

## Chapter 2 - Lesson 4



# Clinic Infectious Disease Control

### Introduction

Infectious and parasitic disease control is important in veterinary clinics. The main objective is to prevent the spread of infections and infestations. These diseases are caused by bacteria, fungi, viruses, and parasites.

These infections and diseases may be spread or transmitted from human to human, human to animal, and animal to human.

### Examples of Disease Agents

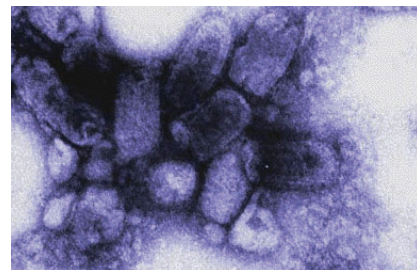
**Dog:** Parvo virus, distemper virus, kennel cough bacteria, methicillin resistant *Staphylococcus aureus* bacteria, rabies virus, leptospira bacteria, mange mites, fleas, and worms.

**Cat:** Feline immunodeficiency virus, feline calicivirus, feline leukemia virus, rabies virus, ringworm fungus, mange mites, fleas, and worms.

**Horse:** Salmonella bacteria, streptococcus bacteria, rotavirus, methicillin resistant *Staphylococcus aureus* bacteria, and rabies virus.

**Cow:** Cryptosporidium protozoa, pasteurella bacteria, salmonella bacteria, and rabies virus.

Diseases transmitted between animals and humans are known as zoonoses. They can be spread or transmitted by direct or close contact, and indirectly by air, water, food, vehicles, or vectors.



