

# **Syllabus for PhD in Community Medicine**

## **Theme 1**

### **1] MEDICAL SOCIOLOGY & BEHAVIOURAL SCIENCES**

#### **1. Principles of Sociology and the Behavioral Sciences**

- Concepts of Sociology and Behavioral Sciences
- Influence of Social and Cultural Factors on Health and Disease
- Social Structures and Social Organization
- Accelerated changes in life style.

#### **2. Principles of Social Psychology**

- Principles of psychology , Principles of behavioral sciences , Principles of social anthropology

#### **3. Application of Sociology in Health and Development**

- Social Problems in Health and Disease
- Use of Sociology in addressing problems in Health and Disease
- Hospital Sociology
- Clinico-social evaluation of an individual

### **2] PRINCIPLES AND PRACTICE OF INFORMATION, EDUCATION & COMMUNICATION.**

#### **1. Principles of IEC Health Education**

- Objectives of Health Education , Content of Health Education

#### **2. Communication Skills**

- Principles of Communication , Communication blocks , Body Language

#### **3. The use of Media for IEC**

#### **4. Practice (Methods) of IEC and its application in Community Health**

#### **5. Evaluation of impact**

### **3] PUBLIC HEALTH MANAGEMENT**

- Concept & theories of management
- Qualitative skills of management
- SWOT analysis
- PLA techniques
- Programme planning, implementation, monitoring and evaluation
- Human resource management
- Organizational behaviour and development
- Material management / logistic and supply management

- Vehicle management
- Communication in organizations, networking and advocacy
- Strategic project management and Logical Framework Analysis
- Quality management and continuous quality improvement in health sector
- Social marketing

#### **4] HEALTH SYSTEMS DEVELOPMENT**

- Introduction to various Health System Models
- Stakeholders in health care delivery
- Concept & Delivery of Primary Health Care
- Development of decentralized health care delivery system
- Sustainable Grassroots Comprehensive Health Models
- Health Systems research - 10/90 Gap in medical research

## **Theme 2**

#### **1] CONCEPT OF HEALTH & DISEASE**

- Concept of Health & Public Health. Public health in developed and developing countries. Determinants, dimensions, spectrum of health
- Concept of diseases, natural history of diseases, Iceberg phenomena
- Health promotion, protection, prevention and control of diseases
- Measuring Health & disease – Measuring tools, Health indicators
- Contemporary issues in public health

#### **2] HEALTH INFORMATICS & BIOSTATISTICS**

##### **HEALTH INFORMATICS**

- Information systems in health care,
- Sources and types of information systems
- System design of health information systems and health care records; language and coding;
- compatibility and security issues
- Tools to improve management & use of information
- Integration of different information system
- Information management and use at the district and other facility level.
- Applications of IT in health (tele-medicine/health)

##### **BIOSTATISTICS**

- Introduction
- Collection/ Organization of data / Measurement scales
- Presentation of data
- Measures of Central Tendency
- Measures of variability
- Sampling and planning of health survey

- Sampling methods, sampling errors and sample size calculations
- Probability, Normal distribution and inductive statistics
- Estimating population values
- Tests of significance (Parametric/Non-parametric including qualitative methods)
- Introduction to multivariate analysis , Analysis of variance
- Association, correlation and Regression , interaction
- Vital statistics
- Evaluation of health and measurement of morbidity / mortality
- Life table and its uses

### **3] EPIDEMIOLOGY**

- Introduction to epidemiology including clinical epidemiology
- Basic principles of epidemiology
- Measurement of morbidity and mortality: Incidence, Prevalence, Age-adjustment and survival analysis
- Epidemiological studies and trials
- Clinical trials – History, types, phases, Recruitment and retention of participants, Standard Operating Procedures (SOP's) etc.
- Epidemic investigations
- Survival data Analysis in Epidemiology
- Measurement of association and potential impact
- Association & Causation
- Risk assessment in epidemiology – relative risk, odds ratio, attributable risk, population attributable risk, hazards ratio
- Systematic review and meta analysis
- Screening of the diseases
- Surveillance of the diseases
- Integrated Disease Surveillance Programme)
- International rules & regulation for travelers

