

Syllabus for MD Community Medicine, Faculty of Medicine & Health Sciences

The infrastructure and facilities to be as per MCI guidelines

1. Goals

The goal of postgraduate medical education shall be to produce specialists of Community Medicine who shall have the following competencies:

Recognize the health needs of the community and carry out professional obligations ethically and in keeping with objectives of the national health policy.

Have necessary abilities for the practice of Community Medicine

Be aware of the contemporary advances and developments in the discipline of Community Medicine.

Have a spirit of scientific enquiry and is oriented to the principles of research methodology and epidemiology.

Have the basic skills in training of the medical and paramedical professionals.

2.General Objectives:

The general objective of the training programme in Community Medicine will be enable a candidate to be a:

Public Health Specialist to

1. Define and manage the health problems of the community, which he/she serves. He/she should be able to organize epidemiological studies to identify health problems.
2. Plan, implement and evaluate various health programs in his/her area, especially National Health, Family Welfare and Disease Control/Eradication Programmes.
3. Select, train, supervise and manage various categories of health personnel working with him/her.
4. Organize health care services, routine and for special groups and during periods of special needs such as disasters/calamities and epidemics.
5. Should update himself/herself on latest advances/developments in the field of Public Health.

Teacher/Trainer to

1. Plan and conduct educational session/programme. He/she will be able to draw up lesson plan with details of educational objectives, content, process and essential inputs.
2. Assist in development of curriculum, teaching and learning objectives and methods of evaluation.
3. Assist in manpower planning and development. He/she should be able to participate in programmes for the selection, training and supervision of various coders of health personnel.

Research to

1. Plan and execute a research study including clinical trials. Use/organize Biostatistical analysis using computers and software and prepare reports/papers.
2. Critically evaluate research activities.
3. Make recommendations on policy and procure.

Special Objectives

At the end of MD program in Community Medicine the student will

1. Know the structure and functioning of health system at the National and International levels and its historical perspectives.
2. Know the principles of Nutrition, Maternal Health and Family Welfare and put the same into practice.
3. Apply the principles of Epidemiology and Biostatistics to health practice including the design and implementation of health related research studies and clinical preventive medicine trials.
4. Know the principle of Communicable and Non communicable disease control and assist in the implementation of National Health Programmes at the programme level.
5. Identify the sociocultural dimension in Health and disease and apply this knowledge in the design and implementation of an integrated Health and Development program.
6. Apply the principles of environmental and occupational health in the design of health programs aimed at improving health status.

7. Access specific health situations in population, plan, organize, implement and evaluate programs aimed at improving health situations.
8. Identify the health needs of the special groups within populations especially the aged, the disabled and to respond to the needs.
9. Know the principles of learning and apply this knowledge in facilitating the learning process in groups of people involved in health.
10. Relate his/her knowledge of curative medicine to the improvement of health status of a given population.
11. Identify the role of the Government, Private and Voluntary sector in health and understand the principles of innovations in health practices and research.

3. Syllabus

3.1 Theory

Basic Sciences

Genetics: Genes, chromosomes & inheritance, inheritance of dominant, recessive and sex linked genes, genetics and disease conditions, concept of genetic engineering, gene therapy, genetic counseling.

Physiology: Effects of exposure to cold, heat, humidity, noise, vibration, radiation, air pollution, high altitude, depth. Physiology of pregnancy & lactation, respiration, ventilation, dust measurement, space requirement, aerospace medicine.

Biochemistry: Constituents of body fluids, sewage & water, food and milk; principles of dietary constituents; requirements of nutrients and trace elements.

Para-clinical

Pathology

Urine, blood, serology, basic histo-pathology/cytology techniques

Microbiology:

General : Sterilization & disinfections, collection & transportation of samples, concepts of immunology and vaccination

Bacteriology: Classification, essentials of culture technique, staining procedures

Virology: Classification, essentials of virology, virological diagnostic techniques

Parasitology: Classification of protozoa, helminthes identification and lab diagnosis including skin tests

Mycology: Classification of mycoses and general characteristics, lab diagnosis and identification

Rickettesia, spirochetes: Classification & diagnostic techniques

Clinical

The student will have adequate exposure to the clinical aspects of health conditions spanning over other clinical disciplines namely Medicine and allied specialities, Pediatrics, Dermatology and Venereology, Ophthalmology, Radiology, ENT, Psychiatry, Obstetrics and Gynecology and Surgery. For this purpose, the training will be integrated with these departments.

Hospital Administration

Students will be posted to learn organization and administration of hospital services and understand system used for collection, recording and reporting of hospital statistics, inventory control of medical stores, hospital laundry, hospital dietary, CSSD, ensuring quality of health care, clientele satisfaction, hospital infection control, medical audit.

