Rabies is Still Here: Epidemiology, Outbreaks, and Costs of Prevention in the United States

Clinician Outreach and Communication Activity (COCA) Call

Thursday, April 30, 2026

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Objectives

At the conclusion of today's session, the participant will be able to accomplish the following:

- Describe the four key components of a rabies exposure risk assessment when evaluating a bite victim and the unique considerations of rabies epizootiology in the United States.
- Explain the occupational risk that rabies in livestock can present to farmers and veterinarians and how to mitigate that risk.
- Describe the importance of a thorough rabies exposure assessment prior to recommending the patient for post-exposure prophylaxis vaccination.

To Ask a Question

- Using the MS Teams Platform
  - The ability to ask questions during the live webinar is limited to the first 1,000 attendees who join the webinar.
  - Questions may be submitted after the live session by emailing coca@cdc.gov.

- If you are a patient, please refer your question to your healthcare provider.

- If you are a member of the media, please direct your questions to CDC Media Relations at 404-639-3286 or email media@cdc.gov.

Today's Presenters

- **Ryan Wallace, DVM**
  Veterinary Medical Officer
  National Center for Emerging and Zoonotic Infectious Diseases
  Centers for Disease Control and Prevention

- **Carrie Klumb, MPH**
  Senior Epidemiologist
  Rabies Surveillance Coordinator
  Minnesota Department of Health

- **Katy Donovan, PhD**
  Deputy State Epidemiologist, Rhode Island Department of Health
  Office of Readiness and Response
  Centers for Disease Control and Prevention

- **Alexia "Allie" Goodman, MPH**
  Public Health Epidemiologist
  Rhode Island Department of Health

CDC COCA Call: April 30, 2026

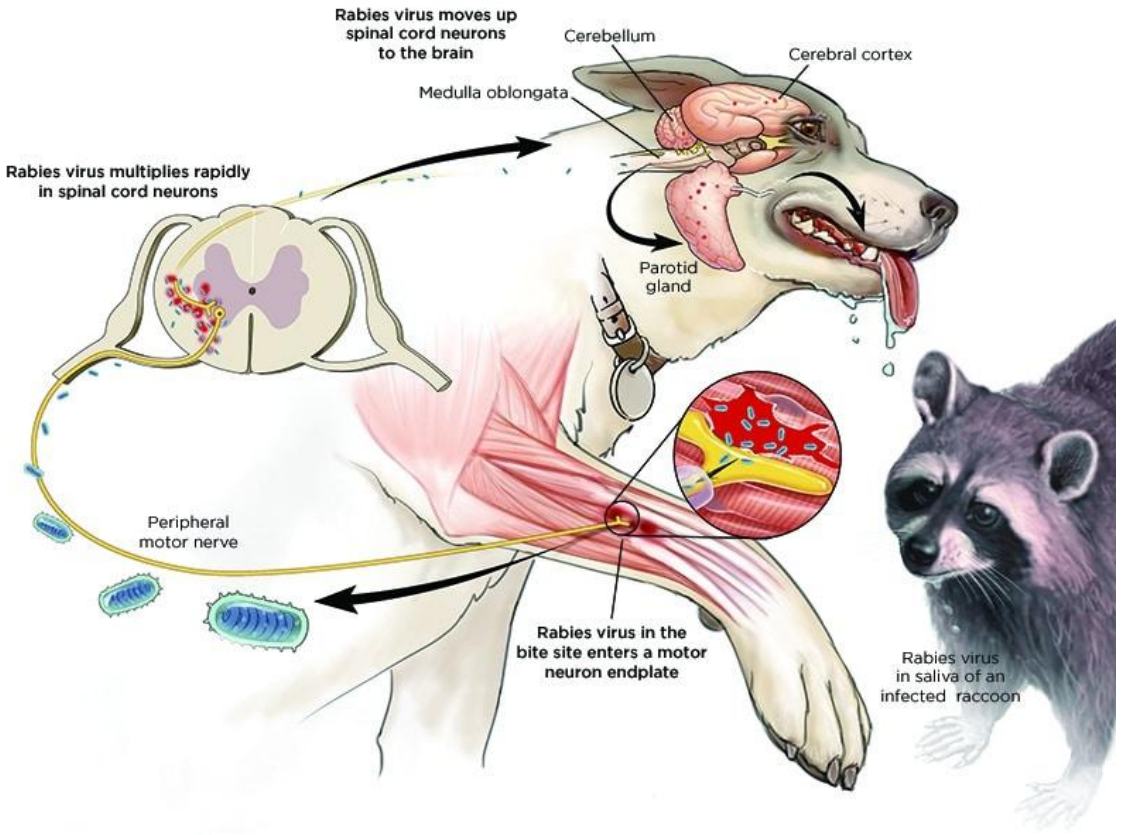
Rabies is Still Here: Epidemiology, Outbreaks, and Costs of Prevention in the United States

Rabies Landscape in the United States

Ryan Wallace, DVM
Veterinary Medical Officer
Division of High-consequence Pathogens and Pathology
National Center for Emerging and Zoonotic Infectious Diseases
April 30, 2026

Rabies!

Rabies virus transmission



- Transmission primarily via bite
- Viruses are highly neurotropic
  - Enter peripheral nerves
  - Travel from peripheral nerves to CNS, including brain
  - Replicate in CNS
  - Disseminate via nerves to innervated organs, including salivary glands, the primary portal of exit
  - Viral excretion in saliva
- Death days to weeks after symptom onset

Clinical features of rabies infection

Fever

Malaise

Flu-like Illness

Confusion

Hypersalivation

Hydrophobia

Paresthesia

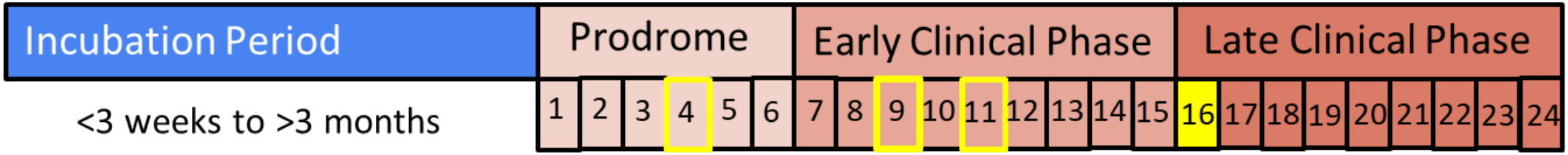
Paralysis

Respiratory Failure

Autonomic Instability

Cerebral Edema

Death



Must receive PEP as soon as possible before symptoms begin

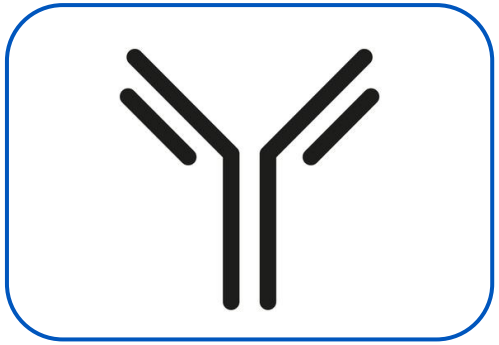
Therapeutic Window

Rabies is preventable

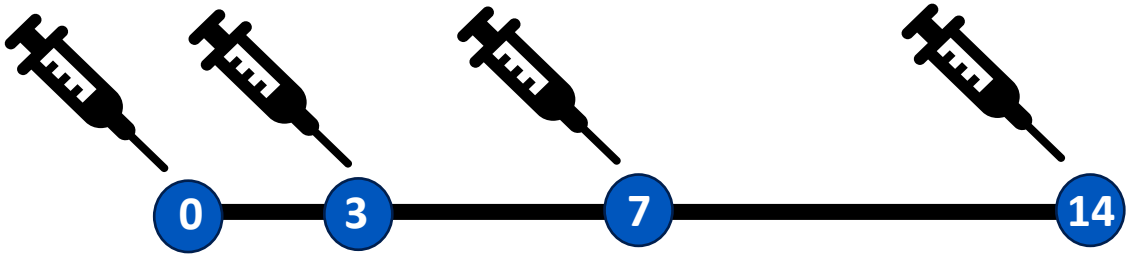
1885 Pasteur vaccine first used on a patient

Rabies Post-exposure Prophylaxis (PEP)

