

# Concepts of Control

# Concepts of Prevention

Facilitator:

**Dr. NAVPREET**

Assistant Professor, Department of Community Medicine  
Govt. Medical College & Hospital, Chandigarh.

# Specific Learning Objectives

- At the end of session, the learner shall be able to:
  - Differentiate Control, elimination and eradication.
  - Apply Levels of prevention.
  - Apply Modes of intervention.
  - Describe International Classification of Disease

# Disease control

- The disease agent is permitted to exist in the community at a level where it ceases to be as public health problem.
- State of equilibrium becomes established between A, H & E.

- Aims at reducing:
  - i. Incidence of disease
  - ii. Duration of disease
  - iii. Risk of transmission of infection
  - iv. Financial burden to the community.

# Disease Elimination

- Interruption of transmission of disease from large geographic regions or areas.
- An important precursor for eradication.
- e.g. Measles, Polio.

# Disease Eradication

- Termination of all transmission of infection by extermination of the infectious agent.
- Tear out by roots.
- Cessation of infection and disease from the whole world.
- e.g. Small pox.
- Potential candidates: Polio, Measles, Dracunculiasis.

# Monitoring

- The performance and analysis of routine measurements aimed at detecting changes in the environment or health status of population.
- e.g. Air pollution, Performance of health services

# Surveillance

- The continuous scrutiny of all aspects of occurrence and spread of disease that are pertinent to effective control.
- Goes beyond passive reporting of cases.
- Lab confirmation of presumptive diagnosis
- Finding out source of infection
- Routes of transmission
- Identification of all cases, susceptible contacts, those who are at risk.



# Evaluation

- The process by which results are compared with the intended objectives.
- Formative evaluation
- Summative evaluation
- Crucial in identifying health benefits derived.
- Useful in identifying performance difficulties.

# Concepts of Prevention

- The objective of preventive medicine is to intercept or oppose the “cause” and thereby the disease process.
- Levels of Prevention:
  1. Primordial prevention
  2. Primary prevention
  3. Secondary prevention
  4. Tertiary prevention

# Primordial Prevention

- Prevention of emergence or development of risk factors in population groups in which they have not yet appeared.
- e.g. Lifestyle diseases.
- Intervention: Health education.

# Primary Prevention

- Action taken prior to the onset of disease, which removes the possibility that a disease will occur.
- Intervention in the pre-pathogenesis phase.
- Elimination or modification of risk factors.
- e.g. Communicable diseases and NCDs.
- Approaches for primary prevention:
  - a. Population (mass) strategy
  - b. High-risk strategy

# Secondary Prevention

- Actions which halts the progress of a disease at its incipient stage and prevents complications.
- Intervention in early pathogenesis phase.
  - Early diagnosis and adequate treatment.
- Largely the domain of a clinical medicine.
- Drawbacks:
  - Already there is suffering of mental anguish, pain.
  - Loss of productivity
  - More expensive and less effective

# Tertiary Prevention

- All measures available to reduce or limit impairments and disabilities, minimize suffering caused by existing departures from good health and to promote the patient's adjustment to irremediable conditions.
- Intervention in late pathogenesis phases to prevent sequelae and limit disability.

# Modes of Intervention

- Any attempt to intervene or interrupt the usual sequence in the development of disease.
- Modes of intervention:
  1. Health promotion
  2. Specific protection
  3. Early diagnosis and treatment
  4. Disability limitation
  5. Rehabilitation

# Health Promotion

- Health education
- Environmental modifications
- Nutritional interventions
- Life style and behavioral changes



