

Domestic Animals: Biting and Being Bitten



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**Michigan Rabies
Conference**
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Michigan Department of Agriculture's (MDA) role

- Prevent and control rabies in Michigan through vaccination.
- Investigate positive rabies cases.
- Provide guidance regarding animal-animal bites and animal-human bites.
- Provide guidance regarding vaccinating against rabies.
- Provide public and professional education on rabies.

Legal Authorities

- Animal Industry Act
 - Act No. 466, PA 1988, as amended
- Dog Law
 - Act No. 339, PA 1939, as amended
- Ferret Law
 - Act No. 358, PA 1994



Rabies Prevention in Domestic Animals: Vaccination

- MDA requires ferrets 12 weeks of age and older and dogs 4 months of age or older to be vaccinated against rabies.
- MDA requires dogs and ferrets being imported into Michigan to be vaccinated against rabies.
- MDA strongly advises vaccinating other animals for which there is an approved rabies vaccine.
- Currently, there is an approved rabies vaccine for cats, horses, cattle, sheep, as well as dogs and ferrets.

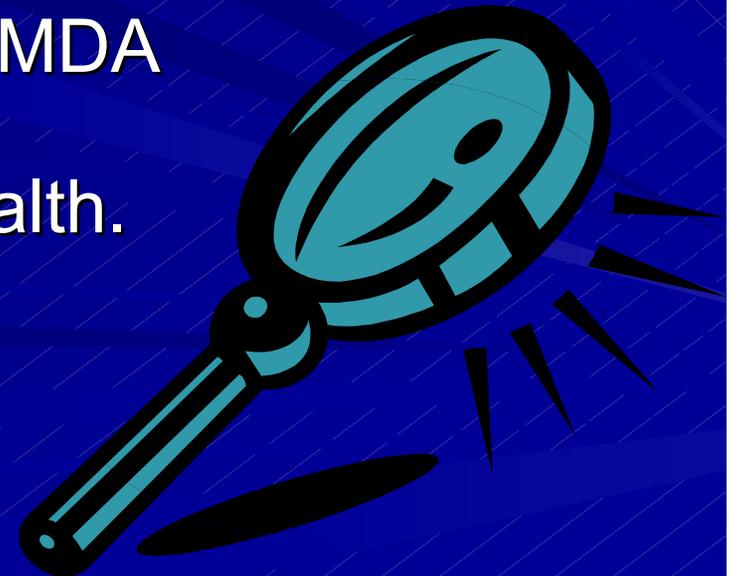


Rabies is a reportable
disease.



Investigate positive rabies cases

- MDA must be contacted when there is a confirmed positive case of rabies.
- Rabies testing is typically conducted by Michigan Department of Community Health.
- Rabies is typically reported to MDA by veterinarians or Michigan Department of Community Health.



