interpretationofliverfunctiontests
- Hyperbilirubinemia
- Acuteviralhepatitis
- Druginduced/toxichepatitis

- Chronichepatitis
- Alcoholicandnon-alcoholicsteatohepatitis
- Cirrhosisand itssequelae/ complications
- Portalhypertension
- BuddChiarisyndrome
- Hepaticfailureand livertransplantation
- Diseasesofthegallbladderandbileducts
- Diseaseofpancreasincludingpancreatitis

19. Haematologicdiseases:

- Hematopoiesis
- Anemias
- Leucopeniaandleukocytosis
- Myelo-proliferativedisorders
- Bone marrowfailuresyndromes
- Plasmacelldisorders
- Disordersofhemostasisandhaemopoieticstemcelltransplantation
- PlateletDisorders
- Hypercoagulableconditions
- Bloodcomponentsandtransfusionmedicine

20. **Oncology**:

- Epidemiology
- Biologyandgeneticsofcancer
- Approachtopatientwithcancer
- Earlydetectionorpreventionofcancer
- Infectionincancerpatients
- Oncologicalemergencies
- Paraneoplasticsyndromesandendocrinemanifestationsoftumours
- Metastaticcancerofunknownprimarysite
- Hematologicalmalignancies
- Cancersofvariousorgansystemsand cancer chemotherapy
- Rehabilitationandpalliativecareincancerpatients.

21. Metabolicdiseases-inbornerrorsofmetabolismanddisordersofmetabolism:

- Hemochromatosis

- Wilson’sdisease
- Porphyrias
- Other inbornerrorsofmetabolism.

22. Nutritionaldiseases:

- Nutritionalassessment,Anthropometry
- Enteralandparenteralnutrition
- Obesityandeating disorders.
- Malnutrition
- Vitaminandtraceelementdeficienciesandexcess.

23. Endocrinediseases:

- Approachtopatientswithendocrinedisorders
- DisordersofPituitary
- Disordersofthyroidgland
- Disorders ofadrenalcortex
- Pheochromocytoma
- Multipleendocrineneoplasia
- Autoimmunepolyendocrinesyndromes
- Reproductiveendocrinologyincludingmenopauseandpostmenopausalhormonethera py
- Diabetesmellitus
- Hypoglycemia
- MetabolicSyndrome
- Dyslipidemia
- Disordersofparathyroidgland
- Disordersofboneandmineralmetabolisminhealthanddisease
- Osteoporosis

24. Rheumaticdiseases:

- Approachtothepatientwithrheumaticdiseases
- Osteoarthritis
- Rheumatoidarthritis
- Spondyloarthropathies
- Systemiclupuserythematosus(SLE)
- Sarcoidosis

- Sjogren'ssyndrome
- Systemicsclerosis
- Anti-phospholipidantibodysyndrome
- Bechet'sdisease
- Vasculitissyndromes
- Acuterheumatic fever
- Inflammatorymyopathies
- Arthritisassociatedwithsystemicdiseases
- Goutandcrystalassociatedarthritis
- Relapsingpolychondritis
- IgG4relateddisease
- Polymyalgiarheumatica
- Fibromyalgia
- Amyloidosis

25. Infectiousdiseases:

- BasicconsiderationinInfectiousDiseases
- Clinicalsyndromes
- Communityacquiredclinicalsyndromes
- Nosocomialinfections
- Infectionsinimmunocompromised
- Bacterial diseases - General consideration, diseases caused by gram - positivebacteria, diseases caused by gram - negative bacteria,miscellaneous bacterialinfections,Atypicalbacterialinfections-Mycobacterialdiseases,Spirochetaldiseases,Rickettsialdisease,Mycoplasma andChlamydia.
- Viraldiseases-DNAviruses,RNAviruses,HIVinfection,Emergingviraldiseases -Coronavirus,Nipha virus,H1N1virus,Hantavirus.
- Fungalinfections,
- Protozoalinfections,
- Helminthicinfections.

26. Neurology

- Approachtothepatientwithneurologicdiseases,
- Diagnosticneurology,
- Localizationofneurologicaldisease/s,

- Headache,
- Seizuredisordersandepilepsy,
- Coma,
- Disordersofsleep,
- Cerebrovasculardiseases,
- Cranialneuropathy,
- Dementiasandneurodegenerativediseases,
- Brainabscess,
- Demyelinatingdiseases,
- Parkinson'sdiseaseandothermovementdisorders,
- Motorneurondiseases,
- Ataxicandgaitdisorders,
- Meningitisandencephalitis,
- Priondiseases,
- Peripheralneuropathies,
- Musclediseases,
- Diseases ofspinalcord
- Diseasesofneuromusculartransmission,
- Autonomicdisordersandtheirmanagement.

