# RABIES CONTROL & ANIMAL DISEASE REPORTING MANUAL FOR VETERINARY FACILITIES IN LA COUNTY

County of Los Angeles
Public Health
Veterinary Public Health & Rabies Control

***For Consultation on Rabies, Animal Bites, Animal Diseases and Disease and Bite Reporting***

**Public Health Veterinarian on Call**
**Phone: 213-288-7060**
**Email: vet@ph.lacounty.gov**
Monday through Friday, 8am-5pm.

**LA County Veterinary Public Health Program**
313 N. Figueroa St., Suite 1127
Los Angeles CA 90012
Telephone: 213-288-7060
Fax: 213-481-2375
Email: vet@ph.lacounty.gov
Website: http://publichealth.lacounty.gov/vet

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*ALL FORMS HIGHLIGHTED IN YELLOW*

# FOREWORD

The LA County Rabies Control & Animal Disease Reporting Manual is a resource guide for veterinarians and clinic staff to help prevent and control rabies and other animal diseases in Los Angeles County (LA County). It contains essential information such as LA County-specific rules and regulations on animal bite and disease reporting, local data, state resources, and forms and instructions for reporting and animal testing.

LA County is home to more than 25% of California's population. Our county has more than 500 veterinary practices all in an area covering over 4000 square miles. There are 34 animal control agencies and 20 animal shelters. It is the only jurisdiction in the state that requires reporting of many diseases in companion and wild animals. This places our animal health community on the cutting edge in detecting disease trends, geographic illness clusters, outbreaks, and emerging diseases.

If your practice is within LA County, this manual is an important resource for your team to use in fulfilling bite and disease reporting responsibilities. Please review the contents of the manual during a staff meeting and share a link to the manual with your staff:

> **Long Beach, Pasadena and Vernon exceptions:** These three cities have their own health departments; therefore they do NOT fall within the jurisdiction of our department. If your practice is in one of these three cities, you must report animal bites to the Pasadena Humane Society (626-792-7151), Long Beach Animal Care Services (562-570-7387), or (in Vernon) the Southeast Area Animal Control Authority (562-803-3301). Veterinary practices are legally required to report animal diseases to the public health jurisdiction where the animal resides, in the case of these three cities, to their respective animal control agencies listed above.

You play a vital role in helping to protect the public's health every day, whether you are diagnosing and treating disease in animals, educating the public, or promoting pet wellness. This manual will tell you what you need to know about services the Veterinary Public Health Program of LA County offers, important local public health issues, and what is legally reportable locally. Thank you for your continued partnership.

# Rabies Control and Bite Reporting Procedures

## BACKGROUND:

All mammals are susceptible to rabies, but only a limited number of species act as reservoir hosts. In the United States the major terrestrial reservoirs are raccoons, skunks, and foxes. Insectivorous bats also serve as reservoirs for the disease. Each rabies variant is maintained in a particular host, and usually dies out during serial passage to species in which it is not adapted. However, any variant can cause rabies in other species. Occasionally, a virus adapted to one species becomes established in another.

The United States is considered canine rabies free, and wildlife is the most important potential source of rabies for both humans and domestic animals. In Southern California, bats are the main source of rabies. Skunk variants of rabies are currently found in Santa Barbara County and Northern California. Bats, skunks, foxes, raccoons, coyotes, and even opossums are all considered potential sources of rabies, based on California and national rabies data. In addition, each year many dogs are imported into the US from countries where the canine variant of rabies still exists.

Reducing the risk of rabies in domestic animals and preventing contact with wildlife reservoirs is key to the prevention of human rabies. California law requires that all owned dogs be vaccinated against rabies by a licensed veterinarian using approved vaccines (CA Health & Safety Code § 121690, California Code of Regulations, Title 17, Sections 2606.4 and 2606.6).

## RABIES VACCINATION REQUIREMENTS FOR DOMESTIC ANIMALS

- The State of California mandates rabies vaccination for dogs, but not for cats. However, some localities require rabies vaccination and/or licensing of cats. A listing of local requirements for licensing and/or rabies vaccination of cats is included in this manual.
- In California, the *minimum* age dogs may receive their first rabies vaccination is **three** months of age. Initial licensing of dogs in California remains at four months of age.
- In cases where rabies vaccination may endanger a dog's life, a licensed veterinarian can submit a rabies vaccination exemption request using the approved forms to the local health officer.

## REPORTING BITES AND RABIES SUSPECT ANIMALS

In California, anyone with knowledge of an animal bite to a person must report the incident to the local health department, including veterinarians and their staff.

The following must be reported to VPH immediately:

1. Mammals, domestic or wild, that bite a human
   *Bites from rabbits, squirrels, rats, mice, gophers, and other rodents are NOT reportable.*
2. Domestic mammals (pets or livestock) that have an encounter with wildlife

3. Neurologic animals (wild or domestic) suspected of being rabid

Bite reporting forms are found on the VPH website and are included in this manual. Email completed forms to vet@ph.lacounty.gov.

## QUARANTINE OF BITING ANIMALS (GENERAL)

Once the bite report is received and processed by VPH, the animal is placed under quarantine. For owned animals, quarantines are usually overseen by VPH at the animal's home. Quarantines may be completed at shelters or veterinary clinics (costs may be incurred at owner's expense). Please note that location transfers of quarantined animals (i.e. moving between two separate homes) ***are not allowed*** except in rare circumstances and with prior approval from VPH. It is always allowable to move a quarantined animal from a home to a shelter or to a veterinary clinic as needed for care and services.

### 1. QUARANTINE - MAMMALS BITING PEOPLE

Any DOMESTIC animal that bit a person must be quarantined and observed for clinical signs of rabies by VPH staff. This is true regardless of the rabies vaccination status of the biting animal. The animal is under quarantine until VPH staff issues a Quarantine Release Notice. *Domestic animals that are not subject to a rabies quarantine include: rabbits, rodents, birds and reptiles.*

**Quarantine Length** - For specific quarantine periods, please see the summary flowchart in this manual. Captive exotic mammals that have bitten a human are quarantined at their facility for at least 30 days.
**Rabies Vaccination & Booster -** For animal bites to humans, DO NOT vaccinate the animal for rabies during the quarantine period.
**Euthanasia During Quarantine -** Domestic biting animals are **not** to be euthanized until after the quarantine period without prior permission from VPH staff.

- **EXCEPTION** - If the domestic animal is gravely ill or injured, it may be euthanized during the quarantine period for humane reasons without prior permission.
    - In such cases, the head of the animal **must be** submitted appropriately for rabies testing.

### 2. QUARANTINE - DOMESTIC MAMMALS BITTEN BY WILDLIFE

Whenever possible, the wild animal should be humanely euthanized, prepared and submitted to VPH for rabies testing. If the wild mammal tests negative for rabies, no quarantine of the domestic animal is required. If the wild mammal is not tested or tests positive for rabies, the domestic animal must be quarantined.

**Quarantine Length -** Dependent on the domestic animal's rabies vaccination status at the time of the bite. For specific quarantine periods, please see summary flowchart.

**Rabies Vaccination & Booster -** Rabies vaccination and booster recommendations are dependent upon current vaccination status.

- If a domestic mammal is bit by wildlife and is current on rabies vaccination at the time of the bite, VPH recommends a booster immediately, even if the rabies vaccine is not due.
- If a domestic mammal is bit by wildlife and is NOT current on rabies vaccination at the time of the bite, VPH recommends vaccinating immediately post-bite (or when medically stable).
- If a domestic mammal is bit by wildlife and has NEVER had a rabies vaccination, VPH recommends the Texas protocol:
    1. vaccinate immediately after bite
    2. again at week 3, and
    3. again at week 8 post-bite

**Euthanasia During Quarantine -** Domestic animals that are under quarantine due to wildlife exposure should **not** be euthanized until after the quarantine period without prior permission from VPH staff.

- **EXCEPTION** - If the domestic animal is gravely ill or injured, it may be euthanized during the quarantine period for humane reasons without prior permission.
    - In such cases, the head of the animal **must be** submitted appropriately for rabies testing if euthanized more than 2 weeks after the attack.

### 3. NEUROLOGIC ANIMAL SUSPECTED OF BEING RABID

For any animal suspected of being rabid (wild or domestic), isolate the animal and **contact VPH immediately at 213-288-7060.** Complete and submit a bite report using a Bite Report Form, even if no bite occurred. Write 'None' in the Person Bitten Field. Neurologic animals suspected of being rabid are placed under strict isolation by VPH. If the animal dies or is euthanized, the animal must be prepared, submitted to VPH, and tested for rabies. If requesting rabies testing, complete the appropriate sections of the Bite Report Form, even if no one was bitten.

## RABIES TESTING IN ANIMALS

In LA County, rabies testing is conducted by the Public Health Laboratory at the LA County Department of Public Health.

- Please complete the appropriate rabies submission form and call VPH to arrange a specimen pickup for rabies testing.
- Specimen preparation, including decapitation, must be performed by the facility submitting the sample. Only rabies-vaccinated staff should perform decapitations. See rabies specimen preparation instructions in this manual for more information.

    - Exception: Bats are NOT to be decapitated.
- Whenever possible, any WILD mammal that has bitten a human shall be humanely euthanized, prepared, and submitted for rabies testing.

## RABIES TESTING IN BATS

- Any bat that may have potentially exposed humans or animals must be reported and tested (e.g. found on a sidewalk, in a public area, outside/inside of a home or business).
- If a bat is found inside the home, and possibly exposed a child or sleeping person it must be reported and tested for rabies, even if a bite is not visualized.
- Bites from bats can be very small, painless, and go unnoticed.
- If clients call to report a bat or bring in a bat to your clinic – please collect their name and contact information because VPH will need to speak with them. Then provide them with the following information:
    - If you see a dead, sick, or injured bat, OR there is a bat that may have bitten a person or animal, **do not touch it or release it. Call your local animal control agency for assistance.**
    - VPH has developed a flyer on bat encounters that you can post or provide to clients – it is included in this manual and is available on our website.

## RABIES AND ANIMAL IMPORTATION

Dogs and other animals are imported into LA County through the international pet trade and rescue groups daily. The risk of importing rabies and foreign animal diseases to LA County is real and has occurred. Dogs imported from a country where rabies is present must be vaccinated against rabies at least 30 days before entering the USA. Dogs should be vaccinated as early as 3 months of age and wait 1 additional month in the country of origin prior to entry into the USA.

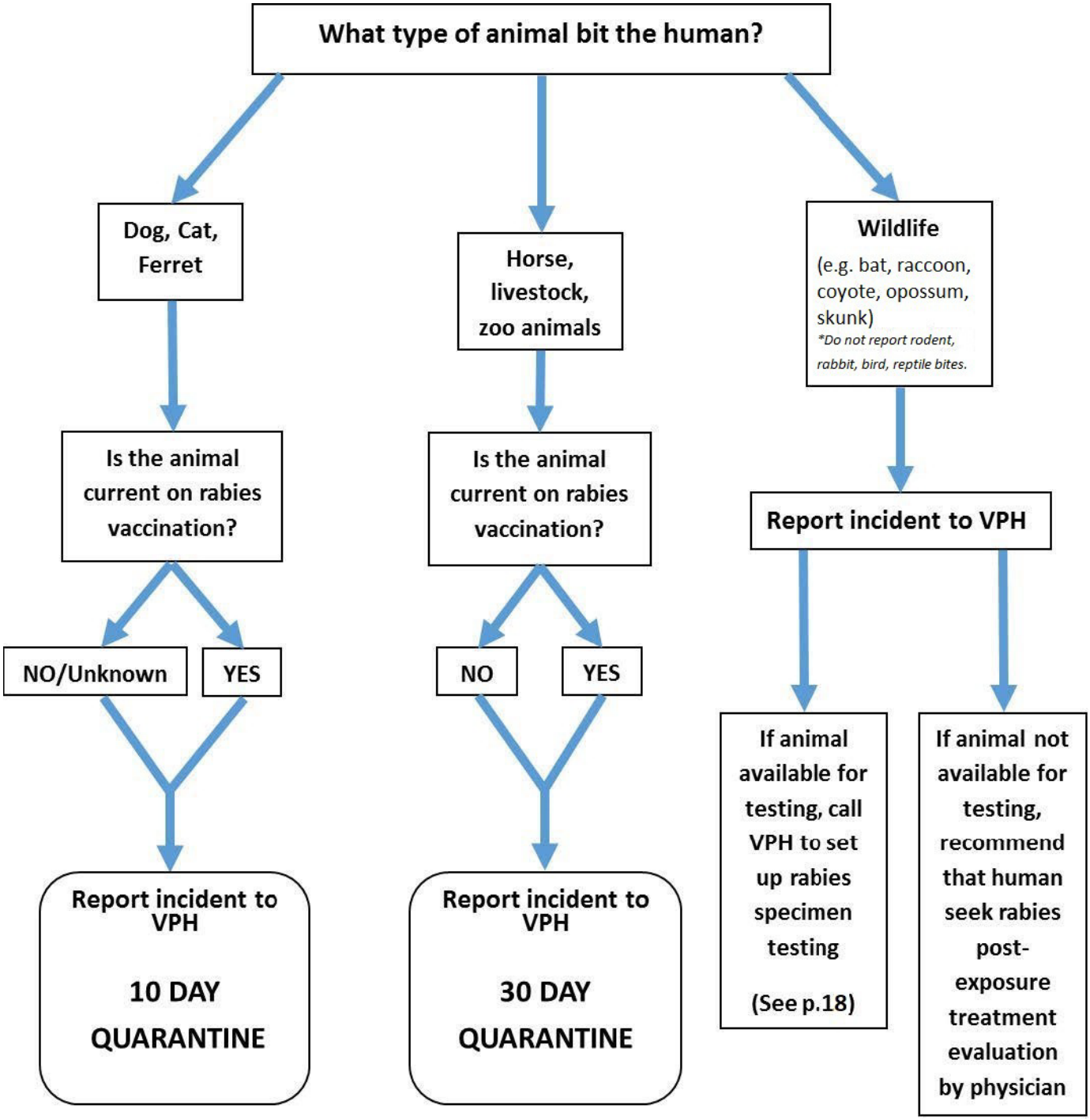
- Obtain importation and travel information in pet's history. Pets imported into the US, should undergo a veterinary exam and a 30-day observation period to monitor their health for disease.
- Please visit the CDC website for a list of high-risk countries for canine rabies: https://www.cdc.gov/importation/bringing-an-animal-into-the-united-states/high-risk.html
- At time of publication of this manual CDC has issued a temporary suspension for dogs entering the United States from high-risk countries for dog rabies: https://www.cdc.gov/importation/bringing-an-animal-into-the-united-states/high-risk-dog-ban-frn.html
    - CDC has the authority to issue a CDC Dog Import Permit for US citizens and lawful residents relocating from high-risk countries to bring their dogs into the United States

- **Booster the rabies vaccine with a US Licensed Rabies Vaccine approved for use in California.** Even if an imported dog has proof of a rabies vaccine, the rabies vaccine must be licensed for use in the United States and approved for use in California. For a list of approved rabies vaccines, please see the California Department of Public Health's Rabies Compendium: https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/PartIIITableCACompendiumofRabiesControl.pdf.
- **If any imported dog or other animal is sick, consider foreign animal diseases, including rabies.** If you suspect rabies or any other infectious disease, report to VPH immediately.

## ADDITONAL RABIES RESOURCES

1. California Department of Public Health (CDPH), California Compendium of Rabies Control and Prevention: https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/CACompendiumofRabiesControlandPrevention.pdf
2. National Association of State and Local Public Health Veterinarians (NASPHV) Compendium of Animal Rabies Prevention and Control, 2016. http://www.nasphv.org/documentsCompendiaRabies.html
3. LA County Department of Public Health, What to Do If You Have a Bat Encounter: http://publichealth.lacounty.gov/vet/batinhouse.htm

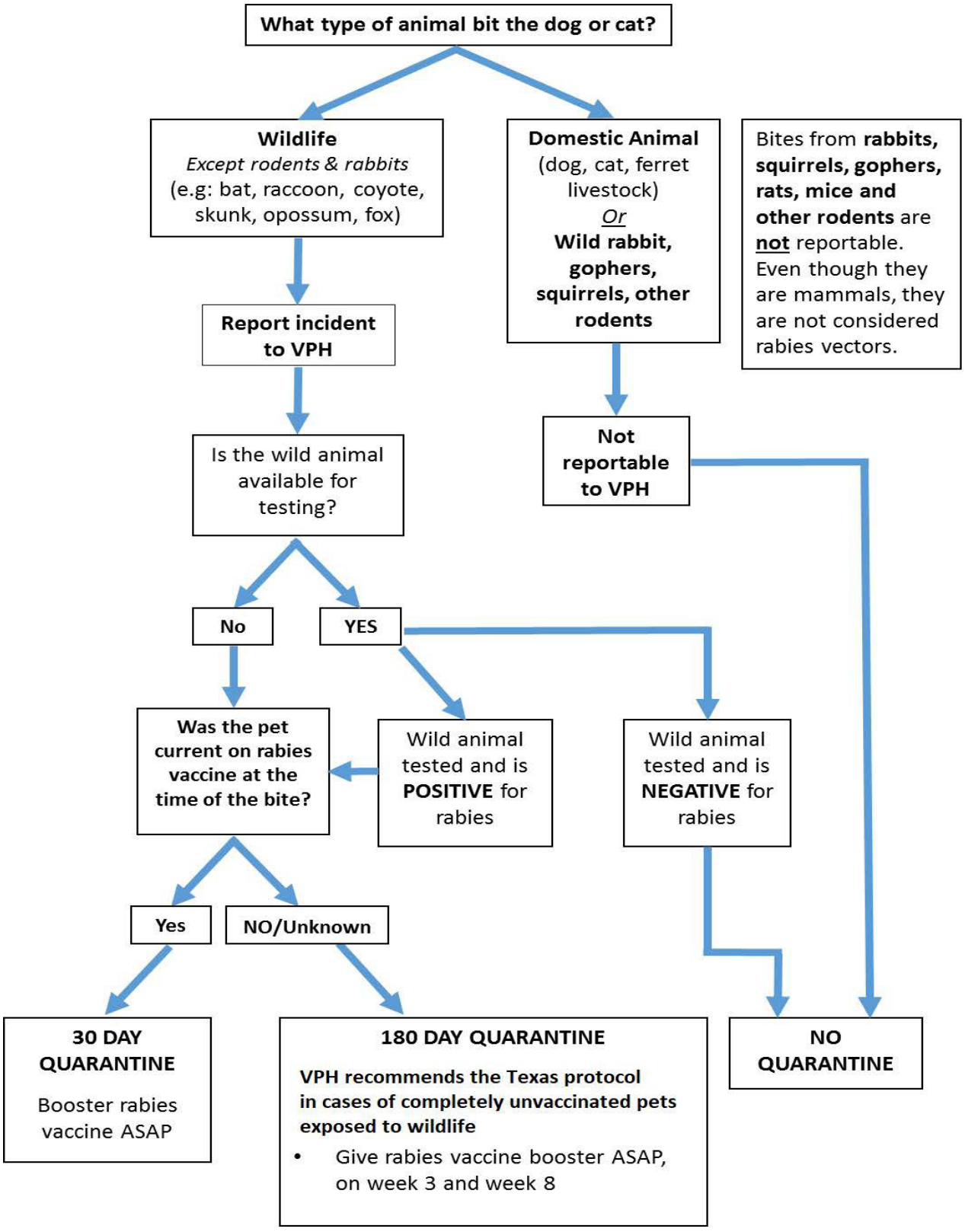
## RABIES CONTROL FLOWCHART FOR HUMAN BITTEN BY ANIMAL




***Bites from rodents, rabbits, birds, and reptiles are not reportable to VPH***

***Report all neurologic animals suspected of being rabid to VPH at (213) 288-7060***

# RABIES CONTROL FLOWCHART FOR DOMESTIC ANIMAL BITTEN BY ANIMAL




County of Los Angeles Public Health
Veterinary Public Health & Rabies Control

## PREPARING A SPECIMEN FOR RABIES TESTING

*Note: Healthy animals may not be euthanized during the quarantine period.*

Specimens that are inappropriately packaged or missing the appropriate reporting form will be rejected from the Public Health Lab. It is the responsibility of the veterinary clinic to pick up the specimen and resubmit it immediately.

**STEP 1** **Dogs/cats/wildlife must be decapitated, except bats**

- Do not decapitate a bat! Submit the whole body.

**STEP 2** **Apply flea/tick spray to the specimen**

**STEP 3** **Specimen must be wrapped in absorbent paper and double-bagged**

- Only one specimen per bag (do not place more than one bat in a bag)
- The specimen and blood should not be visible through the bag
- Place into a box or an opaque container

**STEP 4** **Securely affix appropriate reporting form to the specimen container**

- Impound cards or cage cards are not acceptable
- Do not leave paperwork resting on top or beneath a specimen

**STEP 5** **Place specimen into the fridge (do not freeze)**

- Do not place specimens next to food/vaccines
- Check the fridge temperature to ensure that it is working (unrefrigerated/decomposed specimens may be untestable)

**STEP 6** **Email/fax the reporting form to VPH (Note 'Pick up' in the top corner)**

- Email – vet@ph.lacounty.gov
- Fax – 213-481-2375

**STEP 7** **Call VPH for pick-up**

- Phone – 213-288-7060 (M-F 8am-5pm)
- If you notice a specimen in the fridge for a few days, please call again for pick-up

COUNTY OF LOS ANGELES
Public Health

VETERINARY PUBLIC HEALTH PROGRAM

# Animal Bite Reporting Form
# Animal Control, Shelters & Veterinary Clinics

**Instructions:** Use this form to report animal bites to the Veterinary Public Health Program at the Los Angeles County Department of Public Health. For more information about rabies in Los Angeles County, visit our website: http://publichealth.lacounty.gov/vet.

**Date form completed: _____** **Please submit completed form to vet@ph.lacounty.gov OR fax to (213) 481-2375.**

| **1. REPORT INFORMATION** | | | |
|---|---|---|---|
| Report date: | Reporter name (victim, owner, etc.): | Reporter phone #: | Reporter email: |

| **2. SHELTER/VETERINARY CLINIC TAKING REPORT** | | |
|---|---|---|
| Facility submitting report: | Submitter's name: | Facility phone #: |

| **3. PERSON BITTEN** | | | |
|---|---|---|---|
| Bite victim first name: | Bite victim last name: | | Date of birth: |
| Street address (building #, street name, apt/unit#): | City: | State: | Zip code: |
| Bite victim phone #: | Bite victim email address: | | |

| **4. DESCRIPTION OF INCIDENT** | | | |
|---|---|---|---|
| Date bitten: | Time bitten (AM/PM): | Country where incident occurred (if not US): | |
| Street address where incident occurred: | City: | State: | Zip code: |
| How bite occurred (explain): | | | |

| **5. HUMAN INJURY INFORMATION** | | |
|---|---|---|
| Location of bite(s) (e.g. face, leg, hand, torso): | Side of body affected: ☐ L ☐ R ☐ Both | Date treated: |
| Description of treatment: | | |

| | | | |
|---|---|---|---|
| Treating facility/provider name: | Provider phone number: | Hospitalized: ☐ Yes ☐ No | Hospital name: |

| **6. ANIMAL OWNER** | | | | |
|---|---|---|---|---|
| Animal owner first name: | Animal owner last name: | | | |
| Street address (building #, street name, apt/unit#): | City: | State: | Zip code: | |
| Animal owner phone #: | Animal owner email address: | | | |

| **7. BITING ANIMAL INFORMATION** | | | | |
|---|---|---|---|---|
| Biting animal species: ☐ Dog ☐ Cat ☐ Other: _____ | Breed: | Age: | Animal sex: ☐ M ☐ F ☐ Unk | Sterilized? ☐ Yes ☐ No ☐ Unk |
| Animal name: | Animal color: | Animal vaccinated for rabies? ☐ Yes ☐ No ☐ Unk | Date last vaccinated for rabies: | |
| Animal died: ☐ Yes ☐ No Euthanized? ☐ Yes ☐ No | If yes, reason: | **Specimen prepared for rabies testing:** ☐ **Yes** ☐ **No** ☐ **N/A** | | |

| | | | |
|---|---|---|---|
| Animal licensed: ☐ Yes ☐ No ☐ Unk | Jurisdiction animal licensed in: | License number: | Expiration Date: |
| Animal impounded: ☐ Yes ☐ No | Shelter: | Impound #: | Cage: |

| **8. ADDITIONAL INFORMATION/COMMENTS:** |
|---|
| |

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COUNTY OF LOS ANGELES
Public Health

VETERINARY PUBLIC HEALTH PROGRAM

# Domestic vs Wild Mammal Incident Report Form

**Instructions:** Use this form to report domestic vs wild mammal incidents to the Veterinary Public Health Program at the Los Angeles County Department of Public Health. For more information about rabies in Los Angeles County, visit our website: http://publichealth.lacounty.gov/vet.

**Date form completed: _____** **Please submit completed form to vet@ph.lacounty.gov OR fax to (213) 481-2375.**

| **1. REPORT INFORMATION** | | | |
|---|---|---|---|
| Report date: | Reporter name (victim, owner, etc.): | Reporter phone #: | Reporter email: |

| **2. AGENCY/CLINIC TAKING REPORT** | | |
|---|---|---|
| Facility submitting report: | Submitter name: | Facility phone #: |

| **3. WILD ANIMAL INFORMATION** | | | |
|---|---|---|---|
| Type of wild animal: ☐ Coyote ☐ Skunk ☐ Bat ☐ Raccoon ☐ Opossum ☐ Other: _____ | | Wild animal status: ☐ Left area/not located ☐ Appeared sick ☐ Captured/destroyed/died | |
| **Specimen prepared for rabies testing?** ☐ **Yes** ☐ **No** ☐ **N/A** | Location of specimen (clinic/shelter): | Impound #: | Date euthanized: |

| **4. DESCRIPTION OF INCIDENT** | | | |
|---|---|---|---|
| Date bitten: | Time bitten (AM/PM): | Country where incident occurred (if not US): | |
| Street address where incident occurred: | City: | State: | Zip code: |
| How bite occurred (explain): | | | |
| Type of injury to domestic animal: | | | |

| **5. DOMESTIC ANIMAL OWNER** | | | |
|---|---|---|---|
| Animal owner first name: | Animal owner last name: | | |
| Street address (building #, street name, apt/unit#): | City: | State: | Zip code: |
| Animal owner phone #: | Animal owner email address: | | |

| **6. DOMESTIC ANIMAL INFORMATION** | | | | |
|---|---|---|---|---|
| Domestic animal species: ☐ Dog ☐ Cat ☐ Other: _____ | Breed: | Age: | Sex: ☐ M ☐ F ☐ Unk | Sterilized? ☐ Yes ☐ No ☐ Unk |
| Animal name: | Animal color: | Animal died: ☐ Yes ☐ No Euthanized? ☐ Yes ☐ No | If Y, reason: | |
| Rabies vaccine currently up to date: ☐ Yes ☐ No ☐ Unk | Date of last vaccine: | ☐ 1 yr vax ☐ 3 yr vax | | |
| Rabies vaccinated *after* wildlife contact: ☐ Yes ☐ No ☐ Unk | Date of re-vaccination after wildlife contact: | | | |
| Animal licensed: ☐ Yes ☐ No ☐ Unk | Jurisdiction animal licensed in: | License number: | Expiration Date: | |
| Current location of animal: ☐ Home address ☐ Shelter ☐ Veterinary clinic ☐ Other: _____ | | | | |
| Animal impounded: ☐ Yes ☐ No | Shelter: | Impound #: | Cage: | |

| **7. ADDITIONAL INFORMATION/COMMENTS:** |
|---|
| |

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COUNTY OF LOS ANGELES
Public Health

VETERINARY PUBLIC HEALTH PROGRAM

# Bat Submission Form for Rabies Testing

Use this form to report bats being submitted to the Veterinary Public Health Program at the Los Angeles County Department of Public Health for rabies testing. For more information about rabies in Los Angeles County, visit our website: http://publichealth.lacounty.gov/vet.

