

# Biosecurity

How to keep everyone safe from the invisible

**Sarah Gagnon**

B. Sc. Biology,

M. Sc. Veterinarian Public Health



# Why Biosecurity?

# Zoono-what?

According to the World Health Organization (WHO):

“A zoonosis is an infectious disease that has jumped from a non-human animal to humans. Zoonotic pathogens may be bacterial, viral or parasitic, or may involve unconventional agents and can spread to humans through direct contact or through food, water or the environment.”

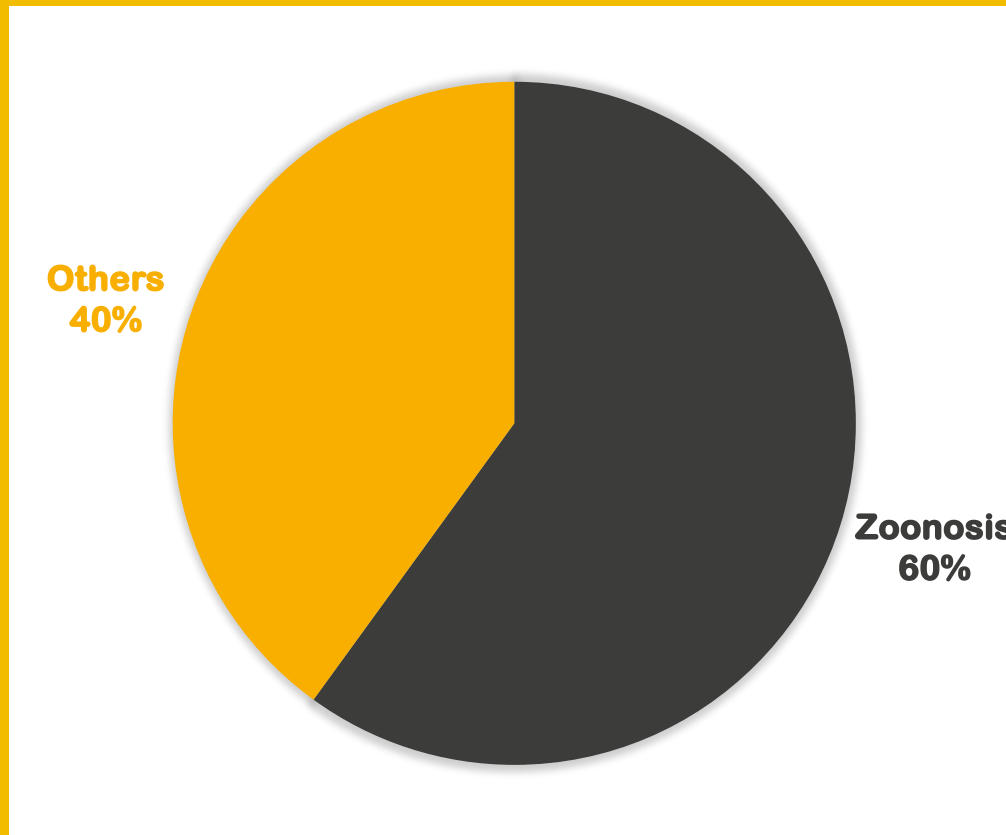


**World Health  
Organization**

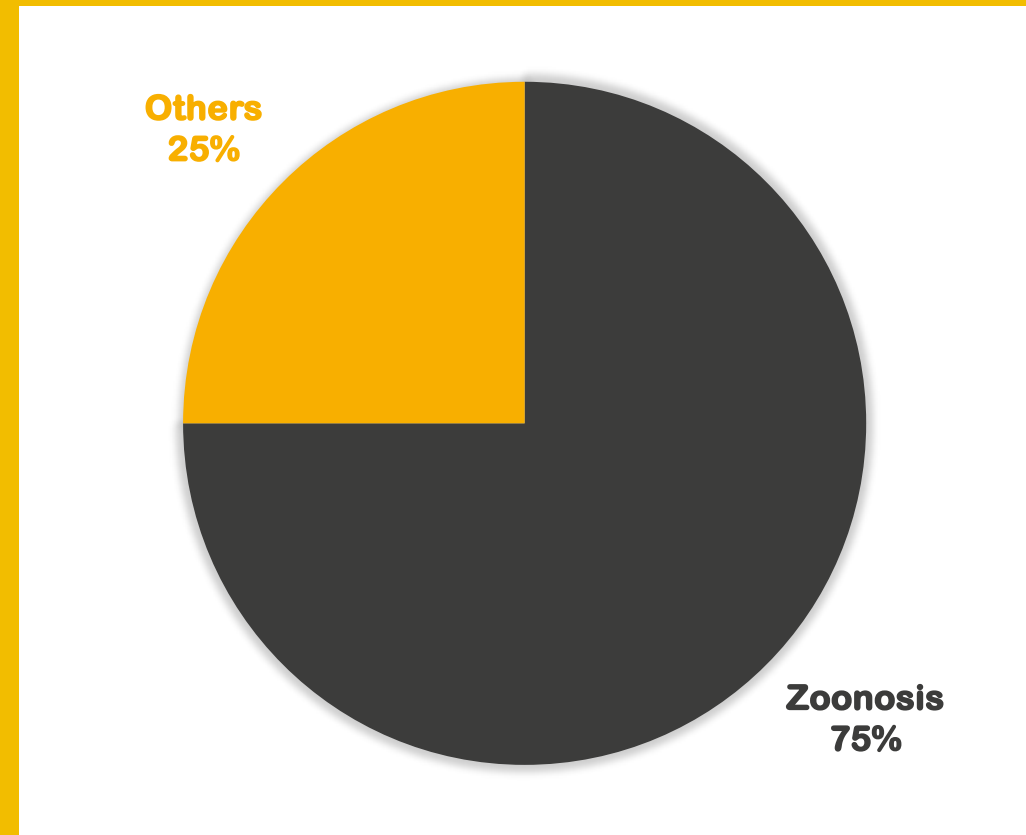
# Zoonosis



## Human infectious diseases



## Emerging Diseases



# Emerging

“An emerging infectious disease is one that has appeared and **affected a population for the first time**, or has existed previously but is **rapidly increasing**, either in terms of the number of new cases within a population, or its **spread to new geographical areas**. Also grouped under emerging infectious diseases are those that have affected a given area in the past, declined or were controlled, but **are again being reported in increasing numbers.**”



# Emerging

## Factors helping emerging diseases:

- Urbanization
- Destruction of natural habitats
- Climate change
- Change in population or reservoir host and intermediate insect vectors
- Microbial genetic mutation