Community Medicine

Concept of Health & Disease

History of medicine, evolution of public health, alternative systems of medicine

Definition and concepts of public health

Definition of health, holistic concepts of health including concept of spiritual health, appreciation of health as a relative concept, determinants of health Curriculum M.D. Community Medicine

Characteristics of agent, host and environmental factors in health and disease and the multifactorial etiology of disease

Understanding the natural history of disease and application of interventions at various levels of prevention

Health indicators

Health profile of India

Concept of rehabilitation, its types and techniques

Social and Behavioural Sciences

Clinico- social, cultural and demographic evolution of the individual, family and community

Humanities and Community Medicine

Social organizations with special reference to family

Religion, its evolution as a special instance of the evolution of social institutions

Major tenets of the common religions in India & their influence on health & disease

Assessment of barriers to good health and health seeking behavior

Methodology in social research (Attitude surveys, Questionnaires, Interviews)

Health economics

Social security in India

Culture and its impact on health

Customs, taboos and mores

Medical social worker

Doctor patient relationship

Social problems e.g. child abuse, juvenile delinquency, drug addiction, alcoholism, marital maladjustment, domestic violence, suicide and attempted suicide, problems of the old, caste system

Psychology and its concepts

The Psycho analytic theory

Human personality, its foundations, development and organization

Development of child and its impact on its personality

Psychological tests-personality tests, intelligence tests

Group dynamics

Hospital psychology

Epidemiology & Research Methodology

Evolution of epidemiology

Epidemiology : definition, concepts and its role in health & disease

Measurement of disease frequency

Use of basic epidemiological tools to make a community diagnosis of health situation, in order to formulate appropriate intervention measures

Cause and effect relationship: concept of association, causation, chance and biases

Descriptive epidemiology

Formulation of hypothesis

Analytical epidemiology

Experimental epidemiology (randomized and non-randomized controlled trials)

Testing of hypothesis

Errors in testing of hypothesis

Survival analysis

Meta analysis

Measurement of risk and risk reduction

Use of constructs/scales and their validity in research

Concepts and techniques of qualitative research

Investigation of an epidemic of communicable diseases and to understand principles of control measures

Definition of the terms used in describing disease transmission and control

Modes of transmission and general principles of prevention and control of communicable, non-communicable diseases and other health conditions of public health importance

Epidemiological intelligence and forecasting

Principal sources of epidemiological data

Definition, calculation and interpretation of morbidity and mortality rates

Geographical information system (GIS) and remote sensing

Hospital epidemiology

Concept of disease eradication/ elimination, review of smallpox eradication strategy

Rapid assessment techniques

Application of computers in epidemiology

Screening for diseases

Screening : definition, types, uses and principles

Screening test : selection criteria, validity, evaluation, predictive accuracy

Screening programmes and their evaluation

Biostatistics

Health Statistics

- Introduction
- Role of statistics in Public Health
- Collection of data
- Sampling in Public Health
- Statistical classification of health data
- Handling and processing of statistical information
- Analysis of demographic data
- Measurement of morbidity, mortality and fertility
- Standardization of rates and standard indices
- Life tables
- Statistical techniques of evaluation in Public Health

Descriptive Statistics

- Introduction to biostatistics- aim and scope
- Collection of data- basic ideas
- Presentation of data- tabulation, diagram and graphs
- Measures of central tendency and dispersion

- Normal distribution
- Elementary idea of skewness
- Concepts of correlation and regression
- **Statistical inferences**
 - Elementary idea of probability
 - Sampling techniques
 - Test of Significance-Chi Square, t-test, z-test, ANOVA
 - Basic idea of testing of hypothesis Curriculum M.D. Community Medicine
 - Advanced statistical techniques, multivariate regression analysis, statistical models. Use of Epi info, SPSS/ other computer software
- **Special topics in Biostatistics**
 - Clinical trials-Aim and scope, general principles, use of controls, placebos and dommios, final presentation of results-discussion of some well known clinical trials
 - Prophylactic trials-Assessment by time trends and geographical comparison, controlled prophylactic trials, discussion of some well known clinical trails
 - Retrospective and prospective studies and follow up studies, discussion of important studies
 - Field studies, prevalence surveys, guiding principles for data collection
 - Controls in field studies & hospital studies
- **Demography and Vital Statistics**
 - Concepts of demography, demographic cycle, vital statistics
 - Definition, calculation and interpretation of various demographic indices
 - Declining sex ratio and its social implication
 - Population explosion, population dynamics of India
 - Population control
 - National population policy
 - Sources of vital statistics like census, SRS, NFHS, NSSO etc.
- **Epidemiology of communicable and non-communicable diseases**
- Communicable and non-communicable diseases of public health importance
- Communicable diseases
 - Intestinal infections : Poliomyelitis, viral hepatitis, diarrhea, cholera, helminthiasis, typhoid fever etc.
 - Respiratory infections: Acute respiratory infections, measles, mumps, rubella, influenza, diptheria, whooping cough, tuberculosis etc.
 - Vector- borne infections: Malaria, filariasis, kala-azar, dengue, yellow fever etc.

