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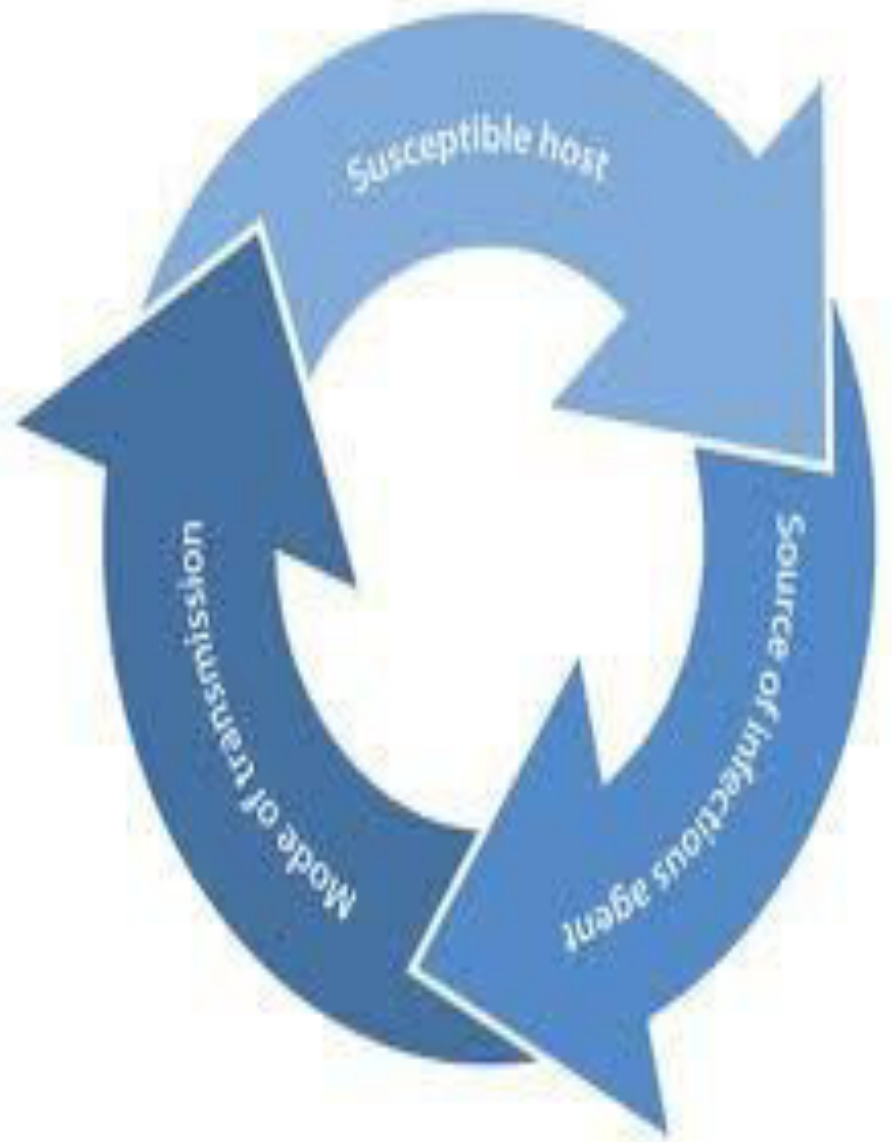
# Dynamics Of Disease Transmission



1. The Reservoir.

2. Mode of Transm

3. Susceptible Host





# Sources or reservoir

## **Reservoir of infectious agent:**

In simple terms, reservoir means the natural habitat. The reservoir of infectious agent is any person, animal, arthropod, Plant, soil and any substance.



# Sources or reservoir

- Starting point of communicable diseases



# **Types of Reservoir**

1. Homologous Reservoir

2. Heterogonous Reservoir

# Types of Reservoir

- Human reservoir
- Animal reservoir
- Reservoir in non living things



# HUMAN RESERVOIR

The human is the source of infection and act as a host for infectious agent. Human itself is responsible for spreading many diseases in humans either by suffering and carrying the infectious agent