**Bat Submission Instructions:**

- **All bats submitted to animal shelters/veterinary clinics must be reported to Public Health immediately. Complete form with as much information as possible. Submit completed form to vet@ph.lacounty.gov OR fax to (213) 481-2375.**
- **DO NOT DECAPITATE bat specimen.**
- **Refrigerate bat after it is deceased. DO NOT FREEZE.**

Date form completed:_____

| **1. Reporting Agency:** | | | |
|---|---|---|---|
| Shelter/Clinic Name: | | | |
| Phone: | Date bat reported to Public Health: | | |
| Staff member/ACO: | Bat Impound #: | | |
| **2. Person Who Found the Bat** | | | |
| Name of Person Who Found Bat: | Phone: | | |
| **3. When/Where Was the Bat Found?** | | | |
| Date bat found: | Name of business (if applicable): | | |
| Street address where found: | City: | State: | Zip code: |
| Type of location where bat found (check one): ☐ Home ☐ Park ☐ Camp ☐ Business ☐ School ☐ Other:_____ | | | |
| **4. Details of the Bat Encounter** | | | |
| Describe how the bat was found, and where on the property: | | | |
| Was the bat found (check one): ☐ **Indoors*** or ☐ Outdoors | | | |
| Time of capture/pickup: | Method used to capture bat: | | |
| When captured, was the bat (check one) ☐ **Alive**** or ☐ Dead? | | | |
| **5. Contact with the Bat** | | | |
| Did any people or animals have *potential* physical contact with bat? (check one) ☐ **Yes*** ☐ No ☐ Unknown | | | |

***List ALL persons and/or pets that had direct contact with the bat OR that were indoors with the bat.***

| **Name(s):** | **Addresses:** | **Phone:** |
|---|---|---|
| | | |
| | | |
| | | |

****List any shelter/clinic staff who had contact with the bat (e.g. during euthanasia, if applicable)***

| **Name(s):** | **Phone:** |
|---|---|
| | |

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## ANIMAL CONTROL AGENCIES AND SHELTERS IN LA COUNTY

| Agency | Telephone Number | Address | On-site Shelter |
|---|---|---|---|
| Avalon City Hall – Code Enforcement | (310) 510-0220 ext 111 | PO Box 707, Avalon, CA 90704 | No |
| Beverly Hills Animal Control | (310) 285-1119 | 455 N Rexford Dr, 1st Floor, Beverly Hills, CA 90210 | No |
| Best Friends (Mission Hills location) | (818) 643-3989 | 15321 Brand Ave, Mission Hills, CA 91345 | Yes |
| Best Friends (NKLA – West LA location) | (424) 208-8840 | 1845 Pontius Ave, West L.A. 90025 | Yes |
| Burbank Animal Control | (818) 238-3340 | 1150 N. Victory Pl, Burbank, CA 91502 | Yes |
| City of Commerce Animal Control | (323) 887-4460 | 2535 Commerce Way, Commerce, CA 90040 | No |
| Culver City Animal Services | (310) 253-6143 | 4040 Duquesne Ave, Culver City, CA. 90232 | No |
| Duarte City Animal Control | (626) 357-7938 | 1042 E. Huntington Dr, Duarte, CA 91010 | No |
| El Monte Animal Control | (626) 580-2081 | 11333 Valley Blvd, El Monte, CA 91731 | No |
| El Segundo Animal Control | (310) 524-2231 | 348 Main St, El Segundo, CA 90245 | No |
| Hawthorne Animal Control | (310) 675-4444 | 4455 W 126th St., Hawthorne, CA 90250 | No |
| Hermosa Beach Animal Control | (310) 524-2750 | 1035 Valley Dr, Hermosa Beach, CA 90254 | No |
| Huntington Park City Animal Control | (323) 826-6682 | 6542 Miles Ave., Huntington Park, CA 90255 | No |
| Inland Valley Humane Society | (909) 623-9777 | 500 Humane Way, Pomona, CA 91766 | Yes |
| La Puente Animal Control Division | (626) 855-1555 | 15900 E Main Street, La Puente, CA 91744 | No |
| Lawndale Animal Control Division | (310) 973-3220 | 14717 Burin Ave, Lawndale, CA 90260 | No |
| Long Beach Animal Care Services | (562) 570-7387 | 7700 E. Spring St, Long Beach, CA 90815 | Yes |
| Lynwood Animal Control Division | (310) 603-0220 ext 271 | 11330 Bullis Rd, Lynwood, CA 90262 | No |
| City of Los Angeles Animal Services | | | |
| Chesterfield Square (South LA) Shelter | (888) 452-7381 | 1850 W. 60th St. Los Angeles, CA 90047 | Yes |
| East Valley Shelter | (888) 452-7381 | 14409 Vanowen St, Van Nuys, CA 91405 | Yes |
| Harbor Shelter | (888) 452-7381 | 957 N. Gaffey St., San Pedro, CA 90731 | Yes |
| North Central Shelter | (888) 452-7381 | 3201 Lacy St, Los Angeles, CA 90031 | Yes |
| West Los Angeles Shelter | (888) 452-7381 | 11361 W. Pico Bl, Los Angeles, CA 90064 | Yes |
| West Valley Shelter | (888) 452-7381 | 20655 Plummer Street, Chatsworth, CA 91311 | Yes |
| LA County Dept. of Animal Care & Control | | | |
| Agoura Shelter | (818) 991-0071 | 29525 Agoura Rd, Agoura, CA 91301 | Yes |
| Baldwin Park Shelter | (626) 962-3577 | 4275 N. Elton St, Baldwin Park, CA 91706 | Yes |
| Carson Shelter | (310) 523-9566 | 216 W. Victoria Ave, Carson, CA 90748 | Yes |
| Castaic Shelter | (661) 257-3191 | 31044 N. Charlie Canyon Rd, Castaic, CA 91310 | Yes |

| | | | |
|---|---|---|---|
| Downey Shelter | (562) 940-6898 | 11258 S. Garfield Ave, Downey, CA 90242 | Yes |
| Lancaster Shelter | (661) 940-4191 | 5210 W. Avenue I, Lancaster, CA 93536 | Yes |
| Palmdale Shelter | (661) 575-2888 | 38550 Sierra Hwy, Palmdale, CA 93550 | Yes |
| Manhattan Beach Animal Control | (310) 802-5160 | 420 15th St, Manhattan Beach, CA 90266 | No |
| Monterey Park Animal Services | (626) 573-1311 | 320 W. Newmark, Monterey Park, CA 90640 | No |
| Pasadena Humane Society | (626) 792-7151 | 361 S. Raymond Ave, Pasadena, CA 91105 | Yes |
| Redondo Beach City Animal Control | (310) 318-0611 | 415 Diamond St, Door 2, Redondo Beach, CA 90277 | No |
| Rolling Hills City Hall | (310) 377-1521 | 2 Portuguese Bend Rd, Rolling Hills, CA 90274 | No |
| Rosemead Animal Control Services | (626) 569-2292 | 8301 E. Garvey Ave, Rosemead, CA 91770 | No |
| San Gabriel Valley Humane Society | (626) 286-1159 | 851 E. Grand Ave, San Gabriel, CA 91776 | Yes |
| Santa Fe Springs Animal Control Police | (562) 409-1850 | 11576 Telegraph Road, Santa Fe Springs, CA 90670 | No |
| Santa Monica Animal Control | (310) 458-8594 | 1640 9th St, Santa Monica, CA 90404 | Yes |
| Southeast Area Animal Control Authority (SEAACA) | (562) 803-3301 | 9777 Seaaca St, Downey, CA 90241 | Yes |
| spcaLA South Bay Pet Adoption Center | (310) 676-1149 | 12910 Yukon Ave, Hawthorne, CA 90250 | Yes |
| Temple City Animal Control | (626) 285-7187 | 9701 Las Tunas Dr, Temple City, CA 91780 | No |
| Torrance Animal Control | (310) 618-3850 | 2200 Jefferson St, Torrance, CA 90501 | No |
| City of Vernon Animal Control | (323) 583-8811 ext 231 | 4305 Santa Fe Ave, Vernon CA 90058 | No |
| West Hollywood Animal Care and Control | (323) 848-6882 | 8300 Santa Monica Blvd, West Hollywood, CA 90069 | No |

## VETERINARIAN REQUIREMENT TO SUBMIT RABIES VACCINATION CERTIFICATES TO LOCAL ANIMAL CONTROL AGENCIES

Many cities in LA County have laws requiring veterinarians to submit copies of rabies certificates to their local animal control authority. Veterinarians that vaccinate animals against rabies in cities/areas where submission of certificates is required must submit copies of the rabies certificate to the appropriate local animal control agency. A summary of which cities/areas require this is listed below (please note this may be subject to change):

**Cities/Areas that REQUIRE veterinarians to submit copies of the rabies certificates to Animal Control:**

| | | | |
|---|---|---|---|
| Agoura Hills | El Monte | Lawndale | Signal Hill* |
| Alhambra | El Segundo* | Lomita | South El Monte* |
| Artesia | Gardena | Long Beach* | Temple City* |
| Azusa | Glendale* | Los Angeles, City* | Torrance |
| Baldwin Park | Glendora* | Lynwood | Walnut |
| Bell | Hawaiian Gardens | Malibu | West Covina* |
| Beverly Hills* | Hawthorne | Maywood | West Hollywood |
| Bradbury* | Hermosa Beach* | Monterey Park | Westlake Village |
| Burbank* | Hidden Hills | Palmdale | Whittier |
| Calabasas | Industry | Palos Verdes Estates | |
| Carson | Inglewood | Pomona* | Unincorporated areas of |
| Cerritos* | Irwindale | Rancho Palos Verdes | LA County |
| Claremont* | La Cañada Flintridge* | Redondo Beach | |
| Compton | La Habra Heights | Rolling Hills | |
| Covina | La Mirada | Rolling Hills Estates | |
| Cudahy | La Puente | San Fernando | |
| Culver City | La Verne* | Santa Clarita | |
| Diamond Bar* | Lancaster | Sierra Madre* | |

**Cities are served by provider as noted in the table below. All other cities listed above (without *) are served by the County of Los Angeles Department of Animal Care and Control.*

| Designated Providers for Animal Services | |
|---|---|
| **City** | **Provider** |
| Beverly Hills | LA Animal Services |
| Bradbury | Pasadena Humane Society |
| Burbank | City of Burbank |
| Cerritos | Long Beach Animal Care Services |
| Claremont | Inland Valley Humane Society |
| Diamond Bar | Inland Valley Humane Society |
| El Segundo | City of El Segundo |
| Glendale | City of Glendale |

| City | Provider |
|---|---|
| Glendora | Inland Valley Humane Society |
| La Cañada Flintridge | Pasadena Humane Society |
| La Verne | Inland Valley Humane Society |
| Long Beach | Long Beach Animal Care Services |
| Los Angeles (City of) | LA Animal Services |
| Pomona | Inland Valley Humane Society |
| Sierra Madre | Pasadena Humane Society |
| Signal Hill | Long Beach Animal Care Services |
| South El Monte | SEAACA |
| Temple City | San Gabriel Valley Humane Society |
| West Covina | Inland Valley Humane Society |

**Cities/Areas that DO NOT REQUIRE veterinarians to submit copies of the rabies certificates to the animal control agency:**

| | | | |
|---|---|---|---|
| Arcadia | Huntington Park | Pasadena | Santa Monica |
| Avalon | Lakewood | Pico Rivera | South Gate |
| Bell Gardens | Manhattan Beach | Rosemead | South Pasadena |
| Bellflower | Monrovia | San Dimas | Vernon |
| Commerce | Montebello | San Gabriel | |
| Downey | Norwalk | San Marino | |
| Duarte | Paramount | Santa Fe Springs | |

## CAT RABIES VACCINATION & LICENSING REQUIREMENTS

Although California State Law does not require rabies vaccination of cats, it is highly recommended. A County of Los Angeles ordinance exists requiring rabies vaccination and licensing of cats. Certain cities uphold this ordinance, requiring cats to be vaccinated for rabies and/or licensed (based on owner address, not address of the veterinary clinic). Information regarding licensing in certain cities can be obtained by calling local shelters or animal control services divisions.

A summary of requirements for licensing and rabies vaccination by city is listed below. Information is based on review of city municipal codes in 2018. City laws are subject to change. Cat owners are encouraged to contact their city for the latest regulations.

**REQUIRE BOTH cat rabies vaccination and cat licensing:**

| | | | |
|---|---|---|---|
| Artesia | El Segundo | La Verne | San Fernando |
| Baldwin Park | Hawaiian Gardens | Lancaster | Sierra Madre |
| Bell | Hidden Hills | Lawndale | Walnut |
| Bradbury | Industry | Lomita | West Hollywood |
| Calabasas | Inglewood | Long Beach | Westlake Village |
| Carson | Irwindale | Malibu | Whittier |
| Compton | La Cañada Flintridge | Maywood | |
| Cudahy | La Habra Heights | Palmdale | Unincorporated |
| El Monte | La Mirada | Pomona | Areas of LA County |

**Cities of LA County that REQUIRE cat rabies vaccination but do NOT require cat licensing:**

| | | | |
|---|---|---|---|
| Agoura Hills | Gardena | Monterey Park | Rolling Hills Estates |
| Alhambra | La Puente | Palos Verdes Estates | West Covina |
| Covina | Lynwood | Ranchos Palos Verdes | |

**Cities of LA County that do NOT require cat rabies vaccination but REQUIRE cat licensing:**

| | |
|---|---|
| Diamond Bar | Santa Clarita |

**Cities of LA County that do NOT require cat rabies vaccination or cat licensing:**

| | | | | |
|---|---|---|---|---|
| Arcadia | Commerce | Lakewood | Redondo Beach | South El Monte |
| Avalon | Culver City | Los Angeles, City | Rolling Hills | South Gate |
| Azusa | Duarte | Manhattan Beach | Rosemead | South Pasadena |
| Bell Gardens | Downey | Monrovia | San Dimas | Temple City |
| Bellflower | Glendale | Montebello | San Gabriel | Torrance |
| Beverly Hills | Glendora | Norwalk | San Marino | Vernon |
| Burbank | Hermosa Beach | Paramount | Santa Fe Springs | |
| Cerritos | Hawthorne | Pasadena | Santa Monica | |
| Claremont | Huntington Park | Pico Rivera | Signal Hill | |

# CANINE RABIES VACCINATION EXEMPTIONS

## KEY MESSAGES

- Canine rabies vaccination exemption applications and all related communications will only be accepted from veterinarians, not dog owners.
- Exemptions are only valid for one year.
- Applications will be automatically denied if missing any of the following: the local and state forms and relevant medical records (5 page maximum).

In LA County (except in Pasadena, Long Beach and Vernon), the authority to grant rabies vaccination exemptions for dogs is delegated to VPH. California law states that a rabies vaccination exemption may be granted if "a rabies vaccination would endanger the dog's life." It also requires that the condition warranting the exemption be documented. This state law applies for dogs only. Local jurisdictions may enact similar requirements for licensing of cats. Contact your local animal control for cat-related rabies vaccine or licensing concerns. The entire law is available at: https://leginfo.legislature.ca.gov/faces/codes.xhtml (Health and Safety Code 121690).

Canine rabies vaccination exemption requests must be submitted to VPH by the veterinarian, not the dog owner. A complete exemption request includes BOTH forms, dog owner's signature, veterinarian's signature AND up to 5 pages of medical records documenting the dog's medical condition related to the request. Incomplete exemption requests will be denied.

Only health conditions that fit the evidence-based criteria for exemption may be approved. Dogs approved for a rabies vaccine exemption are considered unvaccinated and must abide by rabies laws for unvaccinated pets. Exemptions are only valid for 1-year and an application must be submitted each year for renewal. Permanent exemptions do not exist. California does not accept positive rabies titers in lieu of a rabies vaccine.

## STEPS TO SUBMIT A CANINE RABIES VACCINATION EXEMPTION REQUEST

1. For dogs living in LA County (except Pasadena, Long Beach, or Vernon), canine rabies vaccination exemption requests are submitted by a veterinarian (not the dog owner) to VPH.
    a. For dogs living in Pasadena, contact the Pasadena Humane Society at 626-792-7151.
    b. For dogs living in Long Beach, contact Long Beach Animal Care Services, at 562-570-7387, or visit: longbeach.gov/acs/pet-laws-and-licensing/canine-rabies-exemption/
    c. For dogs living in Vernon, contact the Southeast Area Animal control authority (SEAACA) at 562-803-3301.
    d. Cat owners should contact their city to inquire about procedures for getting an exemption.

2. Prior to completing the forms, review the sections below of cases that may be approved and cases that will not be approved.
3. Complete BOTH Canine Rabies Vaccination Exemption Request forms AND submit with **up to 5 pages of medical records documenting the dog's medical condition related to the request**. Incomplete submissions will be automatically denied. A letter from a veterinarian is not considered a replacement for appropriate medical records.
    a. Completed requests can be emailed to vet@ph.lacounty.gov (preferred) or faxed to (213) 481-2375.
    b. Blank exemption forms are only available by request by calling our office at 213-288-7060 or by email: vet@ph.lacounty.gov.
4. VPH strives to process the request within 5 business days. A written decision if the request was approved or denied will be provided to the submitting veterinarian by email or fax. Outside of that timeframe, if you do not hear back from VPH about a submitted request, please call our office at 213-288-7060 or email at vet@ph.lacounty.gov.

## WHAT TO DO AFTER AN EXEMPTION REQUEST IS APPROVED OR DENIED

**It is the applying veterinarian's responsibility to relay the approved or denied notice to the pet owner once the notice is received.**

1. Provide copies of the final document (Approved or Denied) to your client.
2. Inform your clients that, if their exemption request is approved, their dog:
    a. Will be considered at higher risk for contracting rabies and will be considered legally unvaccinated. This means the animal will be subject to a California state-mandated 180-day quarantine if exposed to a wild animal.
    b. Must be confined at home, or on a 6-foot-long leash controlled by an adult.
    c. Cannot live or have contact with other animals not vaccinated for rabies. Only one dog in a household can have a rabies vaccination exemption.
3. The exemption is valid for one year only, after which the dog must either be vaccinated for rabies, or another full request must be submitted and approved.
4. If the exemption is denied due to missing information, new rabies vaccination exemption forms must be completed and submitted for reconsideration.

## CASES WHERE RABIES VACCINATION EXEMPTION MAY BE APPROVED

- Life-threatening anaphylactic reaction soon after administration of a rabies vaccine
    - Signs consistent with anaphylactic shock
    - Mild facial angioedema, hives, or localized reactions do **not** qualify as life-threatening
- Immune-Mediated Hemolytic Anemia (IMHA), **if:**
    - Dog is still within first year after diagnosis, or
    - Onset was within 1 month of a rabies vaccination, or
    - More than one episode (i.e. documented relapses)
- Polyradiculoneuropathy if:
    - Dog is still within the first year after diagnosis, or
    - Onset was within 1 month after rabies vaccination
- Dog currently on immunosuppressive therapy for cancer or immune-mediated disease
    - Low dose prednisone is not considered immunosuppressive therapy
- Terminal prognosis
    - Dog has fewer than 3 months to live in the opinion of presiding veterinarian
    - Must be specifically documented in the medical record

## CASES WHERE RABIES VACCINATION EXEMPTION WILL NOT BE APPROVED

- Old age
- Positive rabies antibody titers (California does not recognize rabies titers in lieu of a rabies vaccine)
- Minor or moderate reactions (including injection site reactions) to rabies vaccination
- Reaction to vaccinations other than rabies
- History of neoplasia and dog is not currently on immunosuppressive therapy
- Medical condition not documented, or no documentation submitted
- Short-term exemptions (e.g. 1 month exemption for recovery from acute illness). In such cases, work with the Animal Control or other licensing agency to request a temporary delay.
- Illegible or incomplete requests

## VETERINARIANS:

**Rabies exemption request forms are not available online.**

**Please contact VPH for copies of the Canine Rabies Vaccination Exemption forms.**

**Phone: 213-288-7060**

**Email: vet@ph.lacounty.gov**

**Completed forms will only be accepted from veterinarians.**

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**Rabies exemption request forms are not available online.**

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**Completed forms will only be accepted from veterinarians.**

# RABIES, LOS ANGELES COUNTY

## KEY MESSAGES

- Keep all pets, including indoor cats, up to date with their rabies vaccination
- Bats are the number one source of rabies in Southern California
- Do NOT touch any bat with bare hands – call your local animal control agency immediately to report a bat and have it collected for rabies testing

## BACKGROUND

Rabies in bats is prevalent throughout the United States. In recent years, many other wildlife species in California have tested positive for rabies and are considered potential sources of the virus. In 2014, a skunk tested positive for rabies in the city of Long Beach – the skunk was found to have been infected with a Mexican free-tailed bat variant of rabies. All bats reported to and collected by VPH are submitted for rabies testing. We are most concerned about bats acting abnormally (e.g. out during the daytime, weak, found unmoving on the ground or clinging to walls, unable to fly, etc.),bats found near people or pets, and bats found inside of homes or businesses.

## LOCAL DATA

The number of rabid bats detected is increasing (Figure 1). Throughout the 1990s and early 2000s, an average of 9-10 bats tested positive for rabies per year in LA County. Since 2010, that number has risen to 34 per year. The year 2021 was a record year for rabid bats in LA County: there were 68 laboratory confirmed rabid bats in LA County and 323 bats tested in LA County by the Public Health Laboratory (21% positive). The cause of the increase is unknown. One hypothesis is that climate change and more extreme weather patterns are causing bats to move closer to areas irrigated by people to find insects to eat.

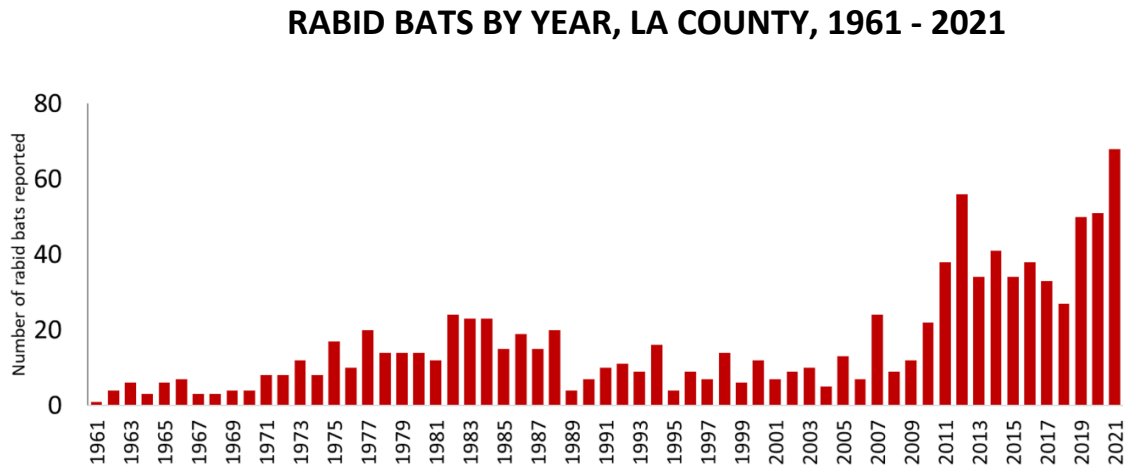


***Figure 1**: Laboratory confirmed rabid bats in LA County from 1961 - 2021*

**Rabid bats can be found in densely populated areas.** Most rabid bats are found in suburban areas, and occasionally in highly urban areas (Figure 2). In 2021, more than a third of the 68 rabid bats found in LA County were found in the city of Santa Clarita. It is unknown if there is a higher incidence of rabid bats in this area, or if the residents are more likely to report bats for rabies testing.

**REPORTED CASES OF BAT RABIES BY LOCATION FOUND, LA COUNTY, 2021**

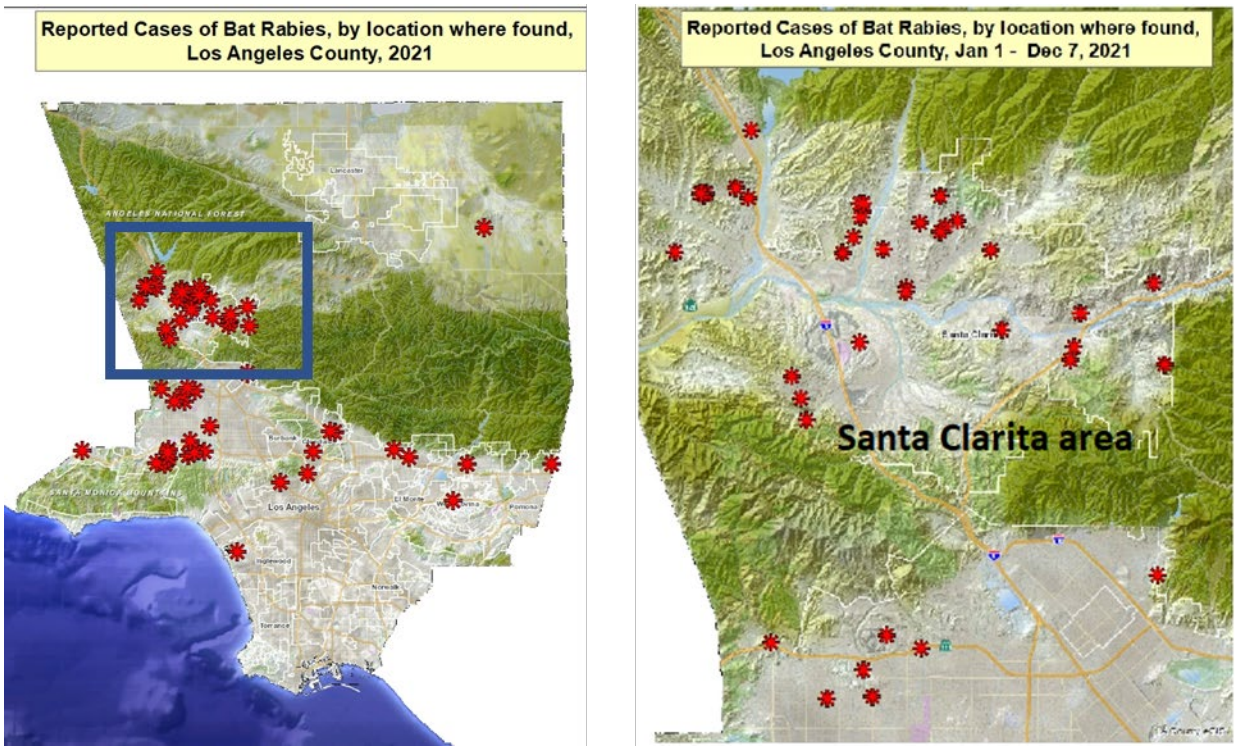


***Figure 2:****Map of location bat was found for reported cases of bat rabies in LA County during 2021. Map zoomed to show the Santa Clarita area where most rabid bats were found.*

**Most rabid bats are found at private homes, and some are found indoors.** In 2021, 82% of rabid bats were found at private homes, usually in the yard or side of the house. Even pets that do not go outside can be exposed to rabies. Three rabid bats were found on sidewalks, four inside homes and three inside businesses.

**Imported pets can bring rabies into LA County.** In 2004, a rabid dog was imported through LAX from Thailand, and in 1987 a rabid cat was brought here from Mexico. Hundreds of dogs are imported into our county every year, with many being from countries where the canine rabies variant is still found.

**If a bat is found near children, pets, or sleeping people, an unrecognized bite may have occurred because bats have tiny teeth, and the bat should be tested for rabies**. Any time a bat is found indoors,

and it is unknown how long it was indoors, it should be tested for rabies if any sleeping or otherwise vulnerable people are in the building.

## RECOMMENDATIONS

- **Vaccinate pets, including indoor cats.** Indoor cats can easily be attracted to a bat in a home and be exposed to rabies. Every year, at least one confirmed rabid bat is found inside a home in LA County.
- **Educate your clients.** If they find a bat in their home, they should NOT touch it with bare hands or release it. They should cover it with a bucket or box if possible and call animal control to collect it for rabies testing. If a bat is found in a room where someone was sleeping or near a pet, there is no way to know if that person or pet was bitten.
    - To read more about what to do if a bat is found in the home, visit: publichealth.lacounty.gov/vet/batinhouse.htm
    - For a printable flyer (available in English and Spanish) on what to do if you find a bat, visit:
        - English:http://publichealth.lacounty.gov/vet/images/RabiesOutreach/WhatToDoIfYouFindABatColorPrint.pdf
        - Spanish:http://publichealth.lacounty.gov/vet/images/RabiesOutreach/WhatToDoIfYouFindABatColorPrintSpanish.pdf
- **Make sure to ask your clients if their pet was recently imported.** While rabies is not likely to be found in local dogs, the risk of rabies may be higher in imported dogs. Be suspicious of rabies if you are seeing a sick dog coming from other countries, especially from places where canine rabies is common.
    - For an updated list of rabies risk worldwide, please visit the CDC website listing import countries and rabies risk: https://www.cdc.gov/importation/bringing-an-animal-into-the-united-states/high-risk.html

**For additional information on Rabies in LA County, please visit:**
http://publichealth.lacounty.gov/vet/rabies.htm

# ANIMAL DISEASE REPORTING AND SURVEILLANCE, LOS ANGELES COUNTY

LA County is unique in that many diseases in companion animals and wildlife are legally reportable locally to VPH. These local reporting ordinances stem from the 1920s after a devastating Foot-And-Mouth Disease outbreak. According to the Code of Ordinances (Title 10, Division 2, Section 10.64.020), any infectious disease in animals must be reported to the local health department.