- Surface infections: Sexually transmitted diseases, HIV & AIDS, tetanus, leprosy, scabies, pediculosis etc.
- Zoonosis: Rabies, Japanese encephalitis, plague, Kyasanur forest disease, leptospirosis, brucellosis, anthrax, other viral / bacterial / parasitic / rickettsial zoonoses etc.
- **Non-communicable and lifestyle diseases**
- Coronary artery disease, hypertension, stroke, obesity, diabetes, rheumatic heart disease, blindness, cancers, accidents etc.

Above diseases to be studied in detail under the following subheads:

- Extent of problem, epidemiology and natural history of disease
- Public health importance of particular disease in local area
- Influence of social, cultural and ecological factors on the epidemiology of particular disease
- Diagnosing disease by clinical methods, using essential laboratory techniques at primary care level
- Treatment of a case, as per National Programme guidelines and also follow up of case
- National Health Programme for particular disease
- Understand the principles of control of an epidemic Curriculum M.D. Community Medicine
- Training of health workers in disease surveillance, control, treatment and health education
- Management information system in a particular disease
- New/ emerging diseases and health related problems
- Applied Nutrition
- Nutrients, common sources and their requirement according to age, sex, activity and physiological conditions
- Balanced diet, Prudent diet
- Techniques of nutritional assessment of individual, family and the community
- Plan and recommend a suitable diet for the individuals and families as per local availability of foods and economic status etc.
- Common nutritional disorders, specific nutrient deficiency disorders, disorders related to toxins in food ; their control and management
- Food fortification, additives and adulteration, food hygiene
- Social and cultural factors in nutrition and health
- Food and economics

- Important National nutritional programmes
- National Nutrition Policy
- Nutritional surveillance, education and rehabilitation
- Role of diet in specific diseases like coronary heart disease, diabetes, obesity etc.
- Food and legislation
- Future trends in nutrition
- **Reproductive and Child Health**
- Current status of reproductive and child health
- Screening of high risk groups and common health problems
- Local customs and practices during pregnancy, lactation, child rearing, child feeding practices including complementary feeding
- Breast feeding and its importance
- Indicators of RCH
- Causes of perinatal/infant/maternal mortality and measures for reduction of the same
- Essential obstetric care, emergency obstetric care
- Essential newborn care
- Reproductive child health (RCH) components, including child survival and safe motherhood, universal immunization programme, integrated child development services scheme (ICDS), integrated management of neonatal and childhood illness (IMNCI) and other existing programmes
- Organization, implementation and evaluation of reproductive and child health program components
- Various family planning methods, their advantages and shortcomings
- Medical termination of pregnancy and Act (MTP Act)
- Adolescent health
- Handicapped child
- Gender issues and women empowerment
- Organizations, technical and operational aspects of the National Family Welfare Programme
- **School Health**
- Objectives and components of school health programme
- Activities of the programme Curriculum M.D. Community Medicine
- Periodic medical examination of the children and the teachers
- Immunization of the children in the school
- Health promotion and education
- Mid-day meal programme

- Healthful school environment
- **Health Care of Elderly**
- Size of elderly population, their common health problems and justification of their special care
- Screening procedures for early detection of various diseases and disabilities of elderly
- Comprehensive health care aspects of elderly
- National policy for care of elderly
- Urban Health
- Common health problems (Medical, social, environmental, economical, psychological) of urban slum dwellers
- Organization of health services for and in urban slums
- National policy on urban health
- Health issues of migrant populations
- **Environment and Health**
- Water : concepts of safe and wholesome water, sanitary sources of water, water borne diseases, water purification processes
- Physical and chemical standards of drinking water quality and tests for assessing bacteriological quality of water
- National rural water supply and sanitation programme
- Concepts of water conservation and rainwater harvesting
- Health hazards of air, water, noise, radiation pollution and their prevention & control including indoor air pollution
- Rural and Urban sanitation
- Concepts of solid waste / human excreta / sewage disposal
- Awareness of standards of housing and the effect of housing on health
- Aerospace medicine
- Health hazards related to climate, altitude, and depth
- Human health in a changing world
- **Medical Entomology**
- Role of vectors in the causation of diseases
- Identifying features of vectors and their control measures
- Life cycles of vectors and advantages and limitations of various vector control measures
- Mode of action, application cycle of commonly used insecticides and rodenticides
- Integrated vector control
- Entomological survey techniques

