Disease Transmission

- Spread of disease
  - Animal to animal
  - Environment
  - Human to animal
  - Animal to human
    - Zoonotic

Direct Contact Transmission

- Direct contact
  - Susceptible animal comes in contact with infected animal
  - Body fluids
    - Urine, feces
    - Saliva
    - Blood, milk
  - Tissues
    - Lesions
    - Carcass
  - Breeding
  - Mother-to-offspring

Aerosol Transmission

- Disease agents contained in droplets
  - Pass through air
- Most agents not stable in droplets
- Close proximity required
  - Enclosed barns
  - Coughing, sneezing
  - Contaminated soil
  - Birthing tissues
  - Feces, urine

Oral Transmission

- Ingestion of contaminated feed or water
  - Feces, urine
  - Saliva
  - Milk
- Licking/chewing contaminated environment
- Shared feed or water sources
Fomite Transmission
- Contaminated inanimate object
- Carries pathogens to other animals
  - Needles, balling guns
  - Buckets
  - Bedding, shovels
  - Vehicles, trailers
  - Humans, clothing

Vector Transmission
- Living organism transfers disease between animals
  - Mosquitoes
  - Ticks
  - Biting midges
  - Flies
- Acquires pathogen from one animal
- Transmits to another animal

Points to Keep in Mind
- Animals may not show obvious signs of disease
- Not all pathogens spread by all routes of transmission
- Persistence in environment
  - Soil, manure, water

Prevention
- Isolation/quarantine
  - Increase distance between sick and well animals
- Cleaning and disinfection
  - Keep environment clean, dry
  - Keep feed and water clean
  - Keep equipment clean
- Vector Control

Personal Protective Equipment
- Hand washing
- Gloves
  - Creates a barrier between you and the disease
  - Especially for hands with cuts, abrasions, or chapped
  - Wash hands after removing gloves
- Coveralls, boots
- Mask, goggles
Vector Control

- Source reduction
  - Habitat reduction/elimination
  - Parasitic or predatory insects
- Control adults
  - Insecticides
    - Knockdown and residual sprays
    - Baits, fly traps
- Minimize interaction with insects
  - Sheltering of animals

Biosecurity and Routes

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<th>Possible Biosecurity Measures</th>
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<td>Aerosol</td>
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