**Difficult to predict and significant as humans have no natural immunity to these diseases**



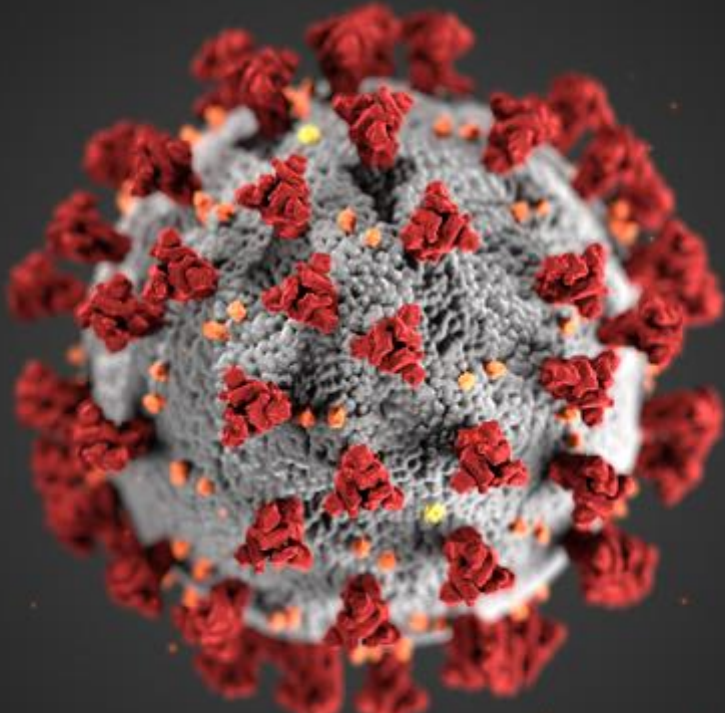
# Virus, Bacteria and Parasites



Not alive

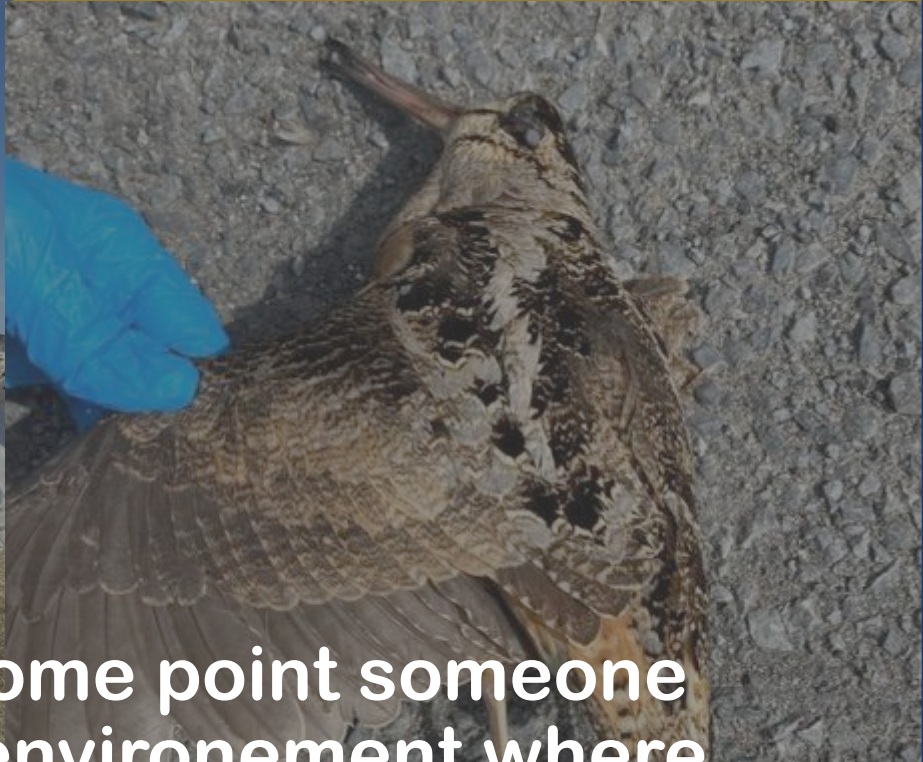
Unicellular

Uni or  
pluricellular

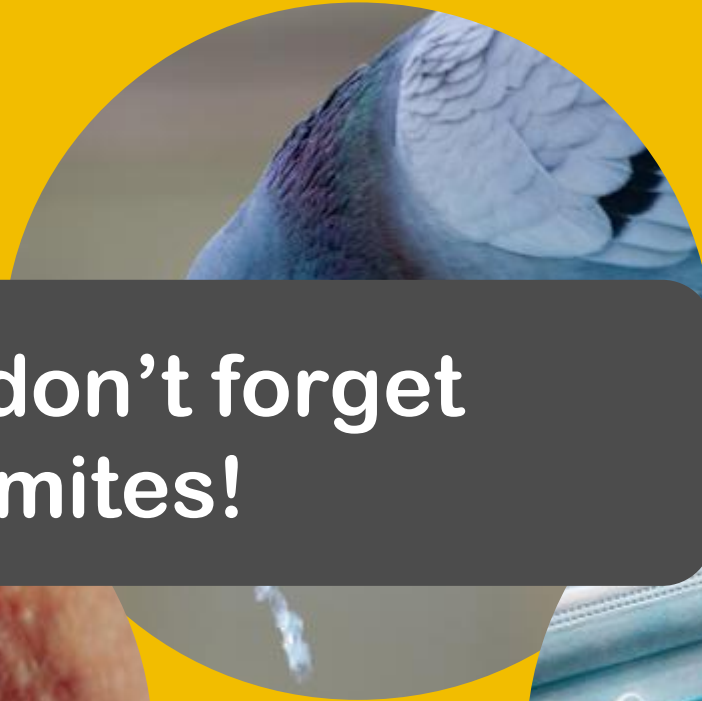


# A Risky Business

Wildlife management requires that at some point someone will be in contact with animals and the environment where they evolve.