Wound care

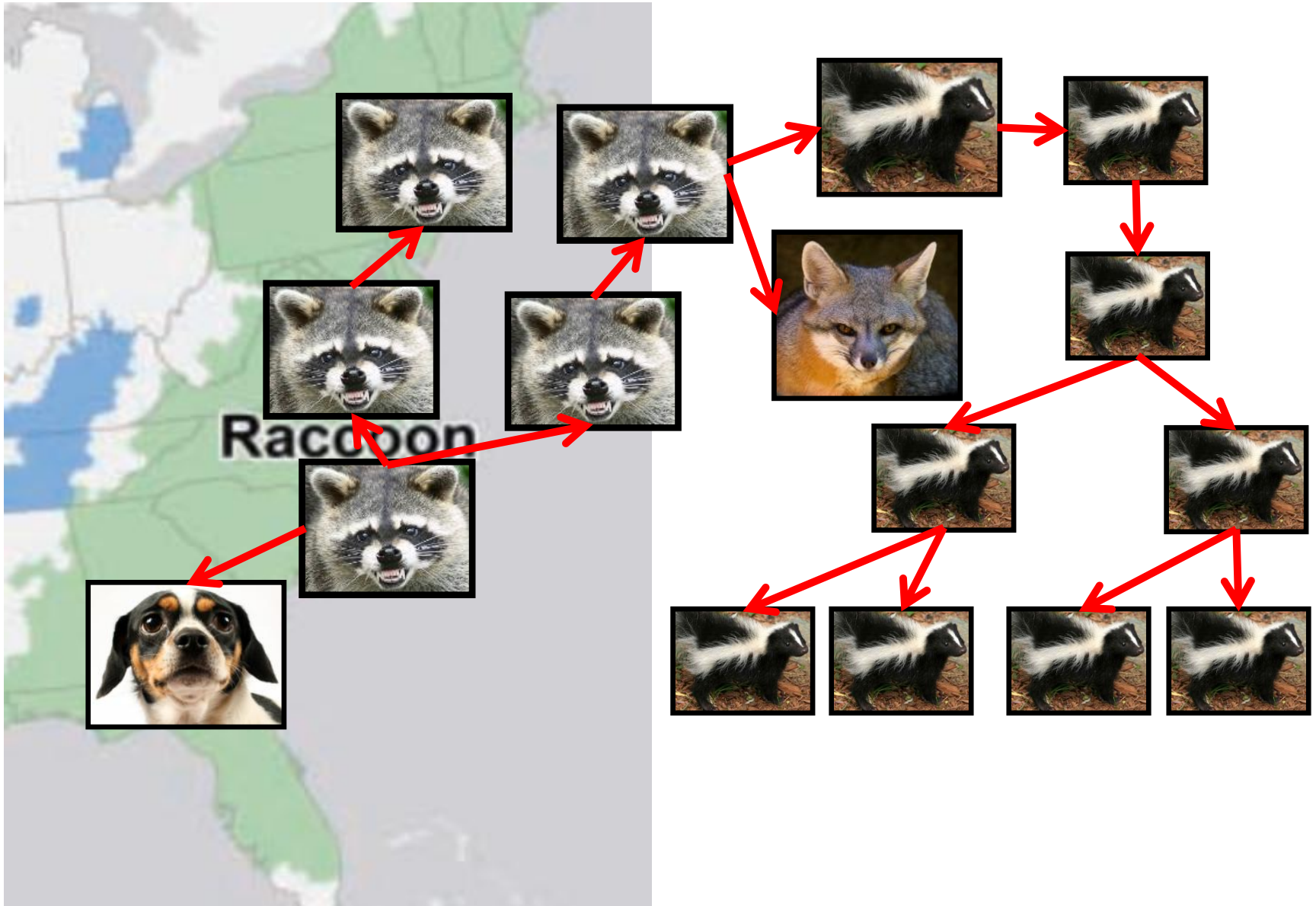


Immunoglobulin

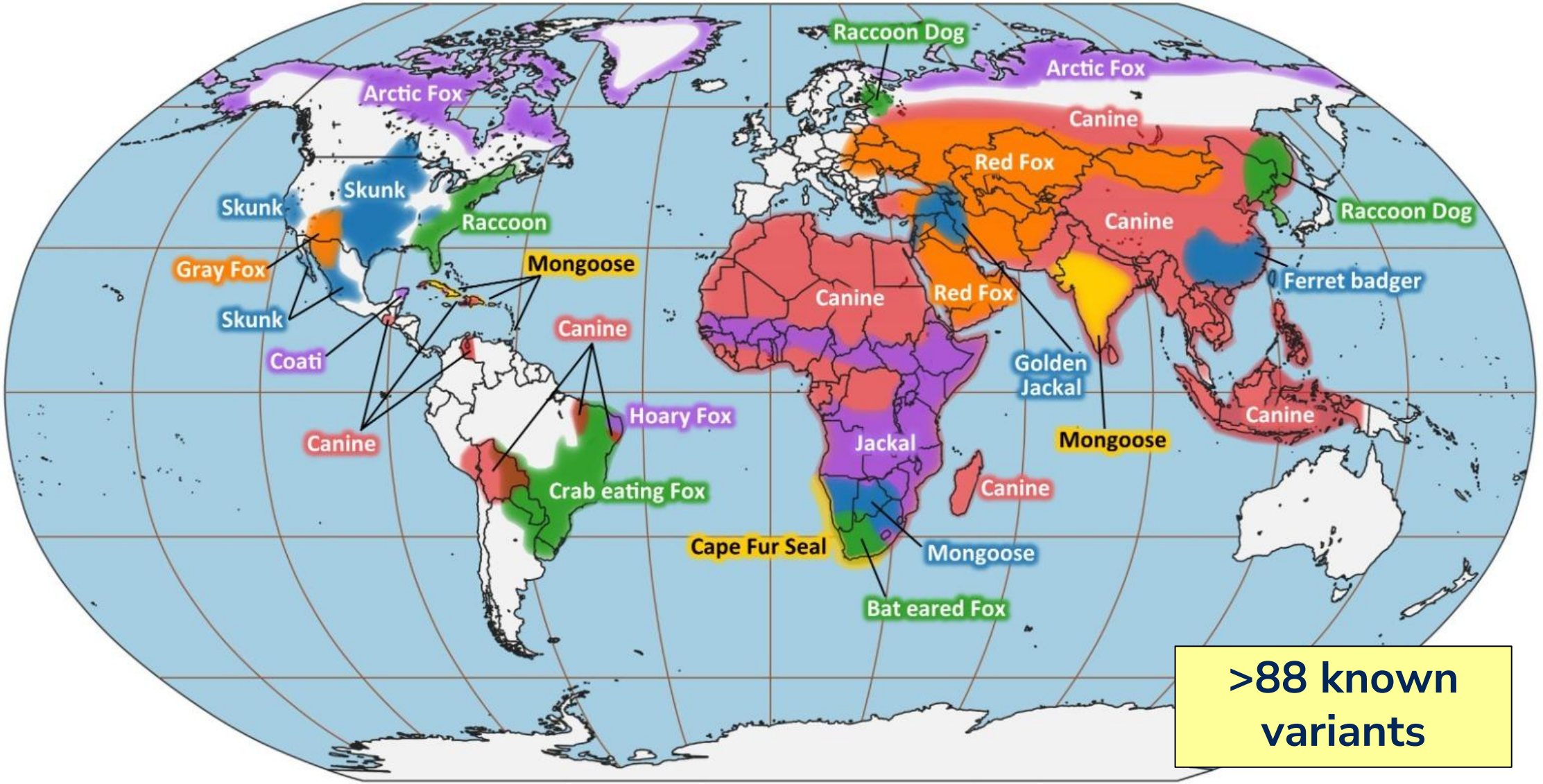


Vaccine

Rabies reservoirs, spillover, and host-shifts

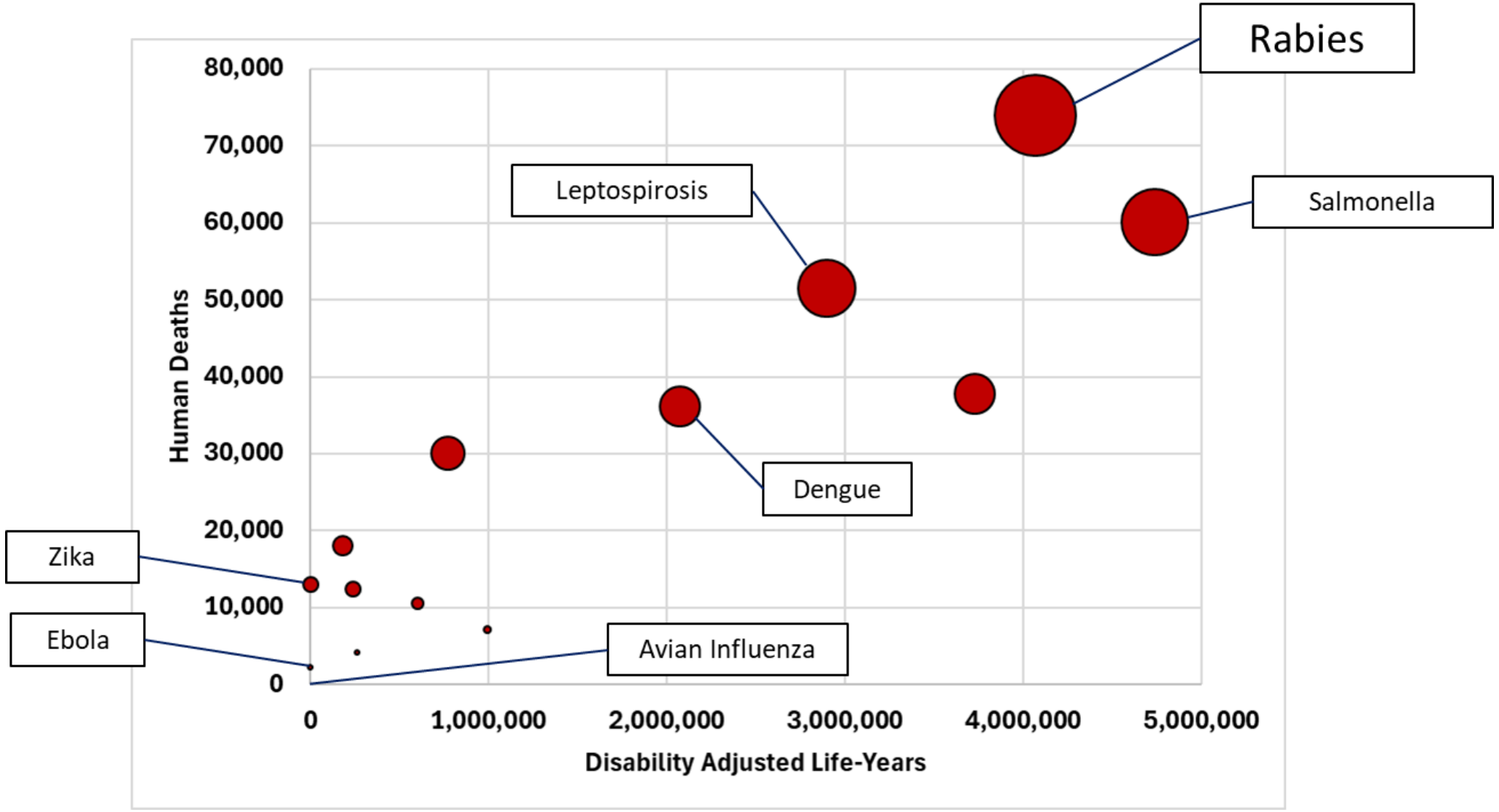


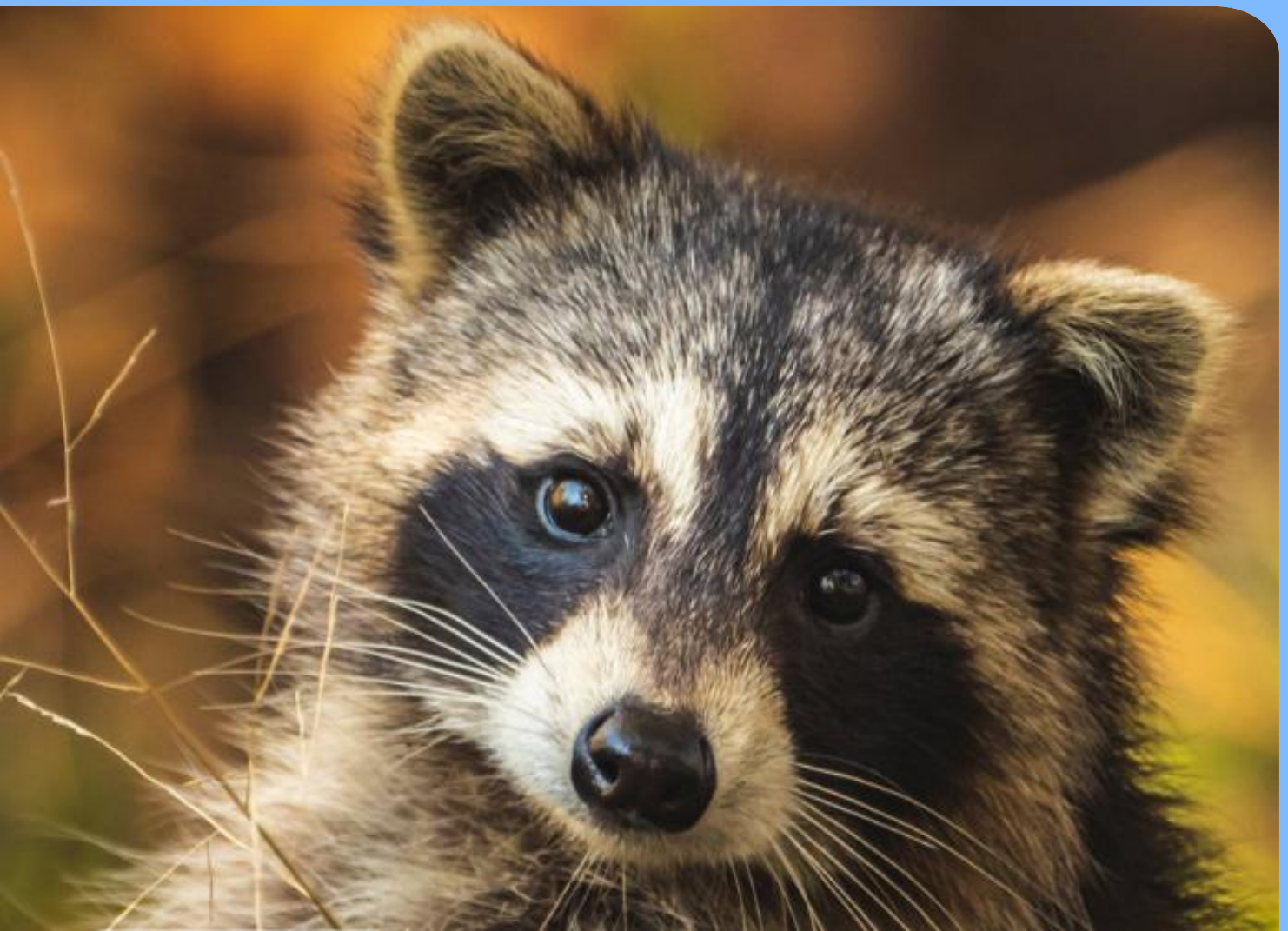
Rabies virus reservoirs across the globe



>88 known variants

Rabies is the deadliest zoonotic disease globally





But rabies is rare in the United States … right?

Rabies in the news showing it's still impacting the United States

Bat flies into woman's mouth in Arizona, costing her nearly $21,000 in medical bills

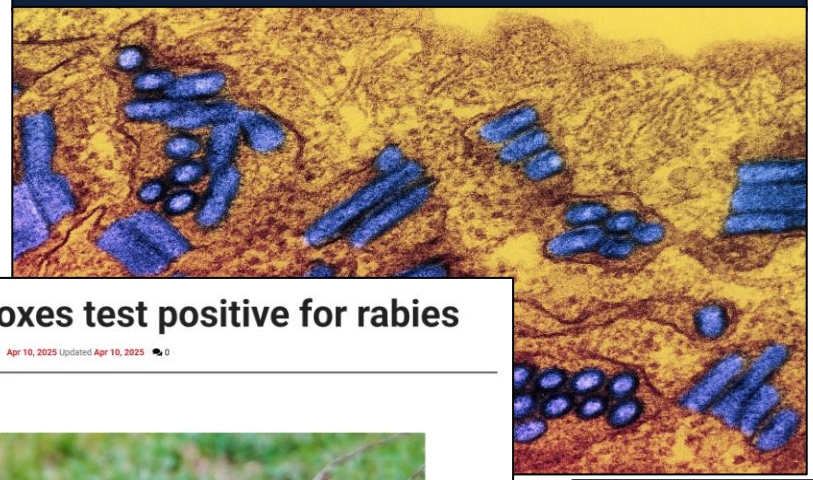
Erica Kahn, who lives in Massachusetts, wasn't insured when she had a close encounter with the flying mammal at Glen Canyon National Recreation Area.

NBC NEWS WATCH

HEALTH NEWS

After Michigan patient dies of rabies from a transplanted kidney, donor's other recipients get preventive shots

The same donor provided corneal grafts for three patients, the CDC said. Those patients have been given shots to prevent rabies and are currently healthy.



Wrong!

Rabies on the Rise in Southern AZ – Just In Time for Spring Camping Season

AZ PUBLIC HEALTH ASSOCIATION > BLOG CLASSIC > ENVIRONMENTAL HEALTH > RABIES ON THE RISE IN SOUTHERN AZ – JUST IN TIME FOR SPRING CAMPING SEASON

Josephine County foxes test positive for rabies

Liv Collom Apr 10, 2025 Updated Apr 10, 2025 0

Maine Med addressing bat problem in neonatal intensive care unit

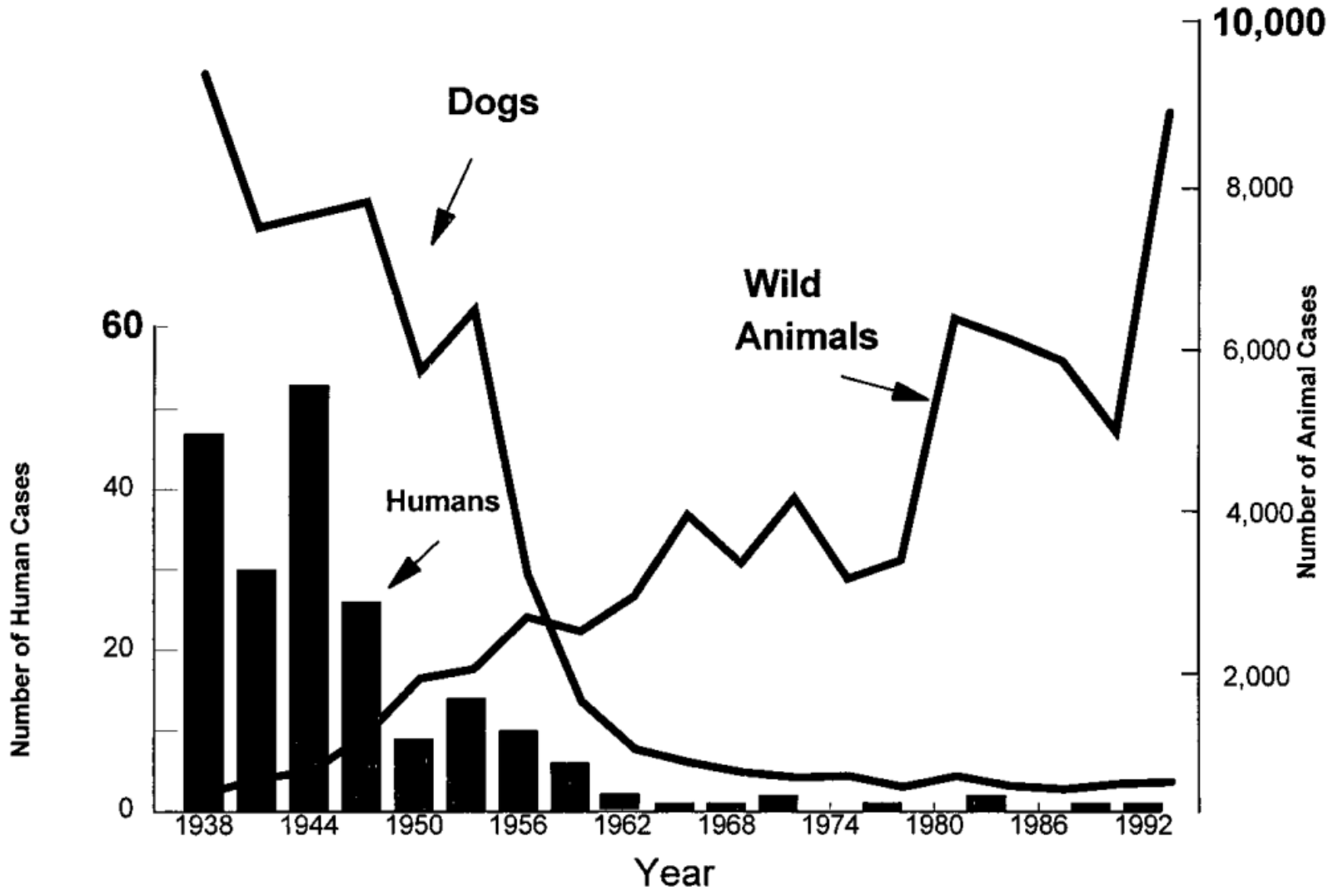
Hospital officials say they are working on various measures to prevent 'bat incursions.'

Community: **Portland**

Posted August 22 Updated August 22

Joe Lawlor
Staff Writer

Changing rabies landscape in the United States



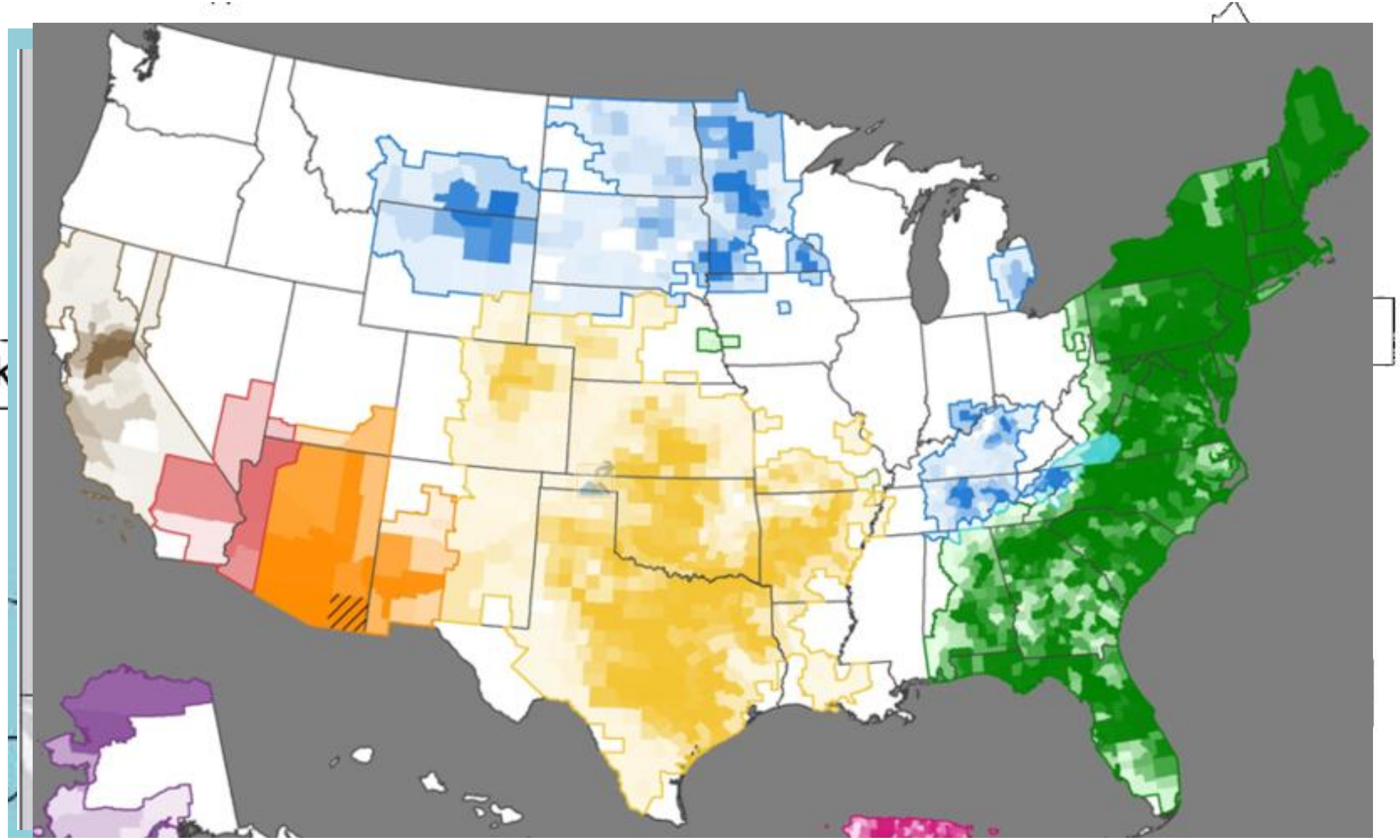
Ever-changing rabies landscape in the United States