Viruses



Parasites

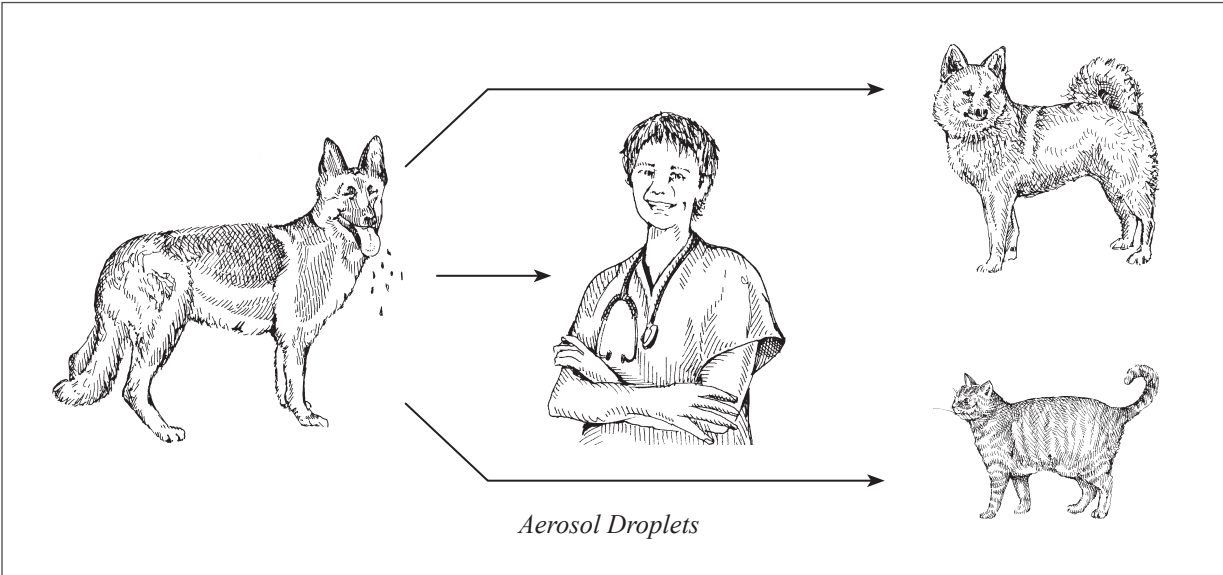
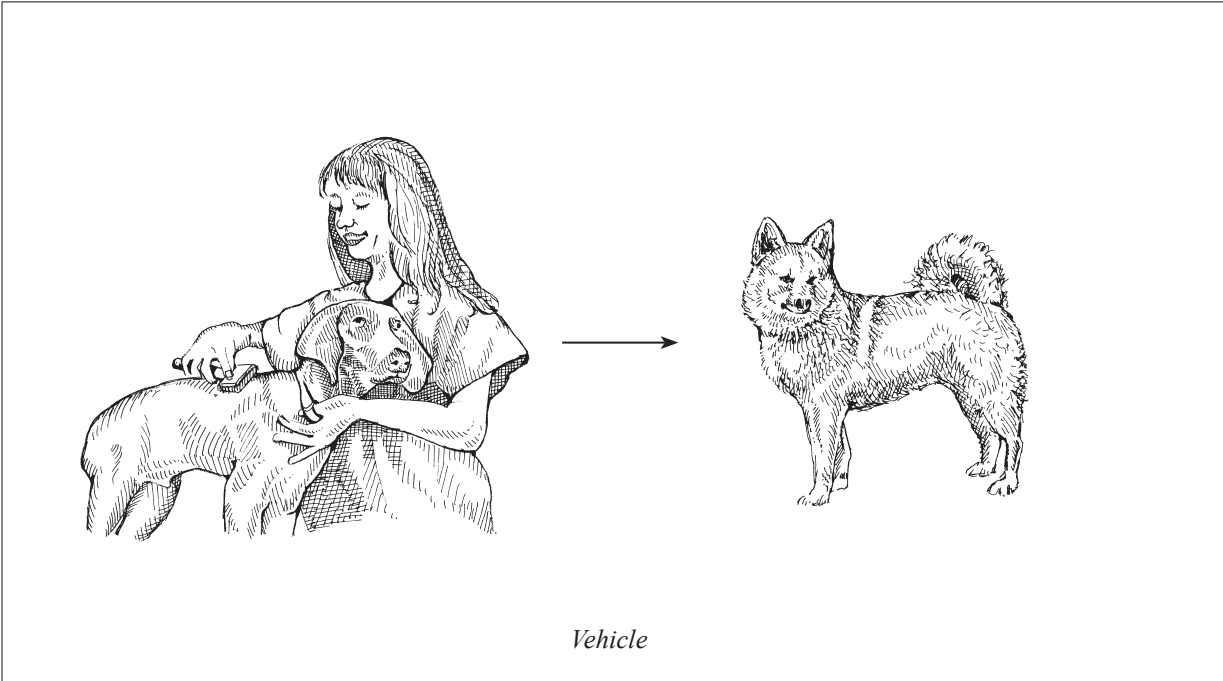
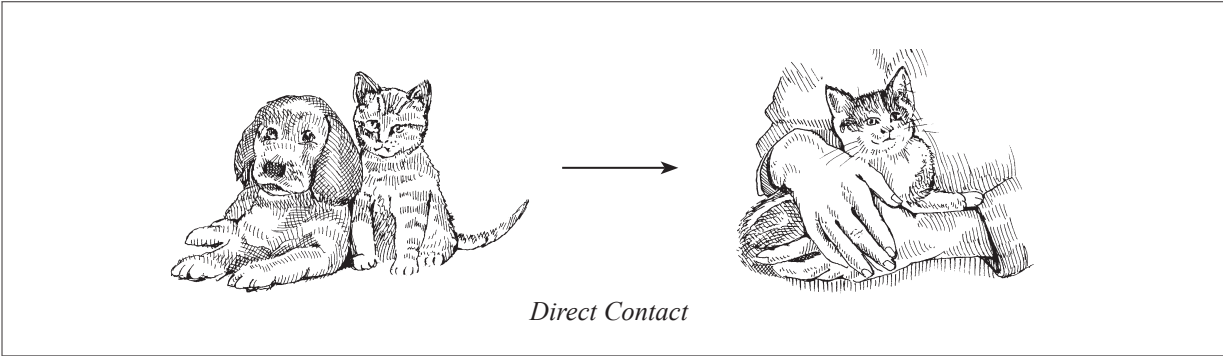