Investigate positive rabies cases

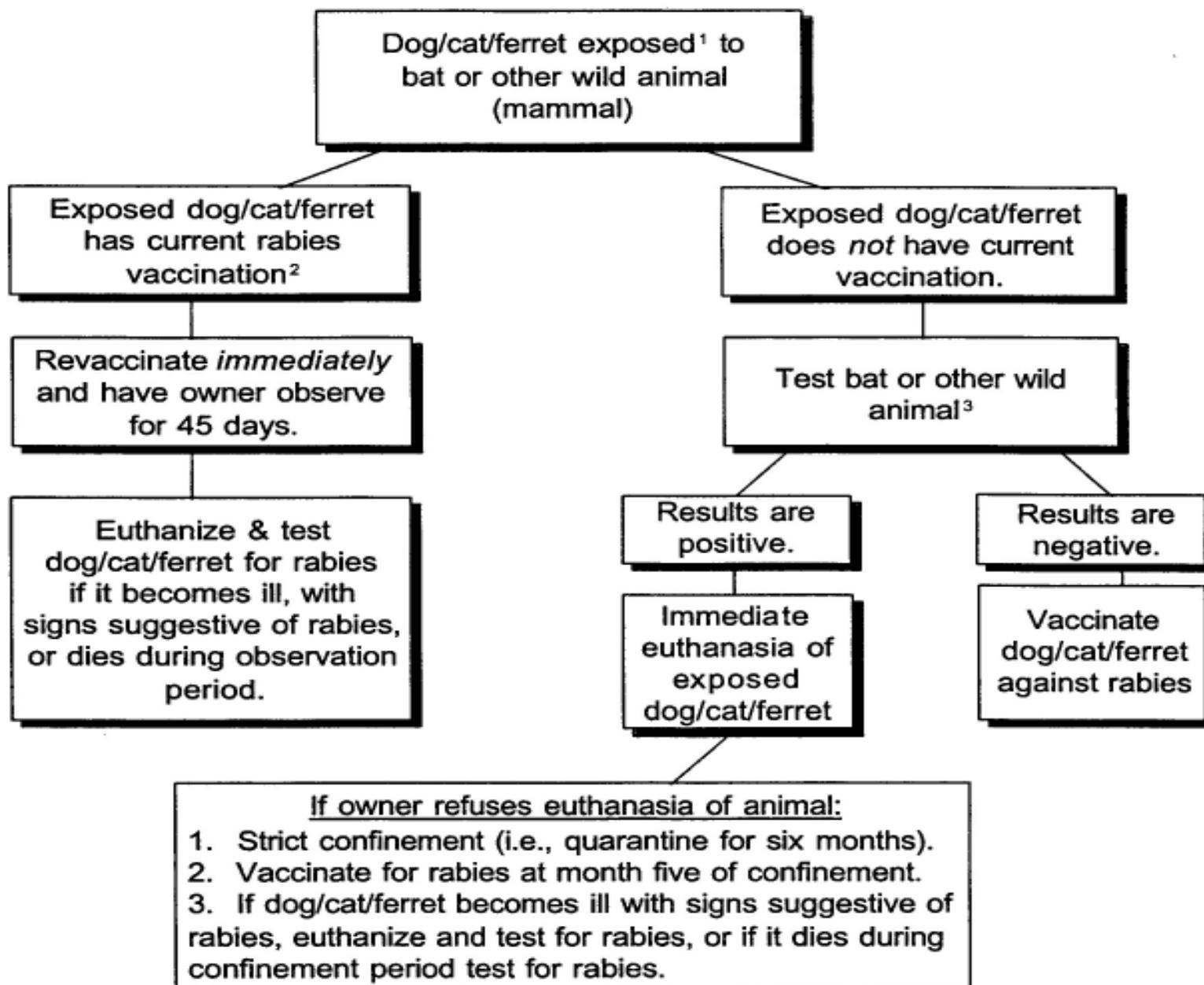
- Exposure is defined as “exposure to saliva, blood, or other bodily fluids through wounds, broken skin, or mucous membranes.”
- MDA assesses animal exposure.



Investigate positive rabies cases

- MDA determines appropriate action to be taken with regards to exposed animals.
- MDA utilizes the NASPHV Compendium of Animal Rabies Prevention and Control, as a guide in determining appropriate action.

