

Animal Bites:

What DVMs and Clinics Need to Know

PRESENTED BY:



Indiana State
Department of Health

Welcome!

1 hour of Continuing Education Credit

- Email with link to a quiz will be emailed to the address registered for this webinar.
- Certificate will be emailed to those who complete quiz.
- www.in.gov/boah/2862.htm

Presenters



Jennifer Brown, DVM, MPH

State Public Health Veterinarian, ISDH



Sandra Norman, DVM

Rabies Director, BOAH



Melissa Justice, DVM

Companion Animal Director, BOAH

Agenda

Handling Human Exposures

- Reporting, Testing

Indiana Rabies Laws

- Vaccination, Quarantine

Handling Animal Exposures

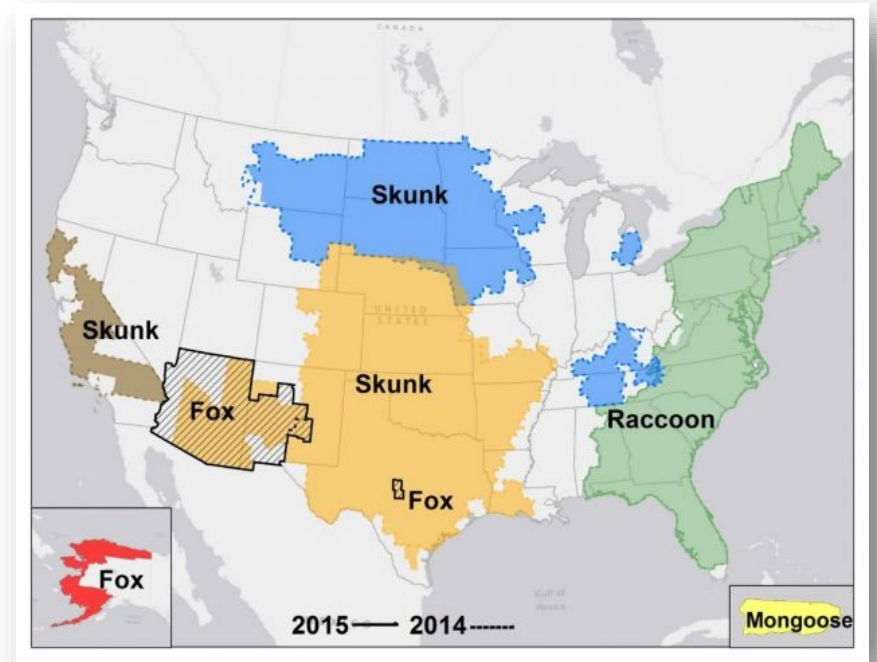
- Boosters, Protocols

Scenarios & Situations

Rabies: The Basics

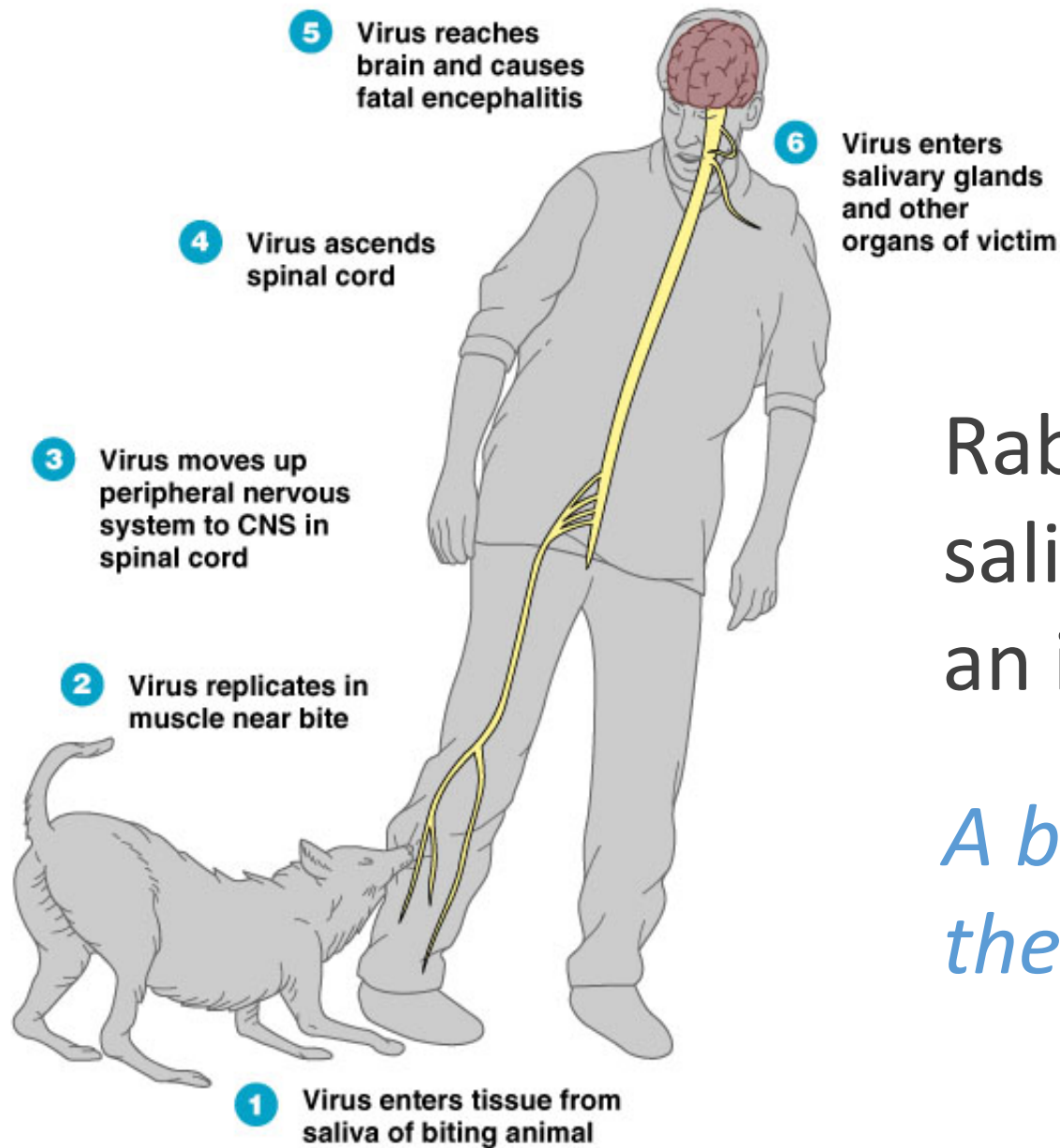
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INDIANA STATE DEPARTMENT OF HEALTH



