

## **(B) COMMUNITY MEDICINE**

The course outline is as follows :

### **Concept of Health & Disease**

- Concept of health
- Definition of health (Dimensions, physical, mental, social and spiritual).
- Spectrum of health
- Determinants of health. Responsibility for health
- Indicators of health
- Concept of disease. Concept of causation (all theories including ecological triad, agent, host & environmental factors).
- Spectrum of disease. Iceberg phenomenon.
- Natural history of disease. Levels of prevention.
- Disease elimination and eradication. Disease surveillance.

### **Introduction to Public Health and Health Systems in Pakistan**

#### *Background and Concepts:*

- Definitions and concepts in Public Health
- Development of Public Health in Pakistan.
- Economics and Health. Health Policy and planning in Pakistan.
- “Health for all”, background, concepts and progress.
- “Primary Health Care”: Concepts and progress.
- The National Disease Control programmes; policies, strategies and operations.

#### *Health System in Pakistan:*

- The role of Federal and Provincial Governments in Health care.
- The District Health System, in the context of devolution.
- The Physician as a manager:
- Functions of manager, management of material, human and financial resources.
- Leadership and motivation.

#### *Partners in Health:*

- The public and private sector.
- Nongovernmental Organizations and International Agencies.

- Resources for health. Community Mobilization.

### **Epidemiology and disease control**

- General epidemiology and research methodology.
- Background and concepts, uses, basic measurements in epidemiology (morbidity, mortality, disability and fatality).
- Epidemiological methods (descriptive, analytic and experimental).
- epidemiological transition. Association and causation.
- Investigation of an outbreak or an epidemic.
- Screening for disease. Community diagnosis.
- Research and survey methodology.
- Introduction to qualitative research methodology.

### **Prevention and control of Infectious diseases**

- Definitions to differentiate between:
  - Infection, contamination, pollution, infestation
  - Infectious disease, communicable disease, contagious disease
  - Host, Immune and susceptible persons
  - Sporadic, Endemic, Epidemic, Pandemic
  - Epizootic, Exotic, Zoonosis
  - Contact, fomites, Carriers, Insect Vectors, Reservoir of infection
  - Incubation period, Infective period, Generation time
  - Cross infection, Nosocomial infection, Opportunistic infections, Iatrogenic (Physician induced) disorders
  - Surveillance, Eradication, Elimination.

### **Dynamics of infections disease Transmission**

- Reservoir and source of infection, Escape of organism, Mode of transmission, Entry into the body, Susceptible host, Immunity (different types of immunity and immunization)

### **Control of infection.**

- Controlling the reservoir-notification, early diagnosis treatment, isolation, quarantine, disinfections.
- Interruption of transmission.

- The susceptible host (active & passive immunization, Combined Chemoprophylaxis, Non-specific measures).
- Health advice to travelers.
- National case management guide lines.

**Epidemiology, control and prevention of infectious diseases of Public Health importance.**

- Diseases transmitted through inhalation
- Diseases transmitted through faeco-oral route
- Arthropod borne diseases.
- Diseases of animals conveyed to man.
- Diseases due to direct contact

**Epidemiology, control and prevention of non-infectious diseases of Public Health importance.**

- Hypertension,
- Coronary heart disease
- Cancers,
- Injuries
- Diabetes mellitus
- Obesity
- Rheumatic fever and heart disease.

**Biostatistics**

- Concepts and uses
- Data and its types
- Rates, ratios and proportions
- Crude, specific and standardized rates.
- Collection and registration of vital events in Pakistan
- Sources of health related statistics
- Measures of central tendency, (Mean, Median, Mode),
- Measures of dispersion (Range, Standard deviation, Standard error)
- Normal curve
- Methods of data presentation (tables, graphs & diagrams).

- Interpretation of data (t-test and Chi-square test)
- Sampling and its various techniques.
- Health Management Information System

### **Demography and Population dynamics**

- Concept, demographic principles and demographic processes
- Census, definition, methodology, types.
- Determinants of fertility, mortality
- Population pyramid, and its interpretation.
- Demographic transition, demographic trap and its public health importance.
- Demographic and social implication of high population growth.
- Social mobilization
- Urbanization

### **Food and Nutrition**

- Concepts (nutrition, nutrient, food, diet).
- Food groups and their functions.
- Role of fiber in diet.
- Balanced diet.
- Malnutrition at all stages of life its types causes and prevention.
- Common nutritional problem of public health importance and their prevention and control.
- Dietary requirements of normal human being at different stages of life.
- Food hygiene, pasteurization, fortification, additives & adulteration and preservation
- Food poisoning
- Assessment of nutritional status of a community.