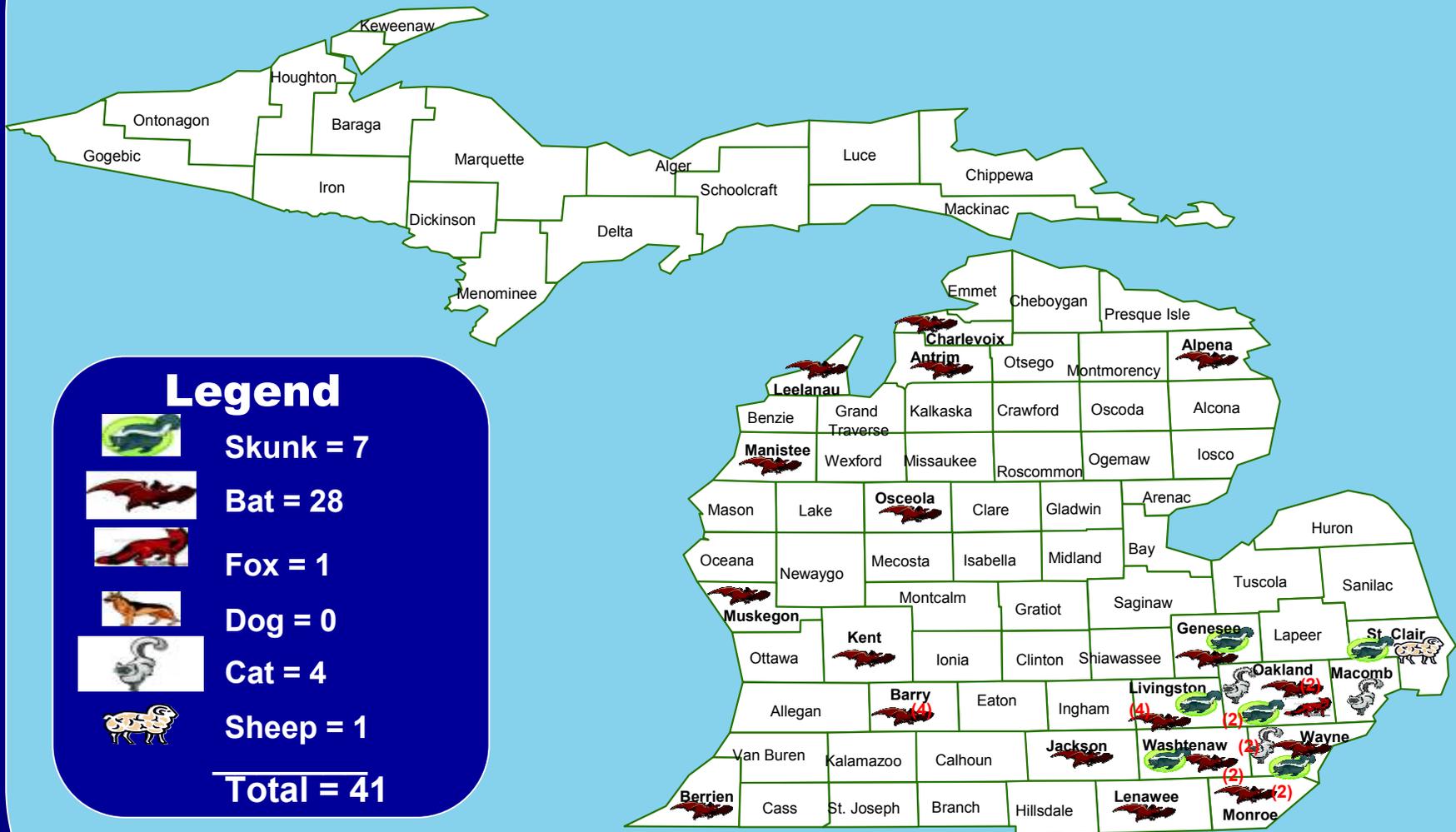
PROTOCOL FOR DOGS, CATS & FERRETS POSSIBLY EXPOSED TO RABIES



Investigate positive rabies cases

■ Quarantine goals:

- Prevent further exposure to animals and people
 - Vaccinate all at risk animals
 - Restrict the movement of exposed animals
 - Minimize human and animal contact to exposed animals
- Monitor for signs of disease in exposed animals



Legend

-  Skunk = 7
-  Bat = 28
-  Fox = 1
-  Dog = 0
-  Cat = 4
-  Sheep = 1

Total = 41

In 2004, 36 bats, 2 skunks, 1 dog, and 1 fox tested positive for rabies.