➤ **Biomedical Waste & its disposal**

- Classification / categories, sources, health hazards and treatment of biomedical waste as per current regulations
- Application of principles of biomedical waste management in different settings of health care delivery system
- Disaster Management

Principles of disaster preparedness and application of these in disaster management

➤ **Occupational Health Curriculum M.D. Community Medicine**

- Relate the history of symptoms with specific occupations including agriculture related occupation
- Asbestos and other fibers, coal workers lung diseases, silicosis, health significance of metal exposures, diseases associated with exposure to chemical substances, multiple chemical sensitivities, pulmonary responses to gases and particles, pesticides, illness due to thermal extremes, ionizing radiations, non-ionizing radiations, effects of physical environment- noise, vibration, work related musculo-skeletal disorders
- Employees State Insurance (ESI) scheme
- Concepts of ergonomics
- Diagnostic criteria of various occupation related diseases
- Industrial hygiene
- Surveillance, monitoring and screening in occupational health
- Occupational problems of special working groups
- Occupational safety and health standards
- Legislations related to occupational health

➤ **Information, Education, Communication & Health Promotion**

- Understand the concepts of health promotion and education, IEC, behavioral change communication
- Principles & methods of health promotion and education
- Barriers to effective communication and methods to overcome them.
- Process of learning and its principles
- Various methods of health education with their advantages and limitations
- Aids for imparting health education
- Organizing health promotion and education activities at individual, family and community settings
- Evaluation of health promotion and education programme

- Pedagogical methods: introduction, elements and techniques
- **Mental Health**
 - Importance of mental health care in primary care settings
 - Common psychiatric/ neurotic/ other mental health disorders, mental retardation
 - Comprehensive mental health care at primary care settings
 - Psychotherapy, its place in mental health
 - Psychology and field research
- **Human Genetics**
 - Genes and development
 - Blood groups- Medico-Legal applications
 - Genetic and chromosomal disorders in man
 - Genetic counseling
 - Genetics and public health
 - Genetic engineering and related health issues including genetically modified foods
 - Gene therapy
 - Human genome project
- **Health care delivery system in India**
 - Concepts of primary health care and comprehensive health care.
 - Health profile of India
 - Evolution of health care delivery system in India
 - Health care delivery in India and infrastructure at primary, secondary and tertiary care level
 - Job responsibilities of different categories of workers in health system
 - Voluntary health agencies working in India
 - Pattern of health care services in certain south Asian and western countries
 - Health insurance

Health planning , management and administration

- Concepts of planning, management, public health administration
- Components of planning a health activity
- Classification and understanding of various qualitative and quantitative health management techniques
- Over view of administration at village, block, district, state and center level in India
- Organizational concept
- Organizational behavior

- Time, material and personnel management
- Integrated disease surveillance project (IDSP)
- Health related Millennium Development Goals
- Operational research
- National Health Policy and National Rural Health Mission
- Concepts of health economics in health planning and management
- Concepts, scope and methods of Health Audit
- Role of Planning Commission and five year plans in development of health sector in India
- Various health committees of Govt. of India and their important recommendations
- Public health administration of the future
- Research in administration, operational & action oriented research
- New concepts in public health administration
- Principles of hospital administration
- Medical audit, quality assurance, quality improvement and client satisfaction
- Alternative approaches to planning
- Importance of hospital records, their retrieval, International classification of diseases, medical certification of death
- **Public Health Legislation**
- Birth and death registration act, PFA act, MTP act, CPA, Child labour act,
- PNDDT act, Transplantation of human organ act in India etc.
- Other public health legislations

- **International Health**
- Role of various multilateral, bilateral international health organizations like WHO, UNICEF, UNDP, World Bank etc.
- Organization structure of these organizations
- International Health Regulations (IHR)

3.2 Practical

All MD students will be required to acquire following demonstrable / verifiable skills:

- All candidates will be required to complete PG thesis as prescribed by the university. Curriculum M.D. Community Medicine
- The following diaries / books will be maintained by each PG endorsed by the guide / HOD:-