27. Psychiatricdisorders

Commonpsychiatricdisordersinadult&geriatricpopulation:

- Mood(affective)disorders,
- Anxietydisorders,
- Schizophrenia,
- Organicmentaldisorders,
- Eatingdisorders,
- Sexualdisorders,
- Personalitydisorderandsuicideandself-harm,
- Autisticdisorders,
- Functionalandpsychosomaticdisorder,
- Somatoformdisorder,
- Dissociative/conversiondisorder.
- Substanceusedisorders.

28. Dermatology:

- Structureandfunctionsofskin.
- Infectionsofskin.
- Papulo-squamousandinflammatoryskinrashes.
- Photo-dermatology.
- Erythroderma.
- Cutaneousmanifestationsofsystematicdiseases.
- Bullousdiseases.
- Druginducedrashes.
- Disordersofhair andnails.
- Principlesoftopicaltherapy.

29. Criticalcaremedicine

- Approachtopatientwithcriticalillness.
- Acuterespiratorydistresssyndrome.
- Mechanical ventilatorysupport.
- Approachtopatientwithshock.
- Sepsisandsepticshock.
- Cardiogenicshockand pulmonaryedema.
- Cardiovascularcollapseandcardiacarrest.
- Cardiopulmonaryresuscitation.

30. Miscellaneous

- Medicalillnessesinpregnancy
- Peri-operativeevaluations

B:Psychomotordomain:Detailedguidelinesonthis sectionaregivenunderSubjectspecificcompetencies.

TEACHINGAND LEARNINGMETHODS

Generalprinciples

Acquisitionofcompetenciesbeingthekeystoneofdoctoralmedicaleducation,suchtrainingshouldbeskillsoriented.Learningintheprogram,essentiallyautonomousandself-directed,

and emanating from academic and clinical work, shall also include assisted learning. Theformalsessionsaremeanttosupplementthis coreeffort.

All students joining the postgraduate (PG) courses shall work as full-time (junior) residentsduring the period of training, attending not less than 80% of the training activity during thecalendar year, and participating in all assignments and facets of the educational process. Theyshall maintain a log book for recording the training they have undergone, and details of theproceduresdone duringlaboratoryandclinicalpostingsinrealtime.

Teaching-Learning methods

This should include a judicious mix of demonstrations, symposia, journal clubs, clinicalmeetings,seminars,smallgroupdiscussion,bed-sideteaching,case-basedlearning,simulation-basedteaching,self-directedlearning,integratedlearning,interdepartmentalmeetings and any other collaborative activity with the allied departments. Methods withexposuretotheappliedaspectsofthesubjectrelevanttobasic/clinicalsciencesshouldalsobeused. **The suggested examples of teaching-learning methods are given below but are notlimited to these. The frequency of various below mentioned teaching-learning methodscan vary based on the subject's requirements, competencies, work loadand overallworkingscheduleintheconcernedsubject.**

SelfDirectedLearning(SDL)isanextensionoftheroleoflifelonglearnerenvisagedinthegoalsoftheIndianMedicalGraduate.Allpostgraduatestudents areexpectedtolearnthrough ProblemBasedLearning,SDL,ProjectBasedlearningetc.Variousformsofself-learning including those mediated through IT - enhanced methodologies must be adopted. Specifichoursneed notbeear-marked,but theseshouldbeintegrated intodaytodaypractice.

Post graduates in all specialities are expected to learn through work-based discussions andexperientiallearning.Beyonddocumentationsinlogbook,theyshoulddemonstratecompetency related to patient care, interpretation and communication skills during the routineworkinwards,OPD,ICUs,districtresidencypostingsetc.Theyshouldbeinvolvedinteaching ofUndergraduate(MBBS)students also.

A. Lectures:Didacticlecturesshouldbeusedsparingly.Aminimumof10lecturesperyearinthecon cernedPGdepartmentissuggested.Topics aretobeselectedaspersubject

requirements.Allpostgraduatetraineeswillberequiredtoattendtheselectures.Lecturescancovertopics suchas:

1. Subjectrelatedimportanttopicsasperspecialtyrequirement
2. Recentadvances
3. Researchmethodologyandbiostatistics
4. **Salientfeaturesof**Undergraduate/Postgraduatemedicalcurriculum
5. Teachingandassessmentmethodology.

