


Sound BITE on Rabies in Ontario

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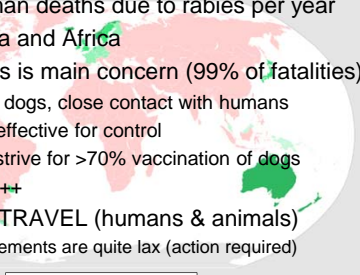


RABIES DISTRIBUTION & SPREAD

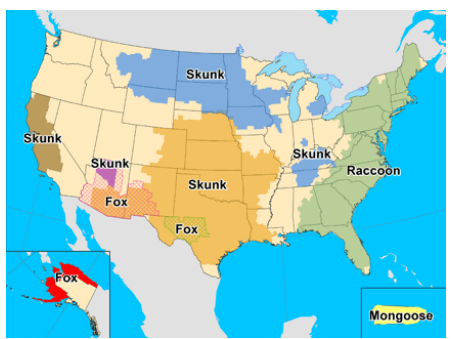
With emphasis on Ontario

Rabies Around the World

- >30 000 human deaths due to rabies per year
- Mostly in Asia and Africa
- Canine rabies is main concern (99% of fatalities)
 - Feral / stray dogs, close contact with humans
 - Culling is ineffective for control
 - If possible, strive for >70% vaccination of dogs
 - Education +++
- Be aware of TRAVEL (humans & animals)
 - Import requirements are quite lax (action required)

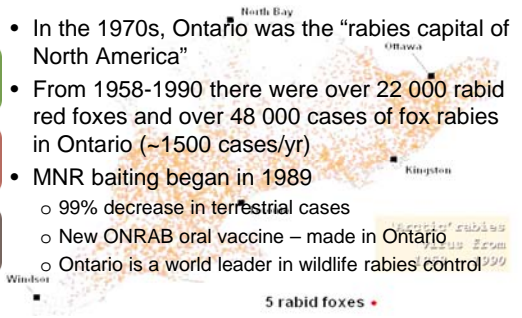

Rabies-free countries 2010

Rabies strains across USA (CDC 2009)




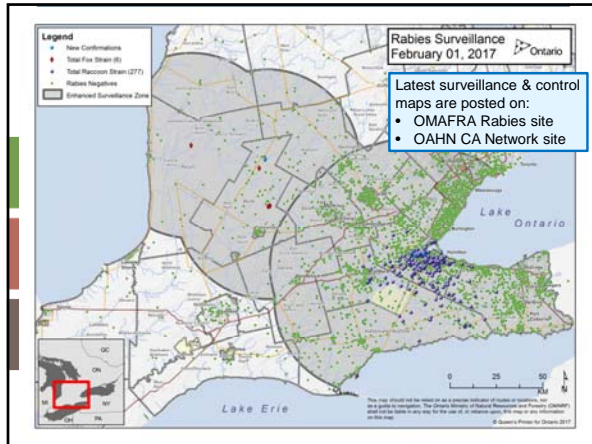
Rabies in Ontario 1958-1990

- In the 1970s, Ontario was the “rabies capital of North America”
- From 1958-1990 there were over 22 000 rabid red foxes and over 48 000 cases of fox rabies in Ontario (~1500 cases/yr)
- MNR baiting began in 1989
 - 99% decrease in terrestrial cases
 - New ONRAB oral vaccine – made in Ontario
 - Ontario is a world leader in wildlife rabies control


5 rabid foxes

Rabies in Ontario - NOW





Current stats on the "Hamilton Invasion"

- Over 4800 surveillance samples tested
- 5 health units affected
- 187 positive raccoons, 85 positive skunks, 1 red fox, 2 stray cats, 1 llama (278 cases total)
- ~1.7 million oral rabies vaccine (ORV) baits dropped from Dec 2015- Oct 2016
- Expect at least 5 years to eradicate
- How did it get here?



RABIES MANAGEMENT

In Ontario, post-Canadian Food Inspection Agency (April 2014)

Rabies in Ontario - Who Ya Gonna Call?