Veterinarians play an essential role in human rabies prevention.





Rabies is transmitted in saliva through the bite of an infected animal.

*A bite is **ANY** penetration of the skin by teeth.*

Rabies Is Maintained In Wild Animal Reservoirs

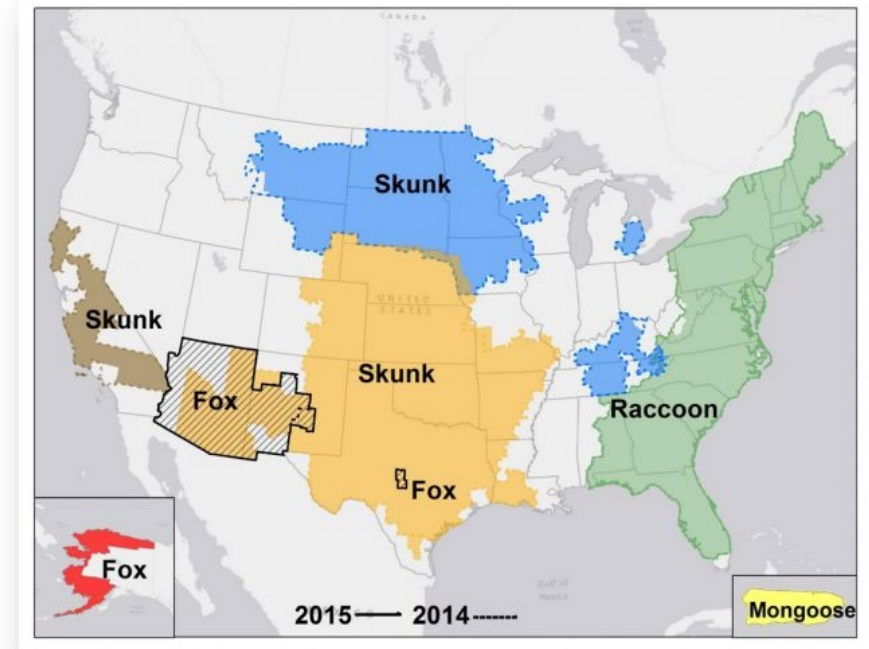
High Risk:

Bats, Skunks, Raccoons, Foxes

Little to No Risk:

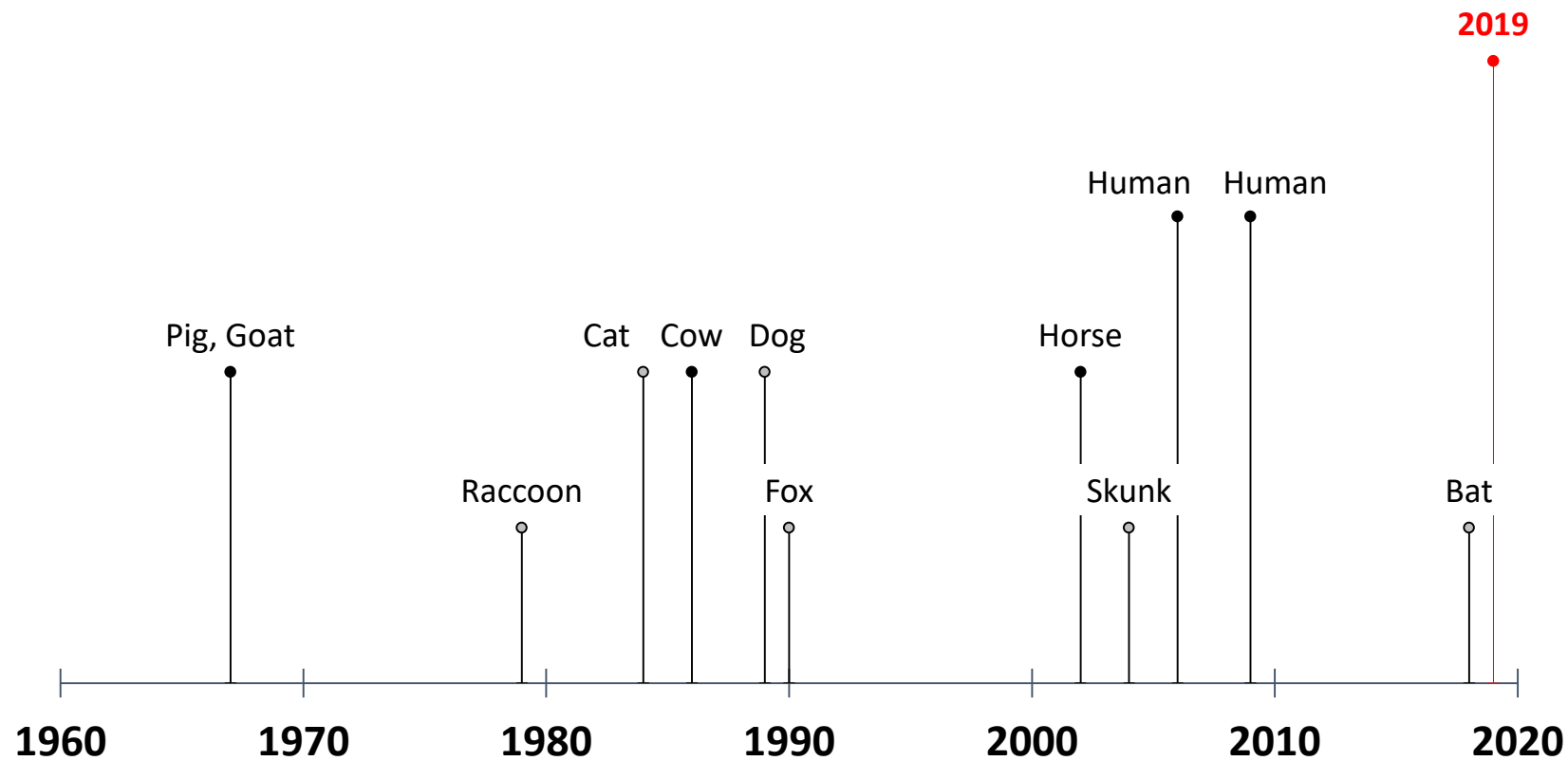
Lagomorphs, Rodents, Pocket Pets

- Rabies testing usually not necessary



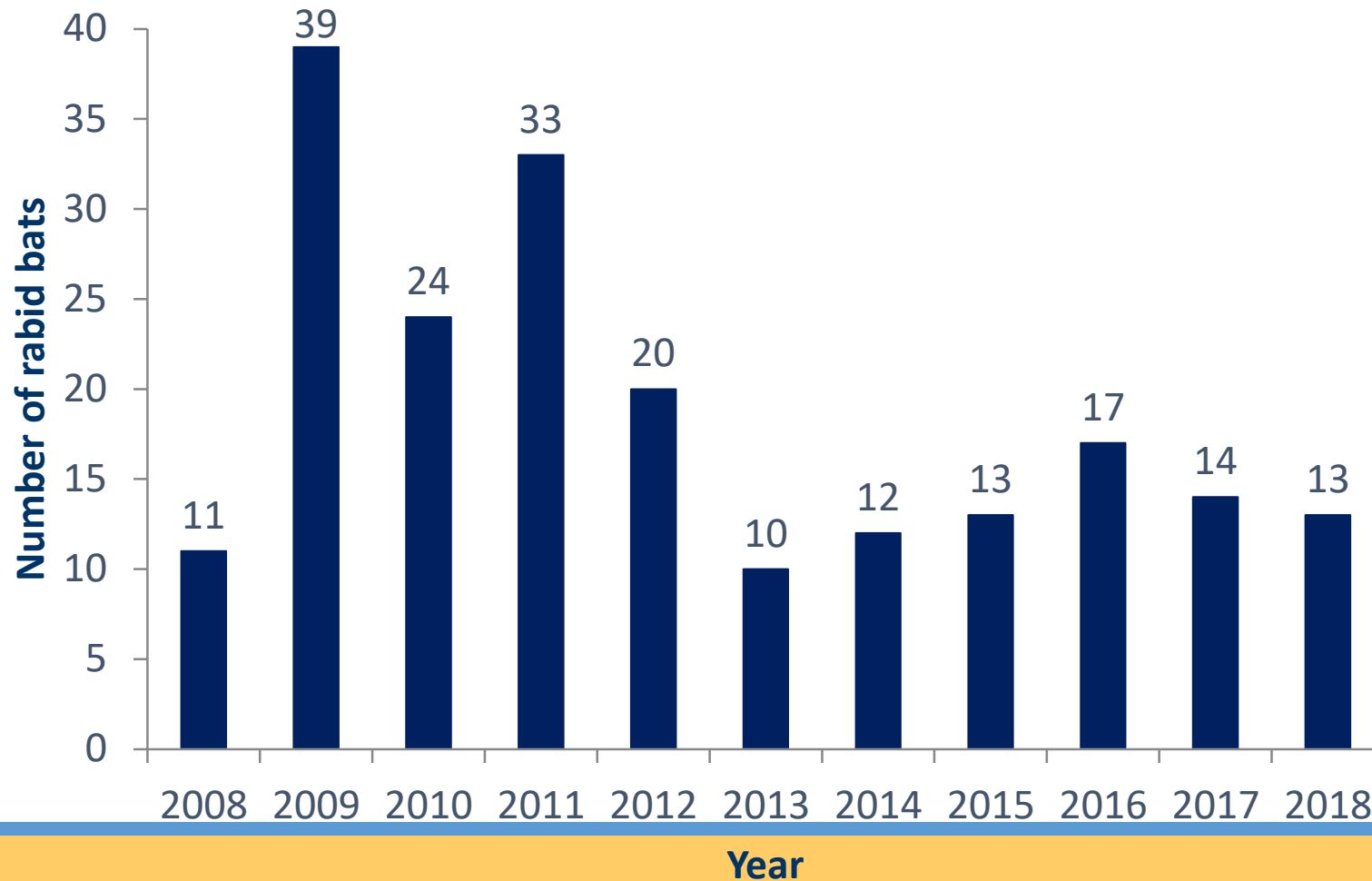
Most Recent Rabies Case, by Species

Indiana, 1960–2018



Bat Rabies Cases

Indiana, 2008–2017



Bat Bites

Can Inflict Very Limited Injury



Wound inflicted by canine teeth of big brown bat. Picture was taken on the same day as the bite. Photo: CDC.



Handling Human Exposures

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410 IAC 1-2.5-80

Every case of a human bitten by a domestic or wild mammal shall be reported within twenty-four (24) hours to the local health officer having jurisdiction.

If a physician is in attendance, the **physician shall report the bite.**

Each reported bite shall be investigated immediately by **the local health officer [or designee].**

This investigation shall be conducted with the purpose of **determining the need for postexposure rabies prophylaxis (PEP)** of the bite victim.

Veterinarian Obligations

Report the bite to public health authorities

Refer the bite victim to a health care provider

Provide accurate information about the biting animal

- Maintain records

Support the determination of animal rabies status

- Help client identify options for post-bite quarantine

- Help client identify options for rabies testing

State Form 14072

- Local health department
- Local animal control
- Local law enforcement
- State health department

Official Indiana Animal Bites Report Indiana State Department of Health State Form 14072 (R3/4-04)									
Incident Location Address			Reported by (name)			Reporting Agency Case Number			
County			Reported by (phone)			Reporting Agency			
Incident Date			Received by (name)			Site Classification (see reverse side of this page to classify)			
Reported Date			Reported Time			Incident On Off Property			
			Release Date			Victim Type (circle 2) Human Animal Juvenile Adult			
VICTIM INFORMATION					OWNER INFORMATION				
Person bitten (if animal victim, use this space for animal victim's owner):					Owner of Animal:				
Last Name					Last First Mid Date of Birth				
First Name					Street Address City Zip Sex M F				
Date of Birth Sex M F					Home Telephone Work Telephone				
Street Address City Zip Telephone Home Work					Biting Animal Dog Cat Other Color/Markings Name Sex M F Neutered Y N				
Parent if victim is a juvenile:					Animal's veterinarian Prior incidents				
Last First Mid					Rabies Vaccine Y N Date				
Street Address City Zip Telephone Home Work					Rabies Tag Number License Number Microchip Number Citation issued? Y N				