### **Reproductive and child health**

- Safe mother hood, and its components. (ante-natal, post-natal, family planning & emergency obstetric care).
- Maternal mortality, causes and prevention.
- Infant care: growth and development. Breast feeding,
- Common causes of morbidity and mortality, their prevention

- And control.
- Child care: health promotion strategies. Common ailments, home accidents, child mortality prevention .
- Strategic approaches of integrated management of childhood illness (IMCI).
- Adolescent health
- Reproductive tract infections: guidelines for management of STD's.

### **Health of school age children.**

- Role of teachers and role of doctor in maintenance of health
- Procedures for determining health status of school age children.
- Common health problems of school children.

### **Environmental Health Sciences**

- Air: Composition of air. Causes of Air pollution. Purification of Air. Diseases caused by impurities in air and their prevention.
- Water: Sources of Water. Daily water requirement. Water pollution its causes and prevention. Purification of Water.
- Water quality Standards. Diseases due to polluted water.
- Waste disposal: contents, hazards and safety measures for solid and liquid; domestic, industrial and hospital waste.
- Climate: Climate and weather. Global environmental concerns
- Green house effect, depletion of ozone layer, acid rains.
- Effect of extremes of temperature, humidity, atmospheric pressure on human health and their prevention.
- Radiation: Sources, types, causes , hazards and prevention.
- Healthful housing. Urban and rural slums. Refugee camps and hostels.
- Noise : Definition, causes, acceptance level, hazards and control.

### **Occupational Health**

- Concepts, of occupational health, occupational medicine and occupational hygiene.
- Ergonomics and its importance.
- Occupational hazards. Principles of control.
- General principles of occupational disease prevention.
- Organization of occupational health services.

- Health Insurance and Social Security Schemes

### **Arthropods and their public health importance**

- Common arthropod borne diseases
- Control of arthropods of medical importance.
- Insecticides and their public health importance

### **Prevention and control of parasitic diseases of public health importance**

**Snake Bites:** personal protection and management

### **Mental Health**

- Concept. Common mental health problems, their causes, prevention and control.
- Juvenile delinquency

### **Behavioral Sciences and lifestyle**

- Concept, attitudes, health and illness behaviour.
- Drug abuse, addiction and smoking
- Child abuse and child labour
- Role of physical exercise in health and disease.

### **Information, Education and Communication (IEC)**

- Concept. Aims and objectives
- Approaches used in public health
- Contents, principles and stages of health education
- Communication methods, barriers and skills in health education
- Planning, organizing and evaluating a health education programme
- Social marketing

### **Disaster**

- Definition, classification, (natural disasters like earthquake, floods.
- Epidemic of communicable diseases, man made disasters.
- Accidents, thermo nuclear warfare, causes and prevention),
- Magnitude and effects of disaster and public health consequences
- Disaster: preparedness and management

### **Medical Ethics**

- Background concepts and components
- National recommended guidelines.

## **PRACTICAL AND COMMUNITY BASED TRAINING**

- Student should have practical experience in questionnaire development, data collection, compilation, presentation, analysis and report writing.

### **Field visits**

- Visit to BHU and RHC
- Visit to an NGO
- Visit to a primary school to assess the nutritional status of school children
- Visit to MCH/Reproductive Health Centre to observe the organization, and function of the centre and to demonstrate counseling skills in one of the following:
  - Nutritional counseling for children, pregnant and lactating women.
  - Antenatal Care
  - Family planning services
  - Immunization, others
- Visit to a hospital to see the hospital waste disposal.
- Visit to an industry
- Visit to a physical/mental/social rehabilitation centre.

### **Skills development lab**

- Water purification at domestic level.
- Contraceptives
- Vaccination including the cold chain
- Oral rehydration solution

## **RECOMMENDED BOOKS**

1. **Text book of Community Medicine** by Park J E. Latest Edition
2. **Text book of Community Medicine.** 6<sup>th</sup> Ed. by Ilyas Ansari.
3. **Text book of Community Medicine** by Maxie Rozani. Latest Edition
4. **Medical Statistics.** 2<sup>nd</sup> Ed. by R. Turkwood.
5. **Online Journals and Reading Materials through HEC Digital Library Facility.**