

# One Health & Infection Prevention and Control (IPAC) in Healthcare

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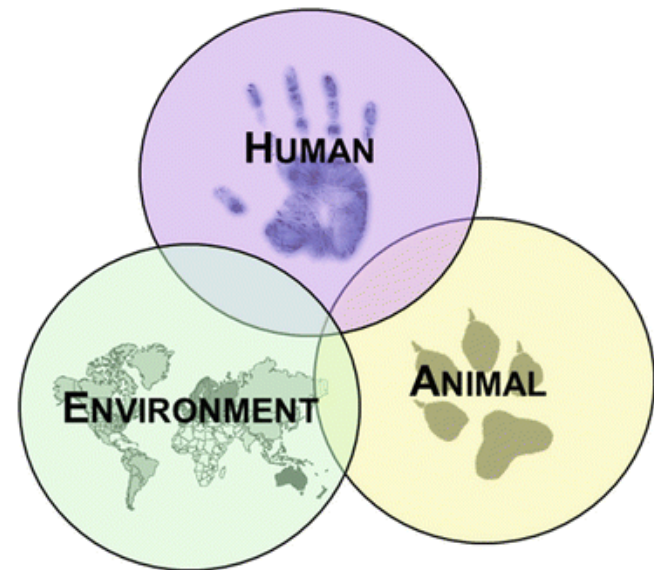
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11 April, 2018

IPAC Canada – Central South Ontario (CSO) Education Day

# Overview

- What is One Health?
- Zoonotic infections
- One Health & IPAC in healthcare
- One Health & PHO