Topic numbers 3, 4, 5 can be done during research methodology/biostatistics and medicaleducationworkshopsintheinstitute.

B. Journalclub:Minimumofoncein1-2weeksissuggested.

Topicswillincludepresentationandcriticalappraisaloforiginalresearchpaperspublishedinpeerreviewedindexedjournals.Thepresenter(s)shallbeassessedbyfacultyandgradesrecordedinthelogbook.

C. StudentSeminar: Minimumofonceevery1-2 weeksissuggested.

Important topics should be selected as per subject requirements and allotted for in-depthstudy by a postgraduate student. A teacher should be allocated for each seminar as facultymoderator to help the student prepare the topic well. It should aim at comprehensiveevidence-basedreviewofthetopic.Thestudentshouldbegradedbythefacultyandpeers.

D. StudentSymposium: Minimumofonceevery3 months.

A broad topic of significance should be selected, and each part shall be dealt by onepostgraduate student. A teacher moderator should be allocated for each symposium andmoderatorshouldtrackthegrowthofstudents.Thesymposiumshouldaimatanevidence-based exhaustive review of the topic. All participating postgraduates should be graded bythe facultyandpeers.

E. Laboratorywork/ Bedsideclinics: Minimum-onceevery1-2 weeks.

Laboratory work/Clinics/bedside teaching should be coordinated and guided by facultyfromthedepartment.VariousmethodslikeDOAP(Demonstrate,Observe,Assist,Perform), simulations in skills lab, and case-based discussions etc. are to be used. Facultyfromthedepartmentshouldparticipateinmoderatingtheteaching-learningsessionsduringclinicalrounds.

F. Inter departmental colloquium

Faculty and students must attend monthly meetings between the main Department andotherdepartment/sontopics ofcurrent/commoninterestorclinicalcases.

G. (a).Rotational clinical/community/institutional postings

Depending on local institutional policy and the subjectspecialty needs, postgraduatetrainees may be posted in relevant departments/ units/ institutions. The aim would be toacquiremorein-depthknowledgeasapplicabletotheconcernedspecialty.Postingswouldbe rotated between various units/departments and details to be included in the specialty-basedGuidelines.Fewexamplesarelistedbelow:

- Broad specialtydepartments
- Emergency/Casualtydepartment
- Superspecialtydepartmentse.g.Cardiology/Endocrinology/Nephrology/MedicalOncologyetc.
- Laboratory-basedspecialtyunits/departmentse.g.Biochemistry/Microbiology/Infectioncontrolunit/LaboratoryMedicineetc.

G. (b).Postingunder"DistrictResidencyProgramme"(DRP):

To consider and approve the tmpte Students admitted in the 2021-22 batch as per the NMC notifications vide letter F.No. NMC23(1)(25)12021/PG/053909 dated 2211212022 and Clarification issued by NMC vide tetter F. N o. N M C/23 (1) (25) 12021 I Med. I 00 1 866 d ated 1 9 I Ot t 2023 Resolution ' with reference to the NMC notifications vide letter F.No. NMC-23(1)(25)t2o21tpcto53g0g dated 2211212022 and Clarification issued by NMC vide letter F.No.NMC/23(1)(25)t2021/Med./001g66 dated 1910112023. the District Residency Program (DRP) shall be implemented for the students admitted in 2021-22 batch onwards. The said notification and clarification from NMC were considered and passed unanimously.

The communication from National Medical Commission vide no. NMC-23 (1) (25) / 2021 / PG / 053909, dated 22.12.2022 regarding Implementation of District Residency Programme, and National Medical Commission vide no. NMC-23(1)(25)/2021/Med./001866, dated 19.01.2023 regarding Clarification on implementation of District Residency Programme, is adopted for execution.

(BOS-Ref :SBKSMIRC/Dean/Outward No.1158/2022-23, Date of Academic council : 11/02/2023)

(BOM-Ref. No.: SVDU/R/2431-A/2022-23, Date of Academic council : 29/05/2023)

AllpostgraduatestudentspursuingMS/MSinbroadspecialtiesinallMedicalColleges/Institutions shall undergo a compulsory rotation of three months in DistrictHospitals/DistrictHealthSystemasapartofthecoursecurriculum,asperthePostgraduate Medical Education (Amendment) Regulations (2020). Such rotation shalltake place in the 3rd or 4th or 5th semester of the Postgraduate programme and the rotationshallbetermedas"DistrictResidencyProgramme"andthePGmedicalstudentundergoingtrainingshallbe termedas"DistrictResident".