**Wildlife
Disease
Laboratory**

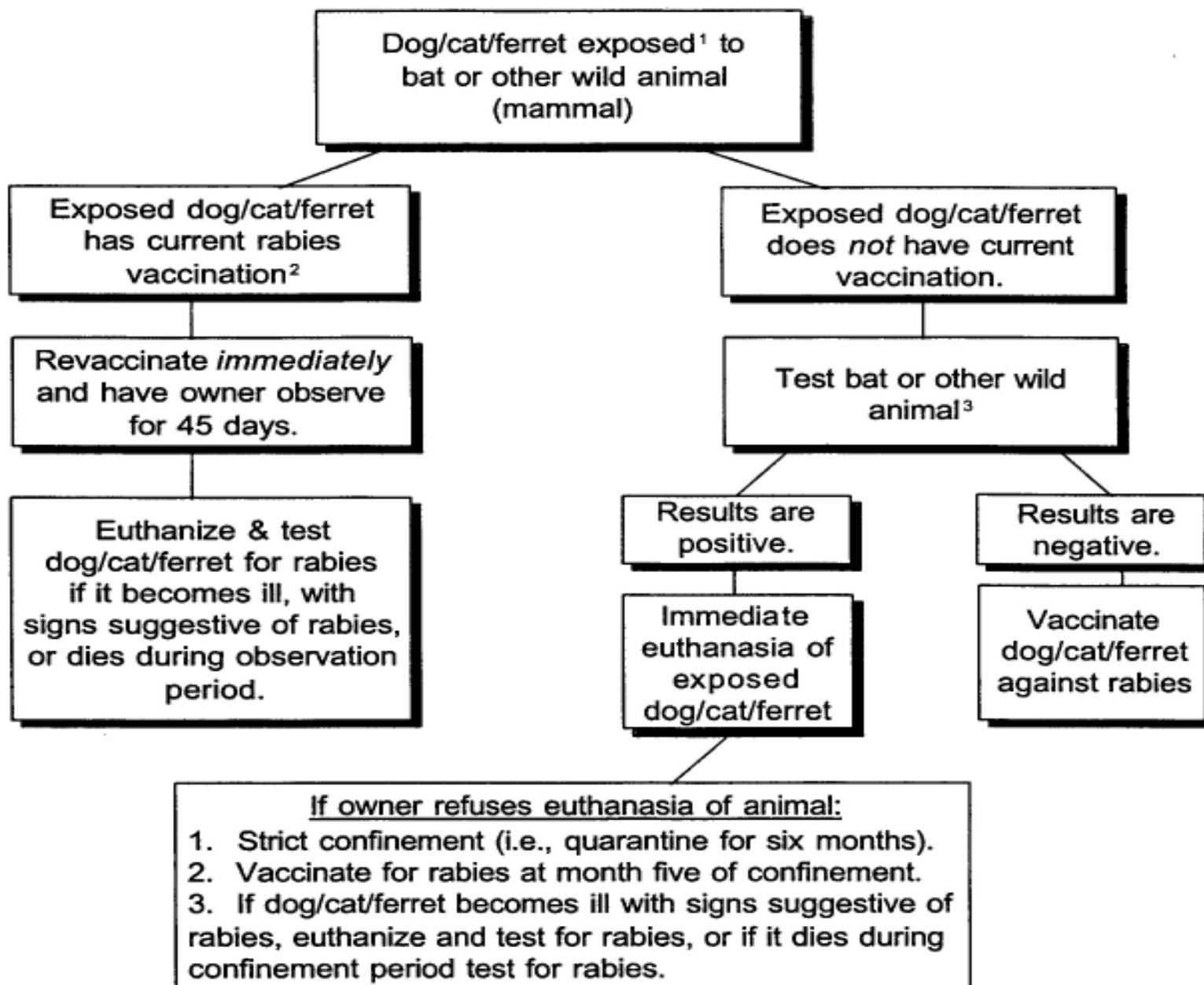


Provide guidance regarding animal-animal bites

- MDA receives calls from animal control, veterinarians/veterinary staff, and the public regarding the proper protocol for animal-animal bites.