*For more information on the LA County Ordinances related to infectious disease reporting in animals, visit municode.com/library. Click on the state of California, then LA County, then click on Title 10. Search for 10.56.010, 10.64.010, 10.64.020, 10.64.030, 10.72.010, 10.72.020, 10.72.030, and 10.72.040.*

## ANIMAL DISEASE REPORTING

Disease reports are received by VPH in one of two ways: 1) direct reporting forms from veterinary clinics and 2) veterinary diagnostic laboratories report to VPH on select animal diseases. For the cases which are reported from the diagnostic laboratories, VPH will follow-up with the respective clinic if a reporting form has not already been completed.

- A reportable animal disease list is updated and published biennially by VPH
- Animal disease reporting forms are located on our website and included in the reporting manual.
- Always include any relevant medical records and copies of laboratory results/diagnostics.
- Completed disease reporting forms can be submitted by email vet@ph.lacounty.gov, fax (213) 481-2375 or by phone (213) 288-7060 - ask to speak to our Veterinarian-On-Call, Monday through Friday, 8am-5pm.

## EPIDEMIOLOGY AND ANIMAL DISEASE REPORTING

Veterinary staff are crucial partners in the effort to track the epidemiology of local diseases. Reporting by veterinary practices and shelters has helped document patterns and changes associated with familiar diseases, such as the increase in rabies in bats and the bi-modal seasonality of parvovirus in dogs. Reporting by veterinarians has also uncovered new and potentially emerging diseases and imported diseases, such as canine influenza H3N2 in dogs imported from China in 2021, leptospirosis outbreak in dogs in 2021 and distemper outbreak in wildlife in 2021. By monitoring and investigating animal disease in the county, VPH works together with local veterinarians and other agencies to address these challenges and to protect the community.

The future will bring additional infectious disease challenges. Antimicrobial resistance confronts clinicians in the exam room and will likely be the focus of increasing amounts of legislation affecting animal care. Pesticide resistance complicates efforts to control disease vectors such as fleas. New,

invasive *Aedes* mosquitoes in LA County are drought-resistant and capable of spreading heartworm and other diseases.

## CASE DEFINITIONS

To categorize cases of disease consistently our program has developed case definitions. A case definition is a set of criteria used to evaluate reported cases of a disease and determine how they should be counted. A case definition categorizes cases as "confirmed", "probable" or "suspected". Laboratory test verification is required for a case to be considered confirmed. VPH is currently the only public health program in the United States consistently tracking numerous infectious diseases in companion animals. Case definitions are available on VPH's website, at: http://www.publichealth.lacounty.gov/vet/surveillance.htm

## STATE REPORTABLE DISEASES

When VPH receives a disease report for a disease that is also reportable to the State of California, VPH will then report that and forward the form to California Department of Public Health (CDPH) or the California Department of Food and Agriculture (CDFA)

- There are six diseases in animals that are reportable to CDPH: anthrax, plague, tularemia, viral hemorrhagic fevers (e.g. Ebola virus), and Brucella species (excluding *Brucella canis*), and rabies.
- Many diseases of livestock are reportable to CDFA.

## ANIMAL DISEASE INVESTIGATIONS

In cases of a cluster/outbreak (3 or more animals) or when a significant emerging pathogen is suspected necropsies and diagnostic tests may be available at no cost through VPH. Specimens are tested at the California Animal Health and Food Safety Laboratory (CAHFS) in San Bernardino. Courier transportation is provided through VPH. Please reach out to the Veterinarian-on-Call at 213-288-7060 (Monday through Friday, excluding holidays, 8am – 5pm) or email vet@ph.lacounty.gov to consult on the case. Specific dates, locations, and symptoms of each animal in the outbreak must be provided and an appropriate reporting form must be completed. Carcasses must be fresh and refrigerated, not frozen.

CALIFORNIA DEPARTMENT OF FOOD & AGRICULTURE
ANIMAL HEALTH BRANCH

January 2022

# LIST OF REPORTABLE CONDITIONS FOR ANIMALS AND ANIMAL PRODUCTS*

**Pursuant to Section 9101 of the California Food and Agricultural Code, Title 3 California Code of Regulations § 797 and Title 9 Code of Federal Regulations Section 161.4(f)*

**WHO MUST REPORT:** **Any licensed veterinarian, any person operating a diagnostic laboratory, or any person who has been informed, recognizes or should recognize by virtue of education, experience, or occupation, that any animal or animal product is or may be affected by, or has been exposed to, or may be transmitting or carrying any of the following conditions, must promptly report the condition(s) per the lists below.**

**WHAT TO REPORT:** **Immediately report any animal disease not known to exist in the United States, any event with increased mortality and/or morbidity of unknown cause or source, and any toxicology condition likely to contaminate animals or animal products (meat, milk or eggs).**

**IN ADDITION TO LISTED CONDITIONS, CALL IF YOU SEE: High morbidity or mortality, vesicles, CNS signs, uncommon ticks, hemorrhagic, septicemias, unusual larvae in wounds, unusual or unexplained illness.**

**Report any emergency, regulatory, or monitored condition within the provided time frame**. Some diseases are listed under the major species of concern; if you see compatible signs for such conditions in another species, PLEASE REPORT!

## EMERGENCY CONDITIONS
**Report within 24 Hours of Discovery**

### MULTIPLE SPECIES

General, non-specific conditions: Unexplained high mortality or diseased animals; livestock exposed to toxic substances.

- Anthrax (*Bacillus anthracis*)[1]
- Crimean Congo hemorrhagic fever[1]
- Foot-and-mouth disease
- Heartwater (*Ehrlichia ruminantium)*
- Japanese encephalitis
- Melioidosis (*Burkholderia pseudomallei*)
- Rabies of livestock[1]
- Rift Valley fever
- Screwworm myiasis (*Cochliomyia hominivorax* or *Chrysomya bezziana*)
- Surra (*Trypanosoma evansi*)
- Vesicular stomatitis

### BOVINE
- African trypanosomiasis (Tsetse fly diseases)
- Bovine babesiosis (Cattle tick fever)
- Bovine spongiform encephalopathy
- Contagious bovine pleuropneumonia (*Mycoplasma mycoides mycoides* small colony)
- Foot-and-mouth disease
- Hemorrhagic septicemia (*Pasteurella multocida B/Asian* or *E/African*)
- Lumpy skin disease
- Malignant catarrhal fever (wildebeest-associated form)
- Rinderpest
- Schmallenberg virus / Akabane
- Theileriosis (*Theilera parva parva* or *T. annulata*)

### CAPRINE/OVINE
- Contagious caprine pleuropneumonia *(Mycoplasma capricolum capripneumoniae)*
- Foot-and-mouth disease
- Nairobi sheep disease
- Peste des petits ruminants (Goat plague)
- Schmallenberg virus / Akabane
- Sheep pox and goat pox

### PORCINE
- African swine fever
- Classical swine fever
- Foot-and-mouth disease
- Nipah virus encephalitis
- Swine vesicular disease

### AVIAN SPECIES
- Avian influenza (HPAI and H5/H7 LPAI)
- Turkey rhinotracheitis (Avian metapneumovirus)
- Virulent Newcastle disease (Exotic Newcastle disease, velogenic viscerotropic Newcastle disease)

### EQUINE
- African horse sickness
- Dourine (*Trypanosoma equiperdum*)
- Glanders (Farcy; *Burkholderia mallei)*
- Hendra virus (Equine morbillivirus)
- Venezuelan equine encephalomyelitis
- Vesicular stomatitis

### CERVIDS/LAGOMORPHS/CAMELIDS
- Middle East respiratory syndrome coronavirus (MERS-CoV)

## REGULATORY CONDITIONS
**Report within Two Days of Discovery**

### MULTIPLE SPECIES
- Brucellosis *(B. melitensis, B. abortus, B. suis)*[1]
- Pseudorabies (Aujeszky's disease)
- Tuberculosis (*Mycobacterium bovis)*[1]
- Tularemia[1]

### BOVINE
- Bovine brucellosis (*Brucella abortus*)[1]
- Bovine tuberculosis (*Mycobacterium bovis*)[1]
- Trichomoniasis (*Tritrichomonas foetus*)

### CAPRINE/OVINE
- Caprine and ovine brucellosis (*Brucella melitensis*)[1]
- Scrapie

### PORCINE
- Porcine brucellosis (*Brucella suis*)[1]
- Pseudorabies (Aujeszky's disease)

### AVIAN SPECIES
- Fowl typhoid (*Salmonella gallinarum)*
- Influenza A virus H9 and emerging LPAI
- Ornithosis (Psittacosis, avian chlamydiosis; *Chlamydia psittaci*)
- Pullorum disease (*Salmonella pullorum*)

### EQUINE
- Contagious equine metritis (*Taylorella equigenitalis*)
- Eastern equine encephalomyelitis
- Epizootic lymphangitis
- Equine herpesvirus myeloencephalopathy (EHM)
- Equine infectious anemia
- Equine piroplasmosis (*Babesia caballi* or *Theileria equi*)
- Western equine encephalomyelitis
- West Nile Virus

### CERVIDS/LAGOMORPHS/CAMELIDS
- Chronic wasting disease
- Rabbit hemorrhagic disease (Calicivirus)

### WHERE TO REPORT:

**CA Department of Food and Agriculture**
**Animal Health Branch (AHB)**
**District Offices:**

| | |
|---|---|
| **Redding** | **530-225-2140** |
| **Modesto** | **209-491-9350** |
| **Tulare** | **559-685-3500** |
| **Ontario** | **909-947-5932** |

**CDFA Animal Health Branch Headquarters**
**1220 N Street**
**Sacramento, CA 95814**
**Telephone 916-900-5002**

**OR**

**US Department of Agriculture**
**Animal and Plant Health Inspection Services**
**Veterinary Services (VS)**
**10365 Old Placerville Road, Suite 210**
**Sacramento, CA 95827-2518**
**Toll free at 1-877-741-3690**

**REPORT FISH, AMPHIBIAN, CRUSTACEAN, BEE, AND MOLLUSK DISEASES as listed by the OIE:**
https://www.oie.int/en/what-we-do/animal-health-and-welfare/animal-diseases/

## MONITORED CONDITIONS
**Report within 30 Days of Discovery**

### MULTIPLE SPECIES
- Bluetongue
- Echinococcosis/hydatidosis (*Echinococcus* species)
- Epizootic hemorrhagic disease
- Johne's disease (Paratuberculosis; *Mycobacterium avium paratuberculosis*)
- Leishmaniosis
- Q Fever (*Coxiella burnetii*)
- Severe acute respiratory syndrome Coronavirus-2 (SARS-CoV-2)[1]

### BOVINE
- Anaplasmosis (*Anaplasma marginale* or *A. centrale*)
- Bovine cysticercosis (*Taenia saginata*)
- Bovine genital campylobacteriosis (*Campylobacter fetus venerealis*)
- Bovine viral diarrhea
- Enzootic bovine leukosis (Bovine leukemia virus)
- Infectious bovine rhinotracheitis (Bovine herpesvirus-1)
- Malignant catarrhal fever (sheep-associated form)

### CAPRINE/OVINE
- Caprine arthritis/encephalitis
- Contagious agalactia (*Mycoplasma agalactiae, M. capricolum* subsp. *capricolum, M. mycoides* subsp. *capri, M. putrefaciens*)
- Enzootic abortion of ewes (Ovine chlamydiosis; *Chlamydia abortus*)
- Maedi-visna (Ovine progressive pneumonia)
- Ovine epididymitis (*Brucella ovis*)
- *Salmonella abortusovis*
- Sheep scabies (Body mange; *Psoroptes ovis)*

### PORCINE
- Porcine cysticercosis (*Taenia solium*)
- Porcine reproductive and respiratory syndrome
- Senecavirus A
- Swine enteric coronavirus diseases, including transmissible gastroenteritis
- Swine influenza
- Trichinellosis (*Trichinella spiralis*)

### AVIAN SPECIES
- Avian infectious bronchitis
- Avian infectious laryngotracheitis
- Duck viral hepatitis
- Goose parvovirus
- Infectious bursal disease (Gumboro disease)
- Influenza A viruses (see Emergency Conditions for HPAI and H5/H7 LPAI)
- Mycoplasmosis (*Mycoplasma synoviae* and *Mycoplasma gallisepticum*)

### EQUINE
- *Corynebacterium pseudotuberculois* (Ulcerative lymphagitis; Pigeon fever)
- Equine herpesvirus-1 and 4 (excluding EHM)
- Equine influenza
- Equine viral arteritis
- *Streptococcus equi spp equi* (Strangles)

### CERVIDS/LAGOMORPHS/CAMELIDS
- Camelpox
- Myxomatosis

[1] Diseases in blue, seen in any species, are also reportable to the California Department of Public Health (CDPH)

**For additional information, contact CDFA (email: evet@cdfa.ca.gov or visit our website at www.cdfa.ca.gov/ah) or USDA at http://www.aphis.usda.gov/animal_health**

# Los Angeles County Department of Public Health
# VETERINARY PUBLIC HEALTH PROGRAM

## REPORTABLE ANIMAL DISEASES AND CONDITIONS

**Per Title 10, Division 2, Section 10.64.020, of the Los Angeles County Code of Ordinances, it is the duty of any person suspecting or having knowledge of the presence of any infectious diseases in animals to report to the local public health department. This prioritized animal disease list is specific to Los Angeles County and differs from state and federal reporting requirements.**

**Urgency Reporting Requirements**

☎ Report **immediately** by telephone
✉ Report by electronic transmission (including FAX or email), phone, or mail within 1 working day of identification
⑦ Report by electronic transmission (including FAX or email), phone, or mail within 7 calendar days of identification

**In addition to diseases on this list, report all diseases on the California Department of Food and Agriculture (CDFA) reportable disease list to the Los Angeles County Veterinary Public Health Program.**

## REPORTABLE ANIMAL DISEASES LIST (2022)

VIRAL DISEASES
- ✉ Bovine Spongiform Encephalopathy
- ✉ Calicivirus, feline virulent
- ✉ Chronic Wasting Disease
- ⑦ Distemper
- ✉ Equine herpesvirus myeloencephalopathy (EHM)
- ☎ Foot-and-Mouth Disease
- ☎ Hemorrhagic Fevers, viral
- ✉ Influenza (any type)
- ⑦ Panleukopenia
- ⑦ Parvovirus
- ✉ Pseudorabies
- ✉ Rabbit Hemorrhagic Disease
- ☎ Rabies
- ☎ SARS CoV-2 or any other novel coronavirus
- ☎ Viral Encephalitis (EEE, WEE, VEE, Japanese Encephalitis)
- ☎ Virulent Newcastle Disease
- ✉ West Nile Virus

VECTOR-BORNE DISEASES
- ✉ Anaplasmosis
- ✉ Babesiosis
- ⑦ Chagas Disease
- ⑦ Ehrlichiosis
- ⑦ Heartworm
- ⑦ Lyme Disease
- ⑦ Spotted Fever Rickettsioses

BACTERIAL DISEASES
- ☎ Anthrax
- ☎ Botulism
- ☎ Brucellosis (any type)
- ☎ *Burkholderia pseudomallei*
- ⑦ Campylobacteriosis
- ☎ Glanders
- ⑦ Leptospirosis
- ✉ Listeriosis
- ✉ Multidrug Resistant Organisms (MDROs)
- ✉ *Mycobacterium* spp.
- ☎ Plague
- ✉ Psittacosis
- ☎ Q Fever
- ✉ Salmonellosis
- ✉ *Streptococcus equi* (Strangles)
- ⑦ Tetanus
- ☎ Tularemia
- ✉ Yersiniosis

FUNGAL DISEASES
- ⑦ Blastomycosis
- ⑦ Coccidioidomycosis
- ⑦ Cryptococcosis
- ⑦ Histoplasmosis

OTHER
- ✉ *Besnoitia*
- ✉ Domoic Acid Poisoning
- ⑦ Hemorrhagic gastroenteritis (HGE) of dogs
- ⑦ *Onchocerca lupi*
- ⑦ Salmon Poisoning Disease
- ☎ Screw worm myiasis

- ☎ Occurrence of any unusual disease
- ☎ Illness in animal recently imported from another country or region
- ☎ Outbreak or cluster (3 or more cases) of animal disease/deaths of any cause
- ☎ Animal illness concurrent with human illness
- ☎ Disease not endemic to area

**All Diseases on the Reportable Disease List of the California Department of Food and Agriculture (CDFA)**

REPORTING REQUESTED - NOT LEGALLY REQUIRED
- Cannabis toxicosis
- *Haemaphysalis longicornis* (Longhorned Tick)
- Suspected contamination of food product

*Ringworm and roundworm are NOT reportable.*

**Contact Veterinary Public Health to report a case or outbreak of any disease**

**Phone** (213) 288-7060 **Fax** (213) 481-2375 **Email:** vet@ph.lacounty.gov

**Disease Reporting Forms: http://www.publichealth.lacounty.gov/vet/Forms.htm**

COUNTY OF LOS ANGELES
Public Health

VETERINARY PUBLIC HEALTH PROGRAM

# Animal Disease/Death Reporting Form

**Instructions:** Use this form to report suspected and confirmed cases of animal disease or death to the Veterinary Public Health Program at the Los Angeles County Department of Public Health. If the disease you are reporting has a specific form, please use that form instead. For a complete list of reportable animal diseases and conditions, and reporting forms, please visit our website: http://publichealth.lacounty.gov/vet/.

**Date form completed: _____ Please submit completed form to: vet@ph.lacounty.gov OR fax to (213) 481-2375.**

**1. Animal Information**

Type of animal: ☐Domestic Pet ☐Wild animal ☐Bird ☐Horse/Livestock ☐Other (specify): _____

| Number of animals: ☐One ☐Multiple (give number): _____ | Species: | Breed: |
|---|---|---|

| Sex: | Age: | Name: | Impound #: | Color: |
|---|---|---|---|---|

**2. Animal Owner (if applicable)**

| First name: | Last name: | |
|---|---|---|
| Address: | City: | Zip: |
| Phone: | E-mail: | |

**3. Animal Location (where in the community the animal was found or originated, if not same as owner above)**

Name:

| Address: | City: | Zip: |
|---|---|---|

**4. Reporting Veterinarian, Clinic or Shelter (if applicable)**

| Name of veterinarian: | Facility name: |
|---|---|
| Phone: | E-mail: |

**5. History (please provide any details about this animal, including travel history or vaccine history if applicable)**

Was the animal imported from outside the U.S.? ☐Yes ☐No If YES, from where? _____

**6. Clinical Signs/Physical Examination Findings**

| Onset date: | Presentation date: | Date of death (if applicable): |
|---|---|---|

| | | | |
|---|---|---|---|
| General: | ☐Normal | ☐Abnormal | Comments _____ |
| Skin: | ☐Normal | ☐Abnormal | Comments _____ |
| Eyes/Ears/Nose/Throat: | ☐Normal | ☐Abnormal | Comments _____ |
| Respiratory: | ☐Normal | ☐Abnormal | Comments _____ |
| Cardiovascular: | ☐Normal | ☐Abnormal | Comments _____ |
| Abdomen/Digestive: | ☐Normal | ☐Abnormal | Comments _____ |
| Urogenital: | ☐Normal | ☐Abnormal | Comments _____ |
| Musculoskeletal: | ☐Normal | ☐Abnormal | Comments _____ |
| Nervous system: | ☐Normal | ☐Abnormal | Comments _____ |
| Lymph nodes: | ☐Normal | ☐Abnormal | Comments _____ |
| Other: | ☐Normal | ☐Abnormal | Comments _____ |

**7. Treatment (please describe any treatments or medications given)**

Date: _____ Treatment (name, strength/dose, duration given): _____

**8. Diagnostics/Testing (please attach laboratory results to this form when you submit it)**

**9. Additional Comments**



**PLEASE SUBMIT LABORATORY RESULTS WITH THIS FORM AND EMAIL TO: vet@ph.lacounty.gov**

COUNTY OF LOS ANGELES
Public Health

VETERINARY PUBLIC HEALTH PROGRAM

# Brucellosis Reporting Form

**Instructions:** Use this form to report suspected and confirmed cases of brucellosis to the Veterinary Public Health Program at the Los Angeles County Department of Public Health. For a complete list of reportable animal diseases and conditions, and reporting forms, please visit our website: http://publichealth.lacounty.gov/vet/.

**Date form completed:** _____ **Please submit completed form to: vet@ph.lacounty.gov OR fax to (213) 481-2375.**

| **1. Animal** | | | | |
|---|---|---|---|---|
| Name: | Species: | Breed: | Sex/Neut: | Age: |

| **2. Pet Owner** | | |
|---|---|---|
| First name: | Last name: | |
| Address: | City: | Zip: |
| Phone: | E-mail: | |

| **3. Reporting Veterinarian** | |
|---|---|
| Name of veterinarian: | Clinic name: |
| Phone: | E-mail: |

| **4. History** | |
|---|---|
| When did the owner obtain the dog? | Any known illness in humans that handled this dog? ☐ Yes ☐ No |

Where did the owner obtain the dog? ☐ Shelter ☐ Rescue ☐ Breeder ☐ Private party ☐ Other
Name of facility/party:_____ Phone: _____
Address of facility/party: _____ Email: _____

Was the dog or the dog's mother imported from outside the U.S.? ☐Yes ☐No If YES, from where? _____

Is the dog spayed/neutered? ☐ Yes ☐ No Date of surgery: _____ Facility name: _____

Are there other dogs in the household? ☐ Yes ☐ No If YES, how many other dogs are in the home? _____

| | |
|---|---|
| Do any other dogs in the household have clinical signs of brucellosis? ☐Yes ☐No<br>Has the dog ever mated with another dog (intentional breeding or not)? ☐Yes ☐No | If YES to either question, please fill out a report for the other dog. |

Has this dog been in contact with cattle, goats, sheep, pigs, deer, or rodents? If YES, explain: _____

| **5. Clinical Findings** | | |
|---|---|---|
| Onset date: | Presentation date: | Date of death (if applicable): |

Check all that apply: ☐ No clinical signs ☐ Lethargy ☐ Fever – highest body temperature measured: _____
☐ Diskospondylitis ☐ Abortion ☐ Epididymitis ☐ Ocular lesions ☐ Urinary tract infection
☐ Enlarged lymph nodes (specify location): _____ ☐ Other (specify): _____

**6. Diagnostics (please submit laboratory results with this form)**

Date: _____ Positive Ab: ☐ IFA ☐ AGID ☐ RSAT ☐ Tube Agg Date: _____☐ Positive PCR ☐ Positive Culture
Date: _____ Positive Ab: ☐ IFA ☐ AGID ☐ RSAT ☐ Tube Agg Date: _____☐ Other: _____

**7. Treatment**

Date: _____ Treatment: (drug, dosage, duration): _____
Date: _____ Treatment: (drug, dosage, duration): _____

**8. Client Education**

I discussed the zoonotic potential of *Brucella* with the client and the importance of spay/neuter if needed ☐Yes ☐No
Owner directed on proper cleaning/disinfection/hand hygiene when handling the pet and bodily fluids ☐ Yes ☐No
Owner directed to not take dog off of the property or to dog parks, grooming, daycare, boarding, etc. ☐Yes ☐No
***Veterinary Public Health will contact the owner to discuss brucellosis in their pet.***
**Brucellosis resource:** https://www.cfsph.iastate.edu/FastFacts/pdfs/canine_brucellosis_F.pdf



**PLEASE SUBMIT LABORATORY RESULTS WITH THIS FORM AND EMAIL TO: vet@ph.lacounty.gov**

COUNTY OF LOS ANGELES
Public Health

**VETERINARY PUBLIC HEALTH PROGRAM**

# Canine Influenza - Reporting Form

**Instructions:** Use this form to report suspected and confirmed cases of CIV to the Veterinary Public Health Program at the Los Angeles County Department of Public Health. For a complete list of reportable animal diseases and conditions, and reporting forms, please visit our website: http://publichealth.lacounty.gov/vet/

**Date form completed:** _____ **Please submit completed form to: vet@ph.lacounty.gov OR fax to (213) 481-2375.**

| **1. Animal** | | | | |
|---|---|---|---|---|
| Name: | Species: | Breed: | Sex/Neut: | Age: |
| **2. Pet Owner** | | | | |
| First name: | | Last name: | | |
| Address: | | City: | Zip: | |
| Phone: | | E-mail: | | |
| **3. Reporting Veterinarian** | | | | |
| Name of veterinarian: | | Clinic name: | | |
| Phone: | | E-mail: | | |
| **4. History** | | | | |
| Date of last 2 canine influenza vaccines: 1) _____ 2) _____ | | ☐ H3N2 ☐ H3N8 ☐ Bivalent | | |
| **Potential exposure history**: ☐Other sick animal or person in home ☐Exposure to stray ☐ Dog park ☐Pet store ☐Shelter ☐Kennel or daycare ☐Other: _____ | | | | |
| Facility or location name(s): | | Last date(s) attended: | | |
| Travel history (past 2 yrs): ☐ Outside LA County ☐ Outside CA ☐ Outside U.S. ☐ None ☐Unknown | | | | |
| **5. Clinical Findings** | | | | |
| Onset date: | Presentation date: | Date of death (if applicable): | | |
| Check all that apply: ☐ Cough ☐ Lethargy ☐ Sneezing ☐ Nasal Discharge ☐ No clinical signs ☐ Anorexia ☐ Fever Highest body temperature recorded:_____ ☐Other (please specify):_____ | | | | |
| **6. Diagnostics** | | | | |
| Chest radiographs? ☐ Yes ☐No | If yes, describe findings: | | | |
| ☐ Positive H3N2 test ☐ Positive H3N8 test ☐ Positive H1N1 test ☐ Other:_____ | | Date PCR sample collected: | | |
| **7. Treatment** | | | | |
| Treatment(s) (medication, dose, frequency): | | | | |
| Time it took pet to recover: | ☐ Patient hospitalized ☐ IV Fluids ☐ Supplemental oxygen | | | |
| Other comments: | | | | |
| **8. Client Education** | | | | |
| ***Pets with influenza can be contagious to other pets for up to several weeks after recovery. Sick pets with influenza should be isolated at home for 28 days from the first day of illness. Exposed/asymptomatic pets should be quarantined for 14 days to monitor for illness.*** | | | | |
| Owner was directed to keep sick pet at home under isolation for 28 days from the first day of illness: ☐ Yes ☐ No Owner was directed to keep exposed/asymptomatic pet at home under quarantine for 14 days from the date of the last exposure: ☐ Yes ☐ No | | | | |

***PLEASE SUBMIT LABORATORY RESULTS WITH THIS FORM AND EMAIL TO: vet@ph.lacounty.gov***

COUNTY OF LOS ANGELES
Public Health

VETERINARY PUBLIC HEALTH PROGRAM

# Coccidioidomycosis Reporting Form

**Instructions:** Use this form to report suspected and confirmed cases of coccidioidomycosis to the Veterinary Public Health Program at the Los Angeles County Department of Public Health. For a complete list of reportable animal diseases and conditions, reporting forms, and specific information about disease, please visit our website: http://publichealth.lacounty.gov/vet/.