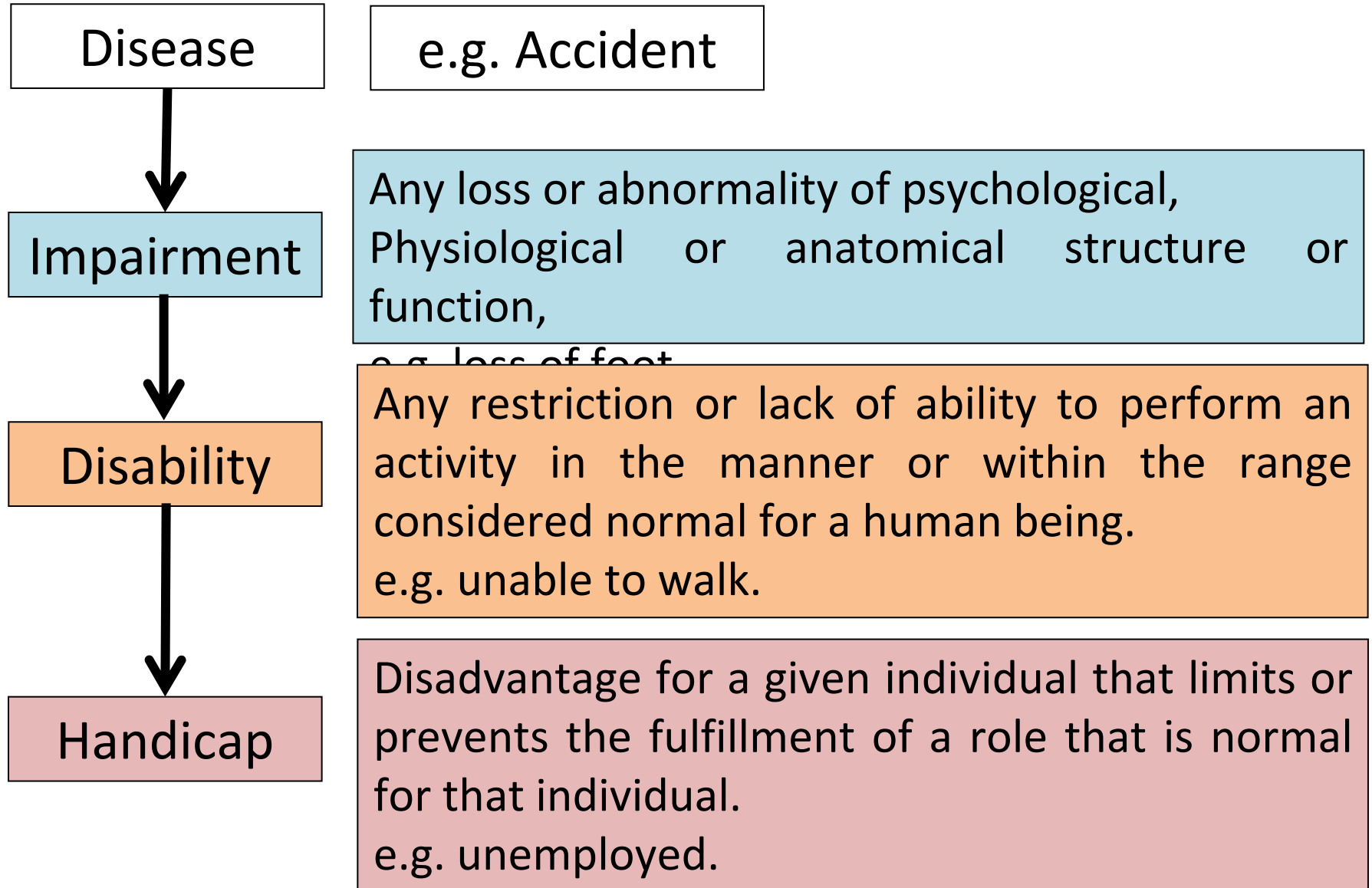
# Specific Protection

- Immunization e.g. Vaccine preventable diseases.
- Specific nutrient e.g. Iron.
- Protection against injuries (helmet, seat belt)
- Chemoprophylaxis e.g. against Malaria.
- Control of consumer product quality and safety of foods, drugs, cosmetics etc.

# Early diagnosis and Treatment

- The detection of disturbances of homoeostatic and compensatory mechanism while biochemical, morphological and functional changes are still reversible.
- Important in reducing high morbidity and mortality.

# Disability Limitation



# Rehabilitation

- The combined and coordinated use of medical, social, educational and vocational measures for training and retraining the individual to the highest possible level of functional ability.
  - Medical rehabilitation
  - Vocational rehabilitation
  - Social rehabilitation
  - Psychological rehabilitation

# Hospitals and Community

- Hospitals:
  - “An ivory tower of disease”
  - Health Promotion settings
- Functions of a doctor:
  - The care of the individual
  - The care of community
    - Community diagnosis & Community treatment
  - As a teacher

# Disease Classification

- To compare morbidity and mortality data at national and international levels.
- To facilitate decision making in prevention.
- To facilitate the research on particular disease.
- International Classification of Diseases (ICD).
  - ICD-10
  - Alphanumeric coding of disease.

# Take Home Message...