# What is “One Health”?

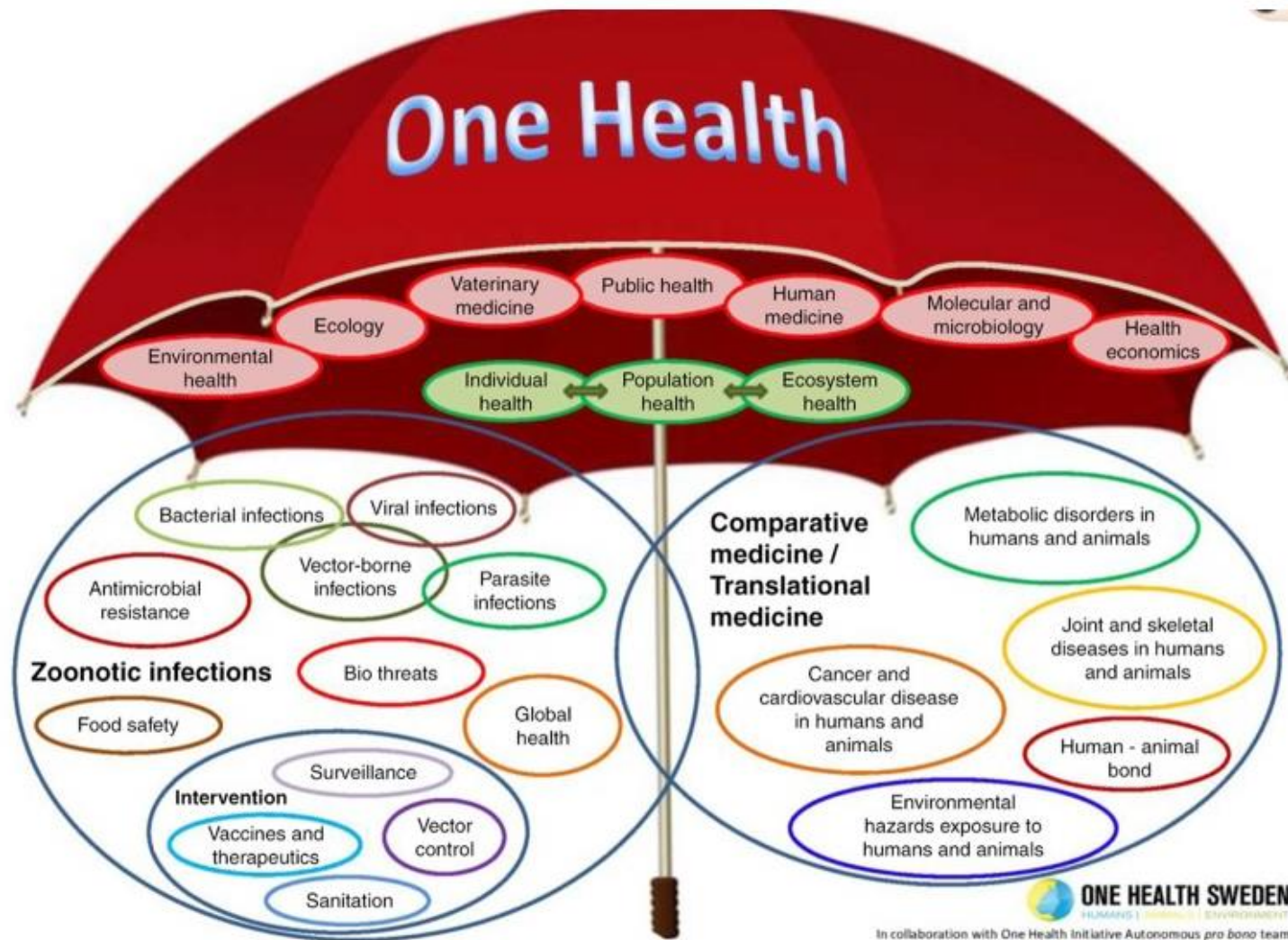


Image credit: One Health Initiative

# Zoonotic infections

- What are zoonoses?
- Some diseases of public health significance
  - *Campylobacter* enteritis
  - Cryptosporidiosis
  - *Echinococcus multilocularis* infection\*
  - Giardiasis
  - Lyme Disease
  - Psittacosis/Ornithosis
  - Q Fever
  - Rabies
  - Salmonellosis
  - Verotoxin-producing *E.coli* infection
  - West Nile Virus illness



# Emerging and Reemerging infections - 70% vector-borne or zoonotic



Image credit: One Health Initiative

# One Health & IPAC in Healthcare



# One Health & IPAC in Healthcare

- Service animals
- Therapy animals
- Pets
- Backyard Poultry
- Petting zoos



*Image Credit: Pixcove*

# Animals in Healthcare

- Zoonoses
- Environmental contamination
- Antimicrobial resistance



*Image Credit: Blend\Bureaux; Canadian Seniors Directory; Temecula Valley's Best*



# Antimicrobial Stewardship

- Antibiotic use in animals
  - Treatment
  - Non-treatment usage:
    - Growth promoters
    - Sub-therapeutic use
- Formal antimicrobial stewardship programs (ASPs) in veterinary clinics are rare
  - Frequently prescribe clinically important antibiotics to humans



# Zoonoses in Our Pets



# Methicillin Resistant *Staphylococcus aureus* (MRSA)

- MRSA is a significant concern in healthcare settings
- The role pets play as a reservoir of antimicrobial resistant organisms is poorly understood
- Veterinarians and veterinary technicians are colonized with MRSA at a higher rate than the general public Verkade et al, 2013

al, 2013



# *Clostridioides (Clostridium) difficile* in Dogs

- Most common cause of antibiotic-associated diarrhea
  - Common cause of outbreaks in hospitals
- Causes infections and colonizations in pets
  - Up to 10% of healthy dogs<sup>Weese et al.2010</sup>
  - Up to 40% of dogs and cats in veterinary clinics<sup>Riley et al. 1991</sup>



*Image Credit: Devon Metcalf*

# Therapy Animals in Hospitals

- A cat has been implicated in transmission of MRSA to patients on a geriatric rehab unit Scott et al. 1988
- Dogs that visited human hospitals are 4.7 times more likely to carry MRSA and 2.4 times more likely to carry *C. difficile* than dogs who don't Lefebvre et al, 2009
  - Increased risk if dogs were allowed to lick patients or accept treats
- Therapy dogs may spread MRSA to patients Stobbe, 2018

# Environmental Contamination

- Urine and feces on carpet
- Widespread contamination
  - Mobility devices
- What level of disinfection to use?
- Who is responsible?