**Date form completed:** _____ **Please submit completed form to: vet@ph.lacounty.gov OR fax to (213) 481-2375.**

| **1. Animal** | | | | |
|---|---|---|---|---|
| Name: | Species: | Breed: | Sex/Neut: | Age: |

| **2. Pet Owner** | | |
|---|---|---|
| First name: | Last name: | |
| Address: | City: | Zip: |
| Phone: | E-mail: | |

| **3. Reporting Veterinarian** | |
|---|---|
| Name of veterinarian: | Clinic name: |
| Phone: | E-mail: |

| **4. History** | |
|---|---|
| Pet lives primarily outdoors | ☐Yes ☐No |
| Pet digs in soil frequently | ☐Yes ☐No |
| Pet/family lives within a site of earth excavation | ☐Yes ☐No |
| Pet/family lives near a dirt road | ☐Yes ☐No |

Travel history (two months prior to illness): ☐Outside LA County ☐Outside CA ☐Outside U.S. ☐None ☐Unknown

Travel date: _____ Travel location (city, state, country): _____

Travel date: _____ Travel location (city, state, country): _____

| **5. Clinical Findings** | | |
|---|---|---|
| Onset date: | Presentation date: | Date of death (if applicable): |

Check all that apply: ☐Cough ☐Weight loss ☐Lameness ☐Fever – highest temp: _____ ☐No clinical signs

Enlarged lymph node location(s): ☐Submandibular ☐Cervical ☐Prescapular ☐Axillary ☐Inguinal ☐Popliteal ☐Unknown ☐Other (specify): _____

Lesion location(s): ☐Ocular ☐Bone ☐Cutaneous ☐Pneumonia/pulmonary ☐Other (specify):_____

**6. Diagnostics (please submit laboratory results with this form)**

Date: _____ ☐Positive IgG Titer Result: _____ Date: _____ ☐Positive IgM Titer Result: _____

Date: _____ ☐Positive Culture Location: _____ Date: _____ ☐Positive biopsy Location:_____

**7. Treatment**

Date: _____ Treatment (drug, dosage, duration): _____

Date: _____ Treatment (drug, dosage, duration): _____

**8. Client Education**

Owner advised that while coccidioidomycosis (Valley Fever) is not zoonotic, a shared exposure could result in human disease (e.g. pet and owner exposed to the same source of infection, such as an earth excavation site). ☐Yes ☐No

**PLEASE SUBMIT LABORATORY RESULTS WITH THIS FORM AND EMAIL TO: vet@ph.lacounty.gov**

COUNTY OF LOS ANGELES
Public Health

**VETERINARY PUBLIC HEALTH PROGRAM**

# Distemper Reporting Form

**Instructions:** Use this form to report suspected and confirmed cases of distemper to the Veterinary Public Health Program at the Los Angeles County Department of Public Health. For a complete list of reportable animal diseases and conditions, and reporting forms, please visit our website: http://publichealth.lacounty.gov/vet/.

**Date form completed: _____ Please submit completed form to: vet@ph.lacounty.gov (preferred) OR fax to (213) 481-2375.**

| **1. Animal** | | | | |
|---|---|---|---|---|
| Name/Impound #: | Species: | Breed: | Sex/Neut: | Age: |

| **2. Pet Owner/Wildlife location when found** | | |
|---|---|---|
| First name: | Last name: | |
| Address: | City: | Zip: |
| Phone: | E-mail: | |

| **3. Reporting Veterinarian/Shelter/Facility** | |
|---|---|
| Name of veterinarian: | Clinic/facility name: |
| Phone: | E-mail: |

**4. History**

Distemper vaccination? ☐Fully vaccinated, up to date ☐Fully vaccinated, not up to date ☐Incomplete series ☐Never vaccinated ☐Unknown

Dates of last 2 DHLPP/DA2PP vaccinations: _____ _____

Was the animal imported from outside the U.S.? ☐Yes ☐No If YES, from where? _____

When did the owner obtain the dog? _____

Where did the owner obtain the dog? ☐ Shelter ☐ Rescue ☐ Breeder ☐ Private party ☐ Other

Name of facility/party:_____ Phone: _____

Address of facility/party: _____ Email: _____

Potential exposure history (1 month prior to illness): ☐Sick animal at home ☐Dog show ☐Kennel visit ☐Pet store ☐Shelter visit ☐Exposure to stray ☐Dog park ☐Wildlife ☐Breeder ☐Other: _____

Please explain (date, location): _____

| **5. Clinical Findings** | | | |
|---|---|---|---|
| Onset date: | Presentation date: | Date of death: | Euthanized? ☐Yes ☐No |

Check all that apply: ☐Diarrhea ☐Vomiting ☐Fever – highest body temperature measured: _____
☐Nasal discharge ☐Ocular discharge ☐Seizures ☐Other neurologic signs (specify): _____
☐Moribund ☐Non-responsive ☐Other (specify): _____

**6. Diagnostics (please submit laboratory results with this form)**

Date: _____ ☐Positive distemper antibody titer Result: _____ ☐Wild type ☐Vaccine interference

Date: _____ ☐Positive distemper PCR - Sample type/location: _____

Date: _____ ☐Other (explain): _____

**7. Treatment**

Date: _____ Treatment (drug, dosage, duration): _____

**8. Client Education**

Owner advised that dogs with distemper can shed virus for up to four months after recovery. ☐Yes ☐No

Owner directed to keep dog isolated from other dogs during this time. ☐Yes ☐No

***Contaminated kennels/surfaces should be completely cleaned, disinfected and dried at least twice before re-use.***

Resource: https://www.uwsheltermedicine.com/library/resources/canine-distemper-cdv

**PLEASE SUBMIT LABORATORY RESULTS WITH THIS FORM AND EMAIL TO: vet@ph.lacounty.gov**

COUNTY OF LOS ANGELES
Public Health

**VETERINARY PUBLIC HEALTH PROGRAM**

# Equine Strangles Reporting Form

**Instructions:** Use this form to report suspected and confirmed cases of equine strangles to the Veterinary Public Health Program at the Los Angeles County Department of Public Health. For a complete list of reportable animal diseases and conditions, and reporting forms, please visit our website: http://publichealth.lacounty.gov/vet/.

**Date form completed:_____** **Please submit completed form to: vet@ph.lacounty.gov OR fax to (213) 481-2375.**

| **1. Horse** | | | |
|---|---|---|---|
| Name: | Breed: | Sex: | Age: |

| **2. Horse Owner** | | | |
|---|---|---|---|
| First name: | Last name: | | |
| Address: | City: | State: | Zip: |
| Phone: | E-mail: | | |

| **3. Reporting Veterinarian** | |
|---|---|
| Name of veterinarian: | Clinic name: |
| Phone: | E-mail: |

| **4. Stable Information** | | |
|---|---|---|
| Stable Name: | Stable address: | |
| Stable contact name: | Phone: | Email: |
| Total number of horses on the premise: | Other horses on premise showing signs of strangles? ☐ Yes ☐ No<br>Does stable require vaccination against strangles? ☐ Yes ☐ No | |

| **5. History** | | |
|---|---|---|
| History of *Strep. equi* vaccine? ☐ Yes ☐ No | Date last vaccine: | Vaccine type: ☐ Intranasal MLV ☐ IM Killed |
| In the month prior to disease onset, list the horse's travel history (imported from, shows, events, etc.): | | |
| Date 1: | Location traveled (address, city, zip): | |
| Date 2: | Location traveled (address, city, zip): | |

| **6. Clinical Findings** | | |
|---|---|---|
| Onset date: | Presentation date: | Date of death (if applicable): |

Check all that apply: ☐No clinical signs ☐ Lethargy ☐Cough/stridor ☐ Nasal discharge ☐Appetite loss
☐ Fever (highest body temperature): _____ ☐ Lymphadenopathy (specify location): _____
☐Abscess (specify location):_____ ☐Other (specify): _____

**7. Diagnostics (please submit laboratory results with this form)**

Date: _____ Culture (sample type/location): _____ Result: ☐Positive ☐Negative
Date: _____ PCR (sample type/location):_____ Result ☐Positive ☐ Negative
Date: _____ Other:_____

**8. Treatment**

Date: _____ Medication (dose, duration): _____
Date: _____ Medication (dose, duration): _____

**9. Client Education**

I discussed the zoonotic potential of *Strep. equi* with the owner and the stable manager/contact. ☐ Yes ☐ No
I discussed the appropriate quarantine and isolation measures with the owner and the stable manager/contact (as listed on the following page). ☐ Yes ☐ No

**PLEASE SUBMIT LABORATORY RESULTS WITH THIS FORM AND EMAIL TO: vet@ph.lacounty.gov**

COUNTY OF LOS ANGELES
Public Health

VETERINARY PUBLIC HEALTH PROGRAM

# Heartworm Reporting Form

**Instructions:** Use this form to report suspected and confirmed cases of heartworm to the Veterinary Public Health Program at the Los Angeles County Department of Public Health. For a complete list of reportable animal diseases and conditions, and reporting forms, please visit our website: http://publichealth.lacounty.gov/vet/.

**Date form completed:_____** **Please submit completed form to: vet@ph.lacounty.gov OR fax to (213) 481-2375.**

| **1. Animal** | | | | |
|---|---|---|---|---|
| Name: | Species: | Breed: | Sex/Neut: | Age: |
| **2. Pet Owner** | | | | |
| First name: | | Last name: | | |
| Address: | | City: | | Zip: |
| Phone: | | E-mail: | | |
| **3. Reporting Veterinarian** | | | | |
| Name of veterinarian: | | Clinic name: | | |
| Phone: | | E-mail: | | |
| **4. History** | | | | |
| Previous heartworm prevention? ☐ Yes ☐ No ☐Unk | | Brand: | | |
| Dose frequency: ☐ Monthly, year-round ☐ Monthly, seasonal ☐ Other:_____ | | | | |
| Suspect heartworm drug resistance? ☐ Yes ☐ No ☐ Unk | | | | |
| Travel history (past 2 yrs): ☐ Outside LA County ☐ Outside CA ☐ Outside U.S. ☐ None ☐Unknown | | | | |
| Exposure Date 1: | Exposure Location 1 (city, state, country): | | | |
| Exposure Date 2: | Exposure Location 2: | | | |
| Exposure Date 3: | Exposure Location 3: | | | |
| **5. Clinical Findings** | | | | |
| Onset date: | Presentation date: | Date of death *(if applicable):* | | |
| Check all that apply: ☐ Cough ☐ Lethargy ☐ Heart Failure ☐ Respiratory distress ☐ No clinical signs ☐Other (please specify): | | | | |
| **6. Diagnostics** | | | | |
| Chest radiographs? ☐ Yes ☐No | If yes, describe findings: | | | |
| HW Test Date 1: | Test: ☐ Ag ☐ Ab ☐Microfilaria ☐Other | | | Result: |
| Test Date 2: | Test: ☐Ag ☐Ab ☐Microfilaria ☐Other | | | Result: |
| Test Date 3: | Test: ☐Ag ☐Ab ☐Microfilaria ☐Other | | | Result: |
| **7. Treatment** | | | | |
| Treatment plan: Follow AHS guidelines ☐ Slow Kill ☐ No treatment ☐ Pending owner decision | | | | |
| Treatment date 1: | Treatment (medication, dose, frequency): | | | |
| Treatment date 2: | Treatment (medication, dose, frequency): | | | |
| Treatment date 3: | Treatment (medication, dose, frequency): | | | |
| ***Slow kill is not recommended by the American Heartworm Society. Year-round HW prevention is recommended in LA County.*** | | | | |
| **8. Client Education** | | | | |
| To reduce the spread of heartworm and other vector-borne diseases to humans and pets, was owner advised about mosquito control (e.g. dumping standing water 1-2 times/week)? ☐ Yes ☐ No | | | | |

**PLEASE SUBMIT LABORATORY RESULTS WITH THIS FORM AND EMAIL TO: vet@ph.lacounty.gov**

COUNTY OF LOS ANGELES
Public Health

VETERINARY PUBLIC HEALTH PROGRAM

# Leptospirosis - Reporting Form

**Instructions:** Use this form to report suspected and confirmed cases of leptospirosis to the Veterinary Public Health Program at the Los Angeles County Department of Public Health. For a complete list of reportable animal diseases and conditions, and reporting forms, please visit our website: http://publichealth.lacounty.gov/vet/

**Date form completed:_____** **Please submit completed form to: vet@ph.lacounty.gov OR fax to (213) 481-2375.**

| **1. Animal** | | | | |
|---|---|---|---|---|
| Name: | Species: | Breed: | Sex/Neut: | Age: |

| **2. Pet Owner** | | |
|---|---|---|
| First name: | Last name: | |
| Address: | City: | Zip: |
| Phone: | E-mail: | |

| **3. Reporting Veterinarian** | |
|---|---|
| Name of veterinarian: | Clinic name: |
| Phone: | E-mail: |

| **4. History** | |
|---|---|
| Vaccinated against *Leptospira* before illness? ☐ Yes ☐ No | Date of last Leptospira vaccine: _____<br>☐ Bivalent ☐ Quadrivalent |
| Travel outside of LA County in the month before becoming ill? ☐ Yes ☐ No | |
| Travel location 1): | Date 1): |
| Travel location 2): | Date 2): |
| **Animal exposure(s)**: ☐Skunks ☐Opossums ☐ Raccoons ☐Rats ☐Mice ☐Pigs ☐Cattle ☐Dogs ☐Other:_____ | |
| **Potential exposure history:**<br>☐Kennel or daycare ☐ Dog park ☐Shelter ☐Other:_____ | |
| Facility or location name(s): | |
| Last date(s) attended: | |

| **5. Clinical Findings** | | |
|---|---|---|
| Onset date: | Presentation date: | Date of death (if applicable): |
| Check all that apply:<br>☐ Polyuria ☐ Polydipsia ☐ Inappetence ☐ Fever - Highest body temperature recorded:_____<br>☐ Vomiting ☐ Diarrhea ☐ Lethargy ☐Azotemia ☐Other:_____ | | |

| **6. Diagnostics** |
|---|
| ☐ Positive urine PCR ☐ Positive blood PCR ☐ Positive *Leptospira* ELISA ☐Positive in-house *Leptospira* test<br>☐ Positive MAT serology - Serovar:_____ Date sample collected:_____ |

| **7. Treatment** |
|---|
| Treatment(s) (medication, dose, frequency, duration): |
| ☐ Patient hospitalized - #days:_____ ☐ IV Fluids ☐ Dialysis |
| Other comments: |

| **8. Client Education** |
|---|
| I discussed the zoonotic potential with the pet owner and advised on proper cleaning and disinfection: ☐Yes ☐No<br>***REMINDER: Zoonotic disease. Gloves should be worn when cleaning urine, a disinfectant should be used to clean the area, and hands should be washed after removing the gloves.*** |

**PLEASE SUBMIT LABORATORY RESULTS WITH THIS FORM AND EMAIL TO: vet@ph.lacounty.gov**

COUNTY OF LOS ANGELES
Public Health

VETERINARY PUBLIC HEALTH PROGRAM

# Animal Multi-Drug-Resistant Organisms (MDRO) Reporting Form

**Instructions:** Use this form to report confirmed MDRO infections to the Veterinary Public Health Program. For a complete list of reportable animal diseases and conditions, reporting forms, and specific information about diseases, please visit our website: http://publichealth.lacounty.gov/vet/.

**Date form completed: _____Please submit completed form to: vet@ph.lacounty.gov (preferred) OR fax to (213) 481-2375.**

| **1. Animal** | | | | |
|---|---|---|---|---|
| Name: | Species: | Breed: | Sex/Neut: | Age: |

| **2. Pet Owner** | | |
|---|---|---|
| First name: | Last name: | |
| Address: | City: | Zip: |
| Phone: | E-mail: | |

| **3. Reporting Veterinarian** | |
|---|---|
| Name of veterinarian: | Clinic name: |
| Phone: | E-mail: |

| **4. Exposure History** | |
|---|---|
| Any associated human illness? ☐Yes ☐No ☐Unk<br>If yes, specify: _____ | Other animals in family ill from bacteria? ☐Yes ☐No ☐Unk<br>If yes, specify: _____ |
| Please list any additional exposures; followed by additional comments: | |

| **5. Clinical Findings** | | |
|---|---|---|
| Date of onset: | Date of presentation: | Date of death (if applicable): |
| Is illness chronic/recurrent in animal? ☐ Yes ☐No ☐Unk | Highest temperature recorded: _____ | |
| Clinical signs: | | |

| **6. Diagnostics** *Please email all bacterial cultures and other lab results in with this form* | |
|---|---|
| Date of specimen collection: | Organism(s) identified: 1)_____ |
| Other organism(s) identified: 2)_____ 3)_____ | |
| To your knowledge, has patient tested positive for the MDRO before the current positive being reported? ☐Yes ☐No ☐Unk | If yes, date of first ever positive specimen: |
| Specimen Source<br>☐Abscess ☐Ear ☐Skin ☐Urine ☐Blood ☐Rectal ☐ GI ☐ Respiratory ☐ Oral<br>☐Wound, open (non-sterile) ☐ Wound surgical (sterile site) ☐Other (specify): _____ | |

**7. Treatment**

Please list all antimicrobial treatments given, including medicated baths *(medication, dose, frequency, duration):*

Date:_____ Treatment: _____

Date:_____ Treatment: _____

Date:_____ Treatment_____

Was animal treated with antibiotics in the 2 weeks before the culture specimen was collected? ☐Yes ☐ No

Please provide any additional treatment comments:

**PLEASE SUBMIT LABORATORY RESULTS WITH THIS FORM AND EMAIL TO: vet@ph.lacounty.gov**

COUNTY OF LOS ANGELES
Public Health

VETERINARY PUBLIC HEALTH PROGRAM

# Panleukopenia Reporting Form

**Instructions:** Use this form to report suspected and confirmed cases of feline panleukopenia to the Veterinary Public Health Program at the Los Angeles County Department of Public Health. For a complete list of reportable animal diseases and conditions, and reporting forms, please visit our website: http://publichealth.lacounty.gov/vet/.

**Date form completed: _____ Please submit completed form to: vet@ph.lacounty.gov (preferred) OR fax to (213) 481-2375.**

| **1. Animal** | | | | |
|---|---|---|---|---|
| Name/Impound #: | Species: | Breed: | Sex/Neut: | Age: |

| **2. Pet Owner/Shelter** | | |
|---|---|---|
| First name: | Last name: | |
| Address: | City: | Zip: |
| Phone: | E-mail: | |

| **3. Reporting Veterinarian** | |
|---|---|
| Name of veterinarian: | Clinic name: |
| Phone: | E-mail: |

**4. History**

Panleukopenia vaccination? ☐Fully vaccinated, up to date ☐Fully vaccinated, not up to date ☐Incomplete series ☐Never vaccinated ☐Unknown

Dates of last 2 FVRCP vaccinations: _____ _____

Travel history (1 month prior to illness): ☐Outside LA County ☐Outside CA ☐Outside U.S. ☐None ☐Unknown

Date: _____Travel location (city, state, country) _____

Date: _____Travel location (city, state, country) _____

Potential exposure history: ☐Other sick animal at home ☐Cat show ☐Kennel visit ☐Shelter visit ☐Exposure to stray ☐Pet store ☐Breeder ☐Rescue ☐Other: _____

**5. Clinical Findings**

| Onset date: | Presentation date: | Date of death (if applicable): |
|---|---|---|

Check all that apply:

☐Vomiting ☐Diarrhea ☐Sudden death ☐Fever – highest body temperature measured: _____
☐Anorexia ☐Moribund ☐No clinical signs ☐Other (specify):_____

**6. Diagnostics (please submit laboratory results with this form)**

Date: _____ ☐Positive in-house parvo/panleuk SNAP/ELISA

Date: _____ ☐Positive panleuk PCR – sample type/location: _____

Date: _____ ☐Other (explain): _____

**7. Treatment**

Date: _____ Treatment: (drug, dosage, duration): _____

**8. Client Education**

Owner directed to keep sick pet at home under isolation for 14 days after cessation of clinical signs. ☐Yes ☐No

Owner directed on proper cleaning and disinfection once pet is recovered. ☐Yes ☐No

***REMINDER: Panleukopenia virus can persist in the environment for up to 7 months and infected pets may shed the virus for up to 14 days past recovery. Contaminated kennels or surfaces should be completely cleaned, disinfected, and dried at least twice before re-use.***

**PLEASE SUBMIT LABORATORY RESULTS WITH THIS FORM AND EMAIL TO: vet@ph.lacounty.gov**

COUNTY OF LOS ANGELES
Public Health

**VETERINARY PUBLIC HEALTH PROGRAM**

# Parvovirus - Reporting Form

**Instructions:** Use this form to report suspected and confirmed cases of parvovirus to the Veterinary Public Health Program at the Los Angeles County Department of Public Health. For a complete list of reportable animal diseases and conditions, and reporting forms, please visit our website: http://publichealth.lacounty.gov/vet/

**Date form completed:_____** **Please submit completed form to: vet@ph.lacounty.gov OR fax to (213) 481-2375.**

| **1. Animal** | | | | |
|---|---|---|---|---|
| Name: | Species: | Breed: | Sex/Neut: | Age: |
| **2. Pet Owner** | | | | |
| First name: | | Last name: | | |
| Address: | | City: | Zip: | |
| Phone: | | E-mail: | | |
| **3. Reporting Veterinarian** | | | | |
| Name of veterinarian: | | Clinic name: | | |
| Phone: | | E-mail: | | |
| **4. History** | | | | |
| ☐Fully vaccinated against parvovirus – up to date ☐Fully vaccinated against parvovirus – not up to date currently<br>☐Never vaccinated against parvovirus ☐Incomplete series against parvovirus ☐ Unknown vaccination status | | | | |
| Dates of last two DA2PP/DHLPP vaccines 1): _____ 2):_____ | | | | |
| Travel outside of LA County in the month before becoming ill? ☐ Yes ☐ No | | | | |
| Travel location 1): | | Date 1): | | |
| Travel location 2): | | Date 2): | | |
| **Potential exposure history:** ☐Kennel or daycare ☐ Dog park ☐Shelter ☐Another sick animal at home<br>☐Other:_____ | | | | |
| Facility or location name(s): | | | | |
| Last date(s) attended: | | | | |
| **5. Clinical Findings** | | | | |
| Onset date: | Presentation date: | Date of death (if applicable): | | |
| Check all that apply:<br>☐ Anorexia ☐ Lethargy ☐ Moribund ☐ Fever - Highest body temperature recorded:_____<br>☐ Vomiting ☐ Diarrhea ☐ Asymptomatic ☐Other:_____ | | | | |
| **6. Diagnostics** | | | | |
| ☐ Positive in-house parvo SNAP/ELISA ☐ Positive parvo PCR ☐ Other tests:_____ | | | | |
| **7. Treatment** | | | | |
| Treatment(s) (medication, dose, frequency, duration): | | | | |
| ☐ Patient hospitalized - #days:_____ ☐ IV Fluids ☐ Dialysis | | | | |
| Other comments: | | | | |
| **8. Client Education** | | | | |
| Owner directed to keep the sick pet at home under isolation for 14 days after cessation of clinical signs: ☐ Yes ☐No<br>Owner was directed on proper cleaning and disinfection and to bathe the pet when recovered to remove virus persisting on the coat: ☐ Yes ☐ No<br>***REMINDER: Parvovirus can persist in the environment for up to 7 months and infected pets may shed the virus for up to 14 days past recovery. In a veterinary setting, contaminated kennels or surfaces should be completely cleaned, disinfected, and dried at least twice before re-use.*** | | | | |

**PLEASE SUBMIT LABORATORY RESULTS WITH THIS FORM AND EMAIL TO: vet@ph.lacounty.gov**

COUNTY OF LOS ANGELES
Public Health

VETERINARY PUBLIC HEALTH PROGRAM

# Psittacosis Reporting Form

**Instructions:** Use this form to report suspected and confirmed cases of psittacosis to the Veterinary Public Health Program at the Los Angeles County Department of Public Health. For a complete list of reportable animal diseases and conditions, and reporting forms, please visit our website: http://publichealth.lacounty.gov/vet/.

**Date form completed:** _____ **Please submit completed form to: vet@ph.lacounty.gov OR fax to (213) 481-2375.**

| **1. Bird Information** | | | |
|---|---|---|---|
| Name: | Species: | Sex (if known): | Age: |

| **2. Bird Owner Information** | | |
|---|---|---|
| First name: | Last name: | |
| Address: | City: | Zip: |
| Phone: | E-mail: | |

| **3. Reporting Veterinarian** | |
|---|---|
| Name of veterinarian: | Clinic name: |
| Phone: | E-mail: |

| **4. History** | |
|---|---|
| How long has this person owned the bird? | Date the bird was obtained if known: |

Where did the owner obtain the bird? ☐Pet store ☐Shelter/rescue ☐Breeder ☐Private party ☐Other
Name of facility/party: _____ Phone: _____
Address of facility/party: _____ Email:_____

Are there other birds on the property? ☐Yes ☐No
If YES, how many/what species _____

Are there other birds that are currently ill on the property? ☐Yes ☐No
If YES, describe how many, what species and clinical signs _____

Were any new birds brought onto the property recently? ☐Yes ☐No
If YES, explain _____

Is there any known respiratory illness in humans that handled this bird or other sick birds? ☐Yes ☐No
If YES, provide names/phone/address for those that are ill _____

Type of housing of the infected bird: ☐Indoor ☐Outdoor ☐Both

| **5. Clinical Findings** | | |
|---|---|---|
| Onset date: | Presentation date: | Date of death (if applicable): |

Check all that apply: ☐No clinical signs ☐Lethargy ☐Conjunctivitis ☐Ocular/nasal discharge
☐Ruffled feathers ☐Sudden death ☐Diarrhea ☐Yellow/green urates ☐Other: _____

**6. Diagnostics (please submit laboratory results with this form)**

Date: _____ ☐PCR ☐Serology ☐Fecal antigen ☐Culture Result: _____

**7. Treatment**

Date: _____ Medication, dose, duration: _____

**7. Client Education**

I discussed the zoonotic potential of *Chlamydia psittaci* with the client ☐Yes ☐No
Owner directed on proper cleaning/disinfection/PPE to wear when handling a sick bird
(mask, gloves, eye protection, change clothes, do not aerosolize dry droppings) ☐Yes ☐No
Owner directed to not take the bird off their property or to public places, except to a vet for care ☐Yes ☐No

***Veterinary Public Health will contact the owner to discuss psittacosis and a 45-day quarantine for their bird.***
***Click on the links for resources:*** ***Psittacosis and Avian Chlamydiosis Checklist for Owners of Infected Birds***
***Psittacosis Prevention Checklist for Pet Stores and Aviaries***



**PLEASE SUBMIT LABORATORY RESULTS WITH THIS FORM AND EMAIL TO: vet@ph.lacounty.gov**

COUNTY OF LOS ANGELES
Public Health

VETERINARY PUBLIC HEALTH PROGRAM

# SARS-CoV-2 Reporting Form

**Instructions:** Use this form to report suspected and confirmed cases of SARS-CoV-2 (the virus that causes COVID-19) to the Veterinary Public Health Program at the Los Angeles County Department of Public Health. For a complete list of reportable animal diseases and conditions, and reporting forms, please visit our website: http://publichealth.lacounty.gov/vet/.

**Date form completed: _____ Please submit completed form to: vet@ph.lacounty.gov OR fax to (213) 481-2375.**

**1. Animal**

| Name: | Species: | Breed: | Sex/Neut: | Age: |
|---|---|---|---|---|
| | | | | |

**2. Pet Owner/Wildlife location**

| First name: | Last name: | |
|---|---|---|
| Address: | City: | Zip: |
| Phone: | E-mail: | |

**3. Reporting Veterinarian/Shelter/Other Facility**

| Name of veterinarian: | Clinic/Facility name: |
|---|---|
| Phone: | E-mail: |

**4. Exposure History**

Was the animal exposed to person(s) with COVID-19?

☐Yes, person with confirmed COVID-19 ☐Yes, person with suspected COVID-19 ☐No ☐Unknown

Was the animal exposed to animal(s) with COVID-19?

☐Yes, animal with confirmed COVID-19 ☐Yes, animal with suspected COVID-19 ☐No ☐Unknown

*If yes to either of the above questions, and there is interest in SARS-CoV-2 testing, please contact VPH.*

Other potential exposures (check all that apply): ☐Dog show ☐Kennel visit ☐Shelter visit ☐Pet store ☐Dog park ☐Exposure to stray ☐Zoo ☐Wildlife ☐Other: _____

Animal Housing Situation: ☐Household pet ☐Shelter ☐Wildlife ☐Zoo ☐Other: _____

Animal's typical access to outdoor spaces:

☐Indoor & outdoor ☐Indoor only ☐Outdoor confined ☐Outdoor free-roaming ☐Unknown

**5. Clinical Findings**

| Onset date: | Presentation date: | Date of death (if applicable): |
|---|---|---|
| | | |

Check all that apply: ☐Cough/shortness of breath ☐Sneezing ☐Vomiting ☐Diarrhea ☐Lethargy ☐Nasal discharge ☐Ocular discharge ☐Inappetence ☐ No clinical signs ☐Fever – highest temperature: _____ ☐Other (specify): _____

Did the animal have pre-existing condition(s)? ☐Yes ☐No

If yes, please describe: _____

**6. Diagnostics**

SARS-CoV-2 test recommended for animal? ☐Yes ☐No | SARS-CoV-2 test conducted for this animal? ☐Yes ☐No

Date sample collected: _____ Type of sample: ☐Oral swab ☐Nasal swab ☐Conjunctival swab ☐Rectal swab ☐Fecal sample ☐Fur sample ☐Serum sample ☐Port-mortem tissue (specify):_____ ☐Other: _____ Test Results: _____

**7. Client Education**

Owner directed to keep sick pet at home under isolation for 14 days after cessation of clinical signs. ☐Yes ☐No

**PLEASE SUBMIT LABORATORY RESULTS WITH THIS FORM AND EMAIL TO: vet@ph.lacounty.gov**

COUNTY OF LOS ANGELES
Public Health

VETERINARY PUBLIC HEALTH PROGRAM

# Tick-borne Disease Reporting Form

**Instructions:** Use this form to report suspected and confirmed cases of tick-borne disease to the Veterinary Public Health Program at the Los Angeles County Department of Public Health. For a complete list of reportable animal diseases and conditions, reporting forms, and specific information about diseases, please visit our website: http://publichealth.lacounty.gov/vet/.