If animal victim:					Location of Quarantine				
Breed/Species Color/Markings Name Sex M F Vaccine Date (rabies)					Date of Quarantine Quarantined by (name) Release Date				
(if animal victim) Quarantined? Yes No Time of bite Treating Physician (or veterinarian) Name Telephone					Released from Quarantine by (name): Owner release card (date received): Released from shelter/quarantine (date): Lab #/Result:				
Location on Body and Extent of Injury:					Animal owner's statement of incident:				
Victim's statement of incident (animal owner if animal victim):									
State Department of Health required information (must be completed):					Circumstances:				
Species (fill in the correct biting species):					Animal confined (indoors, penned, tethered, or on leash)				
<input type="radio"/> Bat <input type="radio"/> Dog <input type="radio"/> Hamster <input type="radio"/> Raccoon					<input type="radio"/> Animal not confined (play, roaming, etc.)				
<input type="radio"/> Cattle <input type="radio"/> Ferret <input type="radio"/> Horse <input type="radio"/> Rat					<input type="radio"/> Wild Animal <input type="radio"/> Provoked <input type="radio"/> Unprovoked				
<input type="radio"/> Cat <input type="radio"/> Fox <input type="radio"/> Mouse <input type="radio"/> Squirrel					<input type="radio"/> Unknown <input type="radio"/> Other				
<input type="radio"/> Chipmunk <input type="radio"/> Gerbil <input type="radio"/> Rabbit <input type="radio"/> Other					Action taken with animal:				
If Other, specify					<input type="radio"/> No Action <input type="radio"/> Body destroyed				
Did the animal exhibit any of the following:					<input type="radio"/> Escaped/not found <input type="radio"/> Head sent to ISDH Lab				
<input type="radio"/> Convulsions <input type="radio"/> Aggression <input type="radio"/> Inability to eat/drink					<input type="radio"/> Pet quarantined (see dates above) <input type="radio"/> Other				
<input type="radio"/> Excessive salivation <input type="radio"/> Paralysis <input type="radio"/> Depression					<input type="radio"/> (dog, cat, ferret only) <input type="radio"/> Unknown				
I, the undersigned, have received a copy of the quarantine guidelines, have read them, and understand them. I agree to comply with all provisions of the quarantine guidelines and understand that noncompliance may result in seizure of my pet if it is in home quarantine or loss of my pet if it is not properly claimed at the end of the quarantine period from the quarantining agency.									
Witness			Date			Signature			

