

# COVID 19: INFECTION PREVENTION & CONTROL

## DEFINING INFECTION & MODES OF TRANSMISSION

# Definition of Terms (1)

**Host**: living animal or plant

**Agent**: something that produces or is capable of producing an effect, i.e. infection

**Vector**: an organism (as an insect) that transmits an agent from one organism or source to another

**Vehicle**: inanimate object (food, water, etc) that can carry an agent from one organism to another

# Definition of Terms (2)

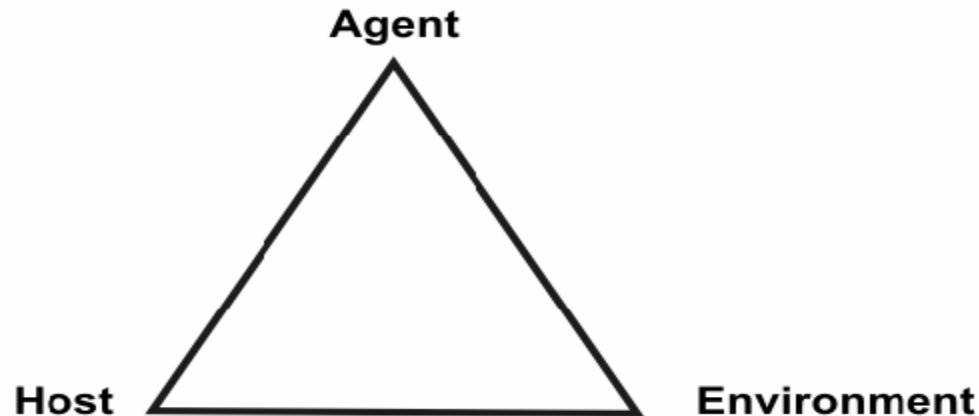
**Disease**: impairment of normal functioning, manifested by signs and symptoms

**Infection**: the state produced by the establishment of an infective agent in or on a suitable host , host may or may not have signs or symptoms

**Carrier**: individual harbors the agent but does not have symptoms. Person can infect others.

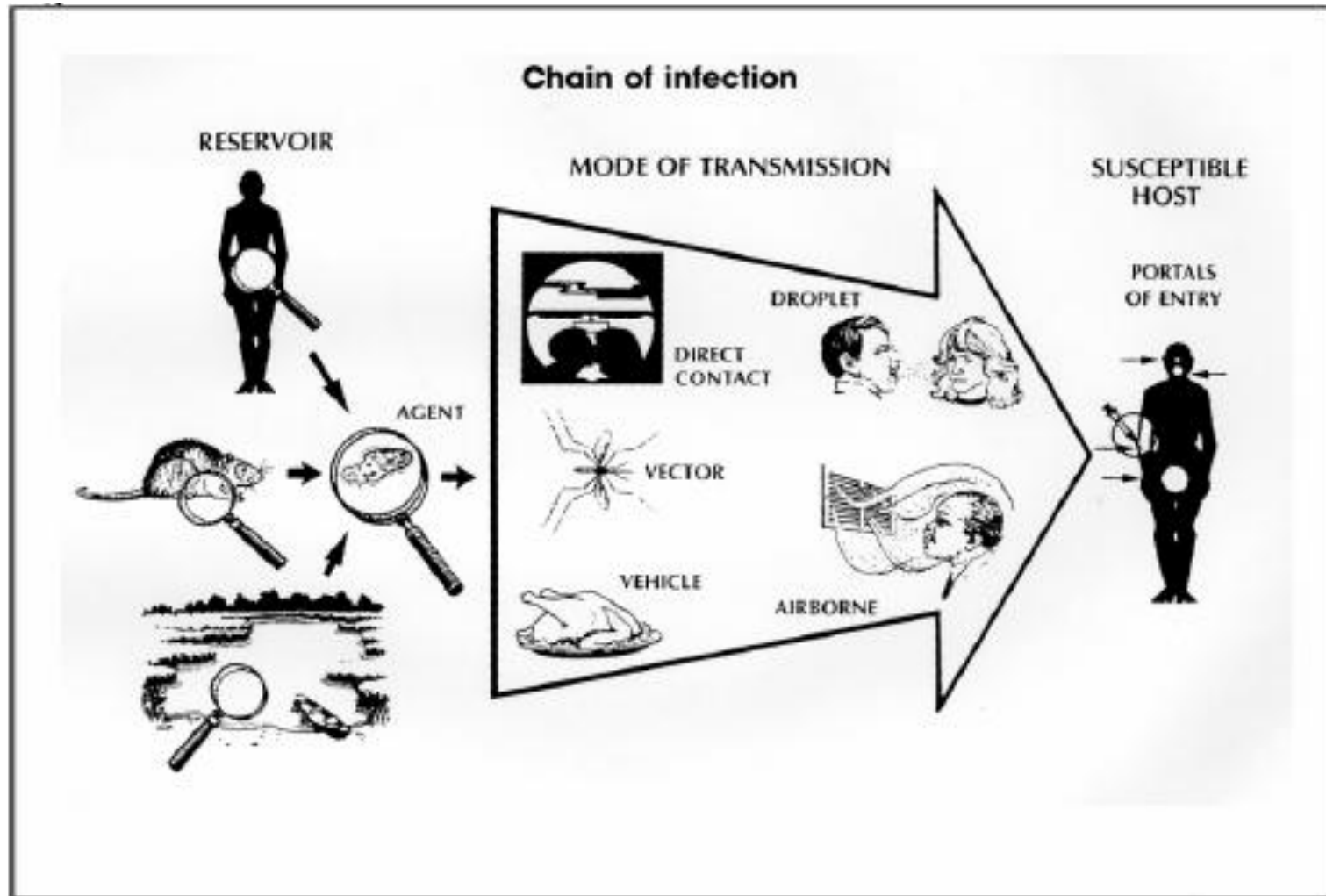
**Reservoir**: habitat (man, animal, etc.) in which the agent normally lives, grows, and multiplies