Fungi

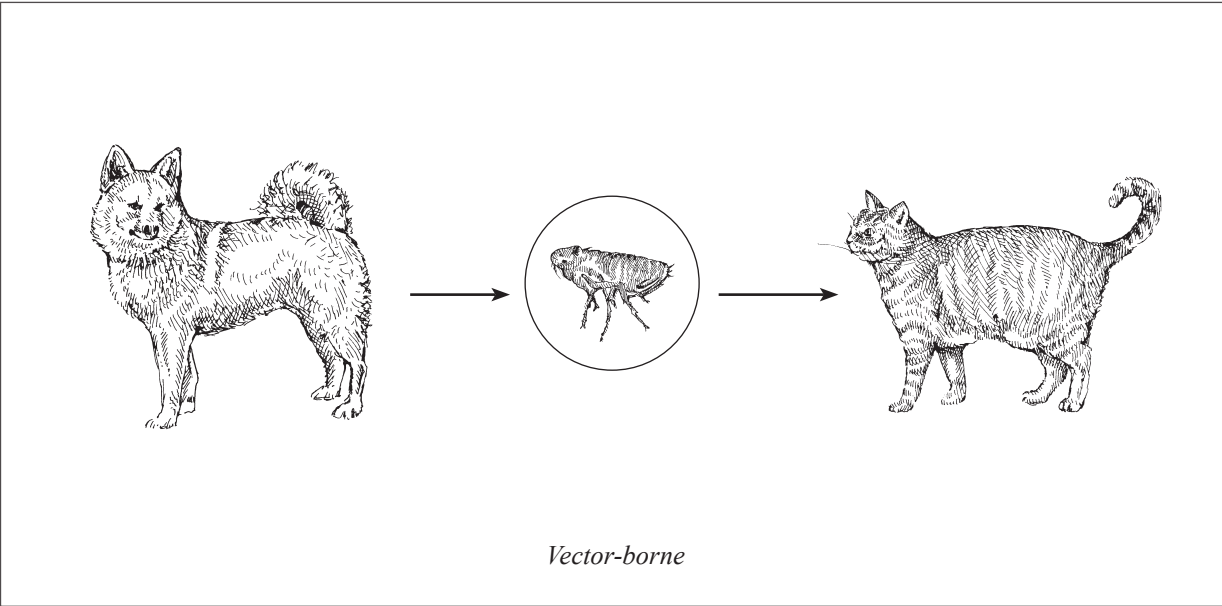
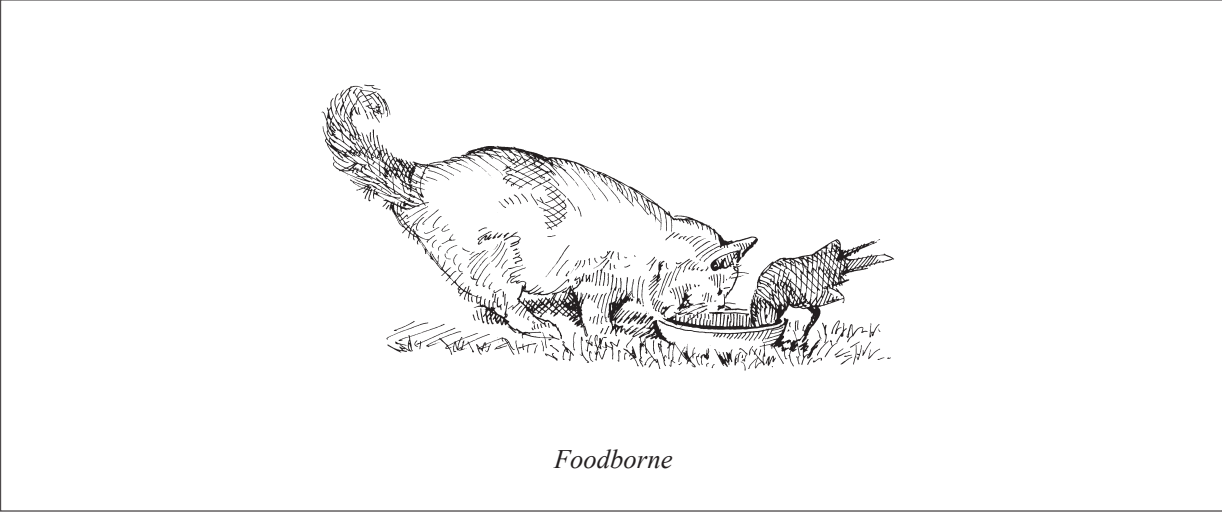
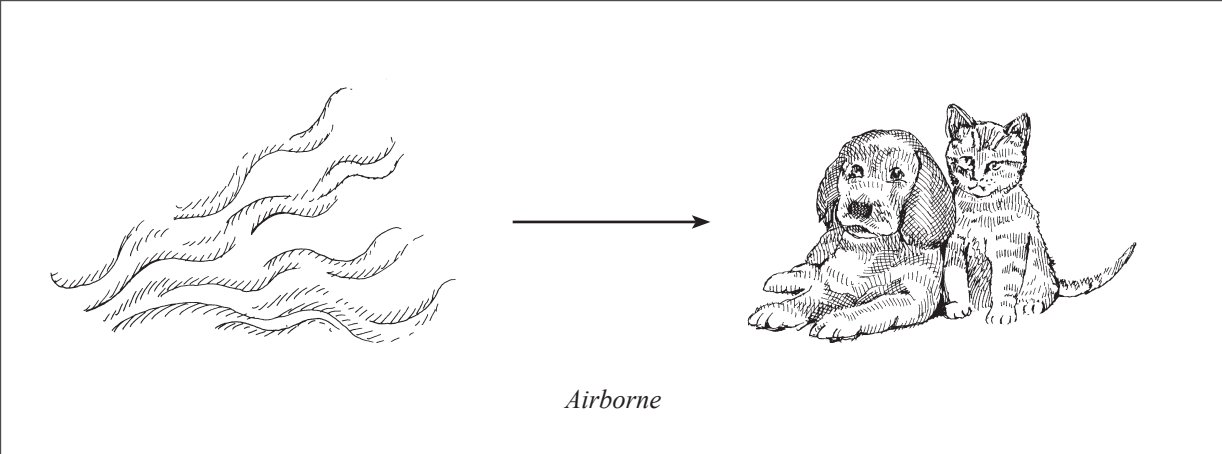