# Human reservoir is of two types

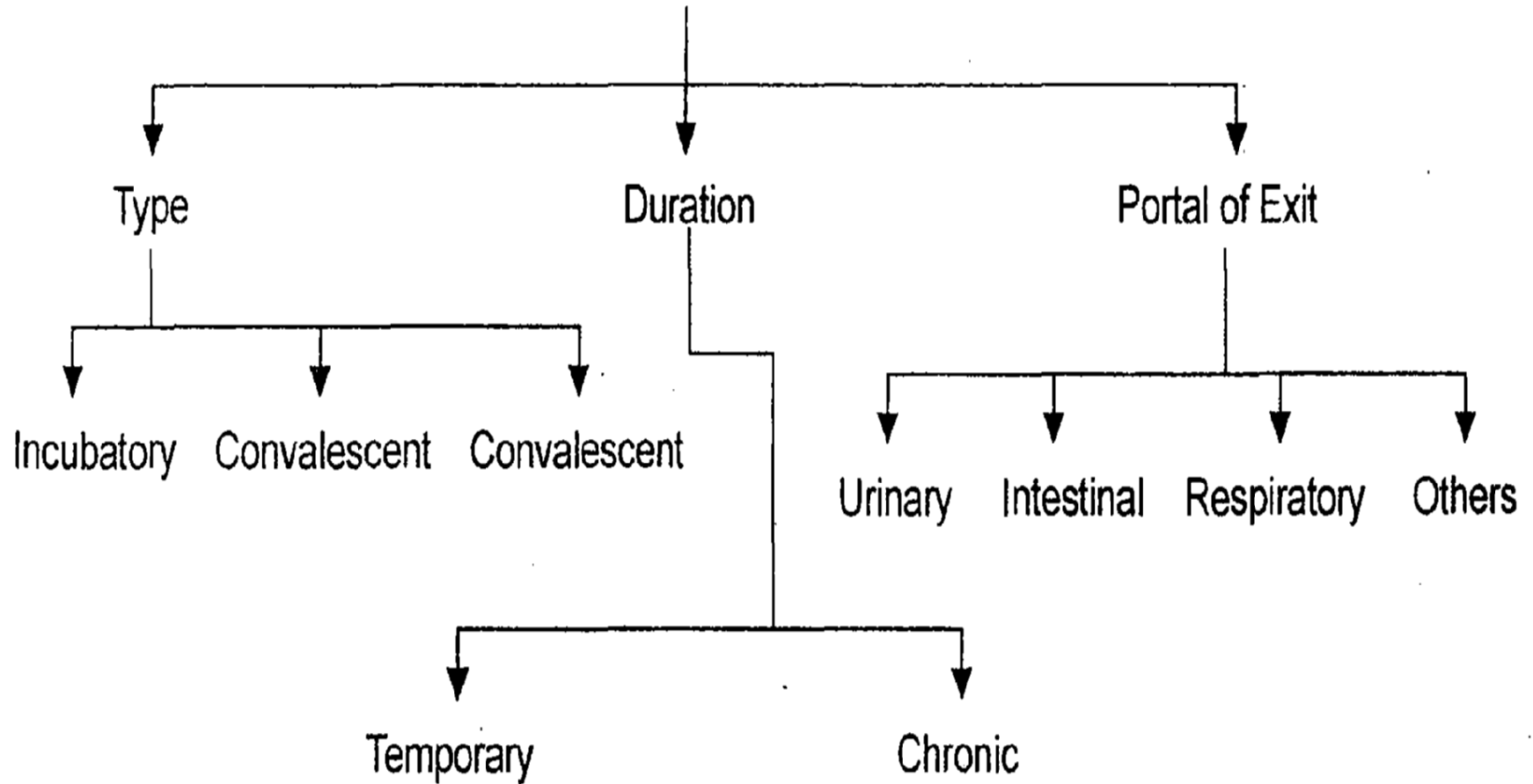
## I. Cases

The cases are of following types:

- Clinical cases
- Sub clinical cases
- Latent cases

## 2. CARRIERS:

Carriers



# Animal reservoir

- Source of infection will be animals
- Zoonoses
- Rabies ,yellow fever and influenza

# Reservoir of non living things

- Soil may act as reservoir of infection
- Tetanus,anthrax

# MODES OF TRANSMISSION

## DIRECT TRANSMISSION

- Direct contact
- Droplet infection
- Contact with soil
- Inoculation into skin or mucosa
- Trans placental or vertical transmission

**Direct contact**



# Droplet infection





**Contact with soil**



Inoculation into skin or mucosa



# Transplacental transmission



# INDIRECT TRANSMISSION

- Vehicle borne
- Vector borne
- Air borne
- Fomite borne
- Unclean hands & fingers



# Vehicle borne



# Vector borne



# Air borne



# *Fomite borne*



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A black silhouette of a hand being washed under a faucet. The hand is positioned with the palm facing up, and the fingers are slightly spread. The faucet is at the top, with water flowing down onto the hand. The background is white.

**He Doesn't Even Bother  
With Washing His Hands?**

**Unclean hands**

# SUSCEPTIBLE 'HOST

- The infectious agent enters the susceptible host after finding a portal of entry such as respiratory tract, alimentary tract, skin etc. Inside the human host, on getting appropriate environment, it multiplies and sufficient density of the disease agent is built up to disturb the health equilibrium and the disease become overt.

# LEVELS OF PREVENTION

- PRIMARY PREVENTION
- SECONDARY PREVENTION
- TERTIARY PREVENTION



# Primary prevention



# ***Secondary prevention***



# Tertiary prevention



# IMPLICATIONS OF EPIDEMIOLOGY IN C.H.N PRACTICE

- An understanding of epidemiological concepts & principles are vital for nurses in the community as well as hospital setting.
- Knowledge of methods of epidemiology is useful to the C.H. nurse, both as tool in conducting the investigation to evaluate & explain phenomena observed in the course of work & as a basis for interpreting & evaluating the epidemiological literature.



- Epidemiological methods such as measures of health , serve as tools for assessing community needs & evaluating the impact of C.H. programmes of disease prevention & health promotion.
- The body of knowledge derived from epidemiological studies , including the natural history & patterns of disease occurrence & factors associated with high risk for developing disease, serves as an information base for C.H. practice .
- It provides a frame work for planning,& evaluating community intervention programmes.





- Serves as a basis for assessing individual & family health needs & for planning nursing interventions.
- Provides tools for evaluating success of interventions.
- Nurses may be the one who initiate a study & more frequently assist in data collection.
- In actual practice, C.H. nurse is considered as the foot soldier in the army of epidemiology.
- Epidemiologist depend on C.H. nurse for follow- up on various conditions.