- Log book of daily activities including statement of skill acquired on each day
- Day book containing detailed reports of visits to establishments of health interest other than own department
- Scrap book containing lay media reports regarding current health issues & critical appraisal thereof (min 30 reports)
- Folder containing formats / brochures / other material like family health cards, in connection with extramural visits
- Family health file containing records of min 15 families
- Folder containing clinico-social case records of 15 long / short case.
- The following skills will be specifically acquired during the entire tenure:
- Skills related to Public Health
- Familiarization with organization & functioning of following establishments:
 - Water supply system
 - Sewage system
 - Slaughter house
 - Catering establishment
 - Food processing plant
 - Milk plant
 - Solid waste disposal system
 - State public health laboratory
- Familiarization with techniques and ability to interpret data in relation to the following :
 - Surveillance of drinking water quality
 - Analysis of sewage
 - Analysis of milk
- Assessment of pesticide & other toxins in the environment
- Familiarization with food adulteration act
- Familiarization with Health Legislation in India
- Skills as Community Physician
- Ability to identify local health needs of community.
- Ability to demonstrate leadership qualities & function as effective team leader.
- Ability to make community diagnosis including application of Rapid assessment techniques.
- Ability to organize health camps.
- Ability to organize health surveys & ongoing comprehensive health delivery programme.

- Ability for effective liaison with PRIs & local opinion leaders, mustering of local resources, advocacy & mobilization of administration & political will for health care programmes.
- Skills as Family Physician
- Diagnosis & management of common illness.
- Diagnosis & management of chronic diseases & disabilities including rehabilitation.
- Nutritional assessment & nutritional therapy.
- Family planning practices.
- Diagnosis & management of Pediatric, Geriatric, Gynecological illness with special emphasis on RCH & integrated management of childhood illness.
- Perform all immunization procedures.
- Ability to organize & conduct MCH services including antenatal clinic, intranatal & postnatal care, care of newborn, growth monitoring & care of toddler.
- Conduct / attend 20 normal deliveries & 5 abnormal deliveries.
- Skills of Occupational Health
- Familiarisation with measurement of relative humidity, temperature, thermal comforts & ventilation, noise levels, air pollution, lead exposure estimation, light level estimation.
- Familiarisation with organization & functioning of ESI system.
- Conduct of pre-placement & periodic medical examination.
- Identification of specific health hazards in occupational environment.
- Skills of Communicable Disease Control
- Investigation of an outbreak.
- Investigation of episode of food poisoning.
- Diagnosis & management of zoonotic diseases.
- Familiarisation with organization & functioning of Rabies clinic
- STD clinic
- Leprosy clinic
- TB Centre
- National vector borne diseases control programme
- IPPI & AFP surveillance
- Case management of diarrhoea & preparation of ORS.
- Case management of ARI
- Functioning of isolation / quarantine unit
- Family Planning skills
- Ability to propagate planned parenthood & small family norm as per national guidelines (GOI) by Counselling, motivation & IEC.

- Administer appropriate method of contraception by cafeteria approach.
- Assess gaps / unmet needs in family planning services in community under care.
- Ability to perform / assist Tubectomy by using conventional / laproscopic method (min 5)
- Ability to perform / assist vasectomy by using latest techniques (min 3).
- Ability to insert IUCDs (min 10).
- Ability to perform / assist in MTPs (min 5)
- Ability to perform / assist in menstrual regulation techniques (min 5).
- Skills of Hospital Administration
- Familiarisation with working of large multispeciality hospital with special reference to following departments:-
 - Layout of OPDs
 - CSSD
 - Laundry
 - Catering
 - Biomedical waste management
 - Other departments / labs / OTs
- Familiarisation with functioning of Medical Record Department
- Inventory control
- HR management
- Familiarisation with functioning of infection control committee
- Disinfection procedures with special reference to OTs & isolation wards.
- Skills of Research Methodology including application of Statistical Methods
- Planning & execution of 1 short hospital based epidemiological (analytical) study other than thesis work.
- Planning & execution of 1 short field based / KAP study.
- Critical appraisal of 10 published research papers / projects duly evaluated.
- Ability to apply biostatistical procedure including sampling & tests of significance.
- Ability to perform epidemiological, biostat & public health exercises duly evaluated (min 10 each).
- Communication Skills
- Ability to utilize all known modes of IEC in order to :
 - To generate desired level of awareness in the community on common health issues
 - To render health education to specified groups / individuals on specific health issues.
 - Mobilise community participation regarding health programmes in hand.