# Disease Causation



HOST Characteristics	Types of AGENTS	ENVIRONMENTAL Factors
Age	Biologic – bacteria, virus, molds	Housing – crowding, noise
Gender	Chemical – poison, alcohol	Air – temperature, humidity
Occupation	Physical - trauma, fire	Water , food
Race		
Marital status		
Genetic profile		

# Disease Transmission



# Mode of Transmission

Route	Example	Disease
Direct contact	Kissing, sexual contact, skin-to-skin contact	STDs, skin infections, scabies/HIV
Droplet	Organism on large respiratory droplets that people sneeze, cough, drip, or exhale. Disease spread when people are close to each other (usually <3 feet) and inhale droplet.	Mumps, pertussis (whooping cough), common cold, 'strep throat', meningitis , COVID 19
Indirect contact	Contact with contaminated surfaces, clothing, etc	Skin infections, diarrheal disease

Route	Example	Disease
Vector	Bite from disease-carrying ticks, fleas, mosquitoes	Lyme disease, LaCrosse encephalitis, Malaria, Dengue fever, Chikungunia
Vehicle	Eat/drink contaminated food/beverage, transfuse infected blood, fomites (bedding, clothes, infected tattoo needle)	Some diarrheal disease, hepatitis A/b/c
Airborne	Organism on dust particles or small respiratory droplets that may become aerosolized when people sneeze, cough, laugh, or exhale	Chickenpox, Tuberculosis, Smallpox, SARS, COVID-19 Anthrax (inhalational)

# Infection Control



Route	Example	Control Measures
Direct contact	Kissing, sexual contact, skin-to-skin contact	Use of barrier (condom, clothing, dressing)
Droplet	Organism on large respiratory droplets that people sneeze, cough, drip, or exhale.	Respiratory etiquette
Indirect contact	Contact with contaminated surfaces, clothing, etc	Hand-hygiene, sanitizing infected surfaces





Vector	Bite from disease-carrying ticks, fleas, mosquitoes	Vector control
Vehicle	Eat/drink contaminated food/drink, transfuse infected blood, vomites (bedding, infected tattoo needle)	Proper hygiene and sanitation, cook food/boil water, etc.
Airborne	Organism on dust particles or small respiratory droplets	Respiratory etiquette, isolation, self-quarantine, social distancing

# Infection Prevention

## Education and Training

- Hygiene
- Sanitation
- Follow public health recommendations – food preparation, isolation and quarantine

## Vaccination

- Keep up to date (regular + requested by countries min case of travel)

## Medicine

- Prophylactic antibiotics – meningitis