1996

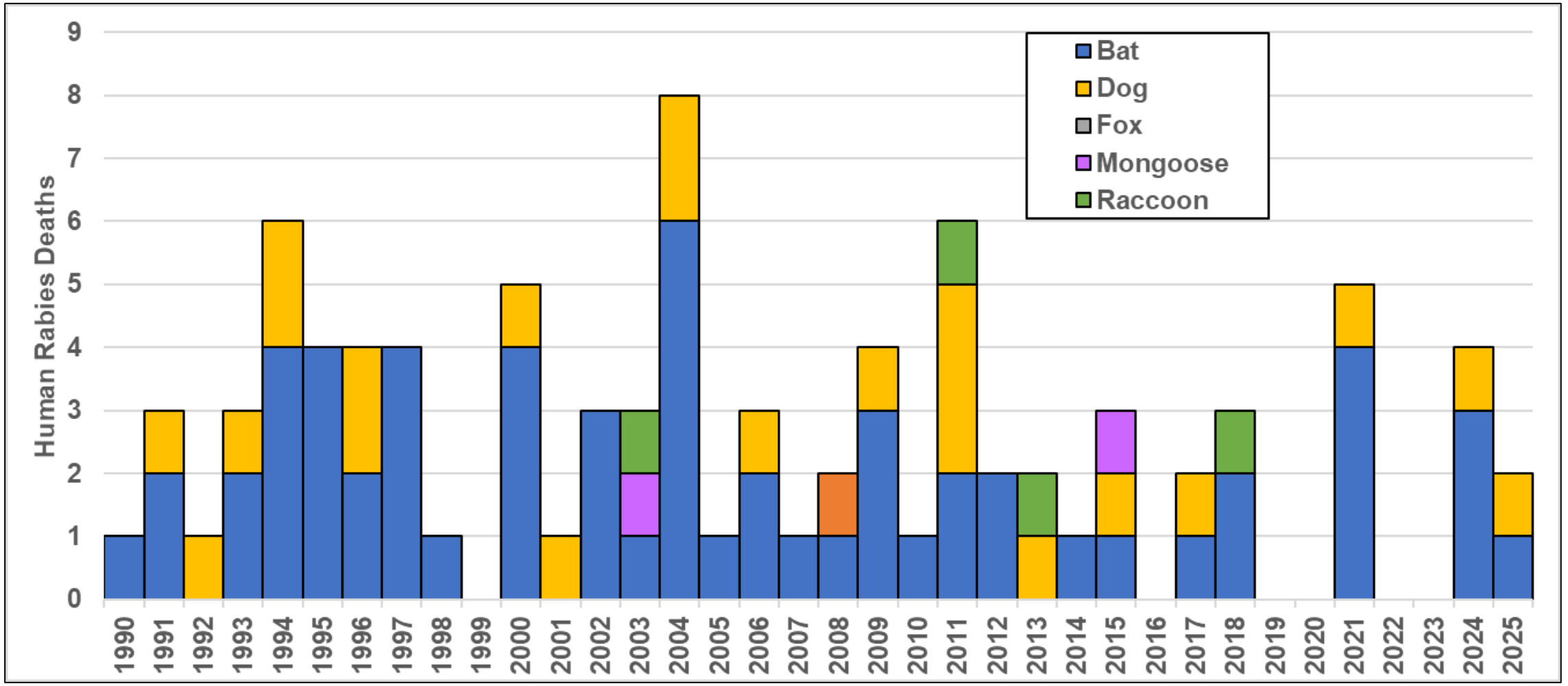
2005

2015

2024



Human rabies surveillance in the United States



Rabies is a DAILY threat in the United States

1.3M consultations per year

÷

=

2 rabies consultations **every day**, for **every health department**

→

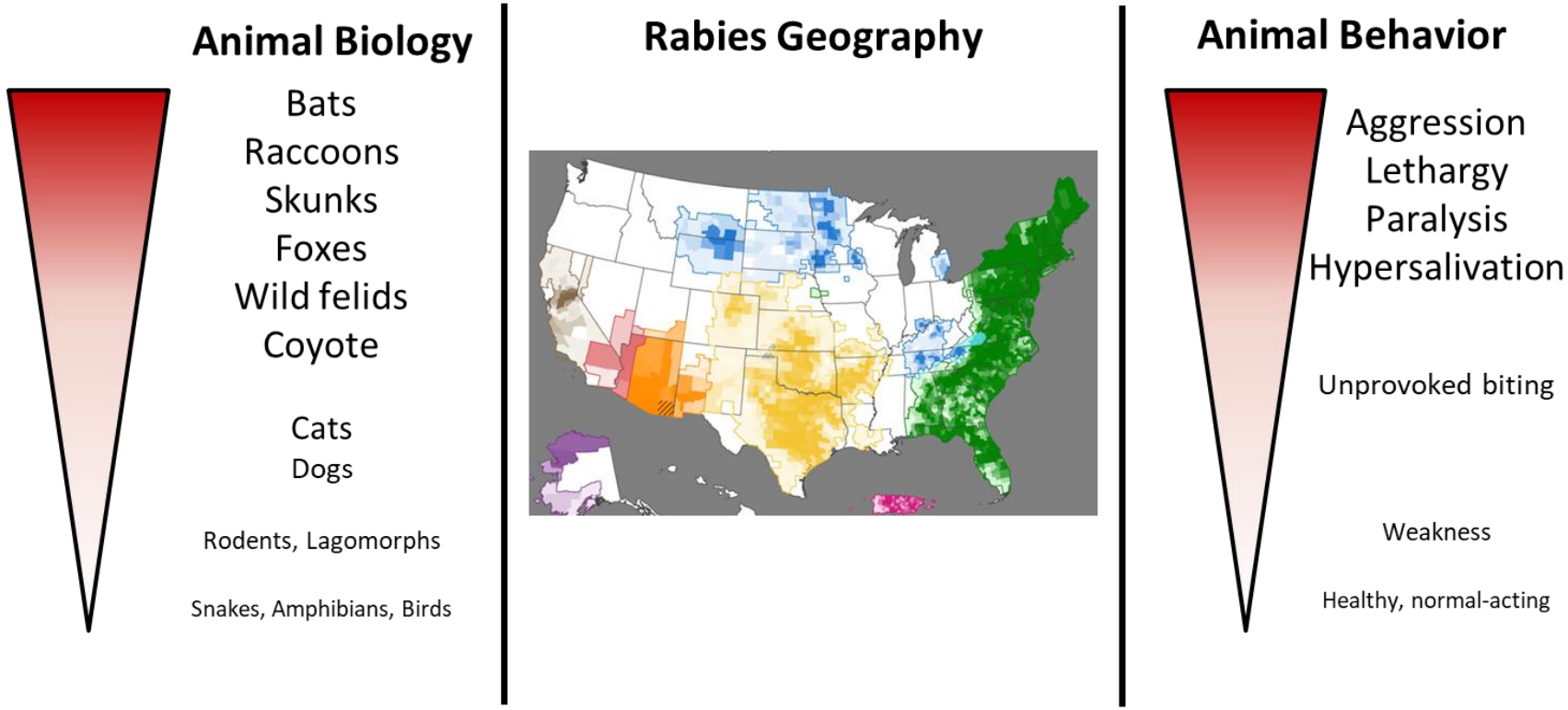
7 per day referred to CDC rabies consultation service

4,600+ pageviews of the CDC rabies site every day

14 rabid animals diagnosed every day

Rabies risk assessments

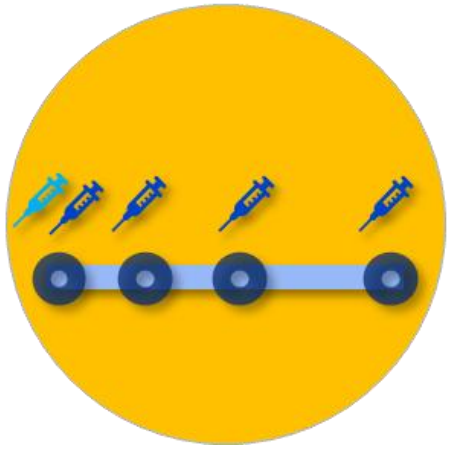
- **Risk assessments** determine if **PEP** is indicated
- Was there an exposure from infectious materials to fresh broken skin or mucous membranes?
- Bio-Geo-Behavioral Risk Assessments
  - **Bio**: Is the animal a reservoir species or high-risk animal?
  - **Geo**: Is rabies commonly found in the area?
  - **Behavioral**: Was the animal showing signs of rabies?



Consequences of unnecessary PEP

Patient financial burden (>$12,000 per PEP course)

Vaccine supply shortages



Complex vaccine regimen

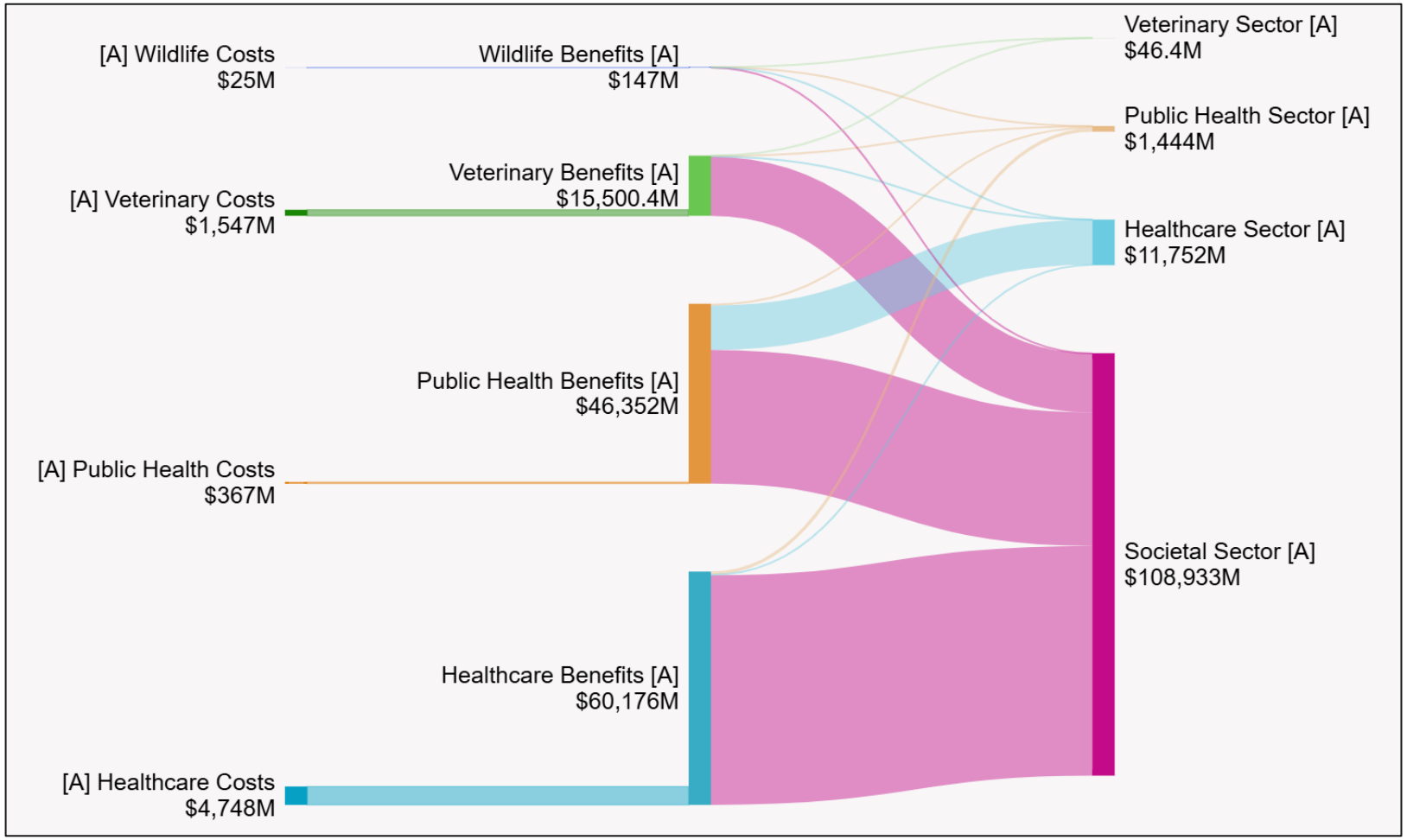
Unnecessary adverse events

Costs and benefits for rabies prevention services

Total costs: **$7.2B**
Total benefits: **$132.5B**

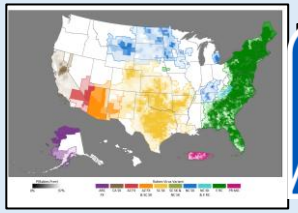
Deaths averted: 3,242
QALY averted: 186,576

Benefit-cost Ratio: 18.2
Cost per QALY averted: $39,021

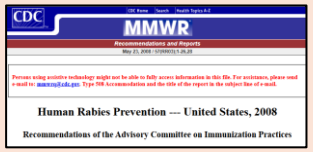


We’re all in this together!

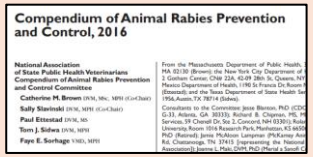
State/county conduct routine surveillance



CDC collates and disseminates epidemiologic information

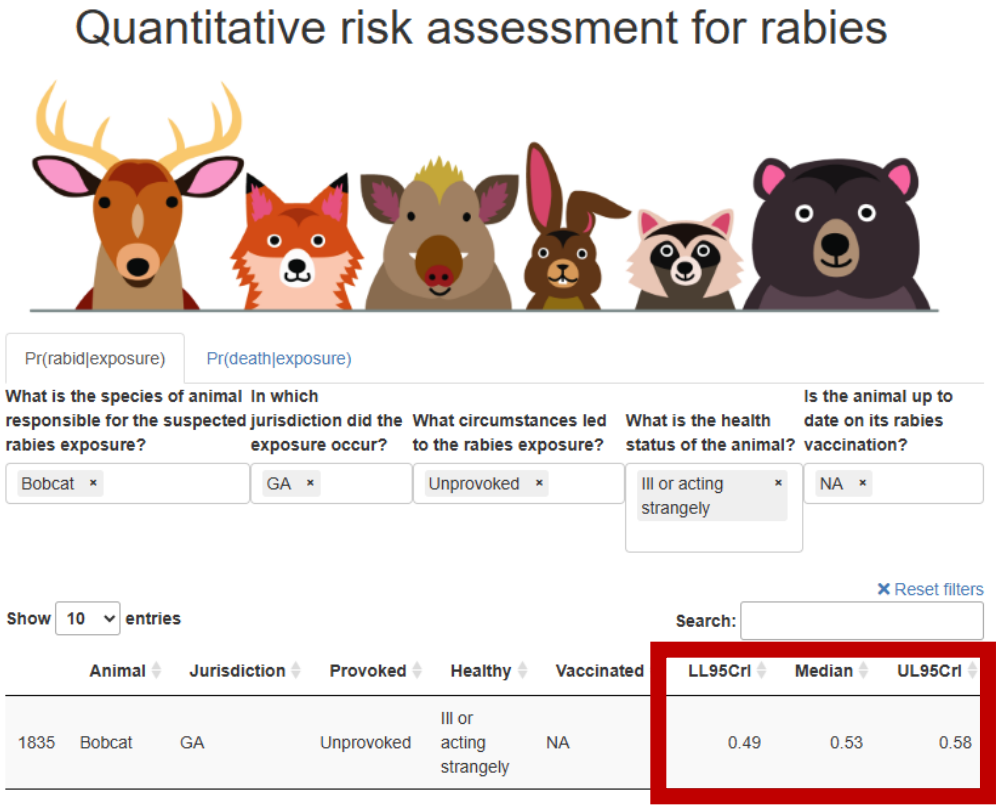


Surveillance informs national, state, local, healthcare, legal codes

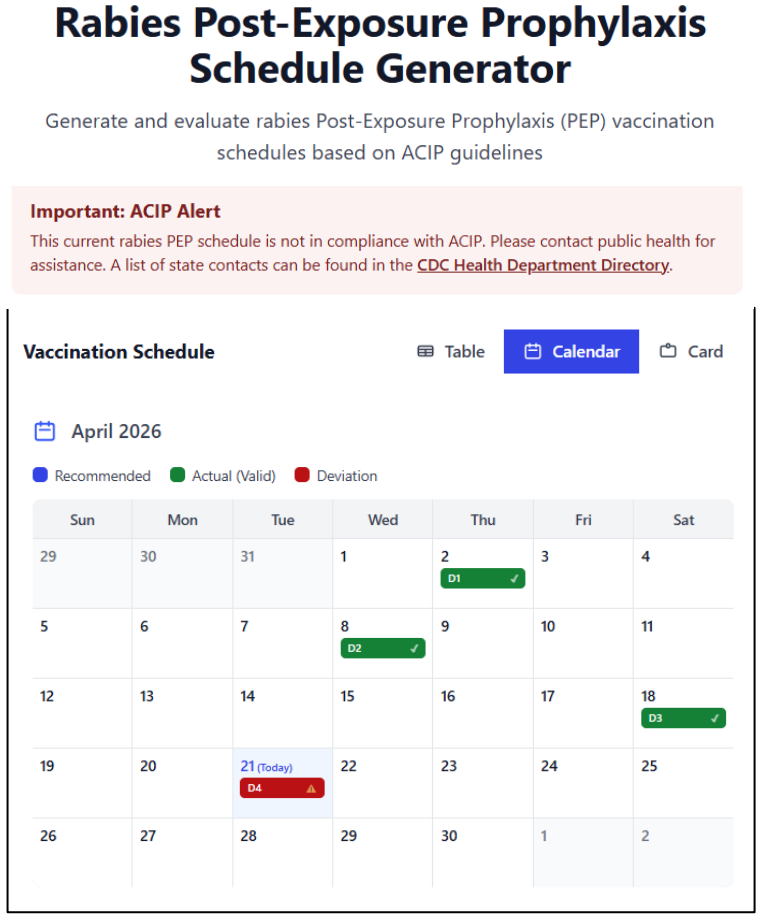


Clinical guidance impacts healthcare decisions

Free resources to support rabies PEP decision-making



[Risk of Rabies and Implications for Postexposure Prophylaxis Administration in the US]



[Rabies PEP Calculator | Rabies | CDC]

Self-knowledge check: question

A 5-year-old in Washington state has a deep bite wound from his neighbor's new puppy. The child and puppy were running around with a dog toy when the puppy playfully jumped and bit. The puppy is too young to be vaccinated against rabies.

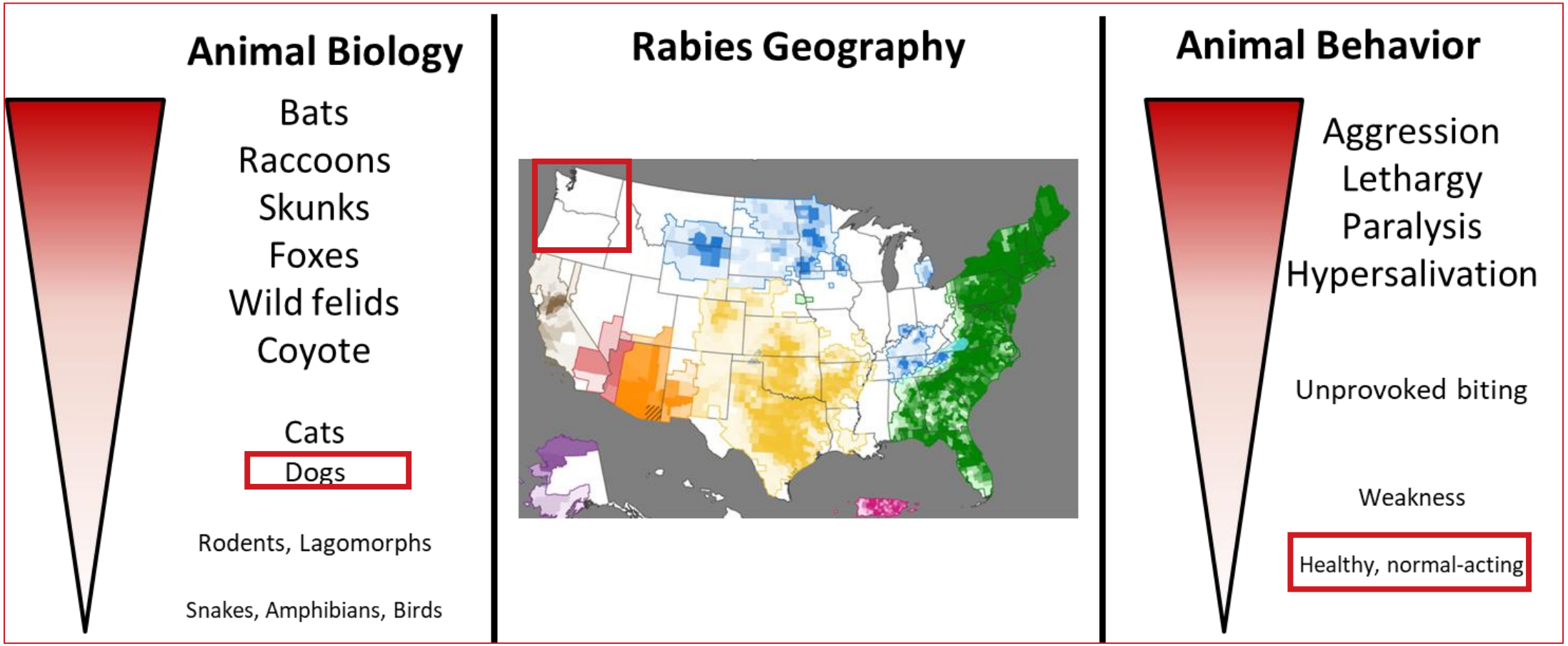
Which of the following are the correct **Bio-Geo-Behavioral** considerations for this event?