**Date form completed: _____ Please submit completed form to: vet@ph.lacounty.gov OR fax to (213) 481-2375.**

**1. Disease**

☐Anaplasmosis ☐Borreliosis (Lyme) ☐Ehrlichiosis ☐Other: _____

**1. Animal**

| Name: | Species: | Breed: | Sex/Neut: | Age: |
|---|---|---|---|---|

**2. Pet Owner**

| First name: | Last name: | |
|---|---|---|
| Address: | City: | Zip: |
| Phone: | E-mail: | |

**3. Reporting Veterinarian**

| Name of veterinarian: | Clinic name: |
|---|---|
| Phone: | E-mail: |

**4. History**

Ticks found on animal? ☐Yes ☐No | Ticks collected from animal? ☐Yes *Tick testing may be available. Call VPH. ☐No

Ticks found on pet: ☐Never ☐Rarely ☐Occasionally ☐Frequently

Ticks found on humans in household? ☐Yes ☐No

Pet currently on tick preventive? ☐Yes, brand: _____ ☐No

Does the owner suspect where pet picked up ticks (trails, parks, beaches, imported country):
_____

Travel history (year prior to illness): ☐Outside LA County ☐Outside CA ☐Outside U.S. ☐None ☐Unknown

Date: _____Travel location (eg – name of park, city, state, country) _____

Date: _____Travel location (eg – name of park, city, state, country) _____

**5. Clinical Findings**

| Onset date: | Presentation date: | Date of death (if applicable): |
|---|---|---|

Check all that apply: ☐Anorexia ☐Lameness ☐Petechiae ☐Bleeding (e.g. epistaxis)

☐Neurological Signs ☐No Clinical Signs ☐Vomiting ☐Diarrhea ☐Fever - highest temperature: _____

☐Enlarged lymph node (location): _____ ☐ Other: _____

**6. Treatment**

Date: _____ Treatment (drug, dosage, duration): _____

**7. Diagnostics (please submit laboratory results with this form)**

Date:_____☐Positive ELISA/SNAP (specify test manufacturer/name) _____

Date:_____☐Positive IgG Titer Result: _____ Date: _____ ☐Positive IgM Titer Result: _____

Date:_____☐Positive PCR (sample type/location): _____ Date:_____☐Other: _____

**8. Client Education**

Owner was advised to use/continue to use a tick preventive product on pet. ☐Yes ☐No

Owner was advised that some ticks carry pathogens that can cause human disease. ☐Yes ☐No

**PLEASE SUBMIT LABORATORY RESULTS WITH THIS FORM AND EMAIL TO: vet@ph.lacounty.gov**

# ANIMAL DISEASES & PET IMPORTATION AND EXPORTATION

## PET IMPORTATION

Each day pets are imported into LA County through the international pet trade and rescue groups. The risk of importing foreign animal diseases to LA County is real and has occurred. Per LA County, Code of Ordinances (Title 10, Division 2, Section 10.56.10), no sick or injured animal can be imported into LA County. The Centers for Disease Control and Prevention (CDC) and United States Department of Agriculture (USDA) regulate animal importation. Although regulations prohibit the importation of underage and sick dogs, these issues continue to occur. Some dogs imported into LA County are sick and/or come with fraudulent paperwork. Puppy importers often advertise their dogs as being domestically bred. Be sure to inquire about the origin of any new puppy.

- Dogs imported from a country where rabies is present should be healthy, vaccinated against rabies as early as 3 months of age, and wait one additional month after rabies vaccination prior to arrival into the USA. For more information on importing please visit: https://www.cdc.gov/importation/bringing-an-animal-into-the-united-states/dogs.html
- Per the United States Department of Agriculture (USDA) Animal Welfare Act (§2148, Importation of live dogs), dogs imported into the USA for retail, research, or veterinary treatment purposes must be at least 6 months of age, in good health and be up to date on their vaccines. If an imported dog is intended for resale, an importer must receive an import permit from the USDA prior to shipment. For more information: https://www.aphis.usda.gov/aphis/pet-travel/bring-pet-into-the-united-states
- Per California Department of Public Health (CDPH), dogs and cats entering California must meet the following criteria
    - *California Entrance Requirements for Dogs:* "All domestic dogs must be healthy. Dogs over four (4) months of age must have a certificate of current rabies vaccination. A Certificate of Veterinary Inspection (CVI), also known as a health certificate, is not required for privately owned dogs being brought into the State of California. Persons bringing dogs into California with intent to sell or transfer ownership must have a health certificate completed by a licensed veterinarian within the 10 days prior to the date of importation. The person seeking to bring a dog into the state must send a copy of the health certificate to the county health department in the county in which the dog is to be sold or in the county of residence of the person who is receiving the dog. All persons transporting dogs via commercial air should call the airline for any additional requirements they might have."
    - *California Entrance Requirements for Cats:* "All domestic cats must be healthy. Neither a Certificate of Veterinary Inspection (CVI), also known as a health certificate, nor a rabies

vaccination is required to import a cat into California; however, if traveling into California via airplane, please call the airline as they may have additional requirements."

For more information, visit CDPH website: https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/PetDogandCatImportationandExportation.aspx

Southern California has several active international dog rescue groups that import dogs internationally through LAX. Dogs that are rescued tend to be stray or street dogs, which have an increased likelihood of exposure to infectious diseases. Imported cases of rabies, canine influenza H3N2, leishmaniasis, heartworm, distemper, and parvovirus have been documented. If you work with a rescue organization, strongly encourage veterinary exams and a 30-day observation period for each animal. If any imported animal is sick, consider foreign animal diseases, including rabies, and report to VPH immediately at 213-288-7060.

## RECOMMENDATIONS

- Reinforce proper hygiene habits and biosecurity to owners (e.g., wash hands after handling the dog, wear gloves to pick up and clean pet waste, and do not bring the dog around other animals until the dog is confirmed to be healthy and fully vaccinated).
- Pets imported into the US, should undergo a veterinary exam and a 30-day observation period to monitor their health for disease.
- For a list of high-risk countries for canine rabies, please visit the CDC website: https://www.cdc.gov/importation/bringing-an-animal-into-the-united-states/high-risk.html
- Consider boostering vaccines. For a rabies vaccine to be considered valid in LA County, a US licensed rabies vaccine for use in California must be used. A list of approved vaccines is provided in the California Rabies Compendium.

## PET EXPORTATION

**Interstate Pet Travel**

- Accredited and licensed California veterinarians must complete the United States Interstate and International Certificate of Health Examination for Small Animals (APHIS Form 7001 - aphis.usda.gov/library/forms/pdf/APHIS7001.pdf) prior to the interstate exportation of dogs and cats.
- Please check with each state regarding specific exportation requirements. For a list of requirements for each state, please see the APHIS website at: https://www.aphis.usda.gov/aphis/pet-travel/interstate-pet-travel

**International Pet Exportation**

If you are helping an owner **export a pet** to another country, their paperwork may need to be signed off by the local USDA office at: 222 Kansas St, El Segundo, CA 90245. Phone - 310-725-1970. Services at the USDA office are by appointment only. For more information on exporting a pet internationally please visit the APHIS website at: https://www.aphis.usda.gov/aphis/pet-travel.

# CANINE INFLUENZA VIRUS, LOS ANGELES COUNTY

## KEY MESSAGES

- Canine influenza virus (CIV) is a highly contagious respiratory virus that easily spreads from dog to dog, especially in congregate settings.
- From July 2021–January 2022, LA County saw its largest outbreak of CIV, with over 1300 cases reported throughout the county. Most were associated with congregate settings including boarding facilities, dog daycares, and shelters.
- VPH recommends vaccinating dogs in LA COUNTY with the bivalent CIV vaccine and recommending annual boosters. Dogs should be fully vaccinated before entering congregate facilities.

## BACKGROUND

Canine influenza is caused by the canine influenza virus (CIV). This virus is highly contagious and easily spreads from dog to dog in many different settings. There are two known strains of CIV in the US: H3N2 and H3N8. A bivalent vaccine is available that protects against both strains. Transmission can occur from direct contact of nasal secretions (coughing, barking, sneezing) or indirect contact through shared toys, water bowls, bedding, or contaminated clothing. Infected dogs can release or shed the virus two days prior to becoming symptomatic and are contagious to other dogs for up to 28 days after becoming ill. Confirmed CIV cases should be isolated for 28 days from the first day of illness. Dogs exposed to confirmed or suspect cases should be quarantined for 14 days to monitor for signs of illness.

Dogs of any age can be infected although puppies and unvaccinated dogs have the greatest risk. To date, there is no evidence that humans can become infected with CIV. Los Angeles County is a high-risk area for canine influenza virus (CIV), due to the large canine population and significant introduction of dogs from other states and countries where the virus may be circulating. Boarding facilities, dog daycare establishments, and shelters represent the greatest risk for exposure and contribute to rapid spread of the disease. There have been sporadic reports of CIV H3N8 and H3N2 in LA County since 2005, including disease clusters related to imported animals entering congregate facilities, and some single cases.

## LOCAL DATA

**CIV OUTBREAK 2021** - From July 2021–January 2022, there were 1,344 confirmed, probable, or suspected cases of CIV H3N2 reported to VPH (Figures 1, 2). This is the largest outbreak of CIV H3N2 reported in LA County. Sadly, 2.0% (21/1,058) cases resulted in deaths at the time of reporting. In dogs that were reported with a known exposure, 84.6% (973/1150) reported attending boarding facilities, dog daycare settings, or exposure at a shelter.

CIV spread rapidly throughout LA County, affecting at least 68 canine congregate facilities and two shelters. All known affected facilities were contacted by VPH and provided recommendations to prevent further spread of CIV.

15.4% (177/1150) of cases with known exposure did not visit a congregate facility but were exposed during walks in their local neighborhood, dog parks, groomers, and veterinary clinics.

CIV vaccination status was largely unknown for this population. Vaccination status was known for 28.6% (384/1344) of cases. Where vaccination status was known, 21.4% (82/384) of dogs were fully or partially vaccinated against CIV prior to disease onset (45.1% (37/82) fully vaccinated and 52.4% (43/82) partially vaccinated). Cases where the dog was vaccinated may have been more likely to report vaccination, so this could reflect a bias that is not indicative of actual vaccination levels, which are likely lower.

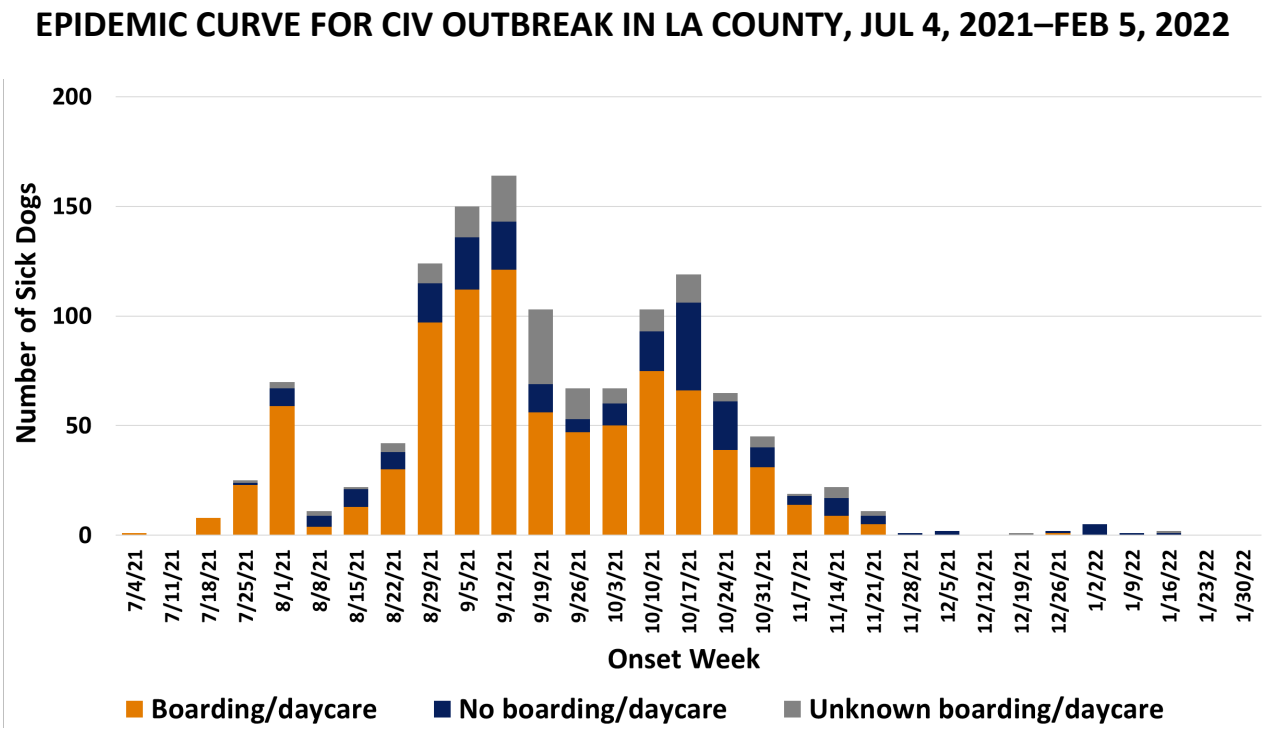


***Figure 3.*** Canine influenza cases in dogs reported to LA County VPH as part of the 2021–2022 outbreak with onset date available (n=1252). If onset date was not available, lab confirmed date was used. There are 92 additional cases without a reported onset date or lab confirmed date. This includes cases that were reported to LA County VPH, but reside in Pasadena, Long Beach, or outside of LA County.

## CIV H3N2 CASES REPORTED TO LA COUNTY VPH BY HOME ZIP CODE, JUL 2021–JAN 2022

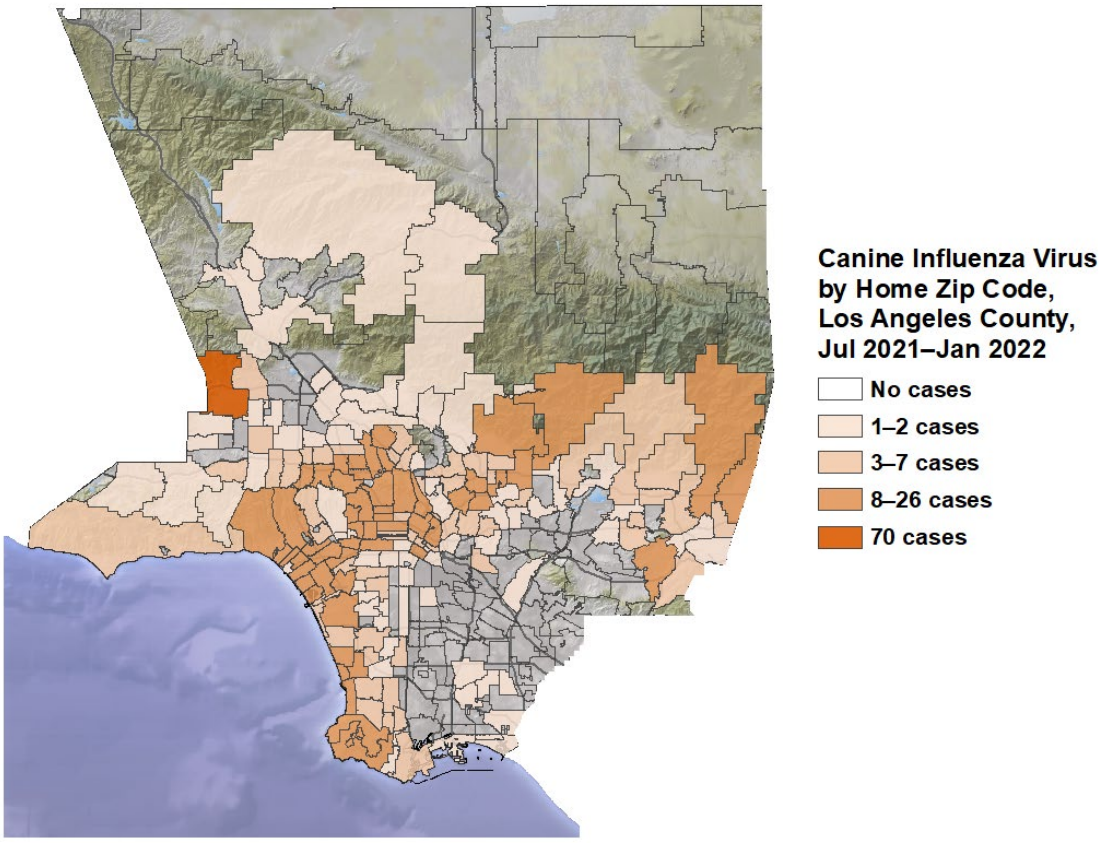


***Figure 4.*** Map of influenza cases in dogs associated with the CIV outbreak in LA County during July 2021 - January 2022 (n=1107). Zip code information was not available for 204 cases and 33 cases had home addresses outside of LA County. This map includes cases that were reported to LA County VPH but reside in Pasadena or Long Beach.

## RECOMMENDATIONS

- Vaccinate dogs in LA County with the bivalent CIV vaccine and recommend annual boosters. Dogs should be fully vaccinated before entering congregate facilities and before interactions with other dogs.
- Educate pet owners and congregate facilities about the recent CIV outbreak, the importance of vaccination, and what clinical signs they should look out for.
- Confirmed CIV cases should be isolated for 28 days from the first day of illness, while dogs that were exposed to suspect or confirmed cases should be quarantined for 14 days to monitor for signs of illness.
- **Report confirmed or suspected canine influenza cases or respiratory disease outbreaks to VPH**. Use this form: attach laboratory results and email to vet@ph.lacounty.gov.

**For more information:** http://publichealth.lacounty.gov/vet/InfluenzaCanine.htm

# COCCIDIOIDOMYCOSIS (VALLEY FEVER), LOS ANGELES COUNTY

## KEY MESSAGES

- Valley fever (coccidioidomycosis) is caused by a fungus (*Coccidioides immitis)* that is common in dry climates of the southwestern United States, parts of Mexico, and Central and South America.
- Although *Coccidioides immitis* does not spread directly between people or between animals, animals with Valley fever may act as sentinels for human disease in areas of LA County where the fungus is present in the environment.

## BACKGROUND

Valley fever is the common name for the disease coccidioidomycosis, which is caused by fungi (*Coccidioides immitis* and *C. posadasii*) that are endemic in the southwestern United States, but that have also been found in south-central Washington. It is endemic in parts of Mexico, as well as Central and South America. While *C. immitis* is the species found in Northern California, Southern California is an area of overlap for both species. The fungi live in soil and dust and their spores can spread through the air when contaminated ground is disturbed by the weather, animals, natural disasters, or through human activity, such as farming, construction, and outdoor recreational activities. People and animals are at risk of developing Valley fever when these spores are inhaled. As a result, exposure is environmental in nature and, with extremely rare exceptions, the disease does not spread between animals and/or people. Many people and animals that are exposed to *Coccidioides* do not develop Valley fever.

Clinical signs of Valley fever are similar in humans and animals and include fever, fatigue, cough, and skin lesions. Dogs are the animal most commonly diagnosed with Valley fever and typically have cough, weight loss, inappetence and lethargy. *Coccidioides* can disseminate to nearly any organ or tissue, causing subcutaneous masses or ulcerations, cardiovascular and ocular disease. Dogs may also have neurologic manifestations such as seizures. In dogs, *Coccidioides* typically disseminates to the bones resulting in ataxia or paresis, joint effusion, as well as osteomyelitis that can appear similar to cancer. In cats, inappetence and weight loss may be seen, and the most common site of dissemination are cutaneous lesions. Due to specific behaviors, like living outdoors or digging, some pets are at an increased risk of being exposed to Valley fever as compared to people. As a result, pets who develop Valley fever can serve as sentinels for human disease in areas of LA County where *Coccidioides* is found.

## LOCAL DATA

In LA County, cases of Valley fever in animals are reportable to VPH by local veterinarians. Starting in 2014, VPH receives electronic laboratory reports (ELR) from veterinary diagnostic laboratories for every positive antibody test result for Valley fever. This has significantly increased the number of reports, as well as the completeness of the data received.

Each reported case of coccidioidomycosis in animals is investigated by a VPH veterinarian to obtain a full case report. Healthy dogs that were simply being tested for the disease were not counted as cases. Diagnosis was accomplished by detection of antibodies against the disease (serology) and/or biopsy of lesions or affected tissues, plus recognition of specific clinical signs. Location of probable exposure was assessed by obtaining a travel history. Exposure location was recorded as LA County, southern California other than LA County (Imperial, Kern, Orange, Riverside, Santa Barbara, San Bernardino, San Diego, San Luis Obispo and Ventura Counties) or outside of southern California. Whenever possible, travel destinations for those cases outside of LA County were recorded. In addition, each report was categorized as confirmed, probable or suspected based on the case definition for Valley fever in animals in LA County. The data collected do not include reports from veterinary practices in the cities of Long Beach or Pasadena ( they have their own public health departments) and animals living in these cities are also generally excluded. Additionally, due to the nature of Valley fever, case follow-up reports are provided to VPH as additional diagnostics are performed. Cases are counted as a new case only once at the time of diagnosis, but VPH continues to track these cases and update diagnostics and treatment on historical laboratory confirmed cases.

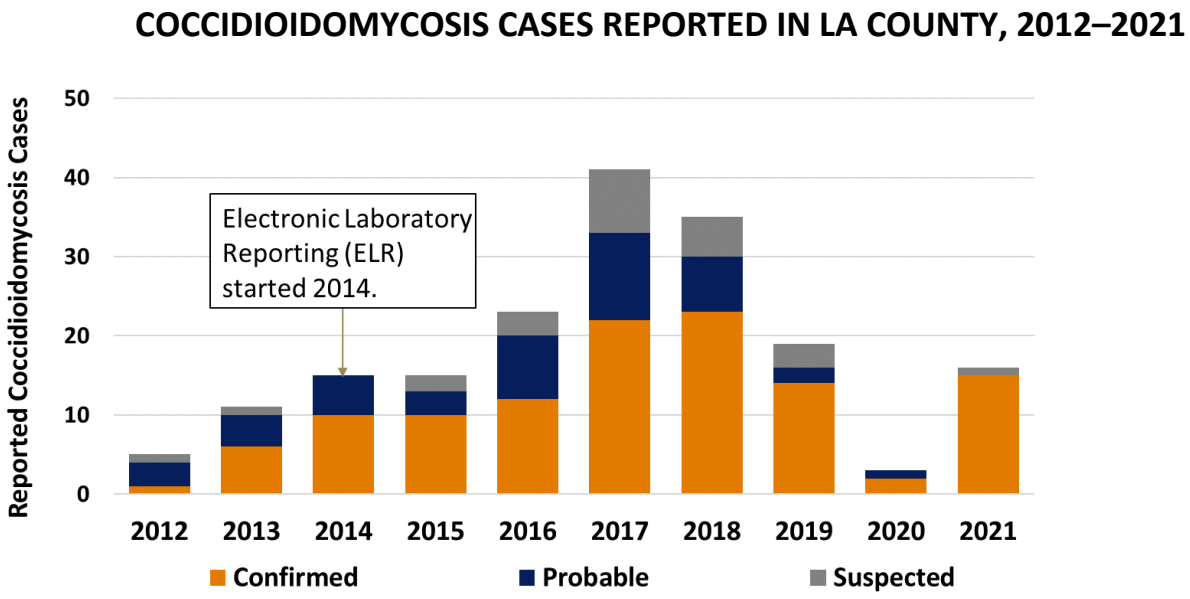


***Figure 1.*** Confirmed, probable, and suspect coccidioidomycosis cases reported in LA County during 2012–2021.

In the decade between 2012 and 2021, there were 183 cases of Valley fever reported in animals in LA County (Figure 1), with 180 in dogs and 3 in cats. The median number of cases was 16 per year. Based on the case definition for Valley fever, 66% of cases were classified as confirmed cases, 25% were probable cases and 14% were suspected cases. In 2020, there was a drop in commercial diagnostic laboratory reporting on positive cases during the pandemic. In addition, the pandemic may have had an impact on veterinary visits and testing being performed.

From 2017-2021 there were 114 Valley fever cases reported, 112 in dogs and 2 in cats. Risk factor information was known for 80 of these cases. Among these 80 cases, digging was the most commonly reported risk factor with 20/80 (25.0%) of animals reported to frequently dig holes. Living mostly outdoors 6/80 (7.5%), living within a site of earth excavation 6/80 (7.5%), living near a dirt road 5/80 (6.3%), and recently being in a dust storm 4/80 (5.0%) were less commonly reported.

Clinical signs information was available for 107 of the 115 cases. Among the 105 cases in dogs with known clinical signs, cough and fever were the most commonly reported symptoms with 52/107 (49.5%) dogs reporting fever, and 53/107 (50.5%) dogs reporting cough. Lameness 42/107 (40.0%) and pneumonia 41/107 (39.0%) were also commonly seen, followed by weight loss 30/107 (28.6%) and enlarged lymph nodes 25/107 (23.8%). Bone and eye lesions were less commonly reported, with 16/107 (15.2%) reported bone lesions and 9/107 (8.6%) reported eye lesions. Clinical signs information was available for both cat cases, and both cats 2/2 (100%) were reported to have weight loss and no other symptoms.

## DOMESTIC ANIMAL COCCIDIOIDOMYCOSIS CASES IN LA COUNTY, 2012–2021

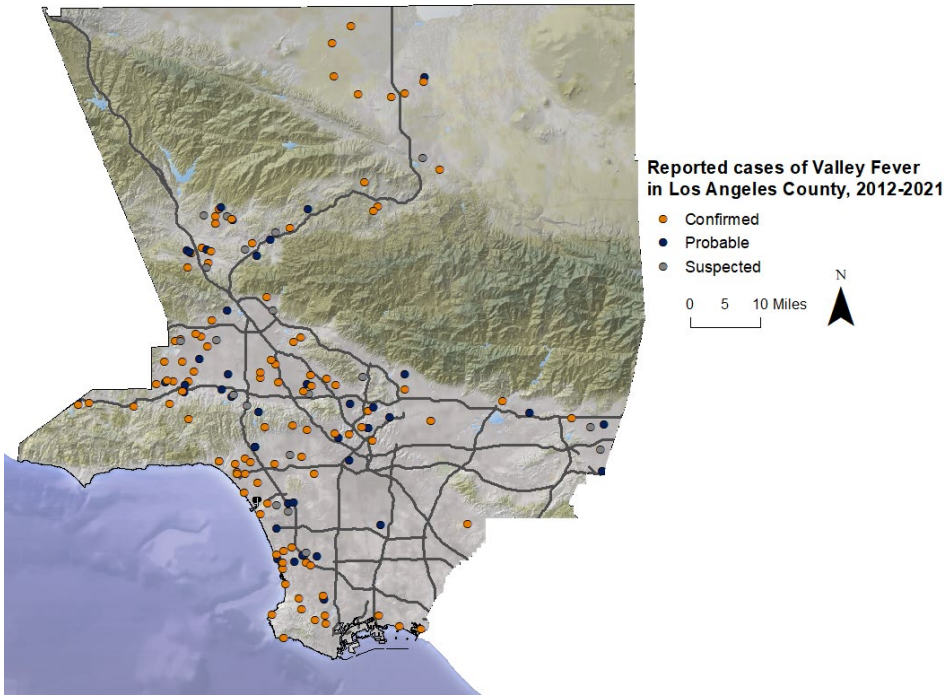


***Figure 2:*** *Map of coccidioidomycosis cases in domestic animals in Los Angeles County (n=183).*

*Geographic pattern*

In LA County, Valley fever is known to be endemic in the Antelope Valley and western San Fernando Valley. Most of the locally acquired animal cases were reported from the San Fernando Valley, however, other areas of the county also have a low number of cases reported. Confirmed cases were concentrated throughout the western and central parts of LA County (Figure 2).