## **Theme 3**

### **1] REPRODUCTIVE & CHILD HEALTH INCLUDING FAMILY WELFARE (RCH)**

#### **1. Structure of RCH and Family Welfare services in India**

- History and evolution of RCH
- Problems of Maternal Health in India
- Problems of Child health in India
- Trends in the RCH services delivery including Private Public Partnership
- RCH related programmes in India eg. MCH, RCH, CSSM, ICDS, IMNCI ,

## **2. Components and services of Reproductive and child health**

### **A. Essential Obstetrical Care.**

- Risk Approach , Antenatal Care, Antenatal visits , Preventive services , Intranatal Care, Postnatal Care, Care of the mother

### **B. Emergency Obstetrical Care**

- Toxemia of pregnancy / Hypertensive disorders of pregnancy, Antepartum hemorrhage, Severe Anemia

### **C. Care of children**

- Care of the neonate & an infant
- Low Birth Weight , Preterm babies , small for date babies
- Growth and Development
- Childhood Infections
- Preventive services

### **4. Family Welfare**

- Concept of Family Planning & Family welfare, Methods of family planning, Small family norm
- Unmet Need

### **5. Evaluation of M C H & FP Services**

- Evaluation of MCH care services , Evaluation of Family Planning Services

### **6. Social Pediatrics**

- Juvenile Delinquency , Child Abuse , Child Labour, Street Children, Child Guidance Clinic
- Child Marriage ,Child Placement

### **7. Social issues related to women**

## **2] HEALTH CARE FOR SPECIAL GROUPS (SCHOOL CHILDREN, ADOLESCENT, AGED AND THE CHALLENGED GROUPS**

### **School Health services**

- Concept & Objectives
- Components of school health services
- Planning for school health services
- Behavioral and Learning Problems in Children
- Evaluation School Health Services

### **Adolescent Health**

- Concept
- Common Adolescent Problems including Psychosocial problems
- Changes during Adolescent
- Teenage Pregnancy
- Safe Abortion
- Adolescent Health Services in India

## **Health care of the aged and the challenged**

### **a. Community Geriatrics**

- Implications of demographic changes in Indian Population
- Health Problems of the aged
- Preventive Health Services for the aged

**b. The Challenged and Rehabilitation**

- Problem of disabled in the country
- Types of disabilities and their management
- Rehabilitation of the disabled
- Community Based Rehabilitation
- Agencies for rehabilitation – National & International

## **Theme 4**

### **1] COMMUNICABLE DISEASES**

- Introduction and epidemiology of communicable diseases
- Epidemiological transition of communicable diseases
- Emerging & re-emerging diseases
- Principles of prevention & control of communicable diseases
- Respiratory Diseases such as Chicken Pox, Measles, Mumps, Rubella, Diphtheria, Pertussis, Influenza, Tuberculosis, ARI etc.
- Intestinal Infections such as Poliomyelitis, Hepatitis, Food Poisoning, gastro-enteritis , cholera, Enteric Fevers, Amoebiasis, Worm Infestations etc.
- Arthropod Borne Infections such as Malaria, Filaria, Dengue , chikenguinea , JE etc.
- Zoonotic Diseases such as Rabies, Leptospirosis, Brucellosis, Rickettsial Diseases, hydatid diseases etc.
- Surface Infectious Diseases of Public Health Importance e.g. Leprosy, STI , HIV/AIDS

### **2] NON COMMUNICABLE DISEASES**

- Non-Infectious Diseases of Public Health Importance
- Emerging non communicable diseases due to changing life styles
- Cardiovascular diseases, diabetes, blindness, accidents, can

### **3] NATIONAL HEALTH PROGRAMMES**

The origin, historical development, interventions, current state and critique of the different National Health Programmes:

- National Family Welfare Programme (NFWP)
- National Tuberculosis Control Programme
- National Leprosy Eradication Programme
- National Diarrhoeal Diseases Control Programme
- National Malaria Eradication Programme
- National Filariasis Control Programme
- National Acute Respiratory Infections (ARI) Control Programme
- National AIDS Control Programme
- National Guinea Worm Eradication Programme
- National Kala Azar Control Programme
- National Japanese Encephalitis (JE) Control Programme
- National Nutritional Programmes
- National Iodine Deficiency Disorders (IDD) Programme
- National Programme for the Control of Blindness
- National Cancer Control Programme
- National Mental Health Programme
  