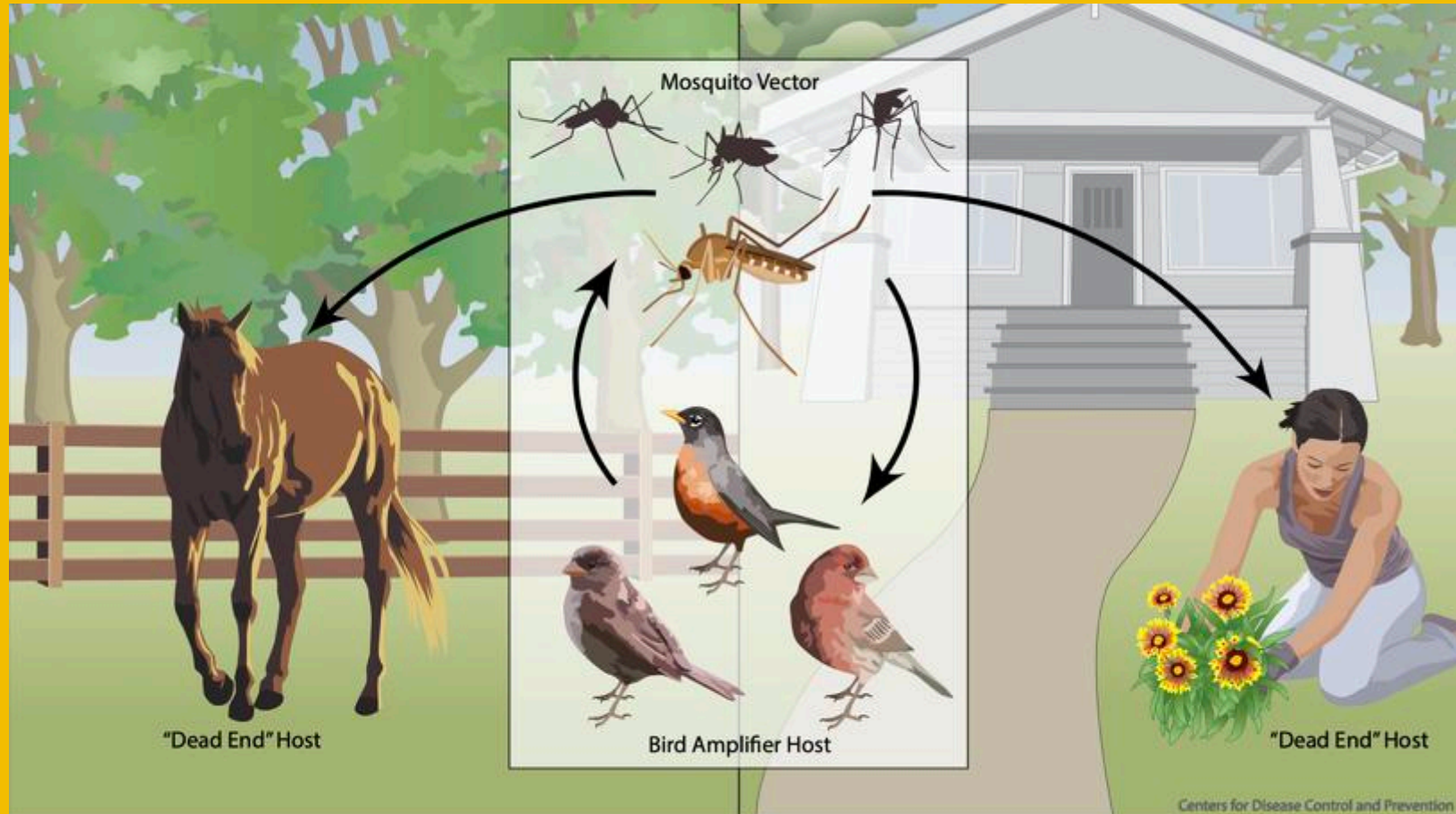
# Transmission Paths



... and don't forget fomites!



