

Introduction to Public Health

Module # 12

Infectious disease prevention and control of Communicable diseases.

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OBJECTIVES OF THE LECTURE

By the end of this lecture you will be able to:

- *Conceptualize*
 - *ID or Infectious diseases & mode of transmission*
 - *preventive measures taken at different emergency situation*
 - *the various awareness programs*
- *Understand the associated risk factors for causing and spreading infection in Bangladesh.*

Problem statement

- Dengue fever is the most common arthropod borne viral disease.
- Dengue fever is one of the most important emerging disease of the tropical and sub tropical regions, affecting urban and pre urban areas.
- The geographical distribution of the disease has greatly expanded and the number of cases has increased dramatically in the past 30 Years

Infectious Disease and contagious disease

A decorative graphic consisting of a horizontal bar with a color gradient from dark blue on the left to bright yellow on the right. To the right of the bar is a large, stylized arrow pointing to the right, filled with a brown-to-yellow gradient.

- Contagious disease: A disease that is transmitted through contact.
- Infectious disease: A clinically manifest disease of man or animals resulting from an infection.

COMMUNICABLE DISEASES



- An illness due to a specific infectious agent or its toxic products capable of being directly or indirectly transmitted from man to man, animal to man or from the environment to man or animal.

COMMUNICABLE DISEASES

- Source: The source of infection is defined as “the person, animal, object or substance from which an infectious agent passes or is disseminated to the host”.

Reservoir: A Reservoir is defined as “any person, animal, arthropod, plant, soil or substance (or combination of these) in which an infectious agent lives and multiplies, on which it depends primarily for survival, and where it reproduces itself in such manner that it can be transmitted to a susceptible host”.

- In short, the reservoir is the natural habit in which the organism metabolizes and replicates.

COMMUNICABLE DISEASES

- CASES: A case is defined as “a person in the population or study group identified as having the particular disease, health disorder or condition under investigation”.
- A variety of criteria (e.g., clinical, biochemical laboratory) may be used to identify cases.

- (b) Intestinal

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CARRIER

- :A carrier is defined as “an infected person or animal that harbours a specific infectious agent in the absence of discernible clinical disease and serves as a potential source of infection for other”

CARRIER



- Carrier may be classified as below:
- A. Type
 - (a) Incubatory
 - (b) Convalescent
 - (c) Healthy
- B . Duration
 - (a) Temporary
 - (b) Chronic.
- C .Portal of Exit
 - (a) Urinary. (C)Respiratory. (d)Others.

Mode of Transmission:



- Mode of Transmission: a) Direct Transmission
- b) Indirect Transmission

Mode of Transmission:



- A. Direct Transmission
 - 1. Direct contact.
 - 2. Droplet infection.
 - 3. Contact with soil
 - 4. Inoculation into skin or mucosa
 - 5. Transplacental (Vertical)

Mode of Transmission:

- B. Indirect Transmission
 - (1) Vehicle-borne
 - (2) Vector borne
 - (a) Mechanical
 - (b) Biological
 - (3) Air-Borne
 - (a) Droplet nuclei
 - (b) Dust.
 - (4) Fomite-borne
 - (5) Unclean hands and fingers.

Cocept of Control

- The term “disease control” describes operations aimed at reducing the:
 - a) incidence of disease
 - b) the duration and the risk of transmission of disease
 - c) effects of infection
 - d) financial burden to the community

e.g # malaria control, TB control etc

Elimination & Eradication of Diseases



- Elimination: It is defined as interruption of transmission of disease.
- Eradication: literally means “tear out by roots”.

It implies termination of all transmission of infection by extermination of the infectious agent through surveillance and containment. e.g Small pox.

Rehabilitation



- It has been defined as “ the combined and co-ordinate use of medical, social, educational and vocational measures for training And retraining the individual to the highest possible level of functional ability.”

Types of rehabilitation:

- 1. Medical rehabilitation- restoration of function
- 2. Vocational rehabilitation- restoration of the capacity to earn a livelihood.
- 3. Social rehabilitation- restoration of family and social relationship.
- 4. Psychological rehabilitation- restoration of personal dignity and confidence.

Control of communicable Diseases



- **A. Measures at personal level:**
 - 1) attention to case.
 - 2) attention to contact
 - 3) attention to carriers