PROTOCOL FOR DOGS, CATS & FERRETS POSSIBLY EXPOSED TO RABIES



Animals not likely to carry rabies

- Chipmunk
- Gerbil
- Gopher
- Guinea Pig
- Hamster
- Mole
- Mouse



- Muskrat
- Prairie Dog
- Rabbit
- Rat
- Shrew
- Squirrel
- Vole

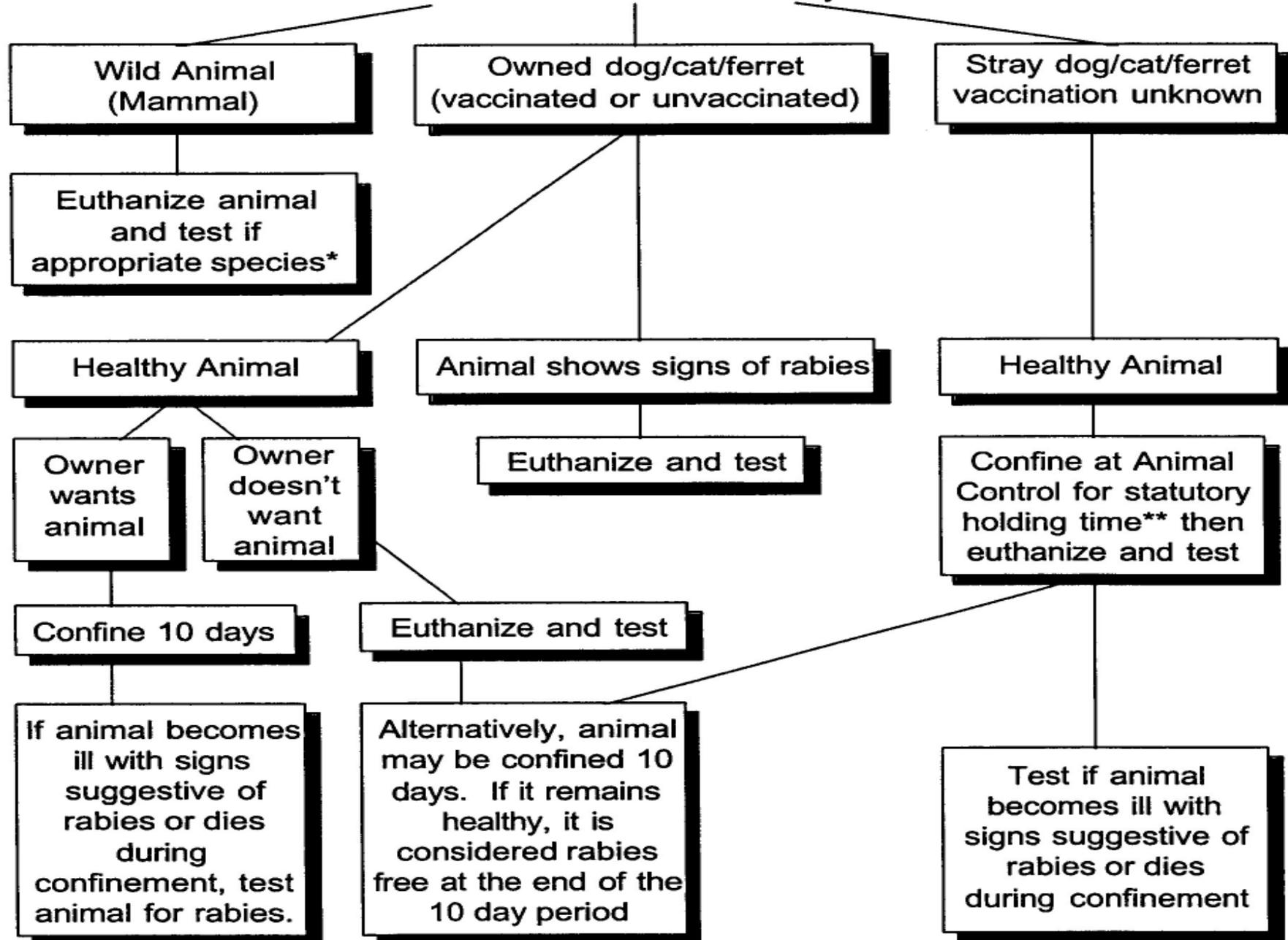
Provide guidance regarding animal-human bites