# Circling back to....





# What Can We Do to Mitigate Risk?



# Definition



**Biosecurity is the actions and methods that are taken to prevent diseases or infections from spreading from one person, animal or place to others.**

# Personal Protective Equipment

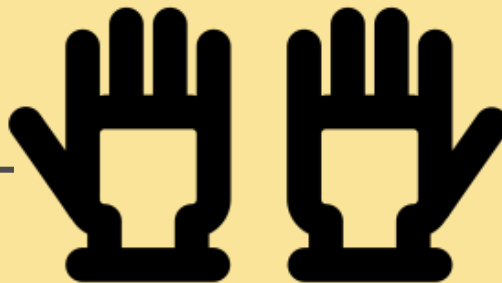
Safety glasses



Mask



Gloves



Cover boots



Coverall



# Cleaning and Disinfecting



# Safe Behaviours

- Limit handling time
- Avoid transporting wildlife inside vehicles and leave wildlife outside office space
- Double bag carcasses
- Place carcasses in a separate freezer
- Clean and disinfect every time wildlife is directly or not in contact with material, including vehicle floor



# Safe Behaviours



- Delimit “clean” and “contaminated” spaces
- Change shoes or wear shoes covers when moving from a “clean” space to a “contaminated” space



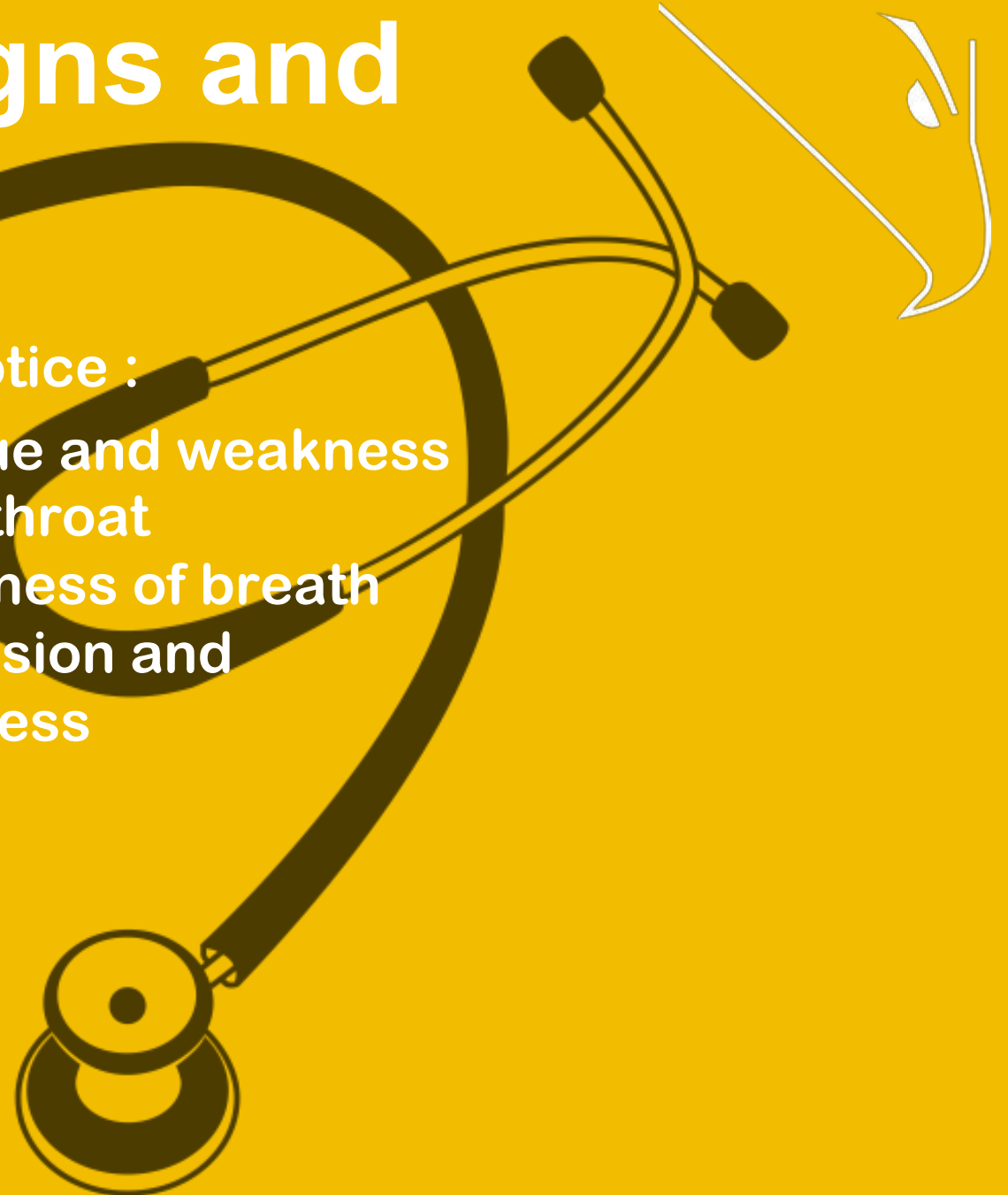
- Avoid touching your face when handling wildlife
- Limit the number of visitors and log their visit

