

# PREVENTIVE MEDICINE, PUBLIC HEALTH AND COMMUNITY HEALTH

## OBJECTIVES:

This subject aims to train students to integrate the principles of prevention into medical practice and to view health problems from a social and community perspective.

## GENERAL OBJECTIVES

- 1- Train students in the application of care methods currently used in preventive medicine
- 2- Provide students with a view of healthcare that focuses on current priorities in public health and social medicine

## SPECIFIC OBJECTIVES

- Define the concepts of Preventive Medicine, Public Health and Community Health
- Describe their respective characteristics and functions
- Present socio-economic measures in public health
- Describe the periods in the natural history of disease
- Explain the characteristics of the different levels of prevention
- Apply epidemiological methods to clinical practice
- Review the most common epidemiological designs in the clinical environment
- Describe the various components of health education
- Describe the methods used in health education
- Explain the role of the doctor in health education
- Assess the importance of medical advice
- Review the concepts that determine the effectiveness of screening for certain diseases
- Know the selection criteria linked to screened diseases
- Describe the possible biases of a screening program
- Know the scientific and operative basis of vaccinations
- Explain the systematic and non-systematic guidelines for vaccination
- Assess the importance of vaccination in special clinical situations
- Present the procedures for chemoprophylaxis and chemoprevention
- Assess the possibilities offered by preventive medicine in medical practice
- Describe monitoring methods in public health
- Present the principal sources of information in public health
- Define quality of life with regard to health
- Describe the instruments for measuring quality of life
- Establish the stages involved in air pollution
- Explain the phenomenon of thermal inversion
- Describe the harmful effects of pollution on health
- Define the quality of healthy water
- Interpret the results of microbiological control of water
- Describe the stages in drinking water purification
- Describe the methods used in the chlorination of water
- Define the concept of biochemical oxygen demand
- Describe the systems for collection of solid waste
- Explain the composting method

- Name the principal chemical contaminants of foods
- Evaluate the role of food additives
- Describe the procedures of sterilization and disinfection
- Explain the components of the epidemiological chain
- Classify transmissible diseases according to their transmission mechanisms
- Be aware of the appearance of new infections
- Describe the elements involved in general prevention of transmissible diseases
- Describe the healthcare and social cost of transmissible diseases
- Explain the epidemiology of priority transmissible diseases in Catalonia
- Develop strategies for the control and prevention of priority transmissible diseases in Catalonia
- Know the *Sistema de Malalties de Declaració Obligatòria* (System for Diseases of Obligatory Declaration)
- Describe the healthcare and social impact of priority chronic diseases in Catalonia
- Explain the descriptive epidemiology of priority chronic diseases in Catalonia
- Develop strategies for the prevention of priority chronic diseases in Catalonia
- Indicate the importance of diet and nutrition in public health
- Describe the nutritional epidemiology in Catalonia
- Classify the food groups
- Present public dietary recommendations
- Present the descriptive epidemiology of drug use
- Describe the healthcare and social repercussions of drug use
- Develop strategies to follow in the fight against drugs
- Develop strategies for the promotion of health through physical activity
- Describe the healthcare and social importance of occupational health
- Indicate the objectives of occupational health
- Describe preventive measures and health promotion strategies in the different population age groups
- Present the basic preventive measure for international travellers

### 3. PROGRAMME

#### BLOCK 1: BASIC CONCEPTS

Topic 1. Concept of Preventive Medicine, Public Health and Community Health

Topic 2. Concept and field of Clinical Epidemiology

Topic 3. Natural History of Disease Levels of Prevention

#### BLOCK 2: METHODS OF CLINICAL PREVENTION

Topic 4. Health Education Concept and Scientific Basis

Topic 5. Health Education. Methods and Applications

Topic 6. Health Education. Medical Advice

Topic 7. Screening. Concept and Criteria of contributory diseases

Topic 8. Screening. Assessment of Programs or Interventions

Topic 9. Vaccinations. Classification and Immune Basis

Topic 10. Vaccinations: Side Effects, Contraindications, Practical Aspects

Topic 11. Systematic Vaccinations. Vaccination Calendar

Topic 12. Vaccinations in Adults

Topic 13. Vaccinations. Administrative Guides. Special Clinical Situations

Topic 14. Chemoprophylaxis and Chemoprevention

#### BLOCK 3: HEALTH PROTECTION

Topic 15. Air Pollution

Topic 16. Health impact of water

Topic 17. Monitoring water quality

Topic 18. Solid waste

Topic 19. Monitoring food quality

Topic 20. Sterilization and disinfection procedures. Other sanitation techniques

## **BLOCK 4: HEALTH PROTECTION**

### **4.1 TRANSMISSIBLE DISEASES**

Topic 21. Epidemiological model of transmissible diseases

Topic 22. Basis of Prevention of Transmissible Diseases

Topic 23. Epidemiology and Prevention of Tuberculosis

Topic 24. Epidemiology and Prevention of Meningococcal Disease

Topic 25. Epidemiology and Prevention of Viral Hepatitis

Topic 26. Epidemiology and Prevention of STDs

Topic 27. Epidemiology and Prevention and HIV infection and AIDS

Topic 28. Epidemiology and Prevention of Food Poisoning

Topic 29. Epidemiology and Prevention of Imported Diseases. Travel Health

Topic 30. Epidemiology and Prevention of Nosocomial Infections

### **4.2 CHRONIC DISEASES**

Topic 31. Cardiovascular Diseases. Epidemiology and Prevention

Topic 32. Arterial Hypertension. Epidemiology and Prevention

Topic 33. Cancer. Epidemiology and Prevention

Topic 34. Endocrine and Metabolic Diseases. Epidemiology and Prevention

Topic 35. Osteoarticular Diseases. Epidemiology and Prevention

Topic 36. Oral Health. Epidemiology and Prevention

Topic 37. Mental Health. Epidemiology and Prevention

Topic 38. Food-related behavioral disorders. Epidemiology and Prevention

Topic 39. COPD. Epidemiology and Prevention

Topic 40. Accidents. Epidemiology and Prevention

## **BLOCK 5 : PUBLIC HEALTH PROGRAMS**

Topic 41. Diet and Public Health. Community Nutrition

Topic 42. Tobacco and Health

Topic 43. Alcohol and Health

Topic 44. Drug addictions

Topic 45. Physical activity and Health

Topic 46. Occupational Health

Topic 47. Maternal and Child Health and Adolescent Health

Topic 48. Adult Health and Elderly Health

## **BLOCK 6 : SOCIAL MEDICINE**

Topic 49. Epidemiological Monitoring and Health Information Systems

Topic 50. Measures of quality of life in medical care

Topic 51. Healthcare and Social Policy

Topic 52. Health Plan for Catalonia

Topic 53. Social inequality in healthcare

Topic 54. Healthcare professionals and Social Medicine

Topic 55. Patient-Client and Social Medicine

## **PRACTICAL CREDITS**

### **PRACTICAL CLINICAL TRAINING (2 credits)**

Each practical group (made up of 5-6 students) will take part in the care activities (health advice, vaccination programs and control of contacts) carried out in the Preventive Medicine Service of the Unit for Support and Prevention at the Hospital Clinic Universitari in Barcelona.

## **5. TEACHING METHODOLOGIES**

Theory classes  
Seminars  
Practical Clinical Training  
Solving clinical cases  
Videographic session  
Tutorials