- MDA receives calls from animal control, veterinarians, veterinary staff, and the public regarding the proper protocol for handling animals that bite humans.



RABIES PROTOCOL FOR MAMMALS THAT HAVE BITTEN PEOPLE

Person Bitten or Scratched by:



Bites inflicted to people by farm animals are evaluated on a case by case basis.



Provide guidance regarding vaccination against rabies

- We answer questions from veterinarians, animal control officers, and the public regarding vaccination against rabies.



Who can legally vaccinate against rabies?

- For dogs, rabies must be given by a licensed, accredited veterinarian.
- For other animals, rabies vaccine must be administered by or under the direct supervision of a licensed veterinarian.
- Exception – livestock owners may vaccinate their own livestock.



Case Studies



Case One



History

- On January 16, 2006, an Australian Shepherd breeder observed a skunk in an outside dog kennel.
- There were also four dogs in the kennel at the same time as the skunk.
- The dogs were attempting to play with the skunk.
- The dog breeder noted that the skunk was “acting strangely.”

History

- Two of the four dogs were current for rabies vaccination.
- One of the four dogs had never been vaccinated against rabies.
- One of the four dogs was overdue for rabies vaccination.
- The breeder observed that the dog overdue for rabies vaccination had a wound on its head after contact with the skunk.

History

- The dog breeder submitted the skunk to Michigan Department of Community Health for rabies testing.
- The dog breeder took the two dogs that were not current on rabies vaccination to the veterinarian where they were vaccinated against rabies.

The skunk tested positive for rabies
by fluorescent antibody
examination. (MDCH Laboratory)

Health Department

- The family was informed that the skunk tested positive for rabies.
- Family and veterinary staff at hospital advised to undergo post-exposure prophylaxis for rabies.

Michigan Department of Agriculture (MDA)

- MDA advised breeder and breeder's veterinarian to revaccinate the two dogs current on rabies vaccination exposed to the skunk.
- These two dogs were isolated and observed for 45 days for any signs of illness.

Michigan Department of Agriculture (MDA)

- Euthanasia was advised for the two dogs without a current rabies vaccination at the time of exposure to the skunk.
- The owners refused euthanasia.
- A 6 month quarantine was placed by MDA on these two dogs.

Conditions of Quarantine

- The two dogs must be isolated from all other animals.
- The dogs must be isolated from all other people. Only the caregiver is allowed contact with the dogs.
- The dogs must be housed in a secure room inside the home or a kennel with a perimeter fence.

Conditions of Quarantine

- The dogs can only be allowed outside on a leash controlled by the caregiver. There can be no animals or people in the area.
- The dogs must be examined by a veterinarian should any signs of illness develop.

Conditions of Quarantine

- At the end of the 6 months, the dogs must have a veterinary exam to release them from the quarantine.

Quarantine Protocol

- Quarantine placed by a state veterinarian.
- The dogs were visited by the state veterinarian with decreasing frequency (weekly for four weeks, then every other week for two months, then monthly thereafter.)

Outcome

- The breeder followed all instructions.
- To date, all dogs and people in the household are healthy.



Case Two



History

- On February 7, 2006, an owner noted that one of her horses, a 20 year old Thoroughbred mare, was acting unusually aggressive.
- The horse was housed in a pasture with six other horses, none of which had ever been vaccinated against rabies.
- The horse was violently charging trees as well as the owner's son.