A. High Risk / High Risk / High Risk
B. Low Risk / High Risk / High Risk
C. Low Risk / Low Risk / High Risk
D. Low Risk / Low Risk / Low Risk

Self-knowledge check: answer

The correct answer is: **D. Low Risk / Low Risk / Low Risk**

Because…



Thank you.

For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 https://www.cdc.gov/
Follow us on social **@CDCgov**

Occupational Rabies Exposures on a Dairy Farm Minnesota, United States, 2024

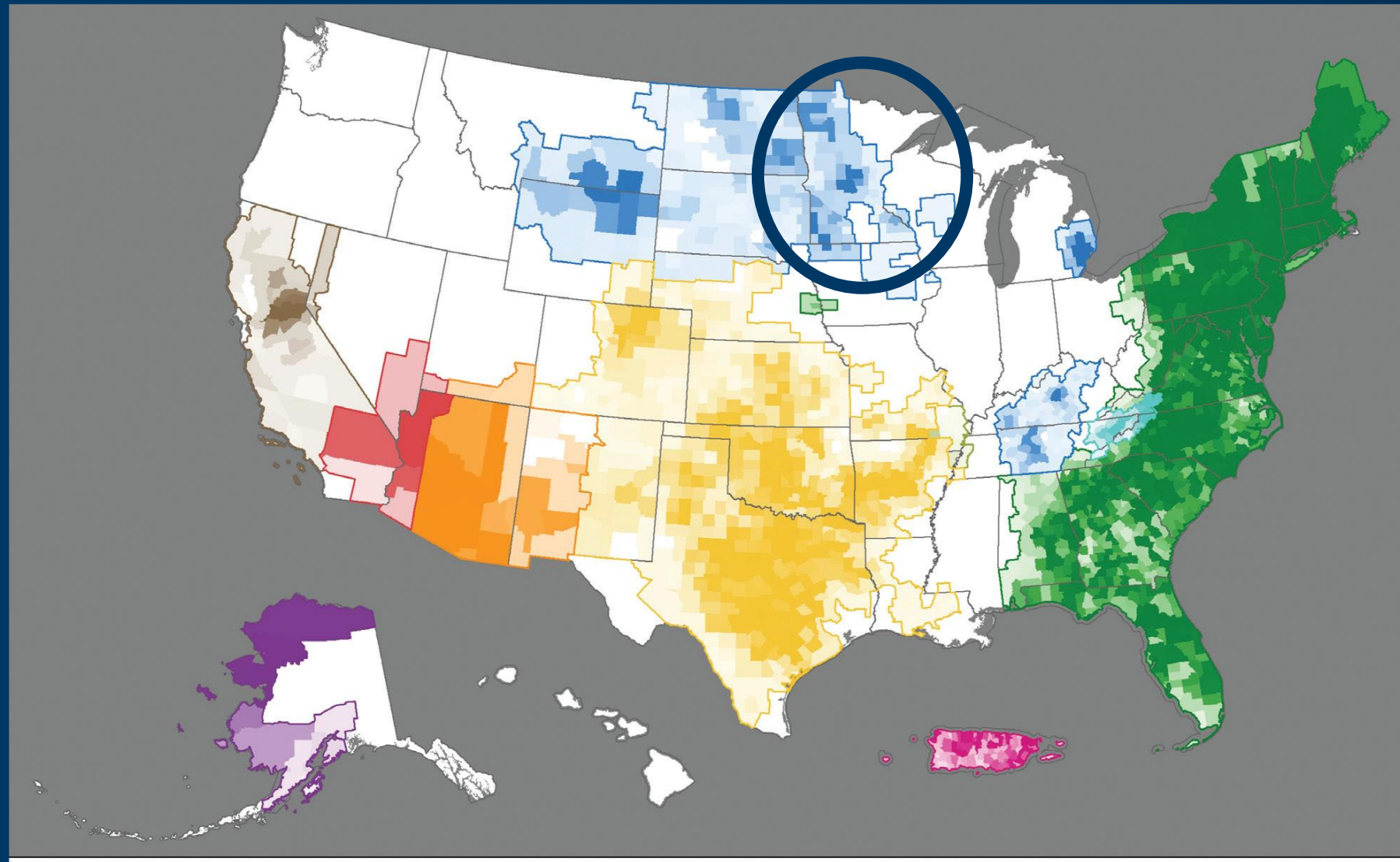
Carrie Klumb, MPH

Senior Epidemiologist | Zoonotic Diseases Unit

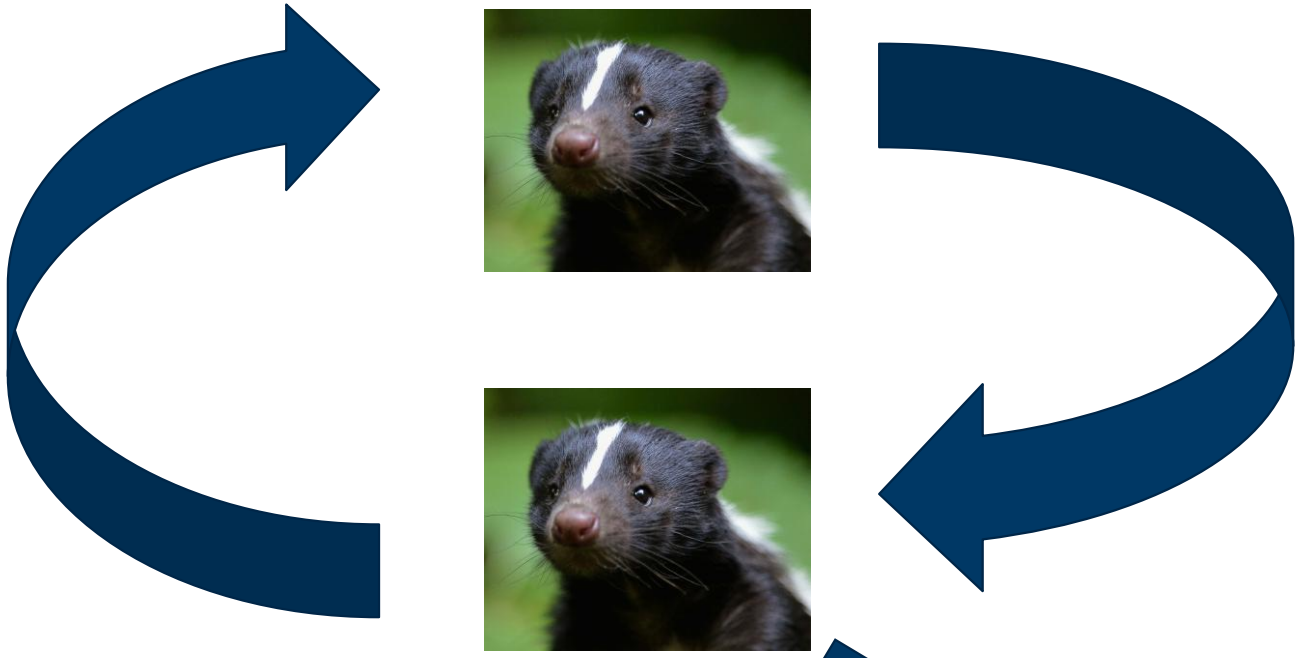
DEPARTMENT OF HEALTH

Distribution of Major Rabies Virus Variants (RVVs)

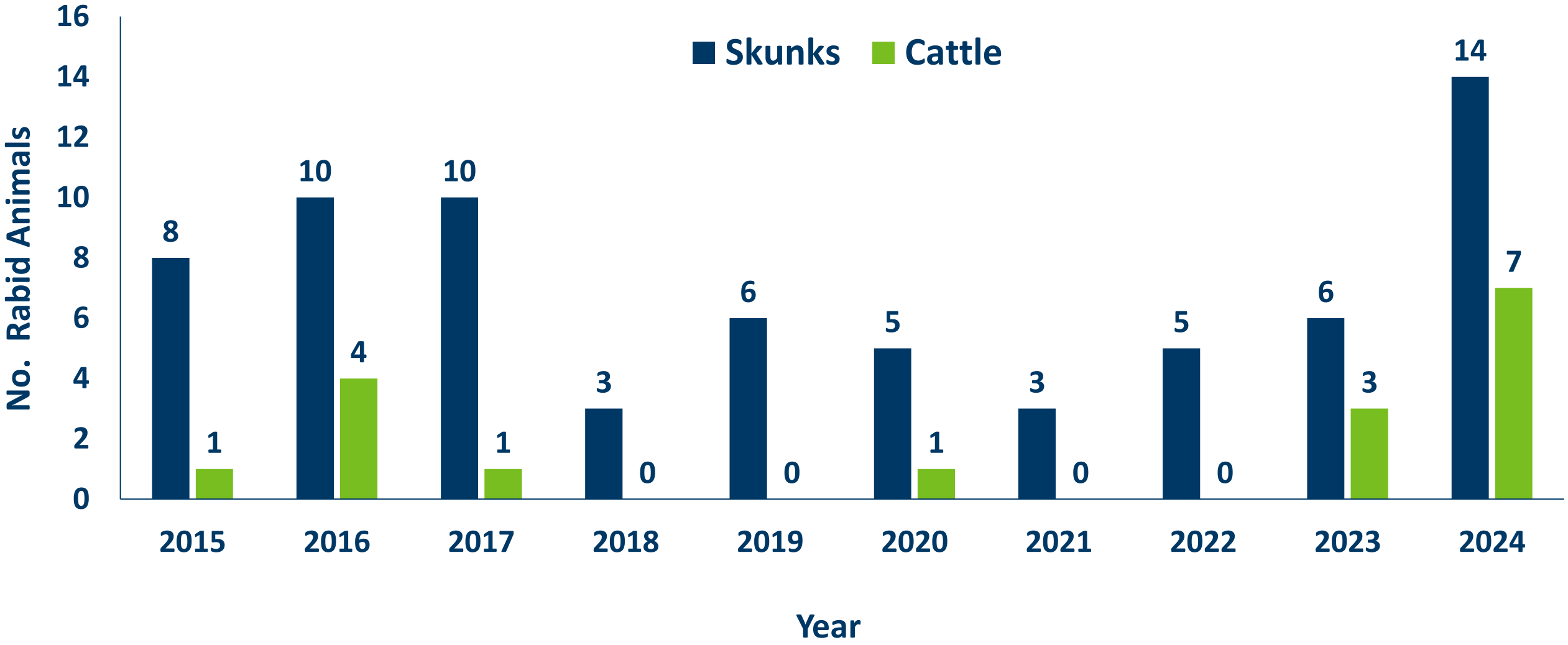
ARC FX = Arctic Fox
CA SK = California Skunk
AZ FX = Arizona Gray Fox
SC SK = South Central Skunk
NC SK = North Central Skunk
E RC = Easter Raccoon
PR MG = Puerto Rico Mongoose



Terrestrial Rabies Cycle in Minnesota



2024 Epizootic Among Skunks in Minnesota



Animal Rabies Surveillance in Minnesota

- University of Minnesota Veterinary Diagnostic Lab (VDL)
- Minnesota Department of Health Public Health Laboratory (MDH PHL)
- MDH Zoonotic Diseases Unit (MDH ZDU)
- Minnesota Board of Animal Health (BAH)

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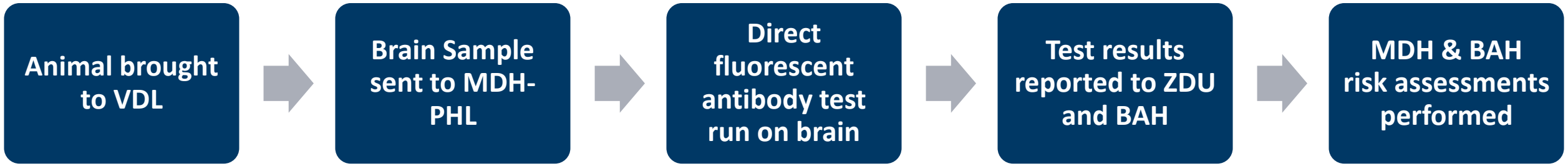
MINNESOTA
BOARD OF ANIMAL HEALTH

Specimen Flow Through the MN System



Animal and Human Health Management

- Domestic animals exposed to rabid animal placed under quarantine
  - — Can range from 45 days to 180 days
- People exposed to a rabid animal receive rabies post-exposure prophylaxis (PEP)
  - — Human rabies immune globulin + 4 vaccines over 2 weeks
- Rabies still considered universally fatal once symptoms begin
  - — PEP prevents rabies from infecting the central nervous system preventing disease onset

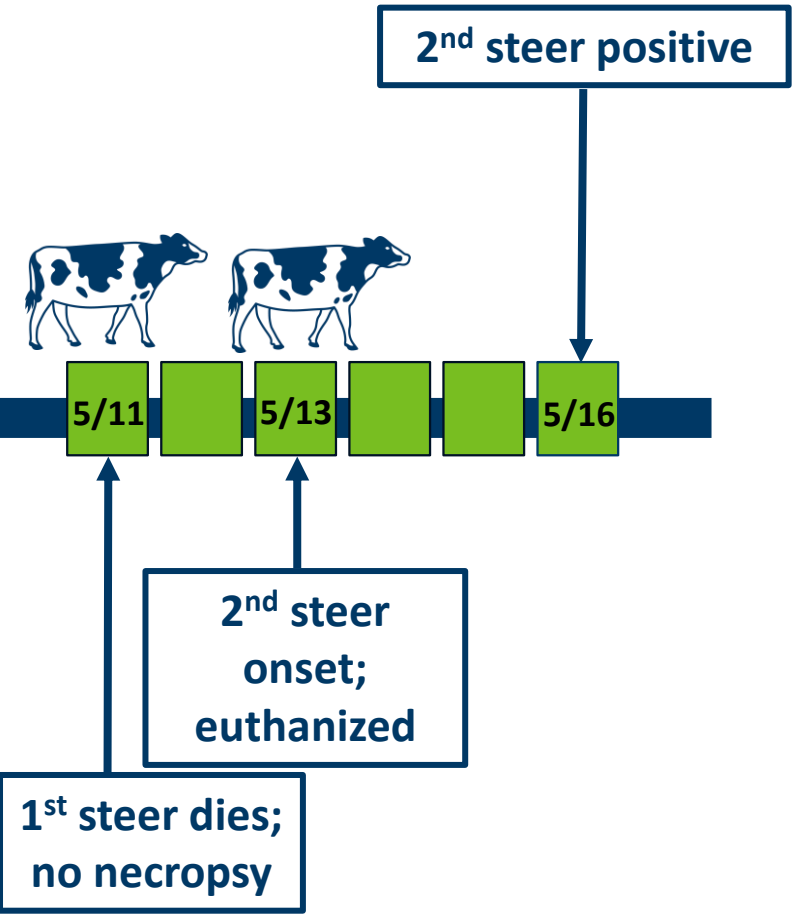
The Investigation

First Illness Occurs

5/11

1st steer dies; no necropsy

2nd Illness Prompts Call to Herd Veterinarian



Joint Investigation Launched – May 16

- Minnesota Department of Health (MDH)
  - — Interviewed potentially exposed people
  - — Assessed need for rabies post-exposure prophylaxis (PEP)
- Minnesota Board of Animal Health (BAH)
  - — Visited farm to assess animal exposures
  - — Establish official quarantines

Initial Investigation Results

- 33 steers placed on a 45-day quarantine
- Rabies vaccination recommended for steers; booster for dog
- 12 unvaccinated cats recommended for euthanasia
- Farmers reported smelling a skunk
- No family members recommended PEP

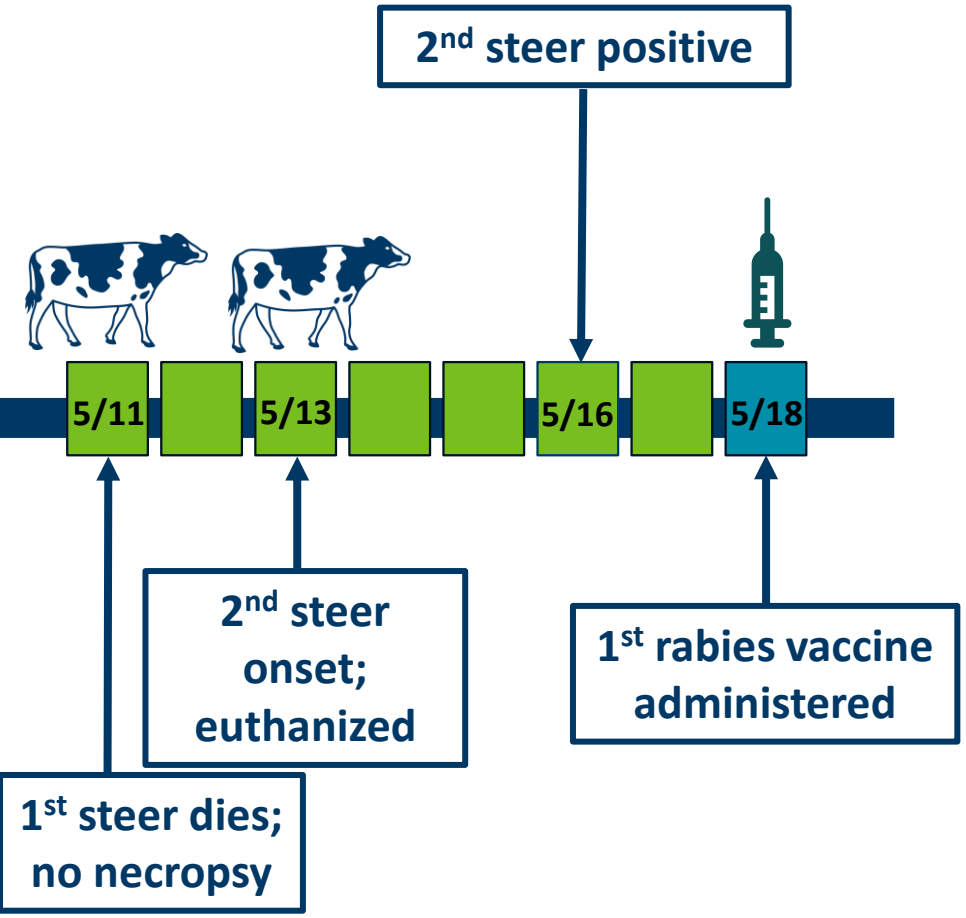
Occupational Rabies Exposure

- Herd veterinarian's glove and skin punctured by skull fragment during removal of steer's brain