## RECOMMENDATIONS

Animals with Valley fever may act as sentinels for risk of exposure for the humans that live in the same area. Monitoring disease in animals may help identify cases in humans. Based on these findings specific for LA County, VPH provides the following recommendations to veterinarians:

- Veterinarians should rule out Valley fever in local pets with respiratory disease, lung lesions seen on radiographs, and proliferative bone diseases, especially in animals coming from endemic areas.
- If you suspect Valley fever in your patient, be sure to obtain a thorough travel history to help assess the local burden of the disease.
- Client Education: Educate pet owners to limit their pets' outdoor activities during dust storms and when there are nearby excavations. When possible, dust control, such as by wetting down work areas with water, should be performed during projects that involve excavation; this will reduce the likelihood of inhaling fungal spores. Pet owners should discourage their pets from digging in soil.

**For more information on coccidioidomycosis, please visit:**
http://publichealth.lacounty.gov/vet/coccidioidomycosis.htm

# DISTEMPER, LOS ANGELES COUNTY

## KEY MESSAGES

- LA County VPH has periodically seen distemper outbreaks in local wildlife. The most recent outbreak was during 2020–2021.
- Sporadic cases of distemper are also reported in dogs, often in dogs that are imported or have an unknown history.
- Distemper is a vaccine preventable disease and dogs should receive the initial puppy vaccination series as well as boosters.

## BACKGROUND

Distemper is caused by canine distemper virus, a paramyxovirus. It is a highly contagious disease that affects dogs as well as many species of wildlife, including raccoons, foxes, skunk, and coyotes. Transmission occurs through aerosolized droplet secretions and infection can result in fever, gastrointestinal, and respiratory symptoms before progressing to pneumonia and/or neurologic signs. The virus is inactivated by most disinfectants.

In LA County, VPH typically sees distemper reported in two groups of animals. First are dogs that are imported or have an unknown origin and/or are not fully vaccinated. These dogs may come from rescues or are purchased online or from an unknown source and are frequently noted to come from Mexico. The second group of affected animals is local wildlife. VPH sees outbreaks of distemper in local wildlife every few years, most recently during 2020–2021. While fortunately we do not typically see confirmed cases of spread from wildlife to pets, these outbreaks are a good reminder of the importance of vaccination in our pets to prevent spread.

Historically, VPH has seen sporadic increases in distemper in raccoons and other wildlife (Figure 1). From August 2014 through April 2015, 129 confirmed or suspect cases were documented across the southern part of Los Angeles County. In early 2017, a cluster of cases was noted in the east San Gabriel Valley and then from August 2017 through August 2018, 396 confirmed or suspect cases of distemper in raccoons were reported throughout LA County, with many cases in the South Bay area as well as the San Fernando and Santa Clarita Valleys (Figure 2). Numbers of cases reported in these outbreaks have typically peaked in the winter months

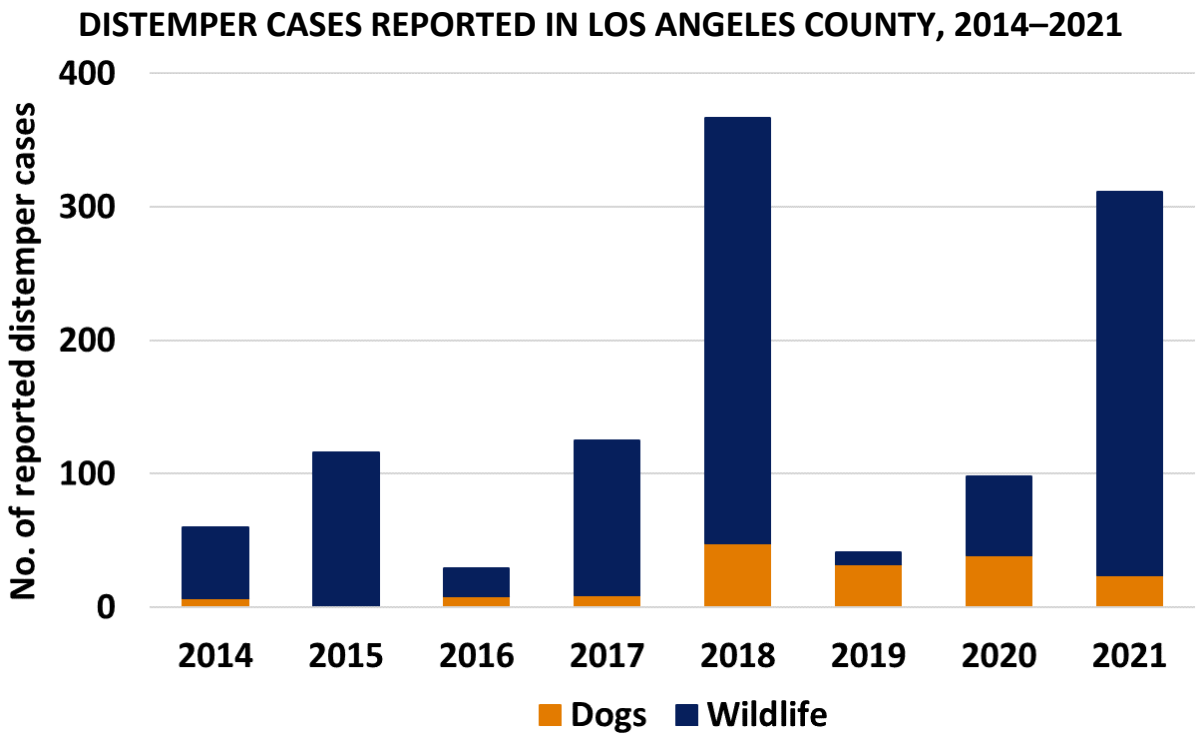


***Figure 1.*** Confirmed, suspect, and probable distemper cases reported in LA County during 2014–2021. Wildlife includes raccoons, foxes, coyotes, skunks, and opossums with the majority being raccoons.

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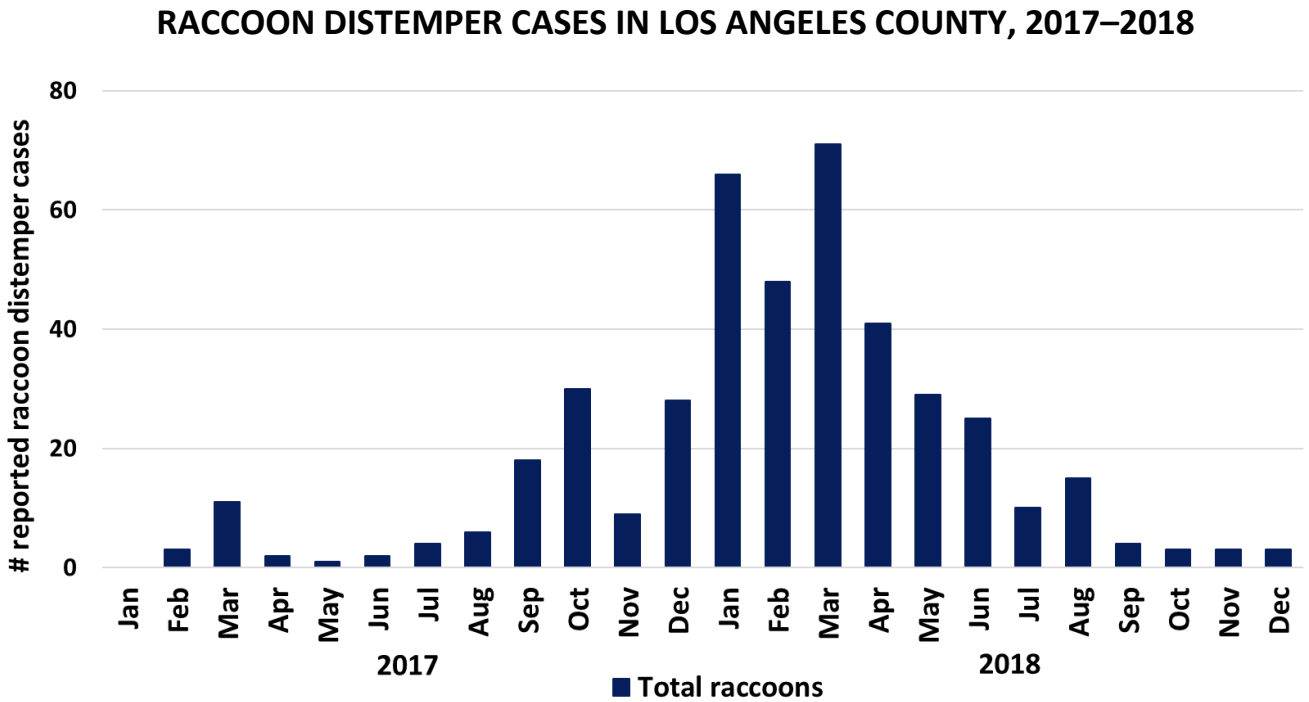


***Figure 2.*** *Confirmed and suspect distemper cases in raccoons reported in LA County during 2017–2018.*

## LOCAL DATA

### 2020–2021 DISTEMPER OUTBREAK

In late 2020, VPH received notifications from local animal control agencies that they were seeing an increased amount of wildlife with signs of distemper. Based on this VPH took several steps. We looked back earlier in the year and confirmed that there was an increase in reporting. Based on this finding, several carcasses from different parts of LA County were sent to CAHFS for necropsy to confirm distemper. All confirmed positive for distemper. Any wildlife with neurologic signs that were not sent for a full necropsy were submitted for rabies testing at the PHL, as the neurologic symptoms of distemper are indistinguishable from the neurologic symptoms of rabies. All of these were negative for rabies. Then, VPH communicated with animal control agencies throughout LA County regarding the outbreak, explaining which animals should be submitted for testing and which should be reported but not submitted. Finally, VPH sent several notifications regarding the outbreak to LA County veterinarians via the Animal Health Alert Network, encouraging vaccination of dogs due to the risk of exposure from wildlife.

From April 2020 through December 2021, VPH received reports of 319 raccoons, 3 coyotes, 17 foxes, 6 skunks, and 1 opossum with clinical signs consistent with distemper. Of these, there were 239 raccoons, 3 coyotes, 17 foxes, 5 skunks, and 1 opossum reported to have possible neurologic signs. 12 raccoons and 3 foxes were necropsied or tested and confirmed to have distemper (Figure 3).

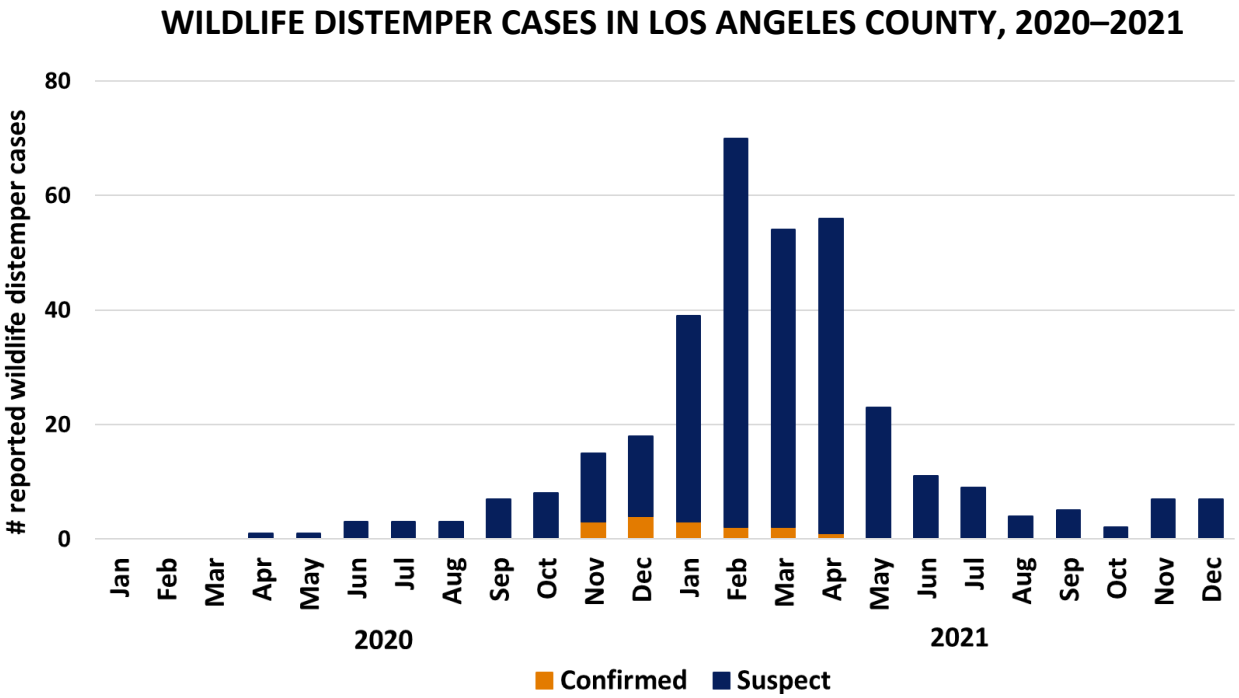


***Figure 3.*** *Confirmed and suspect distemper cases in wildlife reported in LA County during 2020–2021.*

The initial cases were noted in the foothills of the east San Gabriel Valley, but eventually spread west along the San Gabriel Valley foothills into the San Fernando Valley and northwest into the Santa Clarita area. Clusters of cases were also reported in the Long Beach area and scattered cases were noted throughout the South Bay (Figure 4). The outbreak was considered to have slowed in December 2021 based on suspect wildlife cases being reported at a much lower rate. However, we are again seeing an uptick in cases after the first few months of 2022 including two confirmed cases in raccoons, so the risk continues to be present.

**REPORTED CASES OF DISTEMPER IN WILDLIFE IN LOS ANGELES COUNTY, APRIL 2020–DECEMBER 2021**

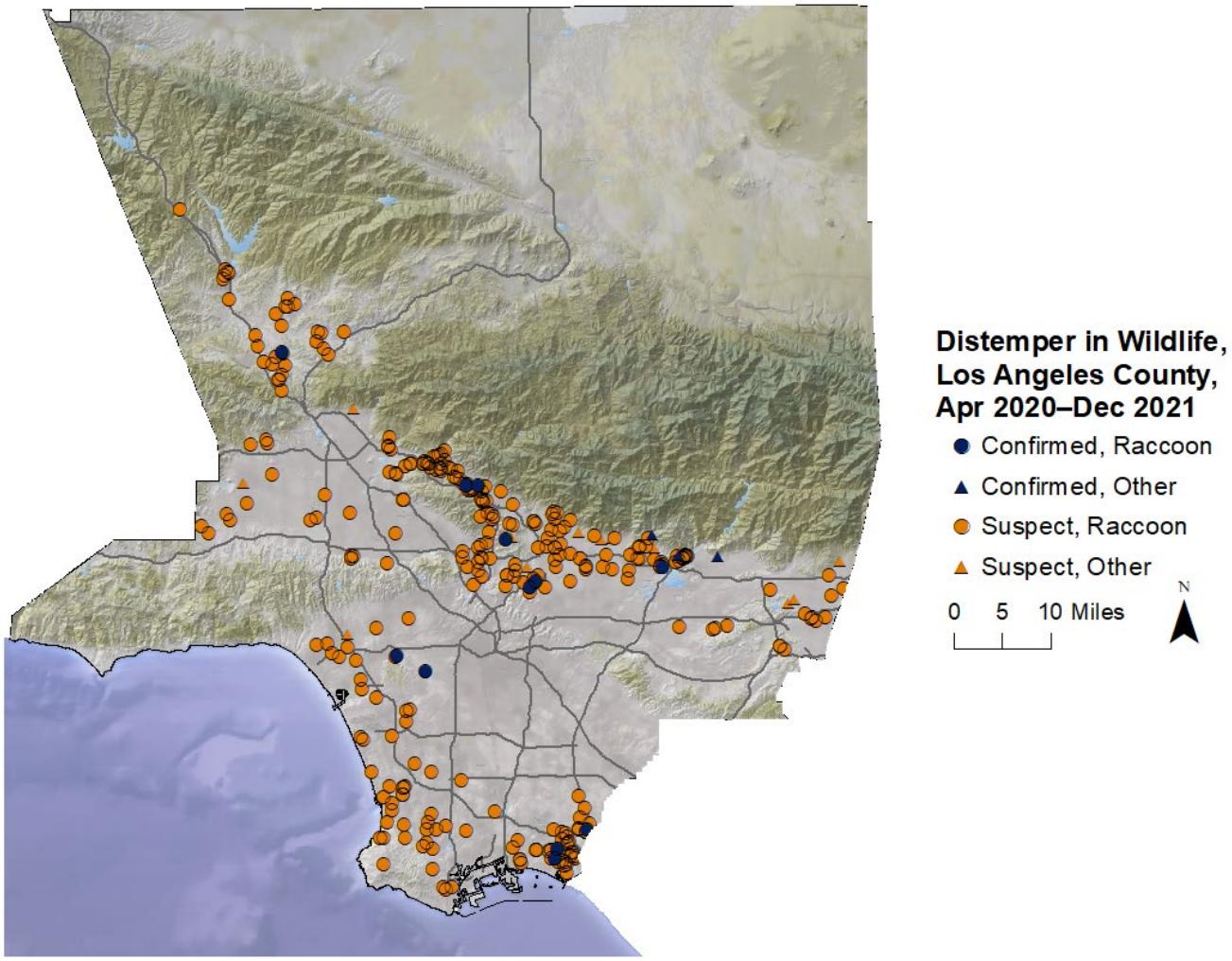


***Figure 4.*** Map of distemper cases in wildlife in Los Angeles County (n=336).

## RECOMMENDATIONS

- Vaccinate dogs and puppies for distemper. Puppies should receive a series of 3 or more distemper vaccines between the ages of 2 and 4 months. The vaccine should be boostered a year later, then every three years for life.
- Keep puppies at home and away from unfamiliar dogs until they have completed the vaccination series. Use caution when socializing dogs or in areas where dogs congregate such dog parks, doggy day care and boarding facilities.
- Keep dogs away from wildlife. Educate owners to keep pet food and water indoors, away from wildlife so as not to attract wildlife which may spread distemper to dogs.
- Report confirmed or suspect cases to VPH. Distemper reporting form: http://publichealth.lacounty.gov/vet/Forms.htm

**For more information:** http://publichealth.lacounty.gov/vet/distemper.htm

# FLEA-BORNE TYPHUS, LOS ANGELES COUNTY

## KEY MESSAGES

- Flea-borne typhus is a rickettsial disease in humans caused by *Rickettsia typhi*, which is transmitted to humans through contact with infected fleas harbored by cats, dogs, opossums, rats, and other small mammals.
- Educate clients on measures to prevent flea-borne typhus including: 1) promoting effective flea control in pets and 2) reduce attractants to wildlife around their homes (trim vegetation, close up crawl spaces, do not leave food outside)
- Animal health care workers/shelter staff are more at risk for this disease -use personal protective equipment (gloves, mask, gowns) and insect repellent to protect staff at work.

## BACKGROUND

Flea-borne typhus is a bacterial disease transmitted through flea bites from animals to people. It is also known as murine typhus or endemic typhus. Flea-borne typhus is endemic in Southern California, Southern Texas, and Hawaii. Many people are unfamiliar with this disease because it is not found in most areas of the United States. It is caused by the bacteria *Rickettsia typhi* and *Rickettsia felis*. Animals are carriers of the infected fleas but are not symptomatic for this disease.

Flea-borne typhus is spread through feces from an infected flea entering the body. Fleas defecate while biting. People may become infected when they scratch a flea bite and drag flea feces across the bite wound, or when flea feces get into their eyes, nose, or mouth. An ***urban cycle*** of flea-borne typhus, involving rats and rat fleas, is present in downtown Los Angeles. Elsewhere in LA County the disease is transmitted within the ***suburban cycle***, involving cats, opossums, other domestic and wild animals, and the cat flea. There is evidence that fleas can pass the bacteria to their offspring, making them not only a vector, but also a reservoir for typhus.

Animals do not get sick from flea-borne typhus. Animals infected with the bacteria do not show clinical signs, nor do they spread the disease directly to people. However, flea-infested animals spread typhus in the community by increasing flea populations and transporting infected fleas to new areas. Clinical signs in humans can sometimes be severe. Most people who become ill develop fever, headache, chills, muscle pain, and sometimes a rash on the chest/back/legs. However, the disease can also spread to major organs or cause meningitis. Most reported cases were severe, with about 80% being hospitalized.

In 2018, there were clusters of flea-borne typhus in people in Downtown Los Angeles and in the Willowbrook area. In response to the outbreak in Skid Row, Veterinary Public Health partnered with Downtown Dog Rescue, Inner City Law Center and the City of Los Angeles Animal Services to provide free flea preventive products and pet-related services through a Pet Resource Center. In an effort to control and prevent future flea-borne typhus outbreaks, these monthly events aimed to assist residents experiencing homelessness and people in housing transition in both the Skid Row community and adjacent areas in the City of Los Angeles.

Animal health workers and shelter staff face a higher risk of exposure to flea-borne typhus. Due to their close contact with flea-infested animals, veterinary staff, wildlife rehabilitators, and animal control workers are more likely to be exposed.

## LOCAL DATA

The risk of human flea-borne typhus is increasing (Figure 1). The number of cases in LA County has notably increased since 2010. In 2021, there were 137 human cases of human flea-borne typhus reported, the highest number case count ever documented in LA County. Cases occurred year-round and throughout the county, peaking in the summer and fall months. In 2021, LA County identified 3 localized outbreaks: 1) Monrovia (City & unincorporated), 2) Willowbrook (unincorporated community), and 3) Westlake (LA City neighborhood). The current 5-year average is 81.6 cases per year, an increase from last year (74 cases per year).

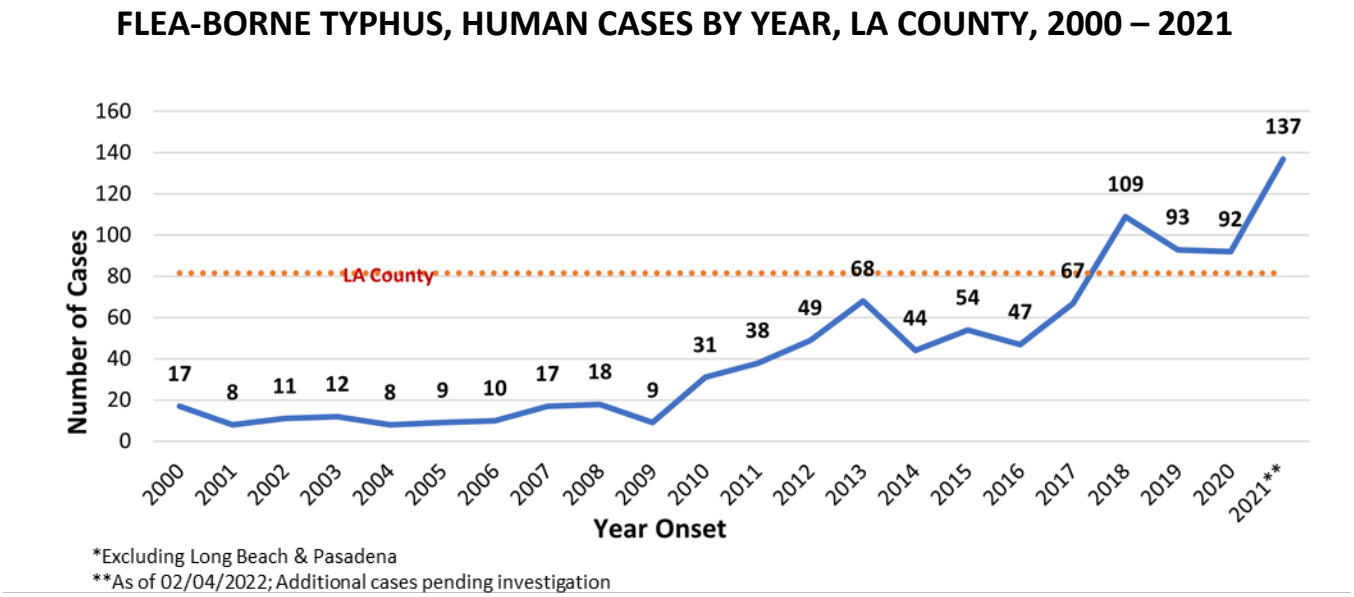


***Figure 1**: Human cases of flea-borne typhus in LA County (excluding Long Beach and Pasadena) each year from 2000 – 2021.*

For the 5-year data, most cases were hospitalized, with an average hospital stay duration of 5 days. All reported cases were symptomatic. The most common symptoms reported were fever, headache, muscle pain, nausea/vomiting, chills. The most common exposures reported were dog and cats, followed by rodents and opossums. Approximately 1 in 4 cases (5-year) and 1 in 5 cases (2020) reported an insect bite in the 10 days prior to symptom illness; not necessarily a flea bite.

## RECOMMENDATIONS

- **Promote year-round flea control in pets.** Proper flea control requires more than just using chemical flea control products. Flea eggs should be frequently removed from the home by

vacuuming and laundering pet bedding. Attracting feral and wild animals in the yard should be minimized by trimming vegetation, sealing crawl spaces, keeping trash sealed, picking up fallen fruit from trees and keeping pet food indoors.

- **Protect your staff from fleas and flea feces.** Make sure all staff use gloves or personal protective equipment when dealing with patients with flea infestations, and practice good hand washing habits. Consider wearing EPA-approved insect repellent while at work or in high-risk situations. Machine wash and dry all of your clothing in a hot cycle when you return home to ensure there are no eggs on them.
- **Never relocate flea-infested wild or feral animals.** Moving fleas spreads this disease.
- **Talk with your health care provider** if you notice symptoms in yourself and be sure to discuss your exposure to fleas on animals.

**For more information on flea-borne typhus, including occupational health handouts, please visit:**

publichealth.lacounty.gov/acd/vectortyphus.htm.

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# HEARTWORM, LOS ANGELES COUNTY

## KEY MESSAGES

- Approximately 1 out of 5 heartworm cases in LA County each year are contracted locally
- Teach clients to remove standing water 1-2 times weekly to fight mosquito breeding
- Test for heartworm annually and recommend heartworm preventatives
- Slow-kill treatment is not recommended by the American Heartworm Society

## BACKGROUND

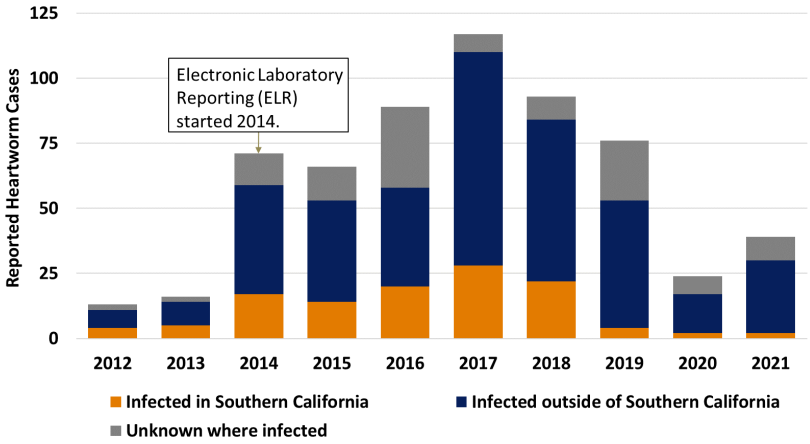
Every year, heartworm disease is diagnosed in pets by veterinarians in Los Angeles County. While the majority of cases are infected when the pet is outside of Southern California, 19.5% of cases are infected locally. In 2014, heartworm became reportable in LA County by animal diagnostic laboratories, leading to a dramatic increase in the amount of available data that year. Cases are categorized as "confirmed", "probable", or "suspected" by following LA County's case definition for heartworm disease, available at: publichealth.lacounty.gov/vet/surveillance.htm.

In the past few years, three new invasive mosquito species became established in certain areas of LA County: the Asian tiger mosquito (*Aedes albopictus*), the Yellow Fever mosquito (*Aedes aegypti*), and the Australian backyard mosquito (*Aedes notoscriptus*). All three are drought-resistant, may bite in daytime, and are capable vectors for multiple diseases. The first two mosquitoes are potential vectors for Zika, Dengue and Chikungunya viruses in humans, and heartworm in animals. The third species is an ideal vector for heartworm. **More than ever, veterinarians need to include mosquito control as a core part of their heartworm prevention information for pet owners.**

## LOCAL DATA

**Heartworm is transmitted locally.** Between 2012 and 2021, a total of 604 cases were reported in 580 dogs and 24 cats. 19.5% of these cases had not traveled outside of Southern California, and therefore had been infected locally (Figure 1, Figure 2).