- Mobilise political & administrative will & demolish communication barrier regarding on going health programme .
- Prepare IEC material using local resources.
- Skills related to Health Care Delivery to Community
- Familiarization with functioning & infrastructure of SC, SHC, PHC, CHC.
- Familiarization with Urban Health Care delivery system models.
- Planning & evaluation of health programme (min 2).
- Organization of health services for camps, fairs, prisons, orphanages, urban slums, migratory population & other special circumstances.
- Planning & organization of health aspects of disaster management.
- Planning & organization of school health
- Documentation & record keeping for delivery of comprehensive family health care (RHC & UHC).
- Familiarization with MIS in primary health care.
- Skills related to Applied Microbiology, Pathology & Radiology

Microbiology

- Familiarisation with organization & functioning of Microbiology lab, diagnostic equipments & bio safety procedures.
- Ability to perform staining procedures (10 each), JSB stain, Niesser stain, Gram's stain, Z-N staining, Leishman stain, other staining procedures.
- Ability to make thin & thick blood smear.
- Ability to identify helminthic ova / larvae.
- Familiarisation with procedures for-
 - VDRL & other tests for STDs
 - Weil-Felix test
 - Widal test & other tests for enteric fever
 - Examination of throat swab
 - ELISA & other tests for HIV
 - Other common tests for viral infection
 - Blood culture & other culture procedures
- Collection, preservation & transportation of samples for microbiological examination.
 - Bacteriological examination of water.

Pathology

- Familiarization with organization & functioning of Pathology lab including diagnostic equipments.

Ability to perform the following tests-

- Routine Haemogram
- Routine urine examination
- Routine stool examination
- Familiarisation with Histopathological procedures
- Familiarisation with cytological procedures including FNAC & pap smear.

Biochemistry

Organization & functioning of Biochemistry lab & familiarization with diagnostic equipments.

Radiology

- Familiarization with protection against radiation exposure.
- Interpretation of skiagrams related to common diseases of chest and occupational exposures.

Computer Skills

- Knowledge & skill to use of Microsoft Word
- Microsoft Excel
- Microsoft Powerpoint
- SPSS
- Epi info
- Public Health Administration Skills
- Familiarisation with the administrative set up & functioning of the health system in India (National, State & District levels).
- Familiarisation with methods of financial management, practice & procedure.
- Familiarisation with techniques of human resource management.
- Familiarisation with creating, implementation & monitoring of routine MIS of the health system.
- Ability to identify need for change & to make strategic & structural changes in clinic, community services, health system & health policies.
- Ability to play advocacy role in the District Planning Committees & Panchayat Samiti & Zila Parishad.
- Familiarisation with the administrative, executive & legislative setup of nation & state.
- Organization & Conduct of health camps.
- Evaluation of National Health Programmes

- Familiarisation with legislation pertaining to health.
- Familiarisation with administrative setup, functions, powers & operations of :
 - Municipal Corporation
 - Pollution Control Board
 - Registrar Births & Deaths
 - IMA
 - NGOs
 - Other bodies of significance to health

4. Teaching Program

4.1. General Principles

Acquisition of practical competencies being the keystone of postgraduate medical education, postgraduate training will be skills oriented. Learning in postgraduate program is essentially self-directed and primarily emanating from clinical and academic work. The formal sessions are merely meant to supplement this core effort.

4.2. Teaching Sessions

Following is the list of teaching sessions:

Seminars

Journal clubs

Family presentations

Long case presentations

Short case presentations

Epidemiological exercise

Biostatistics exercise

Mobile clinics

Thesis work discussion

Extra mural posting discussions

Field visits

Participation in National Health Programmes

5. Postings

The postgraduate students are to be posted in Urban Health Centre/ Rural Health Centre / other departments in the hospital:

UHC : Minimum 1 month per year

RHTC : Minimum 2 months per year

6. Thesis

- Every candidate shall carry out work on an assigned research project under the guidance of recognized postgraduate teacher. The project shall be written and submitted in the form of a thesis.
- Within 6 months the topic to be selected, protocol to be presented at the department level. Local Ethical Committee approval to be obtained at the end of 6 months. The title and synopsis to be communicated to the university.
First 6 months:
Topic Identification.
Protocols Presentation.
Submission of title
Synopsis to university.
- Thesis submission to the university 6 months before the Final University Examinations.
- The student should (i) identify a relevant research question (ii) conduct a critical review of literature (iii) formulate a hypothesis (iv) determine the most suitable study design (v) state the objectives of the study (vi) prepare a study protocol (viii) undertake a study according to the protocol (viii) analyze and interpret research data and draw conclusions (ix) write a research paper.

7. Assessment

All the PG residents are to be assessed daily for their academic activities and also periodically.

7.1. General Principles

The assessment is valid, objective, and reliable.

It covers cognitive, psychomotor and affective domains.