- National Diabetes Control Programme
- Reproductive Child Health (RCH) including Child Survival and Safe Motherhood (CSSM) and Universal Immunization Programme (UIP)
- National Water Supply and Sanitation Programme
- Minimum Needs Programme
- National Rural Health Mission
- The implementation of NHPS at a programme level and in the community

## **Theme 5**

### **1] OCCUPATIONAL HEALTH AND SAFETY**

- 1. Introduction of occupational health including development of occupational health**
- 2. Work and health with special reference to developing countries**
- 3. Approaches to identify and prevention of occupational diseases**



- Occupational Epidemiology
- Risk Assessment
- Screening for occupational diseases
- Industrial toxicology & Hygiene
- Occupational ergonomics
- Occupational safety
- Workers Compensation
- Agencies & Organizations

#### **4. Selected groups of workers**

- Women and work , Migrant workers , Agricultural workers , Minority workers

#### **5. Approaches to Occupational Health**

- Occupational health and safety programs
- Occupational Health Services with special reference to agricultural & unorganized workers (medical & biological monitoring including first-aid)
- Labour union and occupational health
- Protective Technical Approaches to Occupational Injury Prevention
- Occupational Violence & Prevention Strategies
- Principles of Industrial Psychology
- Treatment and rehabilitation

#### **6. Legislation in Occupational Health**

- Factories Act , Employees State Insurance Act , Workmen's Compensation Act , Mines Act , Plantation Labour Act

## **2] VOLUNTARY SECTOR IN HEALTH / PUBLIC PRIVATE PARTNERSHIP**

### **VOLUNTARY SECTOR IN HEALTH**

- Role of the Voluntary Sector in Health
- Activities undertaken by Voluntary Sector in the Health Sector
- Activities of specific Voluntary Sector in Health

- Innovative Approaches in the Voluntary Effort in Health

### **PUBLIC PRIVATE PARTNERSHIP ( PPP)**

- Concept & Definition
- Need for PPP
- Models of PPP
- Potential areas of collaboration
- Public ( Govt.) initiatives
- An articulated framework on PPP

### **3] PUBLIC HEALTH EMERGENCIES (PHE)**

- Concept, definition and scope
- Types of public health emergencies
- Impact of PHE
- Preparedness for PHE
- National and district level Programmes to deal with PHE

### **4] HEALTH TECHNOLOGY**

- Computer application in Health
- Software for research and statistical analysis e.g. Epi-info, SPSS etc.
- Remote sensing
- GIS & other newer technology
- Tele-medicine / health

### **5] RECENT ADVANCES AND TOPICS OF CURRENT INTEREST**

- Recent advances in all the topic mentioned above
- Agricultural Medicine and Plantation Health
- Community Ophthalmology
- Community Dentistry
- Community Health Nursing
- Other Free Topic

## **Recommended Books & Journals As References**

1. Maxcy Roseman John M. Last, Maxcy-Roseman **Public Health and Preventive Medicine**, Appleton-Century-Crofts, New York
2. Hobson W, **The Theory and Practice of Public Health**, Oxford Med. Publication
3. Barker D J P, **Practical Epidemiology**, Churchill Livingstone
4. Park J E & K Park, **Text Book of P & S.M.**, M/s Banarsidasm Bhanot, Jabalpur
5. Mahajan B K and M/C.Gupta, **Text Book of P & S.M.**, Jaypee Publications
6. Bradford Hill, **Principles of Medical Statistics**, The Lancet Ltd. No.7 Adam Street, Adelphi, London, 1967
7. MacMahon & Pugh, **Epidemiology-Principles and Methods**, Little Brown and Co. Boston, U.S.A

8. **Hunter's Diseases of Occupations**, Edited by P.A.B.Raffle, P.H.Adams, P.J.Baxter and W.R.Lee Edward Arnold Publishers (1994), Great Britain.
9. Text book of PSM : A P Kulkarni and Dr. Baride
10. Committee Reports And Policy Documents – Medical Education And Health Policy
11. Epidemiology and Health Management: By Dr.P.V.Sathe
12. National Health Programmes of India : J.Kishore
13. Text Book of Infection Diseases : Christae
15. Statistics : K.Vishvesh Rao
17. Oxford Text Book of by Public Health : Holland & Detel