- Human exposure → Local Public Health
- Domestic animal exposure → Local vet
 - Vets seeking assistance
 - Case requiring testing
 - Case requiring confinement
 } → OMAFRA
- Abnormal wild animal (dead) → MNRF
 - *If alive*, contact local animal/pest control
 - For freshly dead bats, contact CWHC



Rabies & Veterinarians

- Veterinarians are well positioned to respond to potential rabies exposure in domestic animals
- Animal owners and other members of the public look to private veterinarians for information about rabies and how to manage the risks, especially to their own animals
 - Veterinary role in supporting public health
 - Rabies is primarily a public health concern
- **OMAFRA vets are available to support private vets**


Vets Need to Know: Basic Rabies Risk Assessment

- Exposure (category 2+)
- Reservoir species vs other
- Local epidemiology
 - Raccoons along the border
 - Foxes / skunks up north
 - Bats anywhere
- Offending animal behaviour
 - Normal vs abnormal
 - Circumstances of event
 - Provoked?
 - Previously injured?
 - Sick? (DDx: CDV, Baylisascaris...)



Any rabies virus can infect any mammal, but...

- Major reservoir species in Ontario:
 - Bats
 - (previously) >95% of positive animals
 - Only 3-5% of bats tested are positive
 - Foxes and skunks
 - Typically infected with fox / arctic fox strain
 - Incursions from northern regions
 - Raccoons
 - Seem to be less susceptible to fox strain
 - Incursions of raccoon strain across US border
- Coyotes*, groundhogs, muskrats, beavers, possums...
- Squirrels, rats, mice, chipmunks, rabbits, pocket pets...



"Abnormal behaviour" in wildlife


- Nocturnal animals
 - Will come out during the day if disturbed!
 - Seeking food in spring (after hibernating)
- Naturally aggressive
 - Muskrats, groundhogs
 - Beavers
 - Injured, protecting nest
- Raccoons - *bold*



D. Gordon E. Robertson

Post-Exposure Management - Animals: Test / Observation / Confinement (PCP)

- Test if animal / sample available
- Observation / confinement
 - Updated "rules" from CFIA
 - Typically voluntary
 - Enforced if necessary
- Length depends on vaccination status
 - ALL* potentially exposed animals should receive a **booster within 7 days** regardless of vacc status
 - 40 days to 6 months



PARANOIA

Post-Exposure Management - Animals: Test / Observation / Confinement (PCP)

10-day observation periods are for a pet that has bitten a person, **NOT** for an animal that has been exposed to a potentially rabies carrier.


RABIES PREVENTION

It's all about communication!




How to Prevent Rabies

- Avoid exposure
 - Direct contact with saliva
 - Not airborne, does not survive in environment
 - EDUCATE THE PUBLIC
 - Problems with Disney...
- Vaccinate animals
 - Domestic animal bridge from wildlife to humans
 - Highest contact = dogs & cats
 - (Vaccinating wildlife)



Ontario Animal Health Network

- Important communication role
- Maps / case updates
 - Sent out on social media
 - Posted on website
 - Quarterly companion animal vet report
- Share info between multiple species networks
 - Companion animal
 - Bovine
 - Equine
 - Small ruminant

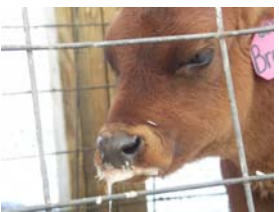


www.oahn.ca

Rabies Vaccination Requirement


Ontario HPPA:
Regulation 567

- **ALL** dogs and cats > 3 months of age (31 of 36 health units)
 - Licensed or not
 - Indoor or outdoor
- Horses, cattle and sheep in contact with non-caretakers (7 of 36 health units)



Rabies Vaccination – When?

- **DO Vaccinate**
 - ASAP following potential exposure
 - Boost immunity before virus spreads
 - Same concept as human PEP
- **Do NOT Vaccinate**
 - Within 10 (or 14) days of a bite or scratch – public health observation period
 - Also do not euthanize unless on humane grounds
 - If animal is at greater risk – case-by-case evaluation



<http://www.omafra.gov.on.ca/english/food/inspection/ahw/rabies.htm>

Rabies Response in Ontario

Remain vigilant!

- Avoid exposure
- Vaccinate (on time!)
- Educate self & others
- Support public health



Thank you!
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