Formative, continuing and summative (final) assessment is also conducted in theory as well as practical/clinicals. In addition, thesis is also assessed separately.

7.2 Formative Assessment

The formative assessment is continuous as well as end-of-term. The former is based on the feedback from the senior residents and the consultants concerned. End-of term assessment is held at the end of each semester (upto the 5th semester). Formative assessment will not count towards pass/fail at the end of the program, but will provide feedback to the candidate.

7.3 Internal Assessment

The performance of the Postgraduate student during the training period should be monitored throughout the course and duly recorded in the log books as evidence of the ability and daily work of the student. Marks should be allotted out of 100 as followed.

Sr. No.	Items	Marks
1.	Personal Attributes	20
2.	Practical Work	20
3.	Academic activities	20
4.	End of term theory examination	20
5.	End of term practical examination	20

1. Personal attributes:

Behavior and Emotional Stability: Dependable, disciplined, dedicated, stable in emergency situations shows positive approach.

Motivation and Initiative: Takes on responsibility, innovative, enterprising, does not shirk duties or leave any work pending.

Honesty and Integrity: Truthful, admits mistakes, does not cook up information, has ethical conduct, exhibits good moral values, loyal to the institution.

Interpersonal Skills and Leadership Quality: Gets on well with colleagues and paramedical staff, is respectful to seniors, has good communication skills.

2. Practical Work

Availability: Punctual, available continuously on duty, responds promptly on assignments and takes proper permission for leave.

Diligence: Dedicated, hardworking, does not shirk duties, leaves no work pending, does not sit idle, competent in practical work.

Academic ability: Intelligent, shows sound knowledge and skills, participates adequately in academic activities, and performs well in oral presentation and departmental tests.

Performance: Proficient in presentations and discussion during academic sessions in the department.

3. Academic Activity

Performance during presentation at Journal club/ Seminar/ Case discussion/ Stat meeting and other academic sessions. Proficiency in skills as mentioned in job responsibilities.

4. End of term theory examinations conducted at end of 1st, 2nd year and after 2 years 9 months.

5. End of term practical/oral examinations after 2 years 9 months.

Marks for personal attributes and work done should be given annually by all the consultants under whom the resident was posted during the year. Average of the three years should be put as the final marks out of 20.

Marks for academic activity should be given by the all consultants who have attended the session presented by the residents.

The Internal assessment should be presented to the Board of examiners for due consideration at the time of Final Examinations.

A. Theory Examination (Total = 400)

Paper	Title	Marks
Paper I	Basic sciences as applied to Community Medicine	100
Paper II	Public Health Administration & Management Sciences	100
Paper III	Community Medicine & Family Practice	100
Paper IV	Recent Advances in Community Medicine	100

B. Practical & Viva voce Examination (Total = 400)

Long Case / Family Study /Medico-social case	80
Short Case (s) x 2	80
Statistical Exercise	30
Epidemiological exercise	30
Public health exercise	20
Structured spot exercise (spotting)	20
Microbiological exercise	15
Pedagogic Exercise	15
Journals/other work records	10
Oral	100

8. Suggested Books

Core books

Maxcy-Rosenau-last Public Health & Preventive Medicine : Wallace RB

Text book of Community Medicine : Sunder Lal, Adarsh & Pankaj

Park's Text book of Preventive & Social Medicine

Epidemiology in Medical Practice : Barker DJP

Biostatistics : A foundation for Analysis in the Health Sciences: Daniel WW

National Health Programmes of India: Kishore J

Multiple Choice Questions in Preventive & Social Medicine : GPI Singh & Sarit Sharma

Reference Books

Oxford Text book of Public Health: Detels R, McEwen J, Beaglehold R

Control of Communicable Diseases in Man: Benenson AS

Manson's Tropical Diseases: Cook G, Zumla A

Hunter's Diseases of Occupations: Baxter PJ, Admas PH Curriculum M.D. Community Medicine

Hunters Tropical Medicine and emerging infectious diseases: Strickland GT

An introduction to sociology: Bhusan and Sachdeva

Clinical Epidemiology- the Essentials : Fletcher

Epidemiology and Management for Health Care for all: Sathe PV, Sathe AP

Training modules of various national & international institutes and national health programmes

Journals

Indian journal of community medicine

Indian journal of preventive and social medicine

American journal of epidemiology

British journal of epidemiology

Lancet

Human biology

Health and populations- perspectives and issues

NTI Bulletin

Journal of communicable diseases (NICD)

WHO Bulletin

WHO technical reports series

Emerging infectious diseases

CD alerts (NICD)

Nutrition news (National institute of nutrition)