DISTRIBUTION: White - Enforcing Agency, Canary - Local Health Department, Pink - Owner

Did Sufficient Contact Occur To Allow The Transmission Of Rabies Virus?

Bite exposure

Non-bite exposure

- Mucous membrane exposure to saliva or CSF
- Open wound exposure to saliva or CSF

Bat found in the same room with:

- Deeply sleeping person
- Unattended child
- Person impaired by drugs, alcohol, or cognitive dysfunction

Was The Animal Rabid?

If biting animal is species capable of transmitting rabies, an evidence-based determination is **always** required.

Even if:

- Animal is current on rabies vaccination
- Low probability that the animal had rabies

Was The Animal Rabid?

	10-day Quarantine	Rabies Testing
Dogs, Cats, Ferrets	✓	✓
Wild Animals		✓

Indications for Rabies Testing

- Dogs, cats, and ferrets for which a 10-day quarantine cannot be completed
- Any mammal exhibiting neurologic symptoms
- Rabies reservoir species
 - Bats, Skunks, Foxes, Raccoons
- Other carnivores

Laboratory Testing



JENNIFER BROWN, DVM, MPH

INDIANA STATE DEPARTMENT OF HEALTH

RABIES:

ISDH Guidelines for Animal Submission

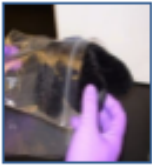


Required Materials:

1. Leak proof container or sealable plastic bags
2. Rabies specimen
3. Cold Packs
4. LimsNet Cover Sheet (Help Desk: (317) 921-5807)
5. Heavily insulated shipping box

NOTE: Live animals cannot be accepted for safety reasons.

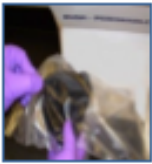
1



Place animal head or entire dead bat specimen(s) in a sealable container (zipper style bag).

Completely seal bag.

2



Double bag the specimen(s) to prevent leakage during transport.

Completely seal second bag.

Place the LimsNet Cover Sheet in a separate zipper style bag.

Completely seal bag.

3



Place the specimen(s) on the cold pack(s) inside insulated shipping box (1 cold pack for bats, 2-3 cold packs for all other animals).

NOTE: Please do not use ice or packing peanuts during shipping.

4



Ship specimen(s) for overnight delivery to the ISDH Laboratories in an insulated shipping box within 24 hours of collection.

Ship in compliance with DOT and IATA shipping regulations for Category B packages.

NOTE: ISDH CAN ONLY RECEIVE SPECIMENS DURING REGULAR BUSINESS HOURS (8:15AM-4:55PM). PLEASE SHIP ACCORDINGLY.

For submission questions, please contact the Rabies Testing Lab at the Indiana State Department of Health Laboratories at 317-921-5500.



Sample Submission

Do NOT submit live animals

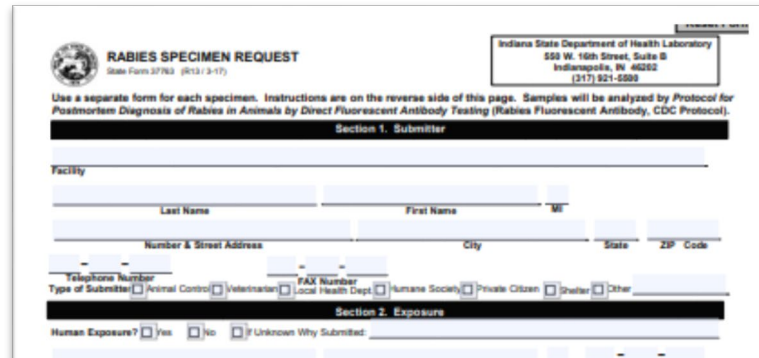
Bats must be submitted intact; head or brain tissue for all other species