*Image Credit: Mandegar; Habitat for Horses*

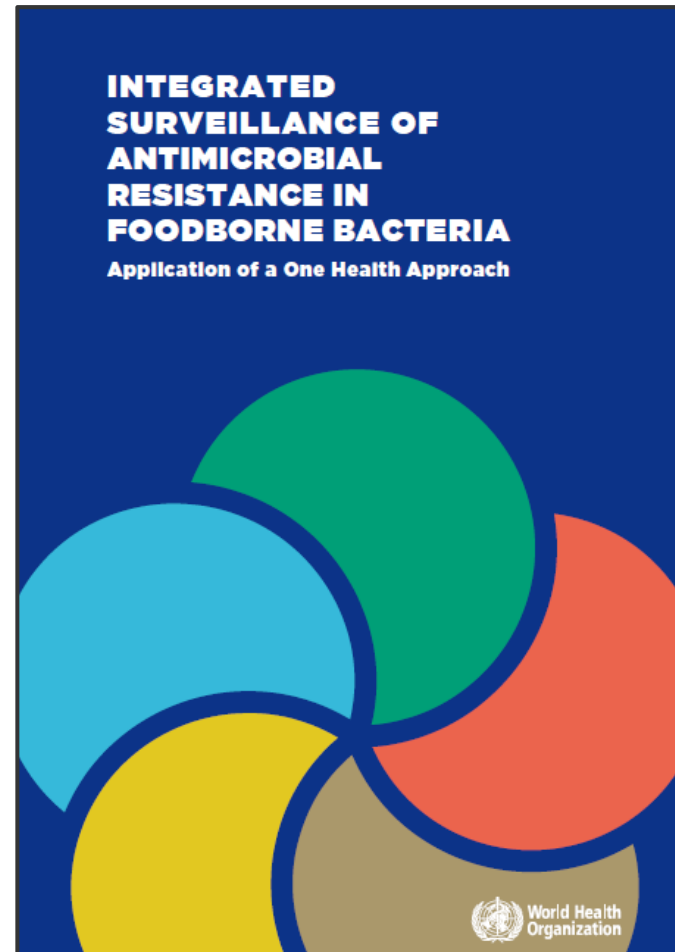
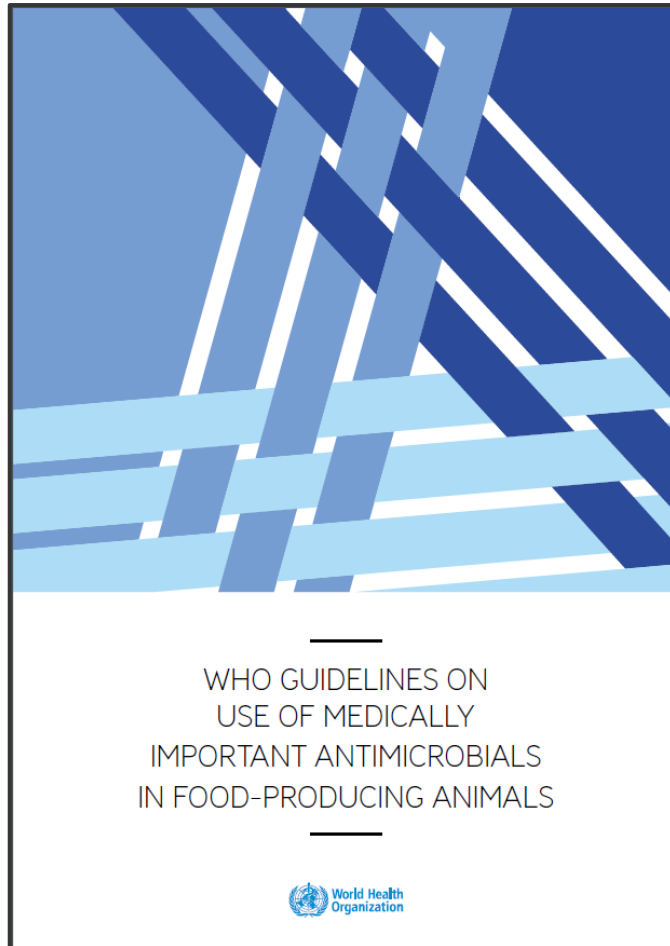
# One Health Approach in Healthcare

- Consider sources of infection
- Up to date vaccination
- Exclusion policies – no ill, dangerous, birthing animals
- IPAC considerations
  - Hand hygiene
  - Environmental cleaning
  - Engineering controls
  - Administrative controls



*Image Credit: Pixcove*

# One Health Resources





# Worms & Germs Blog

PROMOTING SAFE PET OWNERSHIP

RESOURCES – PETS

RESOURCES – HORSES

CONTACT

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CHANGING LIVES  
IMPROVING LIFE



## Update: Canine influenza, Ontario (October 30)

BY [SCOTT WEESE](#) ON OCTOBER 30, 2018  
POSTED IN [DOGS](#)

Things have been quiet over the past few days. That's good news (but always makes me a bit antsy, because I want to be sure it's because there are no new cases vs we're just not finding them). Documented infections have been confined to one region, with the exception of a dog that travelled out of the area, and which is (hopefully) being kept under quarantine for 28 days at its new location. We're still testing and getting negative results, and veterinarians in the area



### ABOUT THIS BLOG

Worms & Germs Blog is an educational website coordinated by Drs. Scott Weese and Maureen Anderson of the Ontario Veterinary College's Centre for Public Health and Zoonoses. The site was initially set up with the help of funding from City... [Read More](#)



### TOPICS

[Animals](#)

# What dog owners need to know about brucellosis after recent cases in Ontario

Infection can be spread to humans but you don't get it from 'quick, casual contact'

Kate Bueckert · CBC News · Posted: Mar 12, 2019 6:00 AM ET | Last Updated: March 12



There's been an increase in cases of brucellosis in dogs in Ontario. Researchers say if you're buying a puppy, it's best to know the dog's background and if you don't, to have the dog tested. (Netflix)

*Image Credit: CBC*

## What is PHO doing?

- Facilitating a One Health community of practice
- Research collaborations
- Internal and external education/awareness
- Provided IPAC input on IPAC documents
  - Infection Prevention and Control Best Practices for Small Animal Veterinary Clinics
  - IPAC Canada position statement – ‘Antimicrobial Resistance Related to Animal Husbandry and Veterinary Medicine’

# Questions?