## HEARTWORM CASES REPORTED IN LA COUNTY, 2012–2021 BY LOCATION WHERE INFECTION ACQUIRED




**Case Categories**

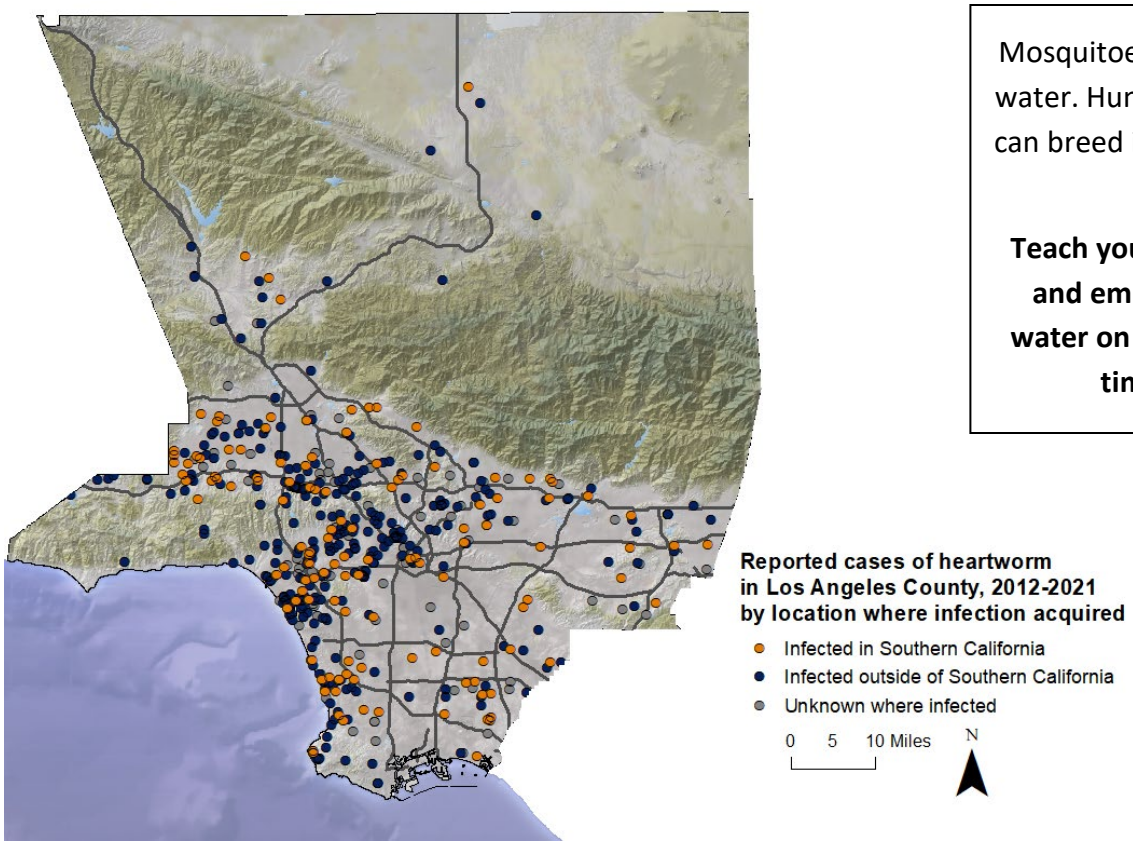
**So Cal-acquired** – Pet did not travel outside of Southern California

**Imported into So Cal** – Pet traveled outside of Southern California and likely contracted the infection outside of area

**Unknown** – Not enough history available about pet

***Figure 1.*** Heartworm cases reported in LA County, 2012–2021, by where infection acquired (n=604).

## HEARTWORM CASES IN LA COUNTY, 2012-2021 BY LOCATION WHERE INFECTION ACQUIRED




Mosquitoes breed in standing water. Hundreds of mosquitos can breed in a bottlecap full of water.

**Teach your clients to locate and empty any standing water on their property 1-2 times weekly.**

***Figure 2.*** Map of heartworm cases in LA County from 2012–2021 showing where infection was acquired where home address was known (n=566).

**Most cases are asymptomatic.** Of the cases where clinical signs were reported, 79.9% of cases had no clinical signs at the time of diagnosis.

**Multiple species of local mosquitoes can transmit heartworm.** Since 2011, the arrival of three new species of invasive mosquitoes may have increased the risk of local transmission further.

**Untreated animals are reservoirs.** Coyotes and completely untreated dogs can maintain heartworm in the local mosquito population. Pets in LA County should be tested annually for heartworm to identify potential reservoirs.

## RECOMMENDATIONS

- **Teach pet owners to fight against mosquito breeding in stagnant water.**
    - Tell clients to remove standing water around their property 1-2 times weekly. Even a bottle cap full of water can breed mosquitoes.
    - Large bodies of stagnant water, such as neglected swimming pools, should be reported to the local vector control agency.
    - Mosquitos can transmit various diseases to both humans and pets, more than just heartworm.
- **Use heartworm preventatives all year long.** Most of these medications have the added benefit of preventing zoonotic intestinal parasites.
- **Test for heartworm.** Include heartworm testing as part of a pet's yearly physical checkup and for newly adopted or rescued dogs.
- **Slow kill treatment is not recommended.** The American Heartworm Society (AHS) does not recommend the slow kill method of treatment for heartworm. This method can take up to a year and usually much longer to achieve results, allowing more time for irreversible damage to the dog's pulmonary system and vasculature. Slow kill is less effective in eliminating adult worms, the timing of worm death is unpredictable, and it requires strict compliance and exercise restriction for the entire duration of treatment, all of which may lead to increased risk of pulmonary thromboembolism.
- **Consider heartworm disease before transporting or relocating a dog**. Whether it is domestic or international relocation, knowing a dog's heartworm status and the appropriate monitoring and treatment recommendations are key to ensuring that they are not serving as reservoirs for disease in their new community and to ensure proper monitoring and treatment.
- **Report cases.** Heartworm reporting form: http://publichealth.lacounty.gov/vet/Forms.htm.

For more information: publichealth.lacounty.gov/vet/heartworm.htm

# LEPTOSPIROSIS, LOS ANGELES COUNTY

## KEY MESSAGES

- Leptospirosis is present and likely underdiagnosed in LA County.
- Although historically most leptospirosis cases in pet dogs have likely been due to wildlife exposure, a large outbreak in 2021 was linked to exposure to dogs, especially in congregate settings like boarding facilities/dog daycares.
- Leptospirosis is a vaccine preventable disease. VPH recommends the 4-way vaccine to protect against four common serovars, particularly if the dog boards or goes to dog daycare.

## BACKGROUND

Leptospirosis is a zoonotic disease with worldwide distribution caused by *Leptospira* species of spirochete bacteria. Leptospirosis has been reported in many mammalian species including humans, dogs, rats, mice, raccoons, skunks, opossums, horses, cows, and pigs. There are hundreds of serovars that are adapted to different animal reservoir hosts and immunity is serogroup specific (serogroups are groups of related serovars).[1]

Leptospirosis is most commonly spread by exposure to the urine of infected animals. This may occur through direct contact (such as at a congregate facility), or when water or soil are contaminated. Wildlife may contaminate water bowls, fountains, or ponds while exploring backyards. Humans and animals can contract leptospirosis when there is contact through the eyes, nose, mouth, or broken skin with water contaminated by the urine of an infected animal.[1] Leptospirosis is also an occupational hazard for people with professions in the outdoors or with animals, a risk for people who participate in camping and water sports, and a risk in natural disasters such as floods and hurricanes.

## LOCAL DATA

Leptospirosis can cause variable symptoms in dogs including fever, lethargy, anorexia, vomiting, polyuria, polydipsia, and uveitis. Severe cases may develop renal or hepatic failure, or pulmonary hemorrhage. In LA County in 2014, leptospirosis became reportable by animal diagnostic laboratories, leading to increased reporting. However, it is believed to be underdiagnosed. A total of 62 cases of leptospirosis in dogs were reported from 2014 to 2020 (Figure 1, 2).[2] Cases were reported from throughout LA County and most of these cases involved dogs that were apparently infected in their

[1] Sykes, J. E., Hartmann, K., Lunn, K. F., Moore, G. E., Stoddard, R. A., & Goldstein, R. E. (2011). 2010 ACVIM small animal consensus statement on leptospirosis: diagnosis, epidemiology, treatment, and prevention. Journal of veterinary internal medicine, 25(1), 1–13. https://doi.org/10.1111/j.1939-1676.2010.0654.x

[2] Los Angeles County Veterinary Public Health. (2021, August 2). *Leptospirosis in Dogs in Los Angeles County*. Retrieved from http://publichealth.lacounty.gov/vet/Leptospirosis.htm

own yards or rarely left their neighborhoods. There were some reports of direct or indirect encounters with wildlife, including seeing raccoons putting their paws into water bowls.

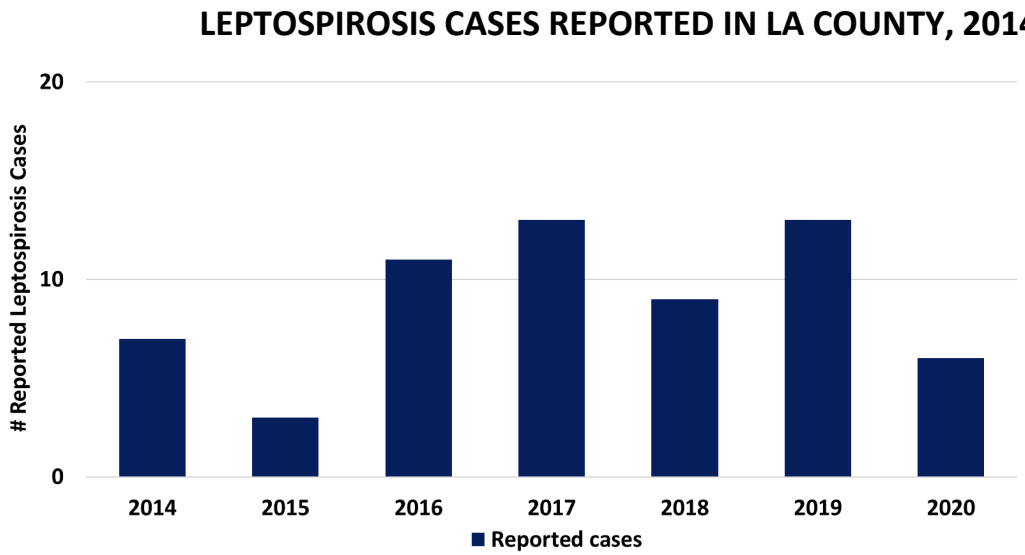



***Figure 1.*** *Leptospirosis cases reported in dogs in LA County during 2014–2020.*

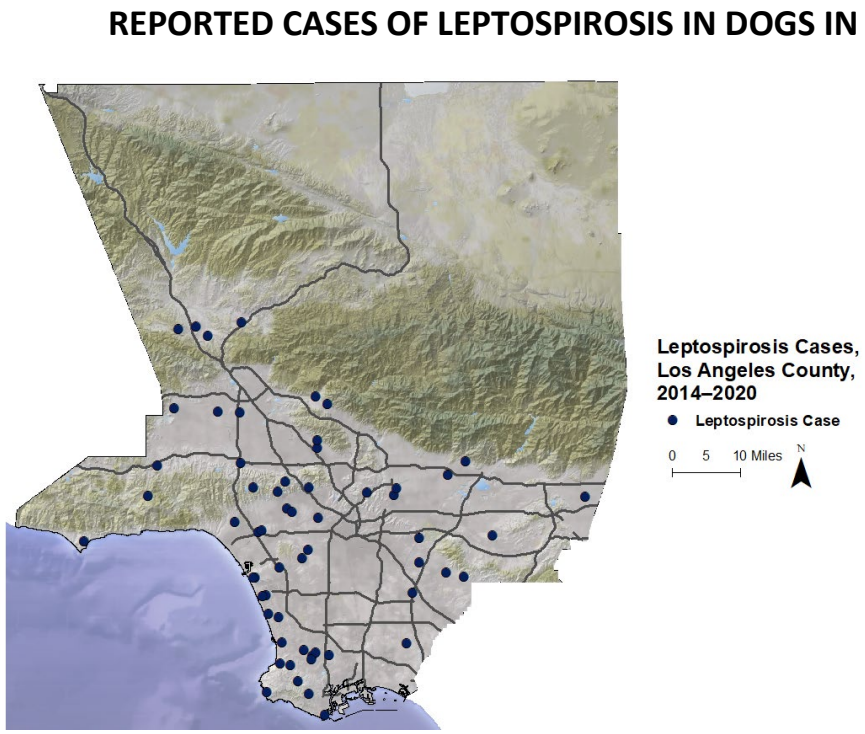



***Figure 2.*** Map of leptospirosis cases in dogs in Los Angeles County (n=59).

**2021 Outbreak** - In July 2021, VPH was notified by a local veterinarian about several leptospirosis cases in dogs potentially associated with attendance at a boarding/daycare facility (Facility A). VPH followed

up with the owner of Facility A who was aware of the illnesses and was working on a response to include sanitation, notifying clients, and requiring leptospirosis vaccination. In early August, VPH received similar reports from other local veterinarians regarding a second boarding/daycare facility (Facility B). This owner was also aware of ongoing illnesses and was working on a response. VPH visited both facilities to advise regarding sanitation, zoonotic potential, and other recommendations. VPH also sent several notifications regarding the outbreak to LA County veterinarians via the Animal Health Alert Network.

The outbreak was considered to have ended in January 2022 based on cases being reported at a much lower rate. Based on laboratory and epidemiological evidence, the *Leptospira* serovar Canicola was the likely cause of this outbreak. There were 199 reported cases reported by LA County veterinarians. This includes four cases from out of county, two which were exposed in LA County. 8.0% (14/174) of cases resulted in death at the time of reporting. Of the cases with data available, 55.8% (92/165) of dogs were hospitalized, and 65.8% (102/155) of dogs had exposures at dog daycare or boarding facilities. The epidemic curve for this outbreak with information about daycare/boarding status is below (Figure 3). Most affected dogs either live in or had exposures on the west side of LA County or the San Fernando Valley (Figure 4). There were two large clusters of cases (over 35 dogs each) at two separate daycare/boarding facilities. Additionally, 48.1% (51/106) of cases reported going to dog parks. Owners also reported hiking, going to beaches, and walks around the neighborhood as potential routes of exposure, although there were a few dogs with no known exposure outside of their home or yard.

**LEPTOSPIROSIS CASES IN DOGS BY BOARDING STATUS, LA COUNTY, MARCH 28, 2021–FEBRUARY 5, 2022**

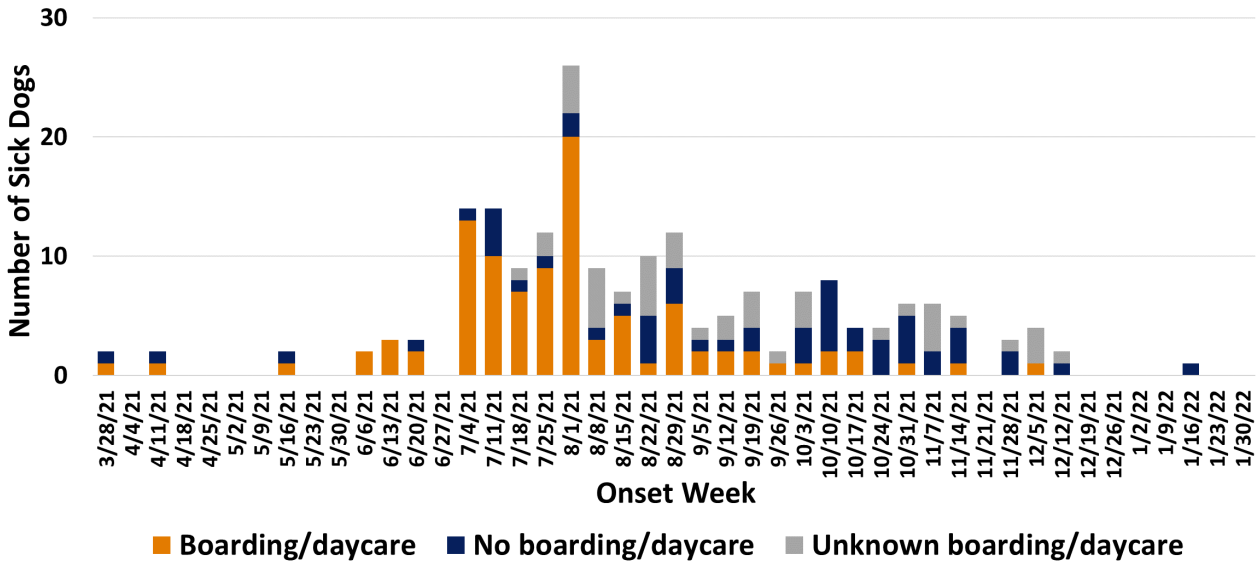



***Figure 3.*** Leptospirosis cases in dogs reported in LA County as a part of the 2021–2022 outbreak with onset date available. If onset date was not available, lab confirmed date was used. There are four additional cases without a reported onset date or lab confirmed date. Six asymptomatic cases are included, the lab confirmed date is used for those. This includes cases that reside in Pasadena and Long Beach.

## CANINE LEPTOSPIROSIS CASES MAPPED BY ZIP CODE, LA COUNTY, MARCH 2021–JANUARY 2022

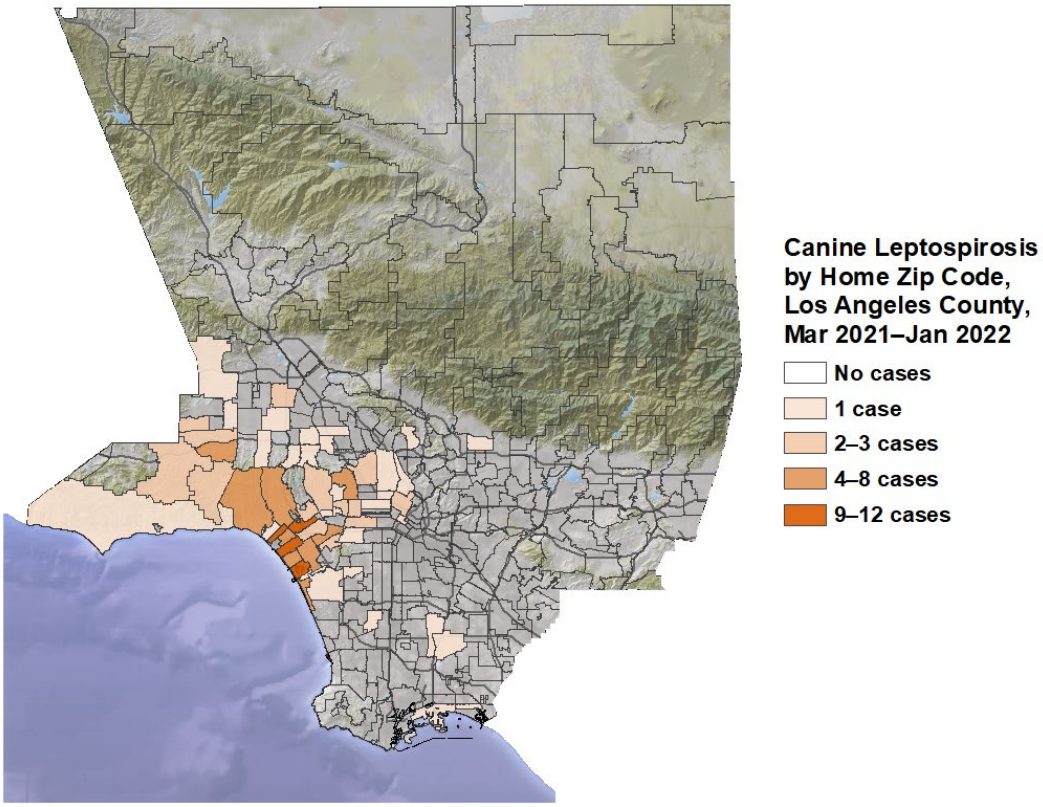



***Figure 4.*** Map of leptospirosis cases in dogs associated with the outbreak in Los Angeles County during March 2021–January 2022 (n=167). Information was not available for 32 cases. This map includes cases that reside in Pasadena and Long Beach.

In recent years, there have been leptospirosis outbreaks among dogs in both Maricopa County, AZ, and San Diego County, CA.[3,4] Both areas typically have a low prevalence of leptospirosis, similar to LA County. Although there was no definitive link to either of these regions, seeing several recent outbreaks of leptospirosis in the Southwest in areas where the disease has not previously been seen frequently support recommending leptospirosis vaccination for dogs, and particularly recommending that congregate facilities require leptospirosis vaccination. This outbreak also raised awareness of the disease and may increase suspicion of leptospirosis and thus reporting in the future.

[3] Iverson SA, Levy C, Yaglom HD, et al. Clinical, diagnostic, and epidemiological features of a community-wide outbreak of canine leptospirosis in a low-prevalence region (Maricopa County, Arizona). J Am Vet Med Assoc. 2021 Mar 15;258(6):616-629. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8786034/pdf/nihms-1682212.pdf

[4] County of San Diego Health and Human Services Agency. (2020, December 16). Health Advisory: Leptospirosis outbreak in dogs. https://www.sandiegocounty.gov/content/dam/sdc/hhsa/programs/phs/cahan/communications_documents/12-16-2020+attachments.pdf

## RECOMMENDATIONS

- Vaccinate dogs using the 4-way leptospirosis vaccine. Only 4.8% (8/166) of dogs in the 2021 outbreak were reported to be vaccinated.
- Educate clients on how to avoid attracting wildlife into yards. Clients should keep food and water bowls inside the home and routinely clean them with hot water and soap in case they have been contaminated by wildlife.
- Educate clients and veterinary staff about the zoonotic potential of leptospirosis and the recommended ways to reduce exposure.
- Report leptospirosis cases to VPH: http://publichealth.lacounty.gov/vet/docs/Forms/LeptospirosisReportForm.pdf

# SARS-COV-2 INFECTION IN PETS, LOS ANGELES COUNTY

## KEY MESSAGES

- SARS-CoV-2 is an evolving disease. This information was current at the time of printing.
- There is currently no evidence that animals play a significant role in spreading SARS-CoV-2 to humans.
- Cats and dogs are the primary domestic animals affected and serologic surveys have found up to 40% of pets exposed to people with COVID-19 have antibodies. Consider that animals presenting with respiratory signs may have been exposed to a person with COVID-19.

## BACKGROUND

SARS-CoV-2 is the virus that causes COVID-19 in humans, resulting in the pandemic that is ongoing at the time of printing. It is an enveloped, positive sense, single stranded RNA virus belonging to the family *Coronaviridae*. SARS-CoV-2 is thought to have originated from an animal host, but research into the specific origin of SARS-CoV-2 is ongoing.

Animals do not appear to play a significant role in the spread of SARS-CoV-2 to people and when infected, typically have mild symptoms. Clinical signs may include fever, coughing, difficulty breathing or shortness of breath, lethargy, sneezing, nasal/ocular discharge, vomiting, and diarrhea. New evidence shows that many animals exposed to people with COVID-19 will become infected and test positive for SARS-CoV-2 antibodies, even if they are asymptomatic[5,6].

Pet owners can spread the virus to animals, especially given the typical close contact between a pet and their owner. Domestic small animal species confirmed to be naturally infected with SARS-CoV-2 include cats, dogs, ferrets, and hamsters. Active surveillance is ongoing in many parts of the U.S. and in some studies up to 40.0% of dogs and cats in COVID-19 positive households have been infected with SARS-CoV-2[7]. As of April 8, 2022, USDA/APHIS had identified 362 confirmed cases in dogs and cats in the United States tested by National Veterinary Services Laboratories (NVSL). However, the USDA only confirms the first dog and cat case for each state. After that although the animal may have tested positive by another government, university or commercial lab, these cases are only considered presumptively positive and are not reported nationally. As such, this count is not representative and is lower than the total number of positive pets detected throughout the country.

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[5] Fritz, M., Rosolen, B., Krafft, E., Becquart, P., Elguero, E., Vratskikh, O., ... & Leroy, E. M. (2020). High prevalence of SARS-CoV-2 antibodies in pets from COVID-19+ households. One Health, 11, 100192.

[6] Stevanovic V, Tabain I, Vilibic-Cavlek T, et al. The Emergence of SARS-CoV-2 within the Dog Population in Croatia: Host Factors and Clinical Outcome. Viruses. 2021;13(8):1430. Published 2021 Jul 22. doi:10.3390/v13081430

[7] Hamer, S. A., Pauvolid-Corrêa, A., Zecca, I. B., Davila, E., Auckland, L. D., Roundy, C. M., Tang, W., Torchetti, M. K., Killian, M. L., Jenkins-Moore, M., Mozingo, K., Akpalu, Y., Ghai, R. R., Spengler, J. R., Barton Behravesh, C., Fischer, R., & Hamer, G. L. (2021). SARS-CoV-2 Infections and Viral Isolations among Serially Tested Cats and Dogs in Households with Infected Owners in Texas, USA. Viruses, 13(5), 938. https://doi.org/10.3390/v13050938

## LOCAL DATA

Since the start of the pandemic in early 2020, four confirmed cases of SARS-CoV-2 in dogs and cats have been reported to VPH. Each came from a household where a person tested positive for COVID-19. The clinical signs of the pets ranged from asymptomatic to upper respiratory signs. Coughing was a symptom reported in each of the symptomatic cases. Treatment varied from observation to hospitalization for less than a week. One of these four (25.0%) pets died, but this animal had a significant comorbidity.

## RECOMMENDATIONS

- **Educate owners**
    - Clients should prepare in advance in the event a household individual or pet is infected with SARS-CoV-2.
    - Pets and Novel Coronavirus (COVID-19) (lacounty.gov)
    - What You Should Know about COVID-19 and Pets (cdc.gov)
    - SARS-CoV-2 in animals | American Veterinary Medical Association (avma.org)
- **SARS-CoV-2 requirements**
    - In Los Angeles County, at the time of printing veterinary facilities are required to follow the current LA County Health Officer Order and Cal OSHA regulations for general businesses. The Cal OSHA Emergency Temporary Standards related to COVID-19 prevention were revised and went into effect January 14, 2022.
- **Testing an animal**
    - Testing may be considered if an animal has a history of exposure to a person or animal suspected or confirmed to be infected with SARS-CoV-2 (COVID-19), even if the animal is asymptomatic. The CDC has summarized testing considerations. Veterinarians may contact VPH with questions and to discuss testing an animal for SARS-CoV-2.
- **Report confirmed or suspect SARS-CoV-2 cases to VPH**
    - A suspect case would include an animal with known exposure to a person or animal suspected or confirmed to be infected with SARS-CoV-2 (COVID-19). Please visit our website to download and complete the SARS-CoV-2 form for reporting: http://publichealth.lacounty.gov/vet/Forms.htm.

**For more information on SARS-CoV-2:**

SARS-CoV-2 Expanded Animal Surveillance in LA County:
www.publichealth.lacounty.gov/vet/AnimalCOVID19Surv

Pets and COVID-19 (LA County VPH):

http://publichealth.lacounty.gov/vet/PetsCOVID19.htm

Animals and COVID-19 (CDC):

https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/animals.html

One Health - SARS-CoV-2 in Animals (USDA APHIS):
https://www.aphis.usda.gov/aphis/ourfocus/onehealth/one-health-sarscov2-in-animals

## LOS ANGELES COUNTY ANIMAL HEALTH ALERT NETWORK

# How To Register for Notifications

In an effort to keep veterinarians informed about local animal disease concerns, outbreaks, unusual diseases, the Veterinary Public Health Program has an Animal Health Alert Network (AHAN). You and your staff can sign up to receive these emails through one of two ways:

1. Complete the form online scanning the QR code below from any smart device

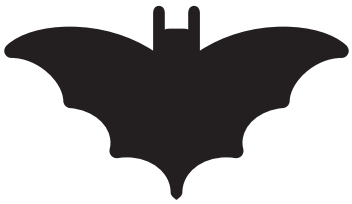
OR

2. Send an email to vet@ph.lacounty.gov with Subject **AHAN** and include:
    a. Name
    b. Email Address
    c. Position / Title
    d. Clinic / Organization
    e. Business Mailing Address (include City, State, Zip)
    f. Phone number

*Veterinarians, veterinary technicians, animal control staff, wildlife rehabilitators and others that may work in an animal health field in our local area are invited to register and receive these alerts and updates. **Alerts may not be forwarded outside of your animal health organization, unless otherwise indicated in the alert.**

APPENDIX A

# WHAT TO DO IF YOU FIND A BAT



## BATS ARE PROTECTED WILDLIFE

It is illegal for members of the public to kill, harm or keep a bat.