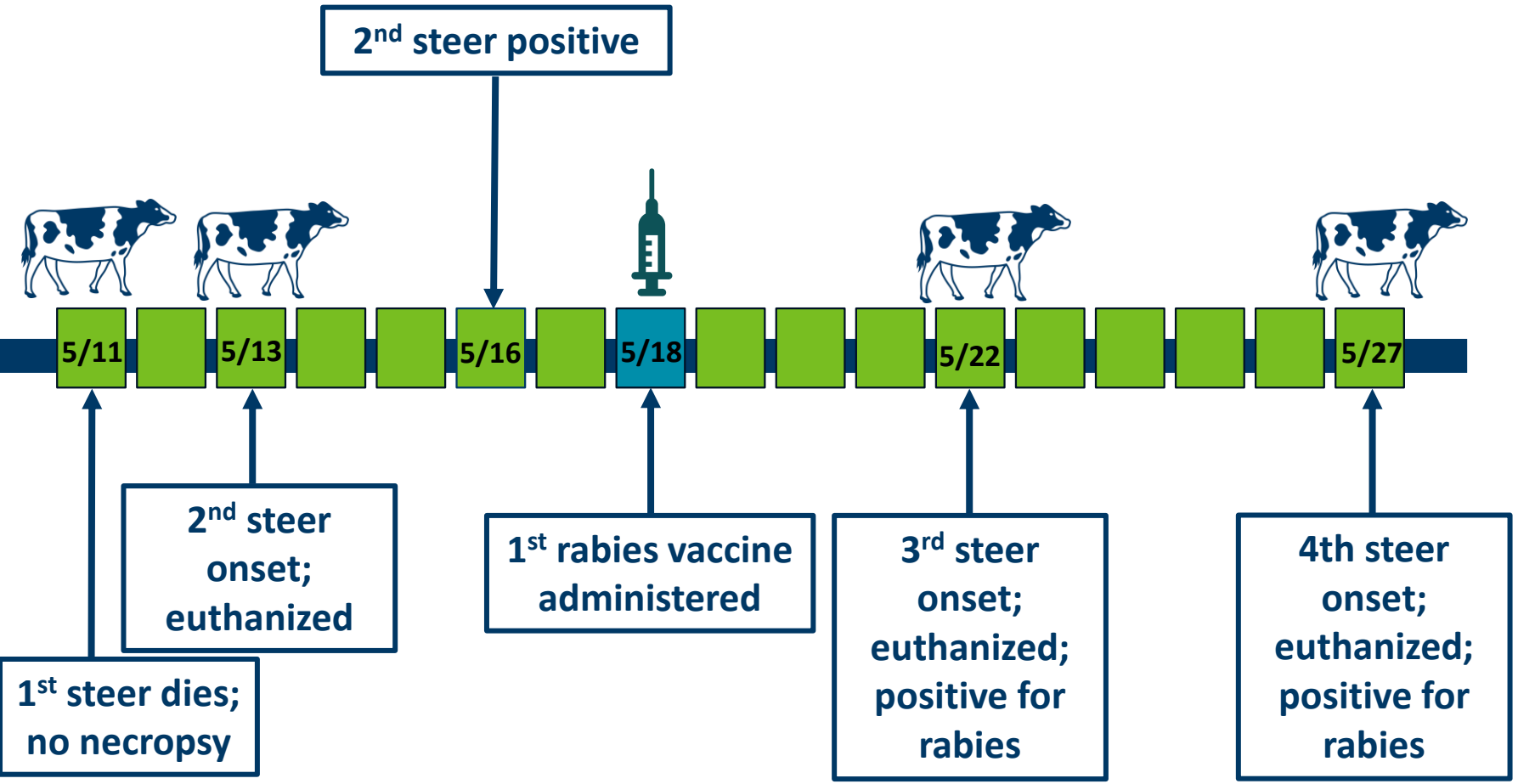
— Was pre-exposure vaccinated

— Recommended 2 booster shots

Steers Receive First Rabies Vaccine Dose



3rd and 4th Steers Become Rabid



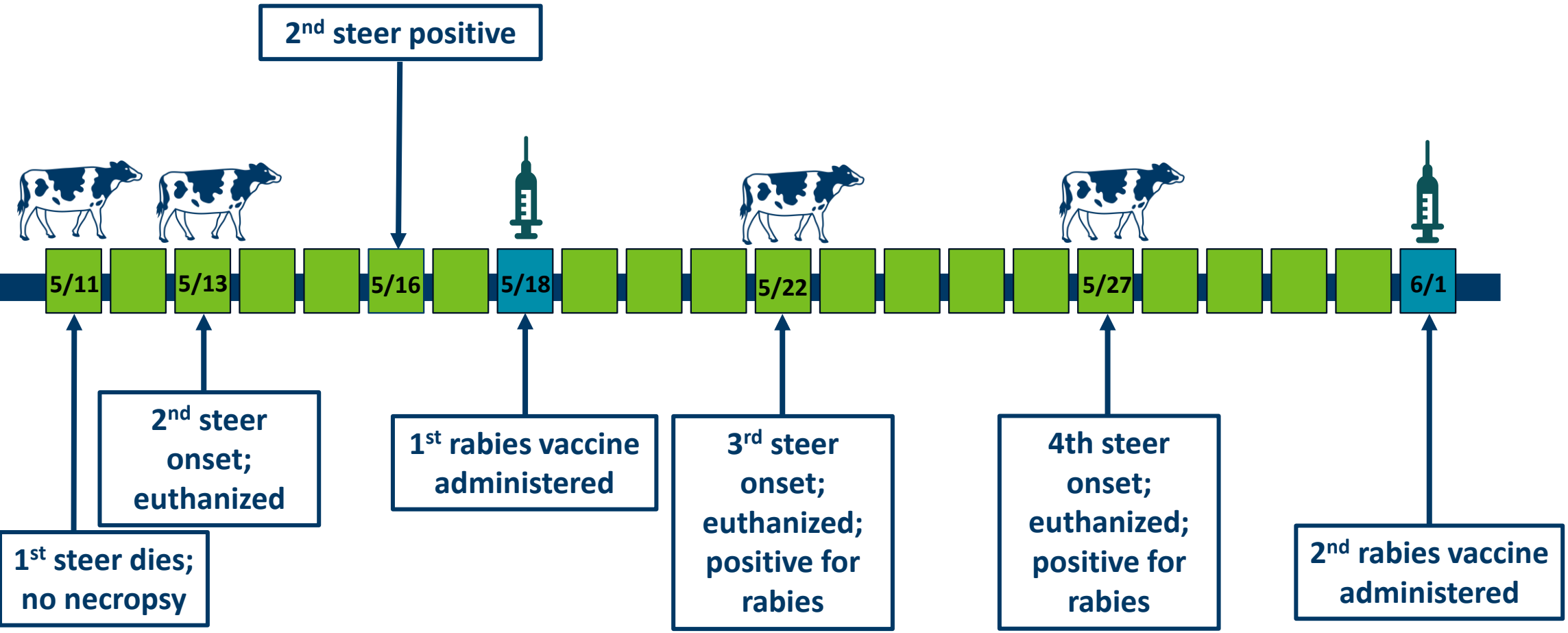
Additional Follow-Up Conducted

- The Board conducted another site visit at the farm
  - — Quarantine extended from 45 to 120 days
  - — Dog remained alive and well
  - — 12 unvaccinated cats euthanized
- Family members interviewed again to assess for new exposures

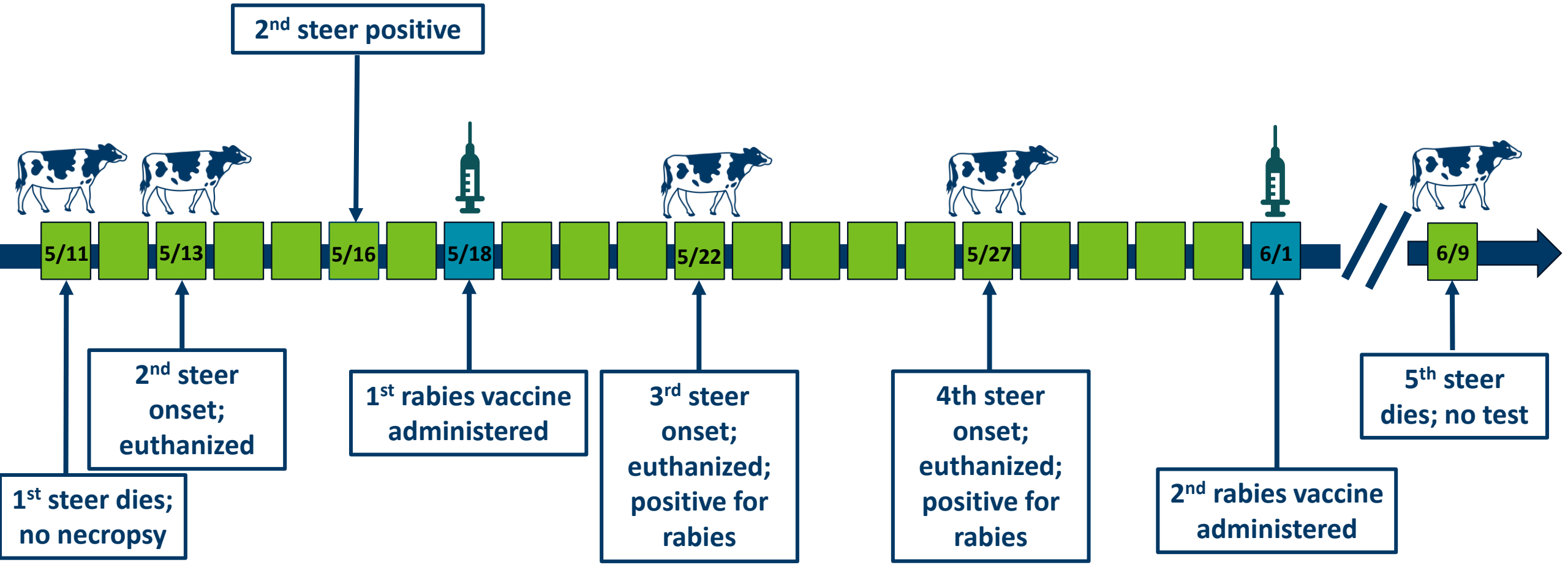
Additional Occupational Rabies Exposures

- Farm owners had extensive contact with infected steers
- Two young children had unmonitored access to steer pen
- 4 people recommended to receive PEP (2 adults, 2 children)
- Veterinarian did not have any new exposures

2nd Rabies Vaccination Administered



5th Steer Dies; Not Submitted for Testing



Investigation Conclusions

- Temporal clustering of rabid animals previously reported but rare
- Dairy steers housed in small pens; multiple exposures possible
- Closely related viruses; suggest point source
- Cluster of 5 rabid steers over 4 weeks highly unusual
  - — Steer-to-steer transmission cannot be ruled out

Self-Knowledge Check: Which of the following steps should be taken by farmers when their cattle appear ill?

A. Call their veterinarian to schedule a farm visit
B. Attempt to treat the animal on their own by administering a variety of medicines
C. Wear appropriate PPE (gloves, eyes, nose, and mouth coverings) when handling ill animals
D. Restrict the number of people caring for the animals to limit potential exposures
E. Isolate the sick animals away from the healthy animals
F. A, C, D, E

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Rationale: We do not want farmers to treat ill animals on their own even though this often occurs. Treatment for cattle can involve significant contact with saliva increasing the risk of exposure.

What about the cost to the farmers?

2024 FINBIN Report

Financial Cost of Rabid Livestock

- Reports have shown that for every rabid livestock, 4 or more people are often exposed to rabies and require PEP
- Rabies often presents in similar ways to other illnesses like choking, bloat, milk fever, etc.
    - Farmers often treat first and only call a veterinarian after treatments don’t work
    - Appropriate PEP often not used, resulting in exposures

Source: Payette-Stroman et al., Rabies in livestock in the United States (2012-2021). https://avmajournals.avma.org/view/journals/ajvr/86/10/ajvr.25.01.0019.xml

Supplementary Table S2 – Economic Burden of Livestock Rabies and Associated Human Exposures, 2012 – 2021

		Cattle	Pigs	Sheep	Goats	Horses & Donkeys	Camelids	Total
	Average Cost	$1,391	$125	$250	$250	$4,500	$5,000	
	Highest Value	$2,894	$150	$323	$435	$5,000	$7,500	
	Lowest Value	$563	$100	$123	$71	$4,000	$2,500	
	Rabies Cases	624	6	28	65	216	8	**947**
Livestock Losses	Upper Case Detection Rate	66%	66%	66%	66%	66%	66%	
	Median Case Detection Rate	33%	33%	33%	33%	33%	33%	
	Highest Cost	$5,472,291	$1,818	$10,436	$13,985	$2,618,182	$60,606	**$9,042,652**
	Median Cost	$1,315,127	$1,136	$10,606	$24,621	$1,472,727	$60,606	**$2,884,824**
	Unadjusted Cost	$867,984	$750	$7,000	$16,250	$972,000	$40,000	**$1,903,984**
Human Exposure Treatment Costs	Upper Human Exposure per Case	4	4	4	4	4	4	**4**
	Median Human Exposures per Case	2	2	2	2	2	2	**2**
	Highest Cost	$20,716,800	$199,200	$929,600	$2,158,000	$7,171,200	$265,600	**$31,440,400**
	Median Cost	$10,358,400	$99,600	$464,800	$1,079,000	$3,585,600	$132,800	**$15,720,200**
	Unadjusted Cost	$5,179,200	$49,800	$232,400	$539,500	$1,792,800	$66,400	**$7,860,100**
Total Economic Cost of Livestock Rabies - High		$26,189,091	$201,018	$940,036	$2,171,985	$9,789,382	$326,206	**$40,483,052**
Total Economic Cost of Livestock Rabies - Median		$11,673,527	$100,736	$475,406	$1,103,621	$5,058,327	$193,406	**$18,605,024**
Total Economic Cost of Livestock Rabies - Low		$6,047,184	$50,550	$239,400	$555,750	$2,764,800	$106,400	**$9,764,084**

Total Cost to the Farmers and Medical Sector: $47,500

Item	Cost per item	Total cost
9 veterinary visits	$172	$1,550
65 rabies vaccines (steers, dog)	$5	$325
Rabies testing and shipping	$100	$400
Loss of 5 steers ready for market	$2,500	$12,500
Rabies PEP for family	$8,000	$32,000
Rabies booster for veterinarian	$365	$730

Rabid Livestock are Major Financial Burden

37% of annual farm income

Hard to make farm equipment loan payment

Sale of the herd significantly delayed

Mental Health Toll

- Losses not covered by United States Department of Agriculture (USDA) livestock indemnity program
- Losses not typically covered by farm insurance
- Farmers felt unsupported
- 4 family members each getting 4 shots over 2 weeks; lots of trips
- Stress of farm equipment payment loan
- Worried about more animals getting sick

Final Thoughts

- Rare occurrence but high consequence
- Consider herd vaccination in areas with increase rabies circulation, high value animals, and potential for human exposure
- Fully fund animal rabies surveillance
- Consider programs to help farmers with cost

Acknowledgements

MDH and PHL

- Stacy Holzbauer
- Malia Ireland
- Katie Harry
- Gongping Liu
- Scott Cunningham
- Kirk Smith

Board of Animal Health

- Bonnie Miller
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- Betsy Lempelius

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- Bruce Alexander

UMN Veterinary Diagnostic Lab

- Hemant Naikare
- Albert Rovira

CDC

- Ryan Wallace

Others

- Thomas Czeck
- Farm owners

Thank You!

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RHODE ISLAND
DEPARTMENT OF HEALTH


ACCREDITED HEALTH DEPARTMENT
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Advancing public health performance
PUBLIC HEALTH ACCREDITATION BOARD

Rhode Island's Centralized Rabies Control Program: Reducing Unnecessary Post-Exposure Prophylaxis and Associated Healthcare Savings

April 30, 2026

Clinician Outreach and Communication Activity (COCA) Call

Alexia Goodman, MPH and Katy Donovan, PhD

Background

100,000 people receive PEP annually

Risk assessments determine who needs PEP

Health department consultation prevents unnecessary PEP

Animal Bites Reporting and PEP Approval in RI

Patients
Medical Providers
Animal Control Officers
Other Reporters

RI Department of Health

Risk Assessment

PEP Authorization

Animal Bites Reporting and PEP Approval in RI

Patients
Medical Providers
Animal Control Officers
Other Reporters

RI Department of Health

Risk Assessment

PEP Authorization

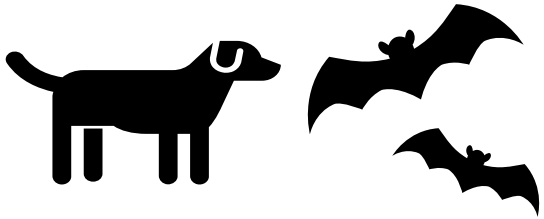
REDCap
Research Electronic Data Capture

Initial Report Intake

Patient Demographics

- ✓ Name
- ✓ Date of Birth
- ✓ Phone Number
- ✓ Address
- ✓ Sex
- ✓ Race & Ethnicity

Initial Report Intake



Patient Demographics

- ✓ Name
- ✓ Date of Birth
- ✓ Phone Number
- ✓ Address
- ✓ Sex
- ✓ Race & Ethnicity

Incident Details

- ✓ Exposing Animal
- ✓ Wound Type
- ✓ Wound Location
- ✓ Status at Time of Report
- ✓ Description of Incident

Initial Report Intake

Patient Demographics

- ✓ Name
- ✓ Date of Birth
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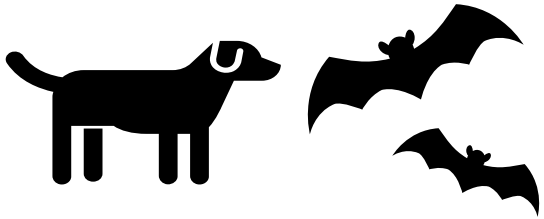

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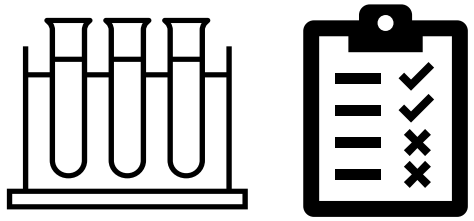