Ship specimens on cold packs.
Refrigerate up to 72 hours; freezing delays results

Ship for overnight delivery during normal business hours

Laboratory Testing: *Only at ISDH*

Indiana ADDL @Purdue can only collect samples



RABIES SPECIMEN REQUEST
State Form 3783 (8/13 / 3-17)

Indiana State Department of Health Laboratory
559 W. 16th Street, Suite G
Indianapolis, IN 46202
(317) 921-5505

Use a separate form for each specimen. Instructions are on the reverse side of this page. Samples will be analyzed by Protocol for Postmortem Diagnosis of Rabies in Animals by Direct Fluorescent Antibody Testing (Rabies Fluorescent Antibody, CDC Protocol).

Section 1. Submitter

Facility _____

Last Name _____ First Name _____ MI _____

Number & Street Address _____ City _____ State _____ ZIP Code _____

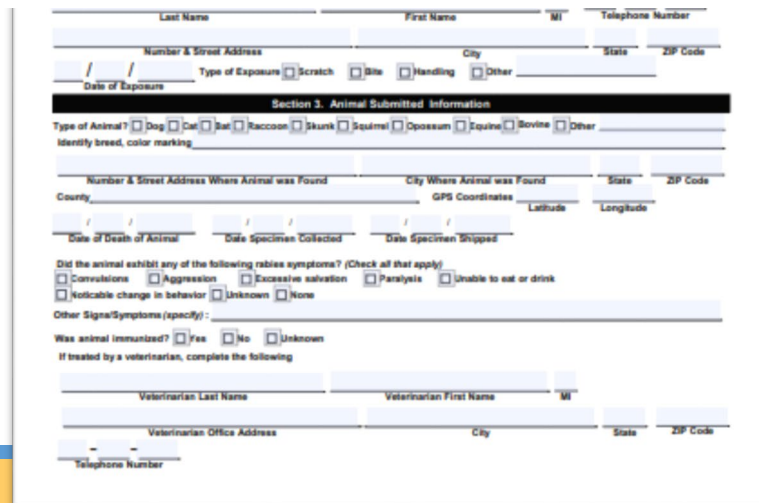
Telephone Number _____ FAX Number _____

Type of Submitter: ☐ Animal Control ☐ Veterinarian ☐ Local Health Dept. ☐ Humane Society ☐ Private Citizen ☐ Shelter ☐ Other _____

Section 2. Exposure

Human Exposure? ☐ Yes ☐ No ☐ Unknown Why Submitted: _____

www.in.gov/isdh/24550.htm



Last Name _____ First Name _____ MI _____ Telephone Number _____

Number & Street Address _____ City _____ State _____ ZIP Code _____

Date of Exposure _____ Type of Exposure: ☐ Scratch ☐ Bite ☐ Handling ☐ Other _____

Section 3. Animal Submitted Information

Type of Animal? ☐ Dog ☐ Cat ☐ Bat ☐ Raccoon ☐ Skunk ☐ Squirrel ☐ Possum ☐ Equine ☐ Bovine ☐ Other _____

Identify breed, color marking _____

Number & Street Address Where Animal was Found _____ City Where Animal was Found _____ State _____ ZIP Code _____

County _____ GPS Coordinates _____ Latitude _____ Longitude _____

Date of Death of Animal _____ Date Specimen Collected _____ Date Specimen Shipped _____

Did the animal exhibit any of the following rabies symptoms? (Check all that apply)

☐ Convulsions ☐ Aggression ☐ Excessive salivation ☐ Paralysis ☐ Unable to eat or drink

☐ Noticeable change in behavior ☐ Unknown ☐ None

Other Signs/Symptoms (specify): _____

Was animal immunized? ☐ Yes ☐ No ☐ Unknown

If treated by a veterinarian, complete the following

Veterinarian Last Name _____ Veterinarian First Name _____ MI _____

Veterinarian Office Address _____ City _____ State _____ ZIP Code _____

Telephone Number _____



Indiana State Department of Health

User Name:

Password:

IP Address=10.19.152.10

[Forgot Your Password?](#)

1/22/18 – Blood Lead submitters: Both the American Academy of Pediatrics and the Early and Periodic Screening, Diagnosis and Treatment (EPSDT) Guidelines require confirmation of elevated capillary Blood Lead results above 5 micrograms per deciliter, mcg/dL, with a venous test within 90 days of the elevated screening result.

<https://eportal.isdh.in.gov/limsnet/login.aspx>

5/18/17 - The ISDH Blood Lead Lab does NOT use the Magellan LeadCare Analyzer and is not affected by the recent FDA communication warning about these analyzers.

Problems? [Email LimsNet Support](#) or call 317-921-5506.
[LimsNet Training\(PDF\)](#) [LimsNet Manual](#)

Humanely Euthanize Bats

With Minimal Handling

Why do this...



