Ontario's Wildlife Rabies Control Program

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Fox Strain Rabies

Dispersion of 'Arctic' Variant of rabies into southern Canada

1958 Rabies firmly established in foxes and skunks in southern Ontario

Southern Ontario Rabies Enzootic 1957 - 1987

• 1 Rabid Fox
Rabies Cases

1989

1995

2006

Raccoon Strain Rabies

Terrestrial Rabies Cases
January to December 2013

No cases of rabies in terrestrial mammals in southern Ontario in 2013.

Legend
- Cat (1)
- Dog (1, bat strain)
- Skunk (1)

Raccoon Strain Rabies
The danger for Ontario

Raccoons in Ontario
- Raccoons are one of the most successful furbearers in N.A.
- High affinity for human habitat
- Some cities >100 raccoons/km²
- Ontario population ~ 1 million
- PEP is over $2,000

How to protect Ontario?
- Create proactive strategies
- Build protective barriers to the spread
- Have an emergency response plan if the disease does enter Ontario
- Restrict the movement of RVS species
- More research
**Raccoon Strain Cases in Ontario**

- After six years of control efforts, the last known case of raccoon strain rabies in Ontario was in 2005 (until December 2015...)

- All together, Ontario had **132 cases** between 1999-2005

- Ontario was considered raccoon strain rabies free

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**Legend**

- Raccoon rabies cases
- Raccoon
- Skunk

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**Trap-Vaccinate-Release**

1) Animals lived trapped
2) Vaccinated for rabies
3) Ear tagged
4) Released at capture site
Fast forward to December 2015...

Translocation

Dec 4th, 2015

Dec 7th
Rapid response baiting took place in December 2015. Baited by airplane, helicopter and hand. Over 220,000 baits were distributed between Dec 7 and Dec 23.

ONRAB oral rabies vaccine

- Very good vaccination results for all 3 major vector species
- First ever field trial in August/September 2006
- Delivered in a smaller bait (Ultra-light)
- Ontario, Quebec, New Brunswick, New York, West Virginia, Ohio
Where are we now?

- 203 raccoon rabies strain confirmations
  - Hamilton 173, Haldimand 16, Brant 8, Niagara 6
  - 141 raccoon, 60 skunk, 1 cat, 1 fox
  - Over 4,000 animals tested for rabies

- 220k baits in Dec, 630k baits in spring
- Over 1.5M baits distributed so far this year
- Total 1.7M baits to be distributed in 2016
- Several ongoing research projects
Surveillance

• Importance of partners for sample collection and testing (Health Units, OMAFRA, CFIA, animal control services, OSPCA, local contacts all important)

E. Ont Fall Aerial Baiting

Aug 28, 2016
18,650 baits distributed by fixed wing aircraft

S. Ont Fall Aerial Baiting

Urban Ground Baiting

Summer 2016 ORV

CWMIF Wildlife Rabies
Hand Baiting Areas Completed to Date
September 28, 2016
**DRIT diagnosis**

- Negative brain touch impression
- Positive reaction (detection of rabies virus nucleoprotein)

**Confirmation testing at CFIA**

- **FAT test** (Florescence Antibody Test), by CFIA in Nepean Ontario

**Future plans**

- Monitoring
- Vaccination campaigns
- Assessment/research
- Adaptation
- 3-5 year process

**Urban Bait Distribution**
Rural Bait Distribution

**Differences**

**Brockville 1999-2005**
- Low intensity
- Rural
- Raccoons
- TVR and PIC
- Low surveillance

**Hamilton 2015-?**
- High intensity
- Urban
- Raccoons and skunks
- ONRAB
- High surveillance

**Raccoons**
- 98%

**Skunks**
- 2%

**1999-2005**
- Raccoons 69%
- Skunks 31%

**2015-2016**
- Hamilton
  - 1283 animals tested
  - 173 positives
  - 85% of all cases
  - 31% of positive animals - "Found Dead"
  - 10% of positive animals - "Roadkill"
  - 46% of positive animals - "Strange Behaviour or Sick" animals
  - 14% of all animals tested are positive

Average 53 people/km²
Average 339 people/km²