One Health Zoonotic Disease

Zoonotic diseases spread between animals and humans. Zoonotic diseases that occur in large numbers can impact society in three ways:

1. Threaten the health of animals resulting in illness, loss of productivity, and death.
2. Threaten the livelihood of a large segment of the population dependent on livestock as a major source of income.
3. Threaten the health of people with ability to cause a large number of illness and death, which is associated with significant social and economic losses.

**Salmonella**

- **Modes of Transmission**
  1. Food contamination
  2. Cross-contamination of meat and other food
  3. Undercooked meat or eggs
- Symptoms
  - Abdominal pain
  - Vomiting
  - Diarrhea
  - Fever

**Brucellosis**

- **Modes of Transmission**
  1. Inhalation of infectious aerosols
  2. Direct infection of animal infected tissue or blood in skin cuts or abrasions
  3. Ingestion of contaminated dairy products or undercooked meat
- Symptoms
  - Fevers
  - Fatigue
  - Headache
  - Muscle, joint and back pain

**Avian Influenza**

- **Modes of Transmission**
  1. Direct contact
  2. Contaminated surfaces
  3. Airborne virus infects lungs
- Symptoms
  - Shortness of breath
  - Cough
  - Fever

**Rabies**

- **Modes of Transmission**
  1. Infected saliva gets into an open wound
  2. Infected saliva gets into mucous membranes
  3. Animal to Human Infection
- Symptoms
  - General weakness, fever, or headache, anxiety, confusion/agitation

- As the disease progresses, the person may experience delirium, hallucinations, hydrophobia (fear of water), and insomnia.

**Crimean-Congo Hemorrhagic Fever**

- **Modes of Transmission**
  1. Infection through ticks
  2. Animal to Human Infection
  3. Human to Human Infection
- Symptoms
  - Uncontrolled bleeding
  - Stomach pain
  - Headache
  - High fever

**Anthrax**

- **Modes of Transmission**
  1. Infection through spores
  2. Ingestion of uncooked infected meat
- General Symptoms
  - Fever
  - Chills
  - Sweating
  - Headache
  - Muscle aches
  - Difficulty breathing

**Reservoirs**

- Salmonella: Cattle, sheep, goats, swine, dogs
- Brucellosis: Cattle, sheep, goats, swine
- Avian Influenza: Dog, bat, fox
- Rabies: Dog, bat, fox
- Crimean-Congo Hemorrhagic Fever: Soil, horse, cattle, sheep, exotics
- Anthrax: Soil, horse, cattle, sheep, exotics

**Incubation Period**

- Salmonella: Weeks to months for virus to travel to brain
- Brucellosis: Direct infection
- Avian Influenza: Weeks to months for virus to travel to brain
- Rabies: Weeks to months for virus to travel to brain
- Crimean-Congo Hemorrhagic Fever: Weeks to months for virus to travel to brain
- Anthrax: Weeks to months for virus to travel to brain

**Modes of Transmission**

- Salmonella:
  1. Food contamination
  2. Cross-contamination of meat and other food
  3. Undercooked meat or eggs
- Brucellosis:
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  2. Direct infection of animal infected tissue or blood in skin cuts or abrasions
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- Avian Influenza:
  1. Direct contact
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- Rabies:
  1. Infected saliva gets into an open wound
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  3. Animal to Human Infection
- Crimean-Congo Hemorrhagic Fever:
  1. Infection through ticks
  2. Animal to Human Infection
  3. Human to Human Infection
- Anthrax:
  1. Infection through spores
  2. Ingestion of uncooked infected meat

**General Symptoms**

- Fever, chills, swelling of glands in neck, painful swallowing, hoarse, nausea, vomiting, bloody diarrhea, headache, red face and eyes, fainting, swelling of abdomen (stomach), shock, and meningitis