History

- During this charging, the horse got caught in a fence, and bit the owner who was attempting to free the horse.
- In addition, the horse bit one of the horses housed in the pasture.
- The horse broke through one of the fence walls of the pasture, where it collapsed, thrashed, and soon died.

History

- The owner went to the hospital to have her bite treated. She was also given post-exposure prophylaxis for rabies.
- The owner contacted her veterinarian who advised sending the horse to the Diagnostic Center for Population and Animal Health for a necropsy.

The horse was diagnosed positive for rabies by fluorescent antibody examination. (MDHC Laboratory)

Michigan Department of Agriculture (MDA)

- It is rare to have more than one rabid animal in a herd or herbivore-to-herbivore transmission.
- MDA discussed with the owner euthanasia of the six horses exposed to the rabid horse.
- The owner agreed to euthanize the horse that had actually been bitten by the rabid horse.

Michigan Department of Agriculture (MDA)

- A 6 month quarantine was placed on the other five horses exposed to the rabid horse.
- In addition, all animals on the farm, including the exposed horses, were vaccinated against rabies, provided there was an approved vaccine.

Conditions of Quarantine

- No medical treatments (vaccination, surgeries, or medications) without approval from MDA.
- The horses are to not have contact with any other horses.
- The quarantined horses must be quarantined to the paddock. They are not to leave the farm.

Conditions of Quarantine

- Only the owner/caregiver (Limit to 1-2 people) are to have contact with the horses.
- The horses are to be observed daily for any signs of illness. The horses must be examined by a veterinarian should any signs of illness develop.

Conditions of Quarantine

- An exam by a veterinarian is required at the end of the quarantine to release the horses from the quarantine.

Quarantine Protocol

- Quarantine placed by a state veterinarian.
- The horses then visited by an animal control officer with decreasing frequency (weekly for four weeks, then every other week for two months, then monthly thereafter.)
- Animal control officer reported findings from each visit to MDA.

Outcome

- All animals and people on the farm are healthy.
- All animals on the farm are currently vaccinated for rabies.
- The horse that was bitten by the rabid horse was euthanized and tested for rabies. This horse tested negative.



Case 3



History

- On November 1, 2005, a farmer was walking on his property.
- He soon discovered that he was being chased by a skunk.
- He quickly ran to his truck and got in.
- The skunk then began to attack his truck.
- The skunk eventually wandered off.

History

- 1-2 days later, the farmer could smell a skunk. He noted that one of his sheep had a wound on its nose.
- About 18 days later, the sheep began to experience choking/ difficulties swallowing.
- The sheep was sent to the Diagnostic Center for Population and Animal Health for a necropsy.

Sheep tested positive for rabies by fluorescent antibody examination. (MDCH Laboratory)

Community Health

- Family, five individuals, underwent post-exposure prophylaxis as they had put their hands in sheep's mouth to help it when it was choking.
- No one else deemed exposed.

Michigan Department of Agriculture (MDA)

- Farmer had the following animals on farm:
 - 5 Goats
 - 2 Sheep (1 of which was the rabid sheep)
 - 1 llama
 - 1 cat (indoors)
- None of these animals were exposed to the sheep.
- None of these animals had been vaccinated against rabies. (There is no approved rabies vaccine for goats or llamas.)

Michigan Department of Agriculture (MDA)

- MDA instructed farmer to vaccinate indoor cat against rabies.
- Farmer to observe livestock for 45 days for any signs of illness.
- Livestock to remain on farm for 45 day observation period.
- At end of observation period, MDA advised vaccinating other sheep against rabies.

Outcome

- All animals and people on the farm are healthy.
- Cat was vaccinated.
- Skunk was never found.



Thanks to Dr. Michele Finateri



Credits

- www.aussierescuesocal.com
- www.bug-boys.com
- www.bofelli.com
- [www.homepages.paradise.net.nz/wmg/sh
eep.html](http://www.homepages.paradise.net.nz/wmg/sh
eep.html)
- www.northrup.org/photos/skunk