The journal of family welfare

International family planning perspectives

Indian Journal of Public Health

Social Medicine

IAPSM Punjab Bulletin

MODEL QUESTION PAPER
MD (Community Medicine)
Paper-I
Basic Sciences as applied to Community Medicine

Max. Marks:100

Time: 3 hrs

- i. Attempt ALL questions***
- ii. Answer each question & its parts in SEQUENTIAL ORDER***
- iii. ALL questions carry equal marks***
- iv. Illustrate your answer with SUITABLE DIAGRAMS***

- i. What is Kaplan Meier Survival Curve? Discuss its applications in medical sciences.
- ii. How will you plan the universalisation of ICDS scheme while maintaining the quality of services ?
- iii. Describe lot quality assurance sampling giving suitable examples.
- iv. Discuss the social pathology of maternal mortality in India.
- v. Outline various ethical considerations in randomised controlled trials.
- vi. Outline various ethical considerations in randomised controlled trials.
- vii. Give an account of evaluation techniques in Pedagogy.
- viii. Discuss in detail various criteria for measurement of poverty.
- ix. Enumerate the salient features and uses of International Classification of diseases-10th Revision.
- x. What is nutritional surveillance? Describe briefly various methods used for nutritional surveillance.

MODEL QUESTION PAPER
MD (Community Medicine)
Paper-II
Public Health Administration & Management Sciences

Max. Marks:100

Time: 3 hrs

- i. Attempt ALL questions***
- ii. Answer each question & its parts in SEQUENTIAL ORDER***
- iii. ALL questions carry equal marks***
- iv. Illustrate your answer with SUITABLE DIAGRAMS***

- i. Discuss the role of social marketing in health sector.
- ii. Enumerate health hazards related to infectious waste management. Describe briefly ways to minimize these health hazards.
- iii. What is biological warfare? Write a note on disaster preparedness in case of biological warfare.
- iv. Describe briefly the concept of essential drugs. Enumerate the criteria for selection of essential drugs.
- v. Enumerate the salient features of Pre-Conception and Pre-natal Diagnostic Techniques (Prohibition of Sex Selection) Act 1994.
- vi. Discuss the Impact of International Health Regulations on World Trade Organization.
- vii. What is Medical Audit ? Discuss in detail various stages of audit cycle.
- viii. Explain the effects of lead pollution on environment. Elaborate ways to reduce lead pollution.
- ix. Give an account of new dimensions of health informatics.
- x. Describe briefly various inventory control techniques giving suitable examples.

MODEL QUESTION PAPER
MD (Community Medicine)
Paper-III
Community Medicine & Family Practice

Max. Marks:100

Time: 3 hrs

- i. Attempt ALL questions***
- ii. Answer each question & its parts in SEQUENTIAL ORDER***
- iii. ALL questions carry equal marks***
- iv. Illustrate your answer with SUITABLE DIAGRAMS***

- i. Critically evaluate the available infrastructure of RCH programme.
- ii. Critically evaluate the Current Scenario of RCH programme.
- iii. Describe in detail surveillance of Acute Flaccid Paralysis.
- iv. Discuss the role of emergency contraception in the era of globalization.
- v. Submit a plan for resource mobilization for geriatric population at the level of community health centre.
- vi. Write a note on Disability Adjusted Life Years.
- vii. Discuss validity of a Screening Test giving suitable examples.
- viii. Describe briefly 10/90 Gap in relation to inequitable distribution of resources in health care.
- ix. Give an account of current status of malaria vaccines.
- x. What do you understand by Replacement Level Fertility in the context of population stabilization?

MODEL QUESTION PAPER
MD (Community Medicine)
Paper-IV
Recent Advances in Community Medicine

Max. Marks:100

Time: 3 hrs

- i. Attempt ALL questions***
- ii. Answer each question & its parts in SEQUENTIAL ORDER***
- iii. ALL questions carry equal marks***
- iv. Illustrate your answer with SUITABLE DIAGRAMS***

- i. Discuss the role of remote sensing in vector borne diseases.
- ii. What is meta analysis? Describe steps for conducting meta analysis.
- iii. Write a note on No Scalpel Vasectomy.
- iv. Discuss briefly various operational research techniques used in health care.
- v. Give an account of recent developments in RNTCP.
- vi. Submit a plan for preventing an imminent outbreak of bird flu.
- vii. Outline the objectives & salient features of National AIDS Control Programme phase- III.
- viii. Discuss the impact of tourism on the health of community.
- ix. Discuss briefly the role of computer software in epidemiology.
- x. What is focus group discussion? Discuss its role in qualitative research.