Investigation Outcome

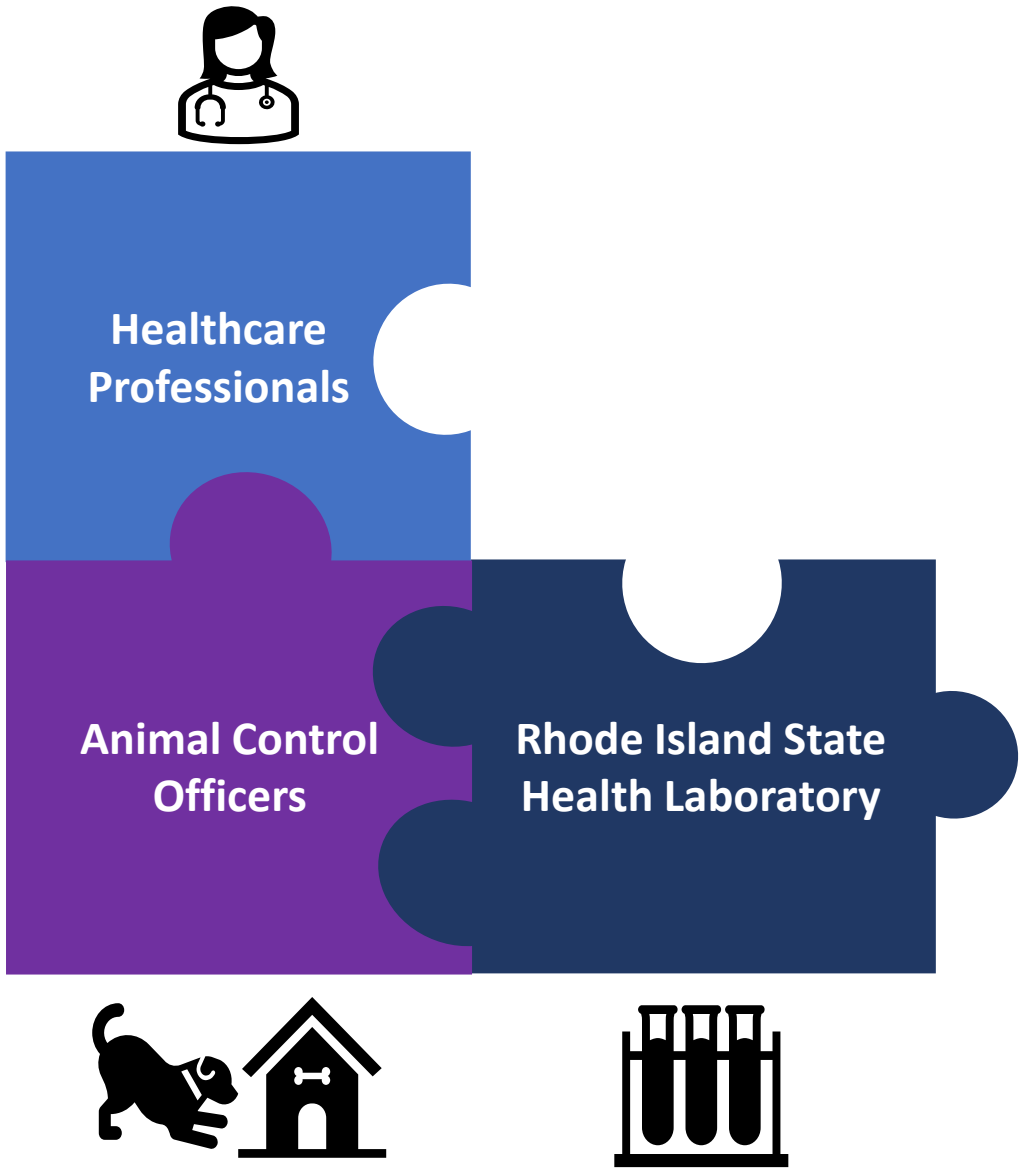
- ✓ Ownership Status
- ✓ Vaccination Status
- ✓ Quarantine Location
- ✓ Rabies Testing Results

Rabies Assessment Process

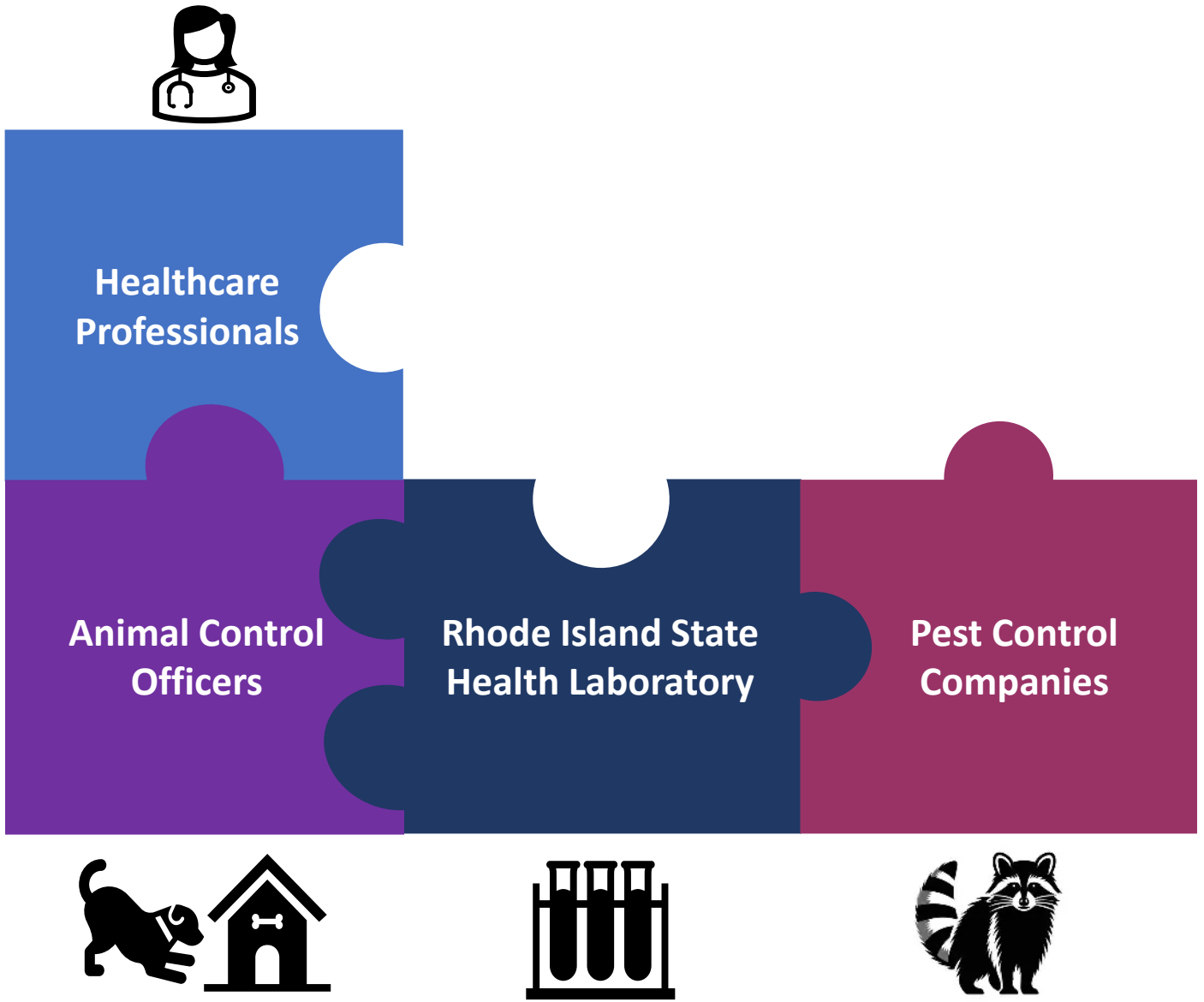
Rabies Assessment Process

Rabies Assessment Process

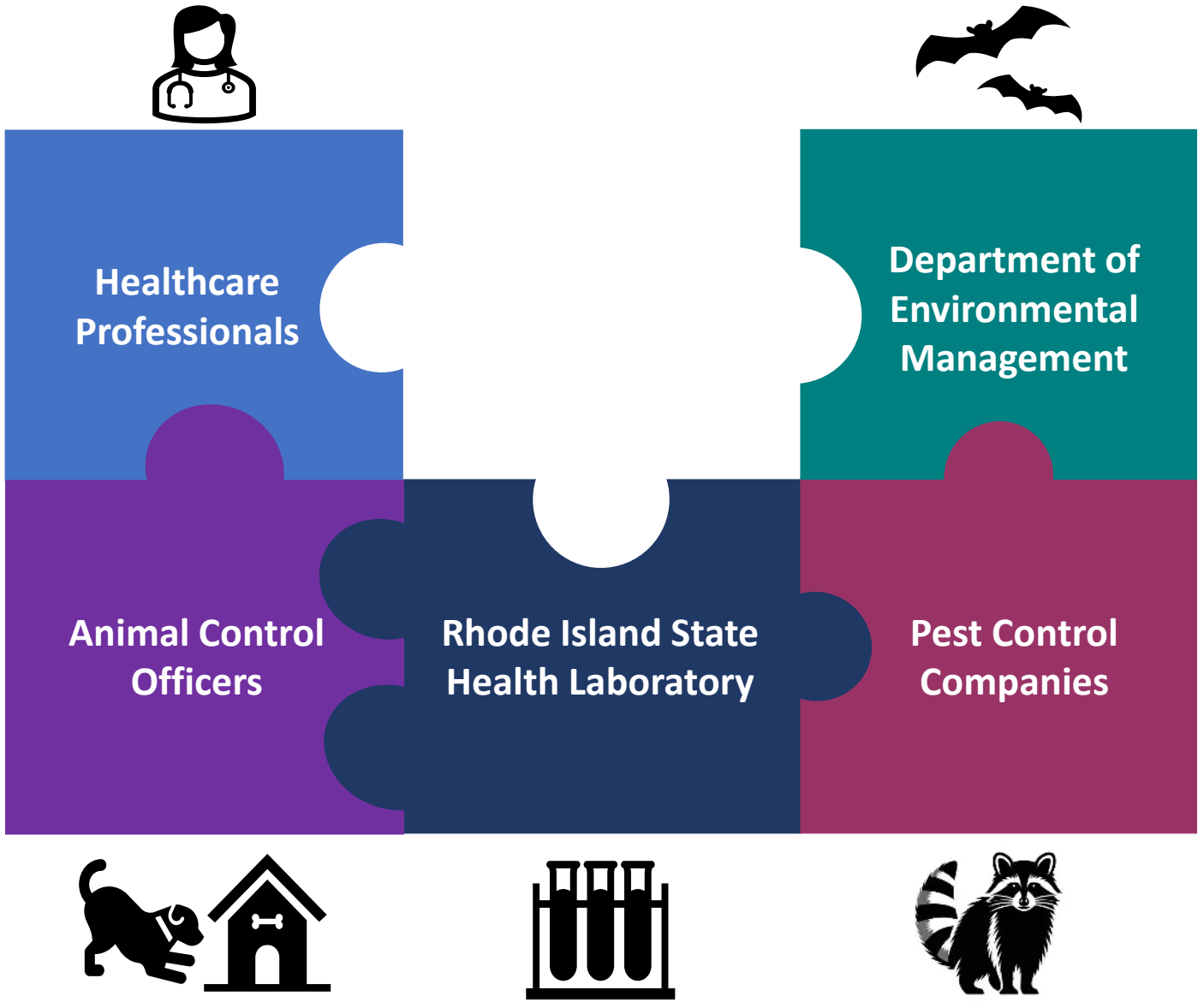
Rabies Assessment Process



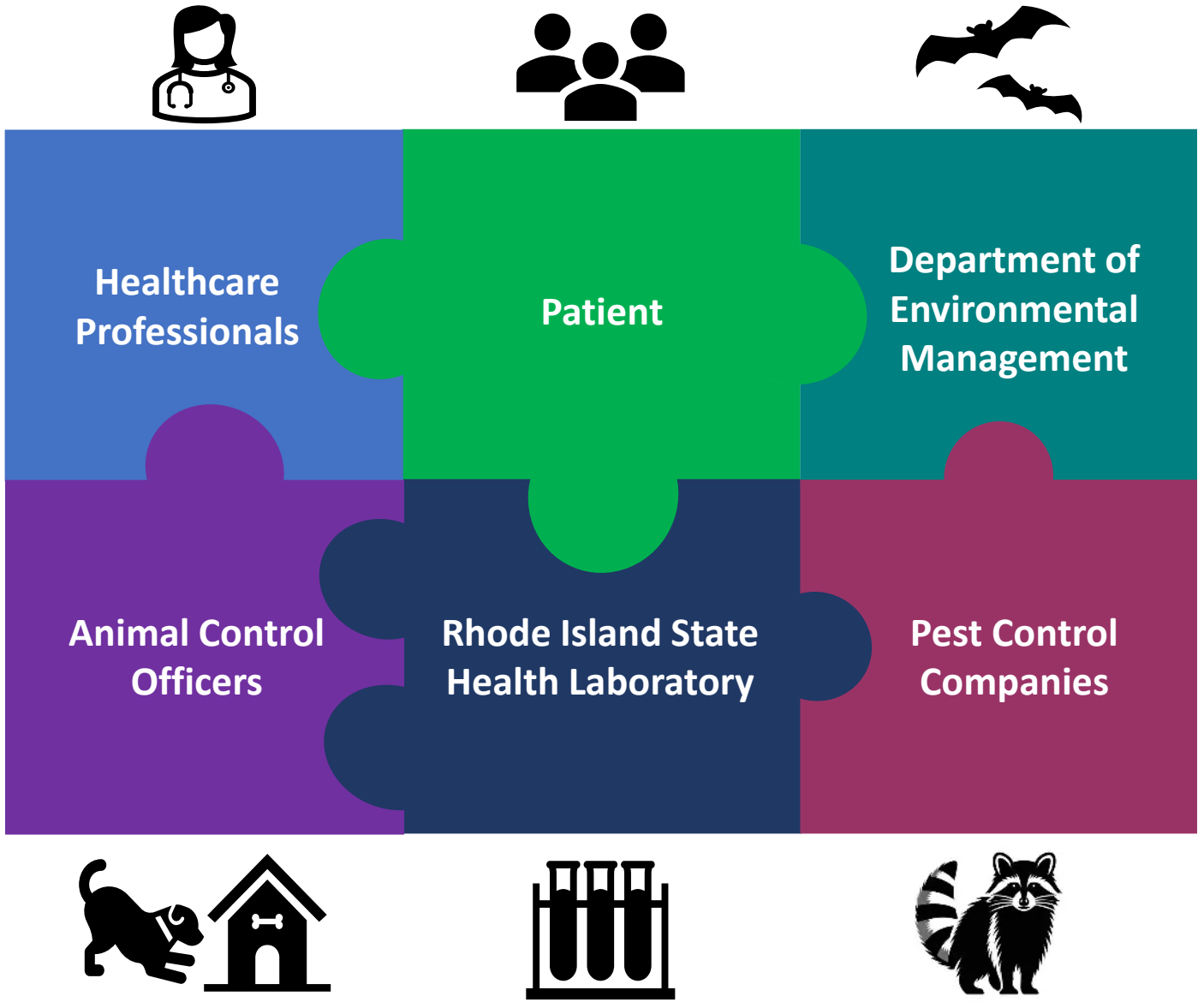
Rabies Assessment Process



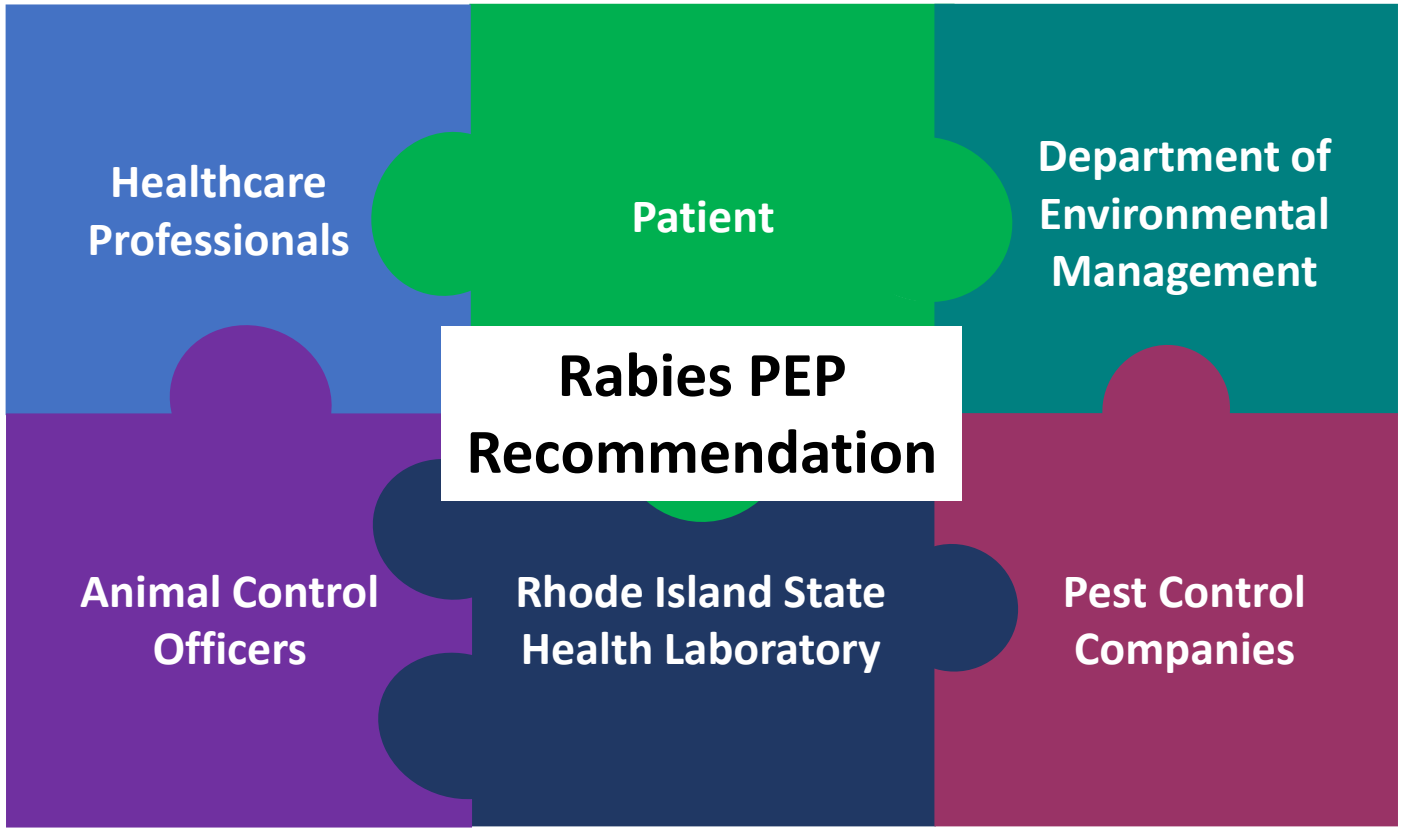
Rabies Assessment Process



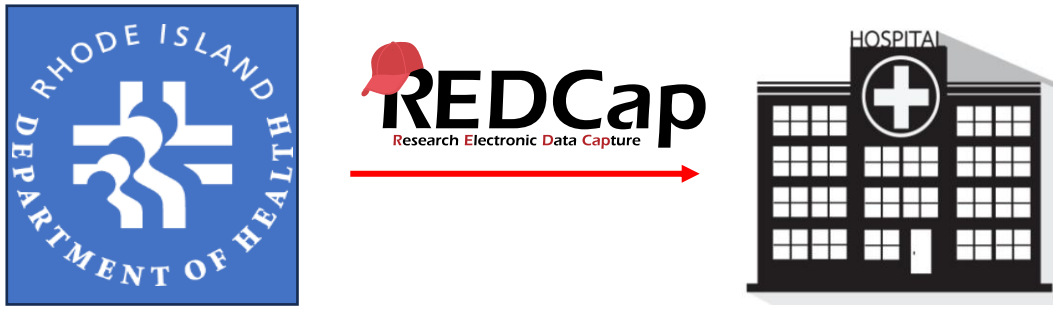
Rabies Assessment Process



Rabies Assessment Process



REDCap **PEP Authorization** Process



- ✓ **Patient information**
- ✓ **Vaccine recommendation**
- ✓ **Anticipated vaccine schedule**

Rabies Exposure Vaccination Outcome:

* must provide value

- [x] HRIG and 4 doses of vaccine
- [ ] HRIG and 5 doses of vaccine (patient immunocompromised). Titer required 2 weeks after final dose.
- [ ] No HRIG and 2 doses of vaccine (patient previously vaccinated with FDA-approved vaccine-HDCV or PCEC).
- [ ] Off-schedule vaccination - describe:
- [ ] Other vaccination recommendation - describe:
- [ ] Patient refused vaccine after risk counseling by nurse and/or MD
- [ ] Unable to reach patient. No response to letter.
- [ ] Patient treated out of state.
- [ ] Submitted for testing and resulted negative. No risk.