Every posting should have its defined learning objectives. It is recommended that thedepartments draw up objectives and guidelines for every posting offered in conjunctionwith the collaborating department/s or unit/s. This will ensure thatstudents acquireexpected competencies and are not considered as an additional helping hand for thedepartment / unit in which they are posted. The PG student must be tagged along withthoseofotherrelevantdepartmentsforbedsidecasediscussion/basicscienceexercisesasn eeded,undertheguidance ofanassignedfaculty.

Opportunitiestopresentanddiscussinfectiousdiseasecasesthroughbedsidediscussion and ward/grand rounds with specialists / clinicians in different hospitalsettingsmustbescheduledtoaddressantimicrobialresistanceissuesandstrategie stodealwithit.

- (Board of Studies letter no.:SBKS/DEAN/1576/2020,dated 0/10/2021 and Vide Notification of Board of Management Resolution : Ref no. SVDU/R/1271-1/2020-21, dated - 30th December 2020)

- To introduce Basic life support (BLS) and Advanced Cardiac Life Support (ACLS) trainingforalltheFirstyearPostgraduateResidentDoctorsfromacademicyear2017-18

- To introduce New chapter / topic 'Intellectual Property Rights (IPR) foralltheFirstyearPostgraduateResidentDoctorsfromacademicyear2020-2021 of duration of 4hrs (Board of Studies letter no.: SBKS/DEAN/742/2021,dated 05/06/2021 and Vide Notification of Board of Management Resolution Ref no.:SVDU/R/3051-1/2020-21, dated - 29" July 2021)

List of topics :

1. Introduction-ConceptofIntellectualProperty,Historicalviewof Intellectual Property system in India and International Scenario, Evolution of Intellectual Property Laws in India, Legal basis of Intellectual Property Protection, Need for Protecting Intellectual Property, Theories on concept of property - Major IP Laws in India.
2. Types of IPR: Patents, Copyright, Trademark Industrial Designs, TradeSecrets.
3. Patents: Concept of Patent, Criteria of Patentability, Inventions NOT patentable, Process of Obtaining a Patent, Duration of Patents, Rights of Patentee, Limitation of rights, Infringement andEnforcement.
4. Copyrights: Meaning of Copyright, Copyright Vs. Moral rights, Copyrighteligibility,TermofCopyright,RegistrationofCopyright, Infringement andRemedies
5. Trademark: Meaning of Trademark, Criteria for trademark, Procedure for Trademark Registration, Term of protection, Infringement andRemedies.
6. Industrial Designs: Meaning of Industrial Designs, Rights in Industrial Designs: Nature, Acquisition and duration ofrights.
7. Trade Secrets: Meaning of Trade Secrets, Need to protectTrade secrets, Criteria of Protection, Procedure for registration, Infringement.
8. Commercialization of IPR: Traditional IP and Evolving IP, Assignment, Licensing, Cross License, Patent Pool, Negotiations, Defensive Publications, TechnicalDisclosures, Patent Pooling, Patent Trolling, Brand Management, Brand and Pricing Strategies.

H. Teachingresearchskills

Writingathesisshouldbeusedforinculcatingresearchknowledgeandskills.Allpostgraduate students shall conduct a research project of sufficient depth to be presentedto the University as a postgraduate thesis under the supervision of an eligible facultymemberofthedepartmentasguideandoneormoreco-guideswhomaybefromthesameorotherdepartments.

In addition to the thesis project, every postgraduate trainee shall participate in at least oneadditional research project that may be started or already ongoing in the department. It ispreferable that this project will be in an area different from the thesis work. For instance,ifaclinicalresearchprojectistakenupasthesiswork,theadditionalproject maydealwithcommunity/field/laboratorywork.Diversityofknowledgeandskillscantherebyb ereinforced.

I. Traininginteachingskills

MEU/DOMEshouldtrainPGstudentsineducationmethodologiesandassessmenttechniques.T hePGstudentsshallconductUGclassesinvariouscoursesandafacultyshallobserve andprovidefeedbackontheteachingskills ofthestudent.

J. Logbook

Duringthetrainingperiod,thepostgraduatestudentshouldmaintainaLogBookindicatingthe duration of the postings/work done in Wards, OPDs, Casualty and other areas ofposting. This should indicate the procedures assisted and performed and the teachingsessions attended. The log book entries must be done in real time. The log book is thus arecord of various activities by the studentlike:(1)Participation & performance, (2)attendance,(3)participationinsessions,(4)completionofpre-determinedactivities,and (5) acquisitionofselectedcompetencies.