Bacteria

Modes of Transmission



Modes of Transmission



Strategies are designed to protect patients, owners, visitors, and veterinary personnel. Policies and guidelines are useful to communicate and explain strategies to prevent or decrease the spread of infectious and parasitic diseases.

## ***General Guidelines***

The following precautions help prevent disease transmission from human to animal, animal to animal, and animal to human:

**Hand hygiene** is an important precaution to prevent the transmission of infectious agents. Hand hygiene (either hand washing or hand sanitizer) should be used before, between and after handling patients.

### *Hand washing*

1. Wet hands with water.
2. Add soap.
3. Rub hands vigorously for at least 15-20 seconds. Wash all surfaces including backs of hands, wrists, between fingers, under fingernails. Remember jewelry can harbor microorganisms.
4. Rinse well.
5. Dry with clean towel.
6. Use towel to turn off water and avoid recontamination.

### *Hand sanitizer*

1. Place a thumbnail-sized amount of product in your hand.
2. Work the product into fingertips of opposite hand, then onto all parts of the hand.
3. Repeat the above steps in the opposite hand.
4. Rub hands together until dry. Do not rinse.

**Barrier nursing precautions** are used when working with infected body fluids or tissues, treating and caring for animals, cleaning cages and stalls or handling carcasses of animal's that have died of a potential infectious or zoonotic disease. Personal protective equipment is used in barrier nursing. Personal protective equipment includes gloves, gowns, aprons, lab coats, coveralls, masks (surgical or N 95 particle respirator), goggles, face shields, and boot or shoe covers. The

type of personal protective equipment should be appropriate for the type of procedure being performed and the type of exposure anticipated.

1. Wear gloves when handling non-intact skin, blood and body fluids of all patients.
2. If a glove is torn or punctured, remove the glove, perform hand hygiene and replace the glove as soon as patient safety permits.
3. Wear protective clothing when handling suspected or known infectious patients and when there is anticipated contact with non-intact skin or blood and body fluids.
4. Gloves, gowns, masks and protective eyewear are worn for procedures that are likely to generate droplets, splashes of blood, and body fluids or bone chips.
5. Cover wounds when possible to prevent the transmission or contact of infectious organisms.
6. Wear shoe or boot covers when appropriate to prevent the spread of infectious organisms. Boot covers and footbaths with disinfectant may be used when entering and exiting a stall of an animal with an infectious disease.

**Isolation:** An animal with an infectious disease may need to be separated or isolated from other animals to prevent the transmission of the infectious disease to other animals. The animal may be isolated in a cage or stall away from the other animals. Barrier precautions mentioned above should be used when caring for this animal.

**Disinfection:** All equipment and areas that come in contact with animals should be thoroughly cleaned by removing organic matter and then disinfected to prevent the transmission of infectious microorganisms.

### *Precautions for Chemical Disinfectants*

1. Read the label for directions on how to use the disinfectant and precautions to be taken when using the product.
2. Wear protective clothing when using disinfectant for a prolonged period of time or if the manufacturer recommends it. Avoid skin contact with the disinfectant.
3. Wash hands thoroughly after use, particularly before eating and drinking.
4. Use correct concentration of chemical disinfectant.

## ***Reference***

Canadian Committee on Antibiotic Resistance. (2008). *Infection prevention and control best practices for small animal clinics*. Retrieved July 20, 2010, from <http://www.ccar-ccra.com/english/pdfs/GuidelinesFINALDec2008.pdf>

## ***Questions***

1. List five activities where you should use hand hygiene.
2. List four general precautions to prevent disease transmission.

## ***Activity***

1. Observe for 15 minutes and record how many times people perform hand hygiene processes while working in a veterinary clinic.