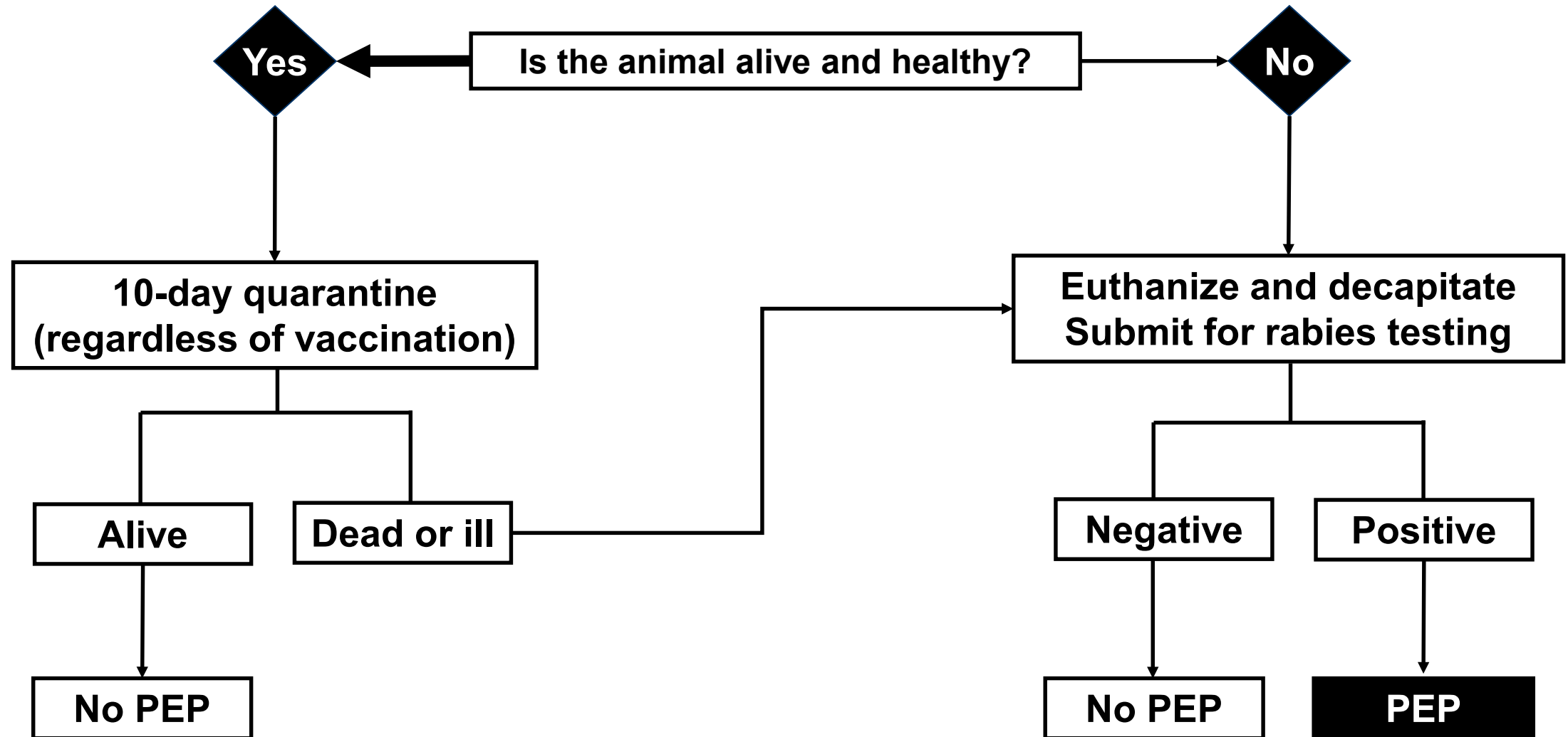
Photo: Michigan Rabies Working Group.

...when you could do this?



Photo: Bat World Sanctuary.

Person Bitten by Dog, Cat, or Ferret



Rabies Pre-Exposure Vaccination & Titers

Previously vaccinated persons still need PEP if exposed

PEP is less invasive and expensive in vaccinated persons

Check titers every 2 years via RFFIT test

Consult general practitioner or occupational health clinic

Indiana State Department of Health

After Business Hours

317-233-1325

**Press “1” to speak with the
epidemiologist on call**

Animal Bites Person...

High-Risk Species

Euthanize and submit head for testing

Vaccination: Not recognized

Quarantine: No approved quarantine period

Person Bitten By...