The purposeofthe LogBookisto:

a) helpmaintainarecordofthework doneduringtraining,
b) enableFaculty/Consultantstohavedirectinformationabouttheworkdoneandinterv ene,ifnecessary,
c) providefeedbackandassesstheprogressoflearningwithexperiencegainedperio dically.
d) Documentationofacquisitionrequired competencies

TheLogBookshouldbeusedintheinternalassessmentofthestudent;shouldbecheckedand assessed periodically by the faculty members imparting the training. The PG studentswill be required to produce completed log book in original at the time of final practicalexamination. It should be signed by the Head of the Department. A proficiency certificatefrom the Head of Department regarding the clinical competence and skillful performanceof procedures by the student will be submitted by the PG student at the time of theexamination.

The PG students shall be trained toreflectand record theirreflectionsin logbookparticularly of the critical incidents. Components of good teaching practices must beassessed in all academic activity conducted by the PG student and at least two sessionsdedicated for assessment of teaching skills must be conducted every year of the PGprogram. The teaching faculty are referred to the MCI Logbook Guidelines uploaded onthe Website.

K. Course in Research Methodology: All postgraduate students shall complete an onlinecourseinResearchMethodologywithinsixmonthsofthecommencementofthebatchandg enerate theonlinecertificateonsuccessfulcompletionofthe course.

Otheraspects

- ThePostgraduatetraineesmustparticipateintheteachingandtrainingprogramofundergradua te students andinterns attendingthedepartment.
- Traineesshallattendaccreditedscientificmeetings(CME,symposia,andconferences)atleast onceayear.
- Departmentshallencouragee-learningactivities.
- ThePostgraduatetraineesshouldundergotraininginBasicCardiacLifeSupport(BCLS)andA dvancedCardiac LifeSupport(ACLS).
- The Postgraduate traineesmustundergo trainingin information technology and use ofcomputers.

During the training program, patient safety is of paramount importance; therefore,relevantclinicalskillsaretobelearntinitiallyonthemodels,latertobeperformedun dersupervision followed by independent performance. For this purpose, provision of skillslaboratoriesinmedicalcollegesis mandatory.

ASSESSMENT

FORMATIVEASSESSMENT,ie.,assessmenttoimprove learning

Formativeassessmentshouldbecontinualandshouldassessmedicalknowledge,patientcare, procedural & academic skills, interpersonal skills, professionalism, self-directedlearningandabilitytopractice inthesystem.

GeneralPrinciples

Internal Assessment should be frequent, cover all domains of learning and used to providefeedbacktoimprove learning;it shouldalsocoverprofessionalismandcommunicationskills.

The Internal Assessment should be conducted in theory and practical/clinical examination,should be frequent, cover all domains of learning and used to provide feedback to improvelearning; itshouldalsocoverprofessionalismandcommunicationskills.

QuarterlyassessmentduringtheMDtrainingshouldbebasedon:

- Casepresentation,caseworkup, casehandling/management :once a week
- Laboratoryperformance :twice aweek
- Journalclub :once a week
- Seminar :onceafortnight
- Casediscussions :onceafortnight/month
- Interdepartmentalcaseorseminar :onceamonth

Note: Thesesessionsmaybeorganizedandrecordedasaninstitutionalactivityforallpostgraduates.

- AttendanceatScientificmeetings,CMEprogrammes(atleast02each)

The student to be assessed periodically as per categories listed in appropriate (non-clinical/clinical)postgraduate studentappraisalform(Annexure I).

SUMMATIVEASSESSMENT, ie.,assessmentat

theendoftrainingEssentialpre-requisitesforappearingforexaminationinclude:

1. **Logbook**ofworkdoneduringthetrainingperiodincludingrotationpostings,departmentalpresentations,andinternalassessmentreportsshouldbe submitted.