# Being Aware of Signs and Symptoms

Common signs and symptoms to notice :

- Fever (sweats)
- Headache
- Body aches
- Stomach cramps, vomiting and diarrhea
- Rash
- Fatigue and weakness
- Sore throat
- Shortness of breath
- Confusion and dizziness

Let your health practitioner know that you are working outside and/or with wildlife.



# What should you do?



You are called to remove a bird carcass laying on the grass.



# What should you do?



1. **Wear proper PPE**
  1. **Gloves**
  2. **Mask**
  3. **Glasses**
  4. **Long clothing**
2. **Place the bird in a doubled plastic garbage bag**
3. **Transport it outside the vehicle (ideally)**
4. **Place it in a designated freezer**
5. **Clean and disinfect everything that was in contact with the bird**
  1. **Think about fomites!**

# What should you do?

A red fox is walking on the apron and looking sickly. You are asked to remove it from the airfield as it keeps coming back to areas where it poses a risk to aircraft.



# What should you do?



- 1. Wear proper PPE**
  - 1. Gloves**
  - 2. Mask**
  - 3. Glasses**
  - 4. Long clothing**
- 2. If the fox has been culled, place its carcass in a doubled plastic garbage bag**
- 3. Transport it outside the vehicle**
- 4. Place it in a designated freezer**
- 5. Clean and disinfect everything that was in contact with the fox**
  - 1. Think about fomites!**

# What should you do?

You are trapping and banding wild birds of prey from the airfield.



# What should you do?



- 1. Wear proper PPE**
  1. Gloves
  2. Mask
  3. Glasses
  4. Long clothing
- 2. Place the bird in a transportation cage/container**
- 3. Transport it outside the vehicle**
- 4. Keep the birds outside before and after banding**
- 5. Banding area should be away from other rooms where other birds can be kept**
- 6. Clean and disinfect everything that was in contact with the bird**
  1. Think about fomites!

# What should you do?



You are asked to clean accumulated feces in the corner of a hangar.



# What should you do?



- 1. Wear proper PPE**
  - 1. Gloves**
  - 2. Mask (N95)**
  - 3. Glasses**
  - 4. Long clothing**
- 2. Spray feces down with water to limit aerosols**
- 3. Remove with proper tools and place in a double bag**
- 4. Place bags directly in garbage bins**
- 5. Clean and disinfect everything that was in contact with the feces**
  - 1. Think about fomites!**

# What should you do?

Your task today involves walking in long grass.



# What should you do?



- 1. Wear proper PPE**
  1. Long clothing with socks over your pants
- 2. Remove your PPE**
- 3. Do a tick check**
- 4. Report if you got a tick**
  1. And see your health practitioner as soon as possible if the tick was biting you for more than 24 hours

# In Summary....

- Diseases are all around us but... Don't panic!
- Be mindful of what your hand touches and where you put your feet and equipment.
- Health and safety risk analysis is key at airports, even in the context of zoonosis.
  - Ask a professional to help you
- Biosecurity don't always have to be difficult to implement – little things can go a long way
  - Procedures and PPE are the key to protection

# In Summary...



# The floor is yours



**Sarah Gagnon**

B. Sc. Biology,  
M. Sc. Veterinarian Public Health  
[sarah@falconenvironmental.com](mailto:sarah@falconenvironmental.com)



# FALCON

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