Patient Information if Receiving Vaccine

Weight (lbs): 170	**Weight (kgs):** 77.1 View equation
Insurance: (•) Yes ( ) No reset	**Name of Insurance Plan:** BCBS Healthmate/Medicare
Immunosuppressed: ( ) Yes (•) No reset	**Specify Condition:**
Previously Vaccinated: ( ) Yes (•) No reset	**If yes, when:** M-D-Y
Egg allergy? ( ) Yes (•) No reset	

Vaccine Release Information

Authorizing RIDOH Physician:	Dr. Bornschein
Dispensing Pharmacy:	Brown University Health ID Clinic
Place of 1st Dose:	Brown University Health ID Clinic
Date of Vaccine Release:	03-26-2026 Today M-D-Y
Vaccine Released By:	Steven LeBlanc

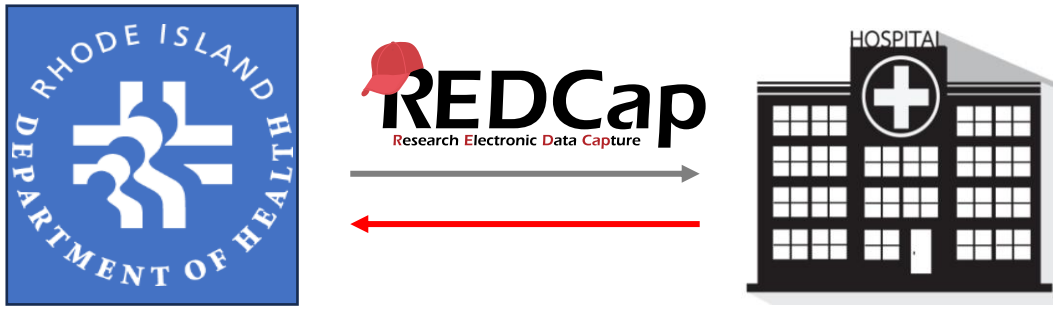
[ ] **Click here if completing series somewhere other than place of first dose.**

Anticipated Vaccine Schedule

1st Dose (day 0):	2nd Dose (day 3):	3rd Dose (day 7):	4th Dose (day 14):	5th Dose (for immunocompromised individuals, day 28):
03-27-2026 Today M-D-Y	03-30-2026 Today M-D-Y	03-27-2026 Today M-D-Y	04-03-2026 Today M-D-Y	Today M-D-Y

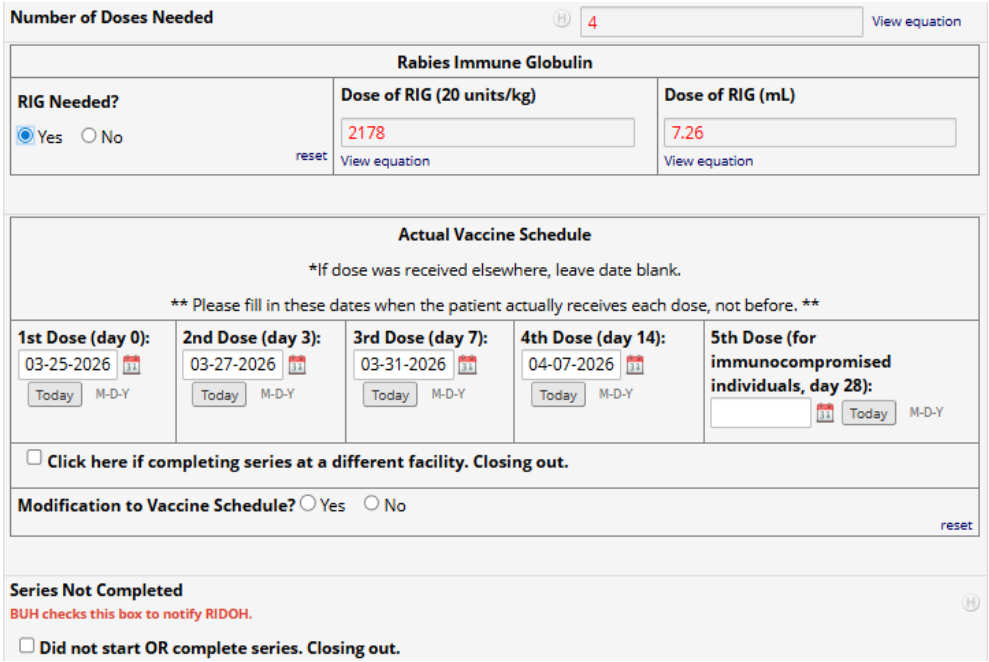
Last Possible Date for First Dose: 03-30-2026 Today M-D-Y

REDCap **PEP Authorization** Process



- ✓ Patient information
- ✓ Vaccine recommendation
- ✓ Anticipated vaccine schedule

- ✓ **Vaccine dose details**
- ✓ **Completed dose dates**
- ✓ **Vaccine schedule deviations**
- ✓ **Incomplete vaccine series**



Number of Doses Needed 4 View equation

Rabies Immune Globulin

RIG Needed?	Dose of RIG (20 units/kg)	Dose of RIG (mL)
(•) Yes ( ) No reset	2178 View equation	7.26 View equation

Actual Vaccine Schedule

*If dose was received elsewhere, leave date blank.

** Please fill in these dates when the patient actually receives each dose, not before. **

1st Dose (day 0):	2nd Dose (day 3):	3rd Dose (day 7):	4th Dose (day 14):	5th Dose (for immunocompromised individuals, day 28):
03-25-2026 Today M-D-Y	03-27-2026 Today M-D-Y	03-31-2026 Today M-D-Y	04-07-2026 Today M-D-Y	Today M-D-Y

[ ] Click here if completing series at a different facility. Closing out.

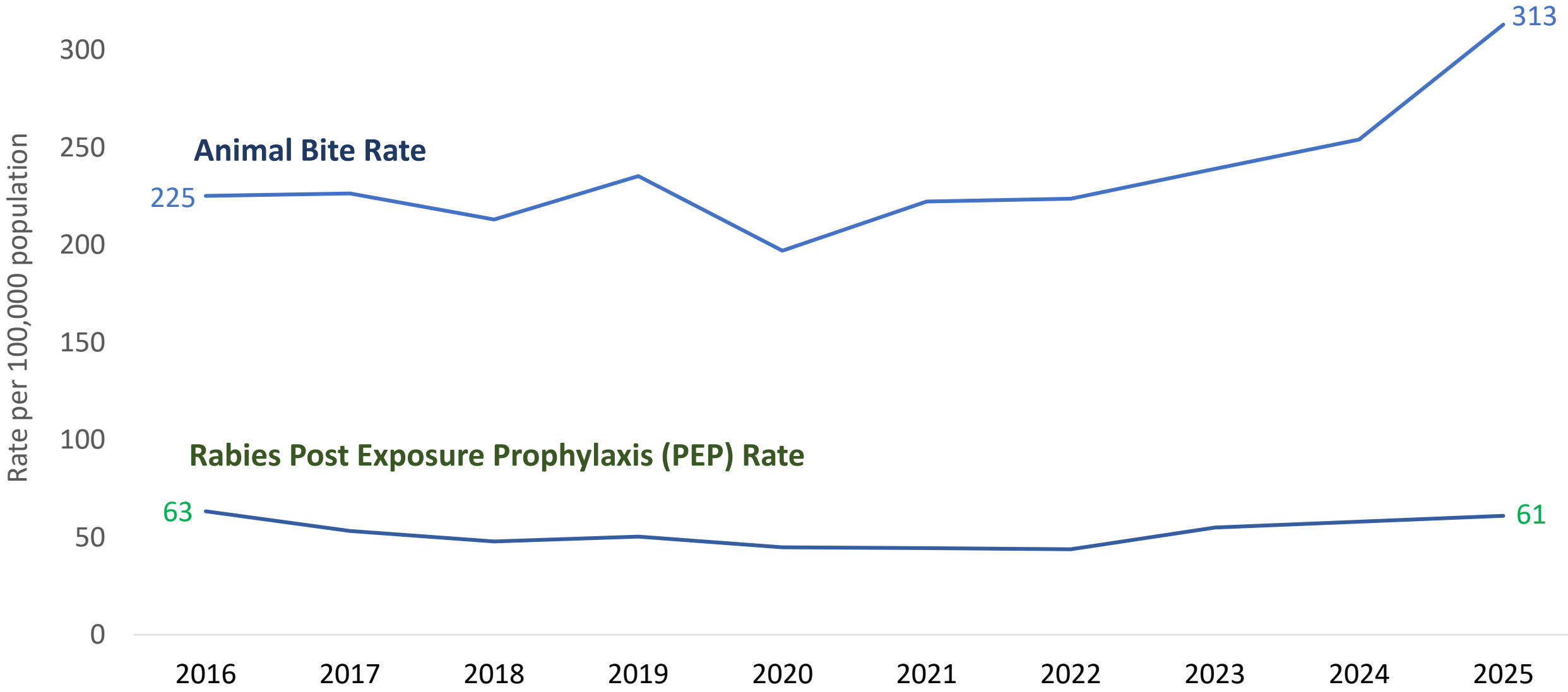
Modification to Vaccine Schedule? ( ) Yes ( ) No reset

Series Not Completed

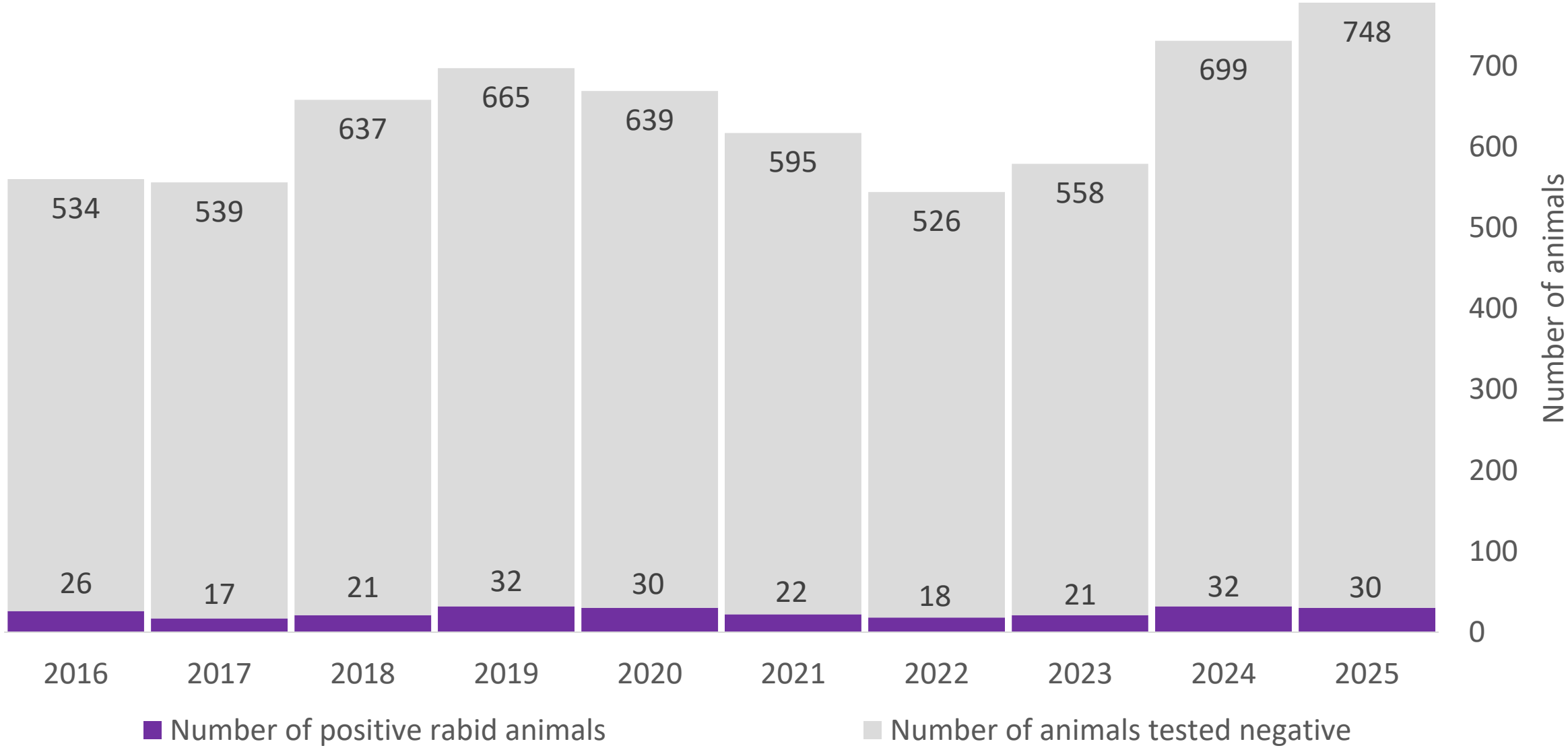
BUH checks this box to notify RIDOH.

[ ] Did not start OR complete series. Closing out.

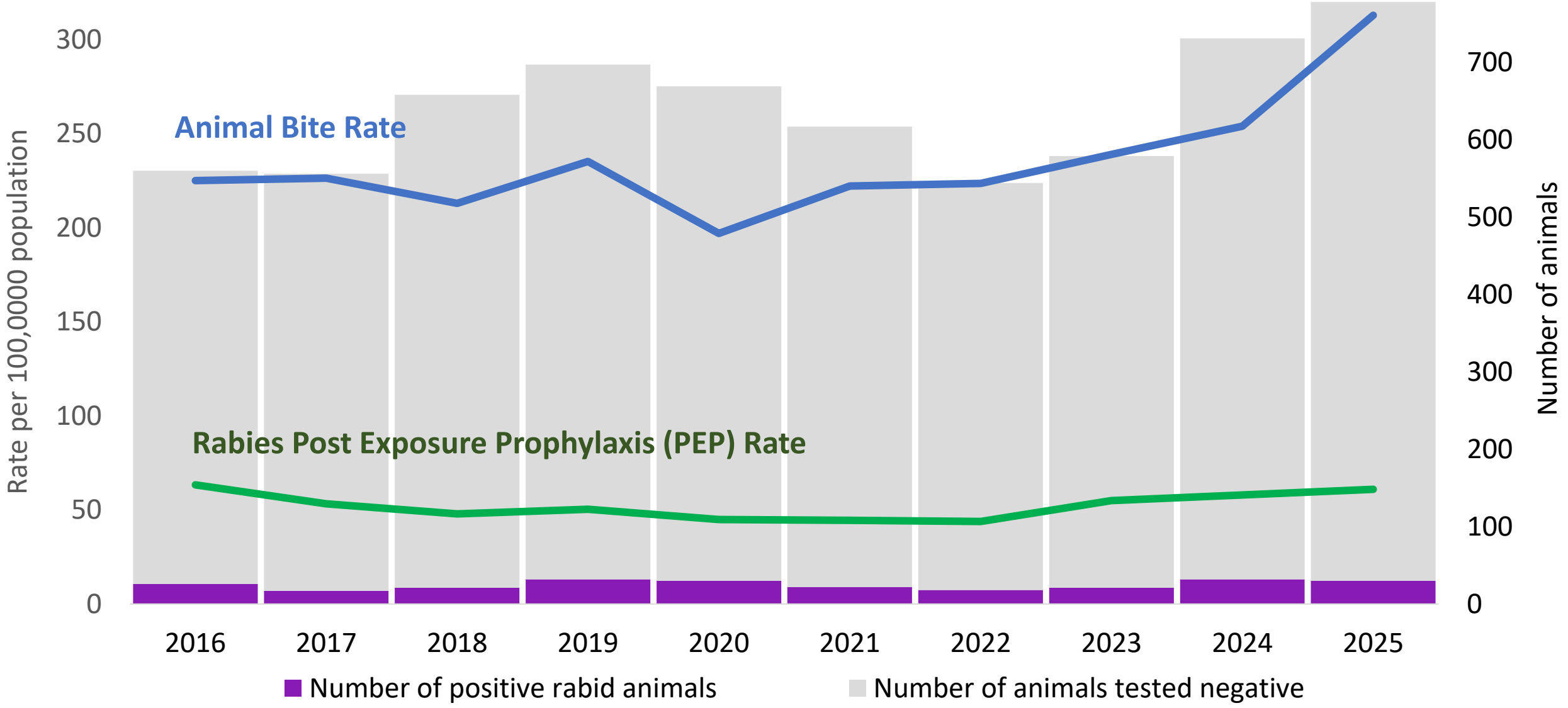
Animal bite rates have increased since 2020
PEP rates have remained steady.