2. At least **two presentations** at national level conference. One research paper should bepublished / accepted in an indexed journal**. (It is suggested that the local or UniversityReview committeeassess the worksentforpublication).**

Thesummativeexamination wouldbecarriedoutasper theRulesgivenin thelatestPOSTGRADUATE MEDICAL EDUCATION REGULATIONS. The theory examinationshallbeheldinadvancebeforetheClinicalandPracticalexamination,sothattheanswerbookscan be assessed and evaluated before the commencement of the clinical/Practical and Oralexamination**.**

Thepostgraduateexaminationshallbeinthreeparts**:**

1. **Thesis**

   Thesis shall be submitted at least six months before the Theory and Clinical / Practicalexamination.Thethesisshall beexaminedbyaminimumofthreeexaminers;oneinternaland two external examiners, who shall not be the examiners for Theory and Clinicalexamination. A post graduate student in broad specialty shall be allowed to appear for theTheory and Practical/Clinical examination only after the acceptance of the Thesis by theexaminers**.**

2. **Theoryexamination**

   The examinations shall be organized on the basis of 'Grading' or 'Marking system' toevaluate and to certify post graduate student's level of knowledge, skill and competence attheendofthetraining,asgiveninthelatestPOSTGRADUATEMEDICALEDUCATIONREGULATIONS. Obtaining a minimum of 50% marks in 'Theory' as well as 'Practical'separately shall be mandatory for passing examination as a whole. The examination forM.D./M.Sshallbeheldattheendof3rd academicyear.

   Thereshallbefourtheorypapers(asper PGRegulations).

   PaperI: Basic sciences as applied to the subject**Paper II:**Therapeutics & Tropical Medicine**PaperIII:**Sytstemic Medicineofallorgansystems**PaperIV:**Recentadvanc esinthe subject.

3. Practical/clinicalandOral/vivavoceexamination

Practicalexamination

Practicalexaminationshouldbespreadover**two**daysandincludevariousmajorcomponentsofthesyllabusfocusingmainlyonthepsychomotordomain**.**

Oral/Viva voce examination on defined areas should be conducted by each examinerseparately. Oral examination shall be comprehensive enough to test the post graduatestudent'soverallknowledgeofthesubjectfocusingonpsychomotorandaffectivedomain.

Thefinalclinicalexamination inbroadspecialty clinicalsubjectsshould include:

- Casespertainingtomajorsystems(eg.onelongcaseandthreeshortcases)
- Stationsforclinical,proceduralandcommunicationskills
- LogBookRecordsandreportsofday-to-dayobservationduringthe training
- ItisemphasizedthatOral/vivavoceexaminationshallbecomprehensiveenoughtotestthepostgraduate student'soverallknowledgeofthe subject.

RecommendedReading:

Text Books(latest edition)

1. API TextbookofMedicine
2. Davidson'sPrinciplesandPracticeofM
3. Harrison'sPrinciples &PracticeofMedicine
4. OxfordTextbookofMedicine
5. Kumar&Clark: BookofClinicalMedicine
6. Cecil:TextBookofMedicine
7. Currentmedicaldiagnosisandtreatment
8. Washingtonmanualofmedical therapeutics
9. Krishnadas. K.V:TextBookofMedicine

Journals

03-05 internationalJournalsand02national(allindexed)journals.

Annexure1

StudentappraisalformforMDinGeneralMedicine											
	Element	**Lessthan Satisfactory**			**Satisfactory**			**More thansatisfactory**			**Comments**
		1	2	3	4	5	6	7	8	9	
1	**ScholasticAptitude andLearning**										
1.1	Has Knowledgeappropriate for leveloftraining										
1.2	Participation andcontribution tolearning activity(e.g., Journal Club,Seminars,CMEetc)										
1.3	Conduct of researchandotherscholarlyactivity assigned(e.gPosters, publicationsetc)										
1.4	Documentation ofacquisitionof competence										
	(egLogbook)										
1.5	Performance in workbasedassessments										
1.6	Self-directedLearning										
2	**Careof the patient**										
2.1	Ability to providepatient careappropriate to level oftraining										
2.2	Ability to work withothermembersofthe healthcareteam										
2.3	Ability tocommunicateappropriately andempathetically withpatients families andcare givers										
2.4	Ability to doproceduresappropriate for theleveloftraininganda assignedrole										

2.5	Ability to record anddocumentworka ccurately andappropriate for leveloftraining										

2.6	Participation andcontribution to healthcare quality improvement										
3	**Professional attributes**										
3.1	Responsibility and accountability										
3.2	Contribution to growthoflearningofthe team										
3.3	Conductthatisethica lappropriate and respectful at alltimes										
4	**Spaceforadditional comments**										
5	**Disposition**										
	Hasthisassessment been discussed withthetrainee?	Yes	No								
	Ifnotexplain										
	Name and Signature of theassesse										
	Name and Signature oftheassessor										
	Date										

SubjectExpertGroupmembersforpreparationofREVISEDGuidelinesforcompetency based postgraduate training programme for MD in GeneralMedicine

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