Dog, Cat, or Ferret

Must be reported to public health

Vaccination Current:

- Observe for 10 days

Not vaccinated/No proof:

- Quarantine and observe for 10 days
 - Vaccinate after quarantine, or
 - May be euthanized w/o testing, if no signs of illness

All other species, contact ISDH

Indiana Rabies Vaccination & Quarantine Laws

SANDRA NORMAN, DVM

Vaccination (345 IAC 1-5-1)

All dogs, cats, ferrets 3 months of age and older

1- and 3-year products approved, per label

- *Ferrets: approved for 1-year products only*

First booster at end of Year One for all products

- 3-year product: 3-year interval is for the subsequent boosters

Vaccination (345 IAC 1-5-1)

Waivers, exemptions are NOT permitted

Titers do NOT replace a current rabies vaccination

- Owners may refuse vaccination
- Pets considered unvaccinated in exposure/bite situations
- Will be required to be vaccinated according to situation

Vaccination (345 IAC 1-5-1)

Off-label, Other Species

- May be vaccinated at discretion of DVM
- Indiana will **NOT** recognize status in a bite situation
 - Animal must be sacrificed for testing

Equine & Livestock Species

- Not required by BOAH; 4-H does require for horses
- Per product label

Veterinarian Obligations

Provide written proof of vaccination owner

- Retain vaccination records for 3 years
- Local officials may require a copy for local licensing/registration

Provide to authorities during investigations

Provide rabies vaccination tag to owner

10-Day Quarantine

Must follow time protocol, unless:

- Euthanasia needed for humane reasons –OR–
- Cannot be safely quarantined due to aggression*

**Requires state approval*

Location determined by local animal control or public health authorities

- Home, kennel, shelter, veterinary office, etc.

Cost is responsibility of the animal owner

10-Day Quarantine Requirements

Securely confined

Prevented from elective contact with people, other animals

Rabies vaccination given **after** quarantine is complete

Report illness promptly to local health department

Animals that die/euthanized during quarantine period should be decapitated and tested for rabies

Animal-Animal Bites, Exposures

SANDRA NORMAN, DVM



Handling The Biter: ***High-Risk Species***

Euthanize and submit head for testing

Vaccination: Not recognized

Quarantine: No approved quarantine period

Includes wolves, wolf-hybrids

Handling The Biter:

Dog, Cat, Ferret

Vaccination Current:

- Observe for 10 days

Unvaccinated/No Proof:

- Quarantine and observe for 10 days
- Vaccinate after 10-day strict quarantine

Handling Pet Bitten By: *Unknown or Rabies-Positive Animal*

Vaccination Current/Overdue:

- Vaccinate w/in 96 hours of exposure
- Observe for 45 days

Unvaccinated:

- Vaccinate w/in 96 hours of exposure
- Quarantine and observe for 4 months
 - BOAH will issue quarantine if confirmed rabies-positive

Handling Pet Bitten By:

Dog, Cat, Ferret, Livestock

Vaccination Current:

- Treat wounds
- No observation

Unvaccinated/Overdue:

- Vaccinate at time of bite
- Treat wounds

Animal-Animal “Exposures”

High-Risk or Unknown Animals

Scenarios:

- Cat carrying/playing with a bat
- Dog in a fight with a raccoon
- Pet was in a fight with unknown animal

Available: Submit wild animal/head for testing

Unavailable: Treat as potentially rabid

Scenarios & Situations

MELISSA JUSTICE, DVM

Timeliness:

When is a situation an emergency?

High-Priority:

- Human bitten on or close to the head
- Human bitten by high-risk species

Non-Emergency (Next Business Day):

- Animal-to-animal bites/exposures
- Human bites when all parties known and animal is retained

Rabies Testing

NO live-animal test for rabies!

REMEMBER: Sometimes, less is more!

- *You do not need to explain full details of sample submission to owner*

Some clinics offer complimentary group cremation to avoid owners taking a sampled animal home for burial.

Reporting of Rabies Test Results

Specimens received by 11 am will be tested on the same business day

All results are available immediately in LIMSNet

- Negative results posted to LIMSNet

Positive results are also reported immediately by phone to the exposed person and the submitter

For inquiries, call 317-233-7125

Scenario:

Testing

Animal dies and owner would like the cause of death:

- *Submit animal to ADDL at Purdue for necropsy*
 - *Please make clear on the accession form that the animal bit someone and a rabies sample needs to be submitted to ISDH*

Scenario:

Testing, Non-business Hours

Uncertain if an animal should be tested:

- *Refrigerate the animal and contact BOAH / ISDH on the next business day*
 - *Refer to priority guidance*

Scenario:

Refusal to Test

Owner refuses testing of the animal:

- *Keep and refrigerate the body until next business day*
 - *Local Health Department can explain testing is required by Indiana State Law*

Resources

Resources

www.in.gov/boah/2337.htm

Rabies Slide Card

Human Exposures

- Local County Health Department
- IN State Health Department 317-233-1325

Animal Exposures

- IN State Board of Animal Health 317-544-2400

Guidelines for Post-Exposure Rabies Treatment



Rabies is a disease of the central nervous system of mammals. The virus is transmitted primarily through the saliva of infected animals. Information obtained from the patient and others involved in the response will allow the physician to determine the need for post-exposure prophylaxis. General information from public health officials about the presence or absence of rabies in the area may assist physicians in their decision-making process.


Indiana State
Department of Health


Indiana State
Board of Animal Health

Link for CE Credits

Take the quiz:

www.in.gov/boah/2862.htm

*We will email this link via email to webinar registrants,
so please share with participating colleagues*