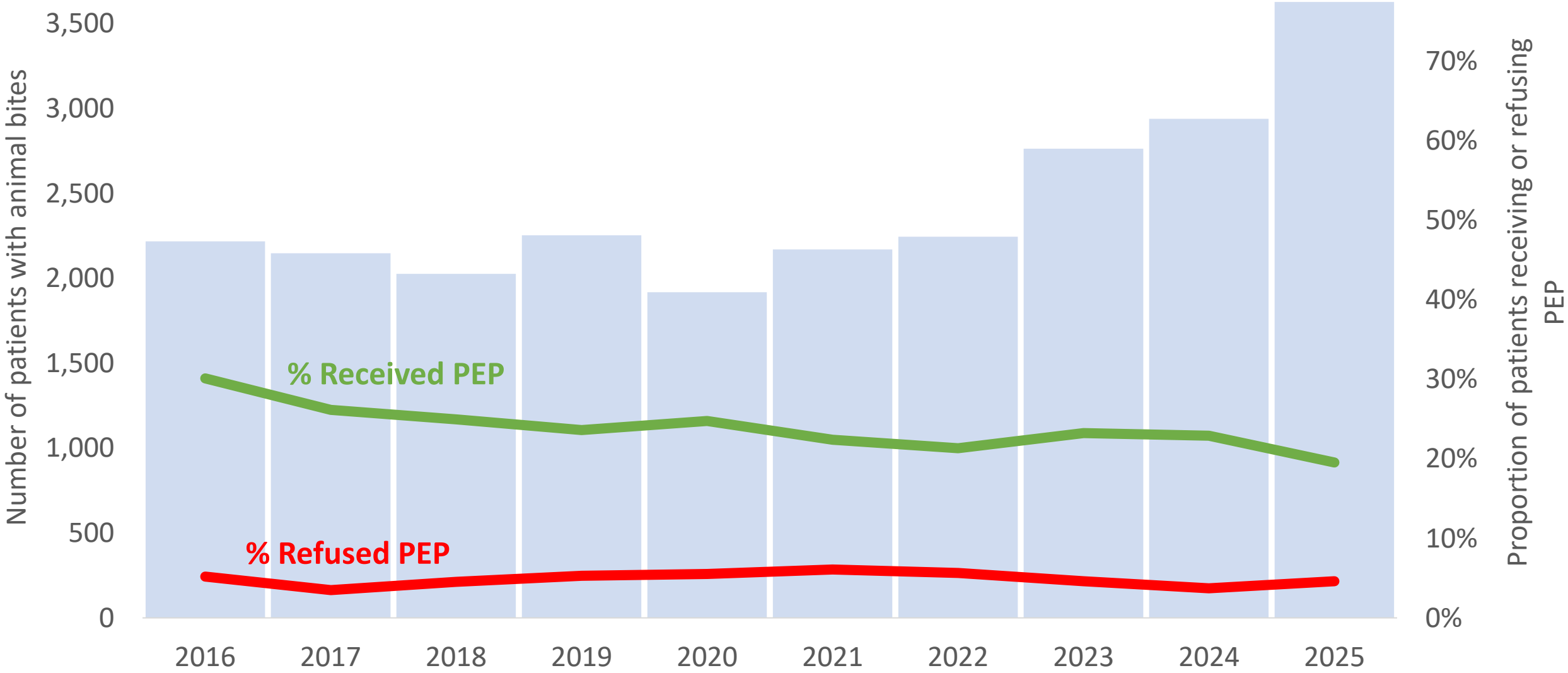
Animal testing has increased recently but the number of rabid animals has remained stable.



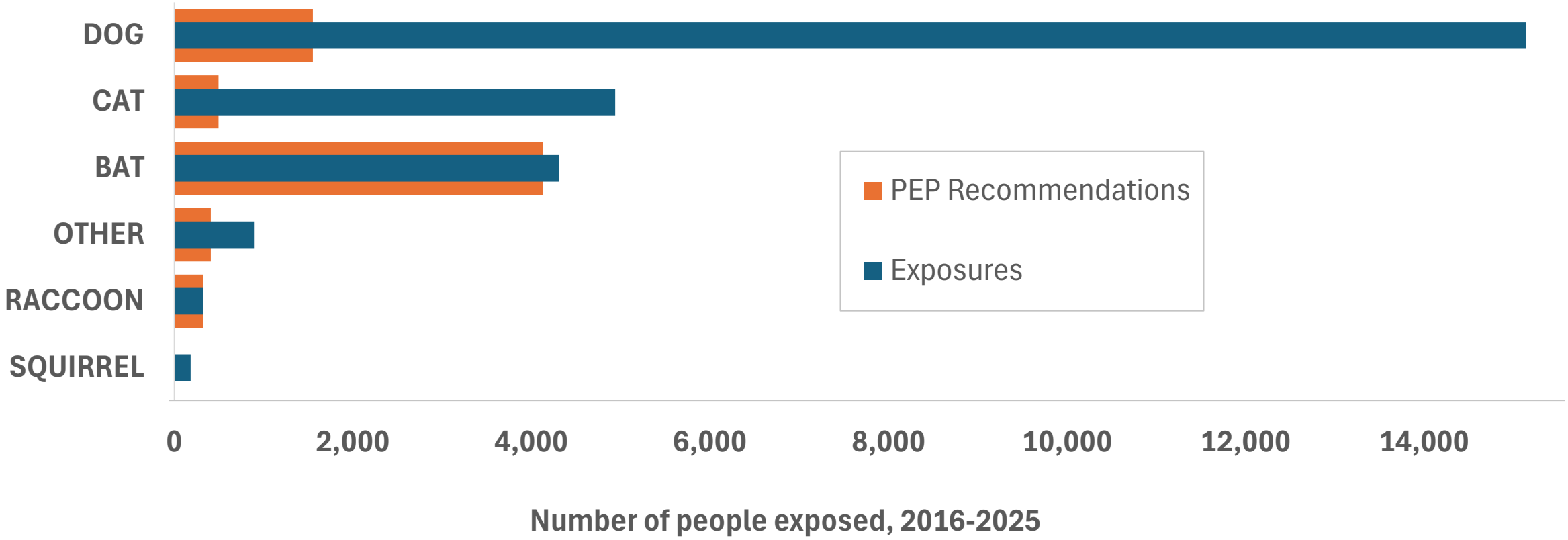
Increased animal testing has likely contributed to a stable PEP rate in Rhode Island.



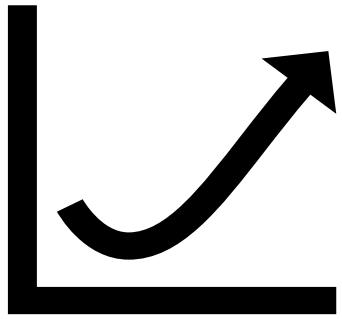
The proportion of people who were recommended to receive PEP decreased by more than 30%. PEP refusals have remained steady.



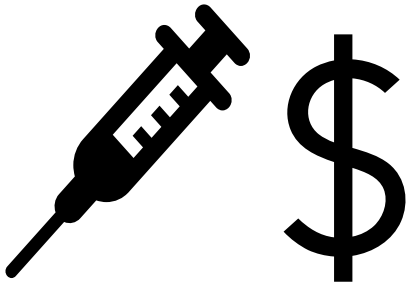
Dogs, cats, and bats are the most frequent exposing animals, but bat exposures are more likely to result in PEP recommendations.



Cost Saving Analysis: Rhode Island, 2013 - 2022

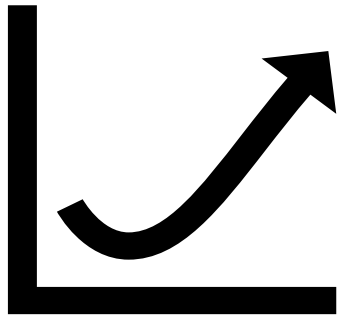


Animal bite and PEP data

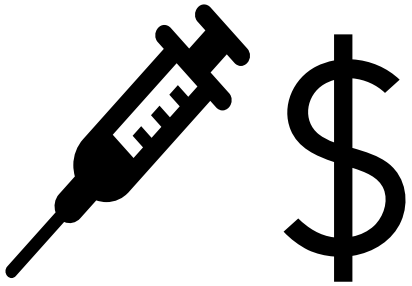


Estimated yearly PEP costs

Cost Saving Analysis: Rhode Island, 2013 - 2022

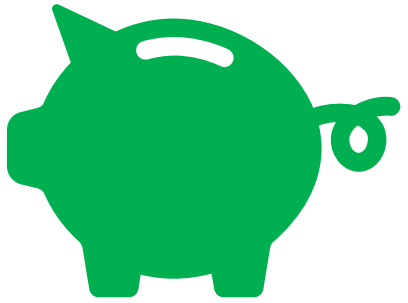


Animal bite and PEP trends



Estimated yearly PEP costs

PEP prevented



Healthcare savings

Estimated Savings as a Result of Preventing Unnecessary PEP Administration, 2013-2022

30,059 animal exposures

PEP authorized for 7,444 people (25%)

22,615 people did NOT get PEP

Estimated Savings as a Result of Preventing Unnecessary PEP Administration, 2013-2022

30,059 animal exposures

PEP authorized for 7,444 people (25%)

22,615 people did NOT get PEP

25%

Estimated would have gotten PEP without RIDOH risk assessment, counseling, and/or lab testing

Estimated Savings as a Result of Preventing Unnecessary PEP Administration, 2013-2022

30,059 animal exposures

PEP authorized for 7,444 people (25%)

22,615 people did NOT get PEP

25%

Estimated would have gotten PEP without RIDOH risk assessment, counseling, and/or lab testing

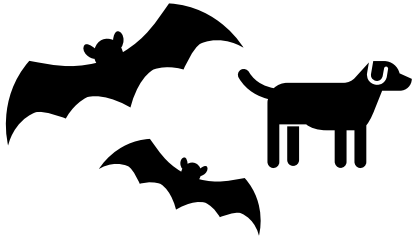
$11,977

Average PEP cost

$68 million

in savings

Estimated Savings as a Result of Preventing Unnecessary PEP Administration, 2022



2,988 animal exposures

PEP authorized for 652 people (22%)

2,336 people did NOT get PEP

25%

Estimated would have gotten PEP without RIDOH risk assessment, counseling, and/or lab testing

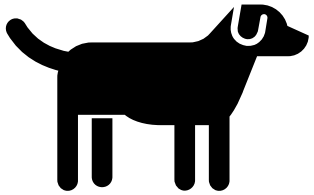
$13,697

Average PEP cost

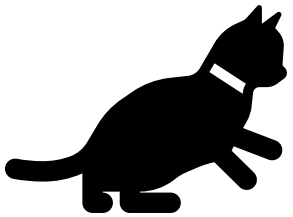
$8 million

in savings for one year

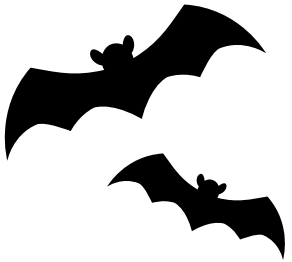
Cost Savings by Animal Type and Program Intervention
2013-2022



$33 million



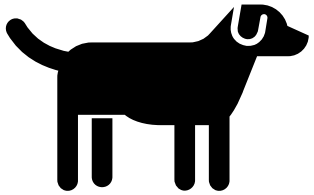
$15 million



$15 million

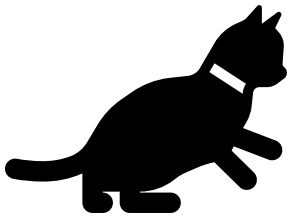
Cost Savings by Animal Type and Program Intervention

2013-2022



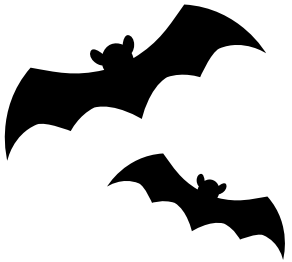
$33 million

Risk Assessment & Counseling

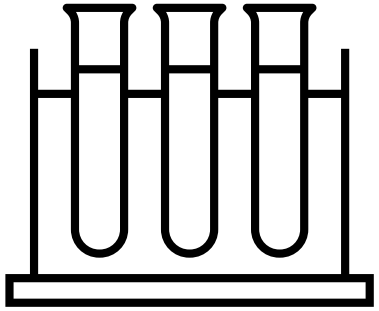


$15 million

Risk Assessment & Counseling



$15 million



Testing

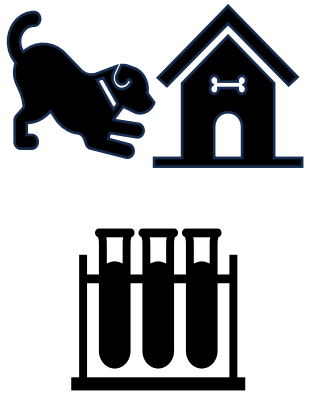
Additional Impacts

Additional Impacts

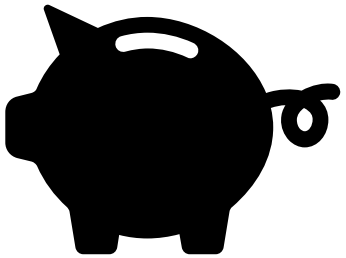
Additional Impacts

Conclusion

Health department-led risk assessment and evaluation



Animal quarantine and testing



Cost and time savings

Self Knowledge Check:

What has the biggest impact on ensuring PEP is given appropriately following an animal bite?

A. Patient age
B. Time of day when the patient presents for care
C. Provider consultation with the local health department
D. Patient has health insurance coverage

Self Knowledge Check:

What has the biggest impact on ensuring PEP is given appropriately following an animal bite?

~~A. Patient age~~

~~B. Time of day when the patient presents for care~~

C. Provider consultation with the local health department

~~D. Patient has health insurance coverage~~

Rationale: Rabies PEP guidance is nuanced and requires consideration of many factors including local rabies epidemiology, circumstances of the exposure, and availability of the animal for quarantine or testing. Two previous studies have shown consultation with the local health department improves adherence to PEP guidelines.

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Career Epidemiology Field Officer
Centers for Disease Control and Prevention
Katy.Donovan.ctr@health.ri.gov

References

1. Risk assessment icon obtained from the Noun Project, Volunteer by Mrfa Studio from Volunteer Icon - Free PNG & SVG 1259612 - Noun Project
2. Centers for Medicare & Medicaid Services. 2014 ASP drug pricing files. http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Part-B-Drugs/McrPartBDrugAvgSalesPrice/2014ASPFiles.html. Published 2014. Accessed January 2014.
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4. Krebs JW, Long-Marin SC, Childs JE. Causes, costs, and estimates of rabies postexposure prophylaxis treatments in the United States. J Public Health Manag Pract. 1998;4(5):56–62.
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8. Whitehouse ER, Person MK, Brown CM, Slavinski S, Rao AK, Blanton JD. Evaluating Surveillance for and Estimating Administration of Rabies Postexposure Prophylaxis in the United States, 2012-2018. PLoS Negl Trop Dis. 2021 Oct 25;15(10):e0009878. doi: 10.1371/journal.pntd.0009878. PMID: 34695115; PMCID: PMC8568135.

For more information, contact rabies@cdc.gov.

For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 https://www.cdc.gov/
Follow us on social **@CDCgov**

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the U. S. Centers for Disease Control and Prevention.

Closing Slide / Disclaimer – CDC/ATSDR

For more information, contact CDC
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TTY: 1-888-232-6348 cdc.gov atsdr.cdc.gov
Follow us on X (Twitter) @CDCgov & @CDCEnvironment

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To Ask a Question

- Using the MS Teams Platform
  - The ability to ask questions during the live webinar is limited to the first 1,000 attendees who join the webinar.
  - Questions may be submitted after the live session by emailing coca@cdc.gov.

- If you are a patient, please refer your question to your healthcare provider.

- If you are a member of the media, please direct your questions to CDC Media Relations at 404-639-3286 or email media@cdc.gov.

TRAIN

- CDC has fully transitioned from the Training and Continuing Education Online (TCEO) system that provides access to CDC educational activities for continuing education to CDC TRAIN. If you do not already have a TRAIN account, please create one at https://www.train.org/cdctrain.
- All new activities that offer continuing education (CE) from CDC will only be listed in CDC TRAIN. CDC TRAIN is a gateway into the TRAIN Learning Network, the most comprehensive catalog of shared public health training opportunities. This transition will allow you to access non-credit and for-credit educational activities, and track your learning, including CE in one place. Many CDC-accredited activities are already listed in CDC TRAIN. The move to one system improves efficiency and makes it easier for learners, CDC staff, and partners to offer and earn CE in one place.

Continuing Education

- All continuing education for COCA Calls is issued online through CDC TRAIN (https://www.train.org/cdctrain).

- To receive continuing education (CE) for **WC5003-043026**—Rabies is Still Here: Epidemiology, Outbreaks, and Costs of Prevention in the United States, please visit CDC TRAIN and search for the course in the Course Catalog using **WC5003-043026**. Follow the steps below by **June 1, 2026**. The registration code is **COCA043026**.

- To receive continuing education (CE) for **WD5003-043026**—Rabies is Still Here: Epidemiology, Outbreaks, and Costs of Prevention in the United States, please visit CDC TRAIN and search for the course in the Course Catalog using **WD5003-011526**. Follow the steps below between **June 2, 2026,** and **June 2, 2028.**

Today's COCA Call will be Available to View On-Demand

- **When:** In approximately one week
- **What:** Closed-captioned video and transcript
- **Where:** On the COCA Call webpage: Rabies is Still Here: Epidemiology, Outbreaks, and Costs of Prevention in the United States | COCA | CDC

Additional Resources

- Continue to visit https://www.cdc.gov/coca/hcp/trainings/index.html to get more details about upcoming COCA Calls.

- Subscribe to receive notifications about upcoming COCA calls and other COCA products and services at https://www.cdc.gov/coca/hcp/trainings/index.html.

Thank you for joining us today!

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