## IF YOU FIND A BAT OUTSIDE THAT IS SICK, NOT MOVING OR DEAD

Place a box or bucket over the bat and call your local animal control to retrieve it for testing.

## IF YOU FIND A BAT INSIDE YOUR HOUSE AND YOU DID NOT SEE IT ENTER

Do not release the bat. Exit and close off the room (doors and windows). If safe to do so, place a bucket or box over the bat to contain it. Keep people and pets away from the bat. In this case it is important to call your local animal control* to retrieve it for testing.

## NEVER TOUCH A BAT WITH BARE HANDS

Teach children and family members to never touch a bat and to alert an adult if a bat is found on the ground or inside the house.

## BATS CAN TRANSMIT RABIES

Rabies is a deadly disease to both humans and pets such as dogs and cats. Any bat that had potential exposure to a human or a pet should be collected by animal control and tested by the Department of Public Health.

## FOR RABIES RISK CONSULTATIONS

After an animal bite or a bat exposure, call 213-288-7060 or email vet@ph.lacounty.gov. Office hours are Monday - Friday 8AM-5PM.

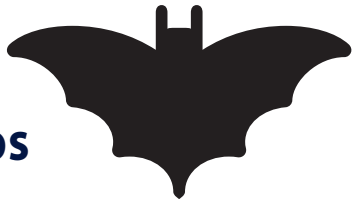
## KEEP PETS INCLUDING INDOOR- ONLY CATS AND DOGS UP TO DATE WITH A RABIES VACCINATION

## CONTACT US

Veterinary Public Health
Phone: 213-288-7060
Email: vet@ph.lacounty.gov
Website: publichealth.lacounty.gov/vet
*Call 211 to find your local animal control

County of Los Angeles Public Health

# QUE HACER SI ENCUENTRA UN MURCIÉLAGO



## LOS MURCIÉLAGOS SON ANIMALES SALVAJES PROTEGIDOS

Es contra la ley que una persona mate, lastime, o se quede con un murciélago.

## SI ENCUENTRA UN MURCIÉLAGOAFUERA QUE ESTÉ ENFERMO, INMÓVIL, O MUERTO

Ponga una caja o cubeta sobre el murciélago y llame a su agencia local de control de animales para que lo recojan y le hagan prueba de la rabia.

## SI ENCUENTRA UN MURCIÉLAGO DENTRO DE SU CASA Y NO LO VIO ENTRAR

No lo saque. Salgase del cuarto cerrando ventas y puertas. Si no es peligroso hacerlo, ponga una caja o cubeta sobre el murciélago para contenerlo. No deje que se le acerquen personas o mascotas.
Es importante que llame a su agencia local de control de animales* para que lo recojan y le hagan prueba de la rabia.

## NUNCA TOQUE UN MURCIÉLAGO CON LAS MANOS DESCUBIERTAS

Enseñe a niños y a familiares que nunca deben tocar un murciélago y que deben avisar a un adulto si encuentran a uno dentro de la casa o tirado afuera.

## LOS MURCIÉLAGOS PUEDENTRANSMITIR LA RABIA

La rabia es una enfermedad mortal para los humanos al igual que a mascotas como perros y gatos. Cualquier murciélago que pudo haber tenido contacto con una persona o mascota debe ser recogido por su agencia local de control de animales para que le haga prueba el Departamento de Salud Pública.

## PARA CONSULTAS ACERCA DELRIESGO DE CONTRAER LA RABIA

Después de una mordedura de animal o de haber sido expuesto a un murciélago, llame al 213-288-7060 o mande un e-mail a vet@ph.lacounty.gov. La oficina esta abierta de lunes a viernes de 8 am a 5 pm.

## MANTENGA SUS MASCOTAS(INCLUYENDO GATOS Y PERROSQUE VIVAN SOLAMENTE DENTRO DE LA CASA) CON SUS VACUNAS CONTRA LA RABIA ACTUALIZADAS.

## CONTÁCTENOS

Salud Pública Veterinaria
Tel: 213-288-7060
Email: vet@ph.lacounty.gov
Internet: publichealth.lacounty.gov/vet/Esp.htm
*Llame al 211 para encontrar su agencia local de control de animales

County of Los Angeles Public Health

**Pet Owners FAQ**

# Coronavirus Disease (COVID-19)

## 1. Can pets become sick with and spread COVID-19?

Animals have tested positive for SARS-CoV-2 (the virus that causes COVID-19), both in the U.S. and other countries, mostly after close contact with people with COVID-19. Most pets have no symptoms or very mild respiratory symptoms and recover without treatment. At this time, the risk of animals spreading COVID-19 to people is considered to be low.

## 2. I have a pet. What should I do?

Although the risk of COVID-19 infection in pets is low, there are other diseases that can cause illness in animals and spread from animals to people. Because of this, maintaining good hygiene around animals is always a good idea. Include pets in your family's preparedness planning.

## 3. I am sick with COVID-19 and I have pets or other animals. What should I do?

You should restrict contact with pets and other animals while you are sick with COVID-19, just like you would around other people. When possible, have another member of your household care for your animals while you are sick. If you are sick, avoid contact with your pet, including petting, snuggling, being kissed or licked, and sharing food. If you must care for your pet or be around animals while you are sick, wash your hands before and after you interact with pets and wear a facemask or face covering. Also, please notify your public health point of contact that you have animals in your home.

## 4. Can I walk my dog if I am under quarantine or isolation?

No. If you were placed under a 10-day quarantine after possible exposure or you are feeling sick and are under isolation for possible or confirmed COVID-19, you cannot leave your home during that period. Have a family member take your dog for walks during that time. Alternately, ask or hire someone else to walk your dog. When the person arrives to take your dog for a walk, both of you should be wearing face coverings and strive to stay 6 feet or more apart. Wash your hands both before and after the process of transferring the dog between people. Consider having the dog walker use their own leash.

## 5. How can I safely take my pet to the veterinarian?

It is up to each individual veterinary practice to decide on their procedures related to masks and allowing clients to come back into the hospital. Typically, the clinic will require all customers to wear masks, require proof of immunization, or post signs and rely on an honor system. People who are not fully vaccinated for COVID-19 should continue to wear masks when visiting veterinary hospitals. Call your veterinarian in advance and work with them

**Key Messages:**

At this time, the risk of animals spreading COVID-19 to people is considered to be low.

However, pets can spread other diseases to people, so wash your hands after handling pets and animals.

Proper veterinary care will always help to keep both pets and people healthy and safe.

**For more information:**

**Los Angeles County Department of Public Health**
Call: 2-1-1
Visit: COVID-19 Media Page or Pets and COVID-19

**Centers for Disease Control and Prevention (CDC)**
Call: 800-CDC-INFO
800-232-4636
Visit: COVID-19 What You Need to Know About COVID-19 and Pets

closely to determine the best way to protect their health, your health, and the health of your animal. If you are sick and your pet needs to see a veterinarian, try to arrange for someone else to take your pet in and alert the facility before your pet arrives so they can prepare.

## There are simple steps you can take to protect the health of your pet and family:

- Get vaccinated against COVID-19.
  - Visit the COVID-19 Vaccine - LA County Department of Public Health Website to learn more and myturn.ca.gov to schedule an appointment.
- Establish a relationship with a veterinarian for your pet.
- Keep your pet's vaccinations current and use flea and tick control.
- Wash your hands after handling your pet, their bedding, toys, and food/water bowls.
- If you are sick, keep your distance from other people and pets and wash your hands frequently.
- If your pet is sick, contact a veterinarian. Keep your pet away from other animals until they are better. Wash your hands each time after caring for them.

APPENDIX D

Dueños de Mascotas – Preguntas Frecuentes

# Enfermedad por Coronavirus (COVID-19)

## 1. ¿Pueden las mascotas enfermarse y propagar COVID-19?

Los animales han dado positivo por SARS-CoV-2 (el virus que causa COVID-19), tanto en los Estados Unidos como en otros países, principalmente después de un contacto cercano con personas con COVID-19. La mayoría de las mascotas no tienen síntomas o síntomas respiratorios muy leves y se recuperan sin tratamiento. En este momento, el riesgo de que los animales propaguen COVID-19 a las personas se considera bajo.

## 2. Tengo una mascota ¿Qué debo hacer?

Aunque el riesgo de infección por COVID-19 en las mascotas es bajo, hay otras enfermedades que pueden causar enfermedades en los animales y transmitirse de los animales a las personas. Debido a esto, mantener una buena higiene alrededor de los animales siempre es una buena idea. Incluya a las mascotas en la planificación de preparación de su familia.

## 3. Estoy enfermo de COVID-19 y tengo mascotas y otros animales. ¿Qué debo hacer?

Debe restringir el contacto con mascotas y otros animales mientras esté enfermo de COVID-19, tal como lo haría con otras personas. Cuando sea posible, haga que otro miembro de su hogar cuide a sus animales mientras usted está enfermo. Si está enfermo, evite el contacto con su mascota, incluyendo acariciar, acurrucarse, ser besado o lamido, y compartir alimentos. Si debe cuidar a su mascota o estar cerca de animales mientras está enfermo, lávese las manos antes y después de interactuar con las mascotas y use una máscara facial o una cubierta facial. Además, notifique a su punto de contacto de salud pública que tiene animales en su hogar.

## 4. ¿Puedo pasear a mi perro si estoy en cuarentena o aislamiento?

No Si fue puesto bajo una cuarentena de 10 días después de una posible exposición o se siente enfermo y está bajo aislamiento por COVID-19 posible o confirmado, no puede salir de su hogar durante ese período. Haga que un miembro de la familia lleve a su perro a pasear durante ese tiempo. Alternativamente, pregunte o contrate a otra persona para que pasee a su perro. Cuando la persona llega para llevar a su perro a pasear, ambos deben usar cubiertas faciales y esforzarse por mantenerse a 6 pies o más de distancia. Lávese las manos antes y después del proceso de transferencia del perro entre personas. Considere la posibilidad de que el paseador de perros use su propia correa.

## 5. ¿Cómo puedo llevar a mi mascota al veterinario de forma segura?

Depende de cada práctica veterinaria individual decidir sobre sus procedimientos relacionados con las máscaras y permitir que los clientes

### Mensajes Clave:

En este momento, el riesgo de que los animales propaguen COVID-19 a las personas se considera bajo.
Sin embargo, las mascotas pueden transmitir otras enfermedades a las personas, así que lávese las manos después de manipular las mascotas y animales.
El cuidado veterinario adecuado siempre ayudará a mantener tanto a las mascotas como a las personas sanas y seguras.

### Para más Información:

**Departamento de Salud Pública del Condado de Los Ángeles**
Llame al: 2-1-1
Visita: Página de medios de COVID-19 o Mascotas y COVID-19

**Centros para el Control y la Prevención de Enfermedades (CDC)**
Llame al: 800-CDC-INFO
800-232-4636
Visita: COVID-19
Lo que necesita saber sobre COVID-19 y las mascotas

# Enfermedad por Coronavirus (COVID-19)

regresen al hospital. Por lo general, la clínica requiere que todos los clientes usen máscaras, requieren prueba de inmunización o coloquen letreros y confíen en un sistema de honor. Las personas que no están completamente vacunadas contra COVID-19 deben continuar usando máscaras cuando visiten hospitales veterinarios. Llame a su veterinario con anticipación y trabaje estrechamente con ellos para determinar la mejor manera de proteger la salud de los empleados de la clínica, su salud y la salud de su animal. Si está enfermo y su mascota necesita ver a un veterinario, trate de hacer arreglos para que otra persona lleve a su mascota y alerte a las instalaciones antes de que llegue su mascota para que puedan prepararse.

## Hay pasos simples que puede tomar para proteger la salud de su mascota y su familia:

- Vacúnese contra el COVID-19.
    - Visite el sitio web de la vacuna COVID-19 - Departamento de Salud Pública del Condado de Los Ángeles para obtener más información en myturn.ca.gov para hacer una cita
- Establezca una relación con un veterinario para su mascota.
- Mantenga las vacunas de su mascota actualizadas y use el control de pulgas y garrapatas.
- Lávese las manos después de manipular a su mascota, su ropa de cama, juguetes y tazones de comida/ agua.
- Si está enfermo, mantenga su distancia de otras personas y mascotas y lávese las manos con frecuencia.
- Si su mascota está enferma, comuníquese con un veterinario. Mantenga a su mascota alejada de otros animales hasta que estén mejor. Lávese las manos cada vez después de cuidarlo.

USDA United States Department of Agriculture

# Highly Pathogenic Avian Influenza (HPAI)

## HPAI in Poultry:

### What To Expect If You Suspect

USDA file photo

***Complete paralysis***

Highly pathogenic avian influenza (HPAI) is a serious poultry disease that spreads very quickly. With this threat, it's more important than ever for you to keep strict biosecurity measures at your poultry operations and watch your birds closely for any signs of the disease. We need you to quickly report problems in your flocks and work with us to respond. Your help will be vital in protecting the U.S. poultry industry from this deadly disease. The faster we can respond and depopulate sick birds, the faster we can stop the virus from spreading.

Be on the lookout for HPAI. Here's what to watch for, where to report, and what to expect from State and Federal responders if you have a suspected case in your birds.

*HPAI is a deadly disease for poultry. It can infect all types of chickens and turkeys, plus many other kinds of birds. HPAI can strike suddenly and spread fast. It is devastating for poultry industries.*

### Know the Warning Signs

- Sudden increase in bird deaths without any clinical signs
- Lack of energy and appetite
- Decrease in egg production
- Soft- or thin-shelled or misshapen eggs
- Swelling of the head, eyelids, comb, wattles, and hocks
- Purple discoloration of the wattles, comb, and legs
- Gasping for air (difficulty breathing)
- Coughing, sneezing, and/or nasal discharge (runny nose)
- Stumbling or falling down
- Diarrhea

### Report It!

If your birds are sick or dying, report it right away. This is one of the most important things you can do to keep HPAI from spreading. Call:

- Your flock or local veterinarian,
- The State veterinarian,
- The State animal health/poultry diagnostic laboratory, or
- USDA toll-free at **1-866-536-7593**.

USDA file photo

***Swelling of the tissue around the eyes and neck***

## What To Expect Next

After you report, a Federal or State animal health official will contact you to learn more about your flock and operation. If we suspect HPAI in your flock, response personnel will come to your operation quickly and work with you on the steps below.

### *Sample Collection*

A Federal or State animal health official will take samples from live birds, dead birds, and/or your barn for testing. The samples then go to the closest diagnostic laboratory, and you can expect initial results within 24 hours. Until the results come back, we consider your operation a suspect HPAI case. This means we work with you to put measures in place that guard against any further disease spread.

### *Quarantine*

The State will quarantine your facility. Only authorized workers are allowed in and out of your property, and the movement of poultry, poultry products, and equipment is also restricted. This is to help make sure the virus, if present, does not keep spreading.

### *Inventory*

USDA will start working with you to inventory your poultry. If the laboratory confirms HPAI, this information helps us appraise your flock and provide the value of your depopulated birds. In order to receive indemnity, the owner or grower must certify that a biosecurity plan was in place prior to an HPAI detection. In 2016, APHIS issued an interim rule that allows for split payments between owners and contract growers. We will also offer a standard amount to cover costs for virus elimination activities at your operation (cleanup work).

## If Your Flock Tests Positive for HPAI

If the test results are positive, a State or Federal veterinary medical officer (VMO) will notify you immediately. We will then assign a case manager who will be onsite to guide you through the next phase of the response and answer any questions you may have. Your case manager will work closely with you as we prepare to depopulate your flock and find out, as best we can, how HPAI may have entered your facility and if it has spread to any neighboring farms.

Our goal is to depopulate your flock within 24 hours of first detecting HPAI. This 24-hour window is critical. By acting quickly, we can keep the virus from building up in the environment and spreading further. We have several depopulation methods we can use to meet the 24-hour goal and will work with you to figure out the best option.

## For More Information

More details about our response steps are available in "HPAI: A Guide To Help You Understand the Response Process."

To download this document and find other resources on HPAI and emergency response, go to **www.usda.gov/avianinfluena.html**, **www.aphis.usda.gov/aminalhealth/defendtheflock** and **www.aphis.usda.gov/fadprep**

USDA file photo

***Twisting of the head and neck (torticollis)***

### *FLOCK INVENTORY: WHAT INFO WILL I NEED?*

To help speed the inventory process, you'll need to have the following information ready:

- Type of flock (turkey, chicken, layer, breeder, backyard, etc.)
- Age, sex, and number of each type of bird
- Number of barns and number of birds in each barn
- Bird mortality records
- Onset date of disease signs (if present)
- County where your farm is located
- GPS coordinates (latitude/longitude) and 911 address for your farm
- Name of your facility/complex
- Name of owner/manager

USDA file photo

***Hemorrhaging of legs***


**CALIFORNIA COMPENDIUM OF RABIES CONTROL AND PREVENTION**
**2012**

https://www.cdph.ca.gov/Programs/CID/DCDC/pages/rabies.aspx

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**Introduction**

This publication of the California Department of Public Health (CDPH) provides information on rabies to California's public health officials, medical professionals, practicing veterinarians, animal control officers, and other parties concerned with rabies control in the State. The recommendations contained herein are reviewed and updated on a periodic basis to reflect the current status of rabies and rabies prevention activities in California. Updates are based on current rabies research and scientific literature, rabies prevention guidelines published by the federal Advisory Committee on Immunization Practices (ACIP)[1, 2] and by the National Association of State Public Health Veterinarians[3], California state statute and regulations, and established rabies control practices and procedures.

Recommendations by state and federal experts and existing standards of practice outlined in this document are intended to provide guidance to individuals and agencies involved with rabies prevention and control in California. Except for statutes and regulations specifically cited, the information provided in this document are recommendations provided for informational purposes only and are not intended to be regulatory in effect.



# Part I.
# Animal Rabies Control

## A. Principles of rabies control

### 1. Human rabies prevention

Human rabies can be prevented by a) eliminating exposure to rabies virus, b) providing appropriate rabies pre-exposure prophylaxis, and c) prompt local treatment of bite wounds combined with appropriate rabies post-exposure prophylaxis. Human rabies pre- and post-exposure prophylaxis are addressed in Part II of the Compendium.

### 2. Domestic animal rabies control

The California Health and Safety Code (HSC) §121690 mandates that the governing body of each city, city and county, or county maintain or provide a rabies control shelter system and a rabies control program. The primary components of a rabies control program for companion animals are: immunization and licensing; stray animal control; reporting, investigation, and isolation of animals involved in bite incidents; and public education.

### 3. Wild animal rabies control

Rabies virus is maintained in populations of wild animals and occasionally spills over into domestic animals and humans. In California, skunks and bats comprise over 90 percent of animal rabies cases reported each year. Prevention and control of rabies in bats and terrestrial mammals pose considerable challenges. It is generally not possible or desirable to control rabies by reducing the size of wild carnivore or bat populations. Selective population reduction may be attempted in terrestrial rabies outbreaks of limited geographic scope, but these efforts can be labor and resource intensive and provide effective control only until immigration or reintroduction of the incriminated species. Immunization of wildlife by widespread distribution of vaccine-impregnated oral baits has shown variable success toward arresting the propagation of rabies in raccoons and coyotes in other states. The effectiveness of oral rabies vaccination programs has not been demonstrated for skunks and such programs would be infeasible for bats. Principles of rabies prevention should focus on excluding wild animals from areas of human and domestic animal habitation and activity, and avoidance of contact with possibly rabid wild animals. Public education on the risks of rabies transmission from wild animals is paramount to effective disease prevention.

## B. Rabies control methods for domestic and confined animals

### 1. Animal bite reporting (Title 17, California Code of Regulations [CCR], §2606)

The local health officer or designee shall be immediately notified of any person or animal bitten by or potentially exposed to a rabid or suspected rabid animal. In addition, the local health officer or designee shall be notified when any person is bitten by a mammal. Potential human rabies exposures are then evaluated and rabies post-exposure prophylaxis (PEP) recommendations made.

### 2. Isolation of biting animals (17 CCR §2606)

#### a) General considerations

Dogs, cats, and ferrets that bite a human or another dog, cat, or ferret are subject to isolation and observation, or euthanasia and testing. If the bite is judged by the local health officer to be unusual or to represent an increased risk for rabies (e.g., unprovoked attacks, bites to the face, or considerable deep tissue damage), the animal should be euthanized and tested immediately. The National Association of State Public Health Veterinarians recommends that if an animal under isolation develops clinical signs suggestive of rabies, the animal should be humanely euthanized and the head submitted for rabies testing through the local public health laboratory[3]. Any unclaimed or stray animal that bites a human may be euthanized and the head promptly submitted to the local public health laboratory for rabies testing. Protocols for submitting samples for rabies testing are available from the local public health laboratory. Rabies or other immunizations should not be administered to a dog, cat, or ferret during isolation because adverse reactions may be misinterpreted as clinical signs of rabies.[3]

#### b) Dogs and cats (17 CCR § 2606(b)(2))

Domestic dogs and cats that bite or otherwise expose humans must be isolated in strict confinement and in compliance with the local health officer's isolation order. The biting dog or cat must be either a) observed daily for signs of rabies for ten (10) days following the exposure date, regardless of the animal's vaccination status, or b) euthanized immediately and tested for rabies in a public health laboratory. If an isolated dog or cat is healthy at the end of the ten-day period, there is no risk of a rabies exposure from the original bite wound.

#### c) Ferrets

It is illegal in California to possess a ferret as a pet (California Fish and Game Code [FGC] §2118). Nevertheless, bites from these animals occur. If a ferret bites a human in California, it should be isolated in strict confinement and in compliance with the local health officer's isolation order. The biting ferret should be either a) observed daily for signs of rabies for ten (10) days following the exposure date, regardless of the animal's vaccination status, or b) euthanized immediately and tested for rabies in a public health laboratory. Biting ferrets should be confiscated by



the animal control agency and isolations conducted under the direction of the local health officer in an animal control shelter or veterinary hospital. If an isolated ferret is healthy at the end of the ten-day period, there is no risk of a rabies exposure from the original bite wound. Because pet ferrets are illegal in California, any ferret isolated for a human bite should be reported to the California Department of Fish and Game for disposition following the isolation.

#### d) Other domestic and nondomestic species

The incubation period, clinical presentation, and pre-clinical period of rabies virus shedding are well described only for dogs, cats, and ferrets. The period in which other domestic, nondomestic, and wild animals shed rabies virus prior to showing clinical signs of rabies is generally not known. Biting wild, nondomestic, or domestic animals other than dogs, cats, and ferrets should not be isolated for observation but should be euthanized and tested for rabies immediately.

While isolation of biting animals other than dogs, cats, and ferrets is not recommended for the reasons given above, local health officers have the prerogative to forego euthanasia and testing in rare special circumstances. If the biting animal has a comprehensive and reliable history that precludes opportunity for exposure to rabies virus, and the risk of rabies in the biting animal is judged by the health officer to be acceptably low, the health officer may institute a prolonged (30-day) isolation of the biting animal. Under the care of a physician, the bite victim could be started immediately on rabies PEP. This special allowance can be considered due to the low risk for exposure, the reliable efficacy of rabies PEP, and the low incidence of serious adverse reactions with that treatment.

### 3. Isolation of animals exposed to rabies (17 CCR §2606)

Any animal bitten by, scratched by, or having direct contact with a wild mammal (especially bats and skunks) that is not available for rabies testing should be regarded as having been exposed to rabies.

#### a) Dogs, cats, and ferrets

Dogs, cats, and ferrets that are currently vaccinated should be revaccinated immediately and placed in strict isolation for 30 days. While isolation provisions are at the discretion of the local health officer, “strict isolation” must preclude contact between the isolated animal and other animals and the public. Any other dogs, cats, or ferrets for which contact with the bitten animal cannot be absolutely prevented during the isolation period should be held to the same restrictions for the entire isolation period. Ferrets must be confiscated by the animal control agency and isolation conducted under the direction of the health officer in an animal control shelter or veterinary hospital. Because ferrets are illegal to possess as pets in California, any ferret must be reported to the California Department of Fish and Game for disposition following the isolation. Unvaccinated dogs, cats, and ferrets exposed to a rabid or suspect rabid animal should be euthanized immediately.[3] An

alternative to euthanasia is immediate vaccination of the animal and placement in strict isolation for six months (180 days). Euthanasia is strongly recommended for unvaccinated juvenile animals due to their higher susceptibility to rabies infection. Protocols for the post-exposure vaccination of previously unvaccinated animals have not been validated, and there is evidence that the use of vaccine alone in a post-exposure setting may not prevent the disease.

**b) Livestock**

All livestock species—horses, cattle, sheep, goats, llamas/alpacas, swine--are susceptible to rabies infection. Cattle and horses are the livestock species most frequently diagnosed with rabies. Unvaccinated livestock bitten or exposed to a rabid or suspect rabid animal should be euthanized.[3] If the animal is slaughtered within seven days after being exposed, the tissues may be consumed without risk of infection, provided liberal portions of the exposed area are discarded. However, the slaughtered animal cannot be sold commercially as a source of food; federal (United States Department of Agriculture [USDA]) meat inspectors are required to reject for slaughter any animal known to have been exposed to rabies within the past eight months.[3] Neither tissue nor milk from a rabid animal should be used for human or animal consumption.[3] However, because heat inactivates rabies virus, persons who inadvertently drink pasteurized milk or eat fully cooked meat from an animal subsequently identified as rabid are not considered to have been exposed to rabies.

An alternative to euthanizing exposed livestock is to vaccinate the animal immediately with an approved vaccine and to place it in strict isolation for six months during which time the animal may not be transported, sold, or slaughtered unless approved by the local health officer and the California Department of Food and Agriculture. Livestock that are currently vaccinated should receive a rabies booster immediately and be placed in strict isolation for 30 days.[3] In general, an isolation order for the entire herd is not indicated unless the animals have been held in close confinement that would allow for multiple animals exposed to the same rabies source (e.g., a wild animal). It is unusual to have more than one rabid animal in a herd. In such cases, it is more likely that multiple animals were exposed by a single rabid wild animal or dog than that rabies virus was transmitted from herbivore to herbivore. Animals in a herd where a rabies death has occurred should be examined immediately for evidence of bite exposures.

**c) Wild, nondomestic, and other mammals**

Wild, nondomestic, and other mammals bitten by or exposed to a rabid or suspect rabid animal should be euthanized immediately.[3]

**4. Animal rabies vaccination**

**a) Rabies vaccine administration (HSC §121690, §121700)**



Animal rabies vaccines are restricted for sale to licensed veterinarians, biological supply companies, and government agencies that conduct rabies control programs. All animal rabies vaccines are restricted to use by, or under the supervision of, a California-licensed veterinarian. The level of supervision shall be consistent with Title 16, CCR, §2034-2036.5 of the California Veterinary Medicine Practice Act. The veterinarian whose signature is on the rabies certificate retains legal responsibility that the person administering the vaccine is appropriately trained in vaccine storage, handling, administration, and management of adverse events.[3] Rabies vaccines should be administered in accordance with the specifications of the vaccine product label or package insert. Rabies vaccine should be administered in a new, sterile needle and syringe. The re-use of cleaned and sterilized needles and syringes is strongly discouraged. Single use of the needle and syringe is consistent with vaccine manufacturers' recommendations.

**b) Accidental human exposure to rabies vaccine**

Accidental human inoculation may occur during administration of an animal rabies vaccine. Such exposure to inactivated rabies vaccine does not constitute a risk for rabies infection.

**c) Contraindications and adverse events**

There are no absolute contraindications to administration of rabies vaccine to appropriate species. Veterinarians should, if possible, postpone vaccinating animals that are ill or immunocompromised to ensure a robust immune response. There is no epidemiologic association between a particular licensed vaccine product and adverse events, including vaccine failure. Adverse reactions to vaccination should be reported to the USDA, Center for Veterinary Biologics (USDA Animal and Plant Health Inspection Service, Adverse Event Reporting, Tel: 800-752-6255, e-mail: CVB@usda.gov).

Beginning in the 1990s, an association between the administration of certain vaccines, including rabies, and the development of cancer (sarcoma) in some cats was identified. However, this risk appears to be extremely low (1-2 cases per 10,000 vaccinated cats). The public health implications of rabies in domestic cats outweigh the low risk of a sarcoma developing at a vaccination site. To facilitate management of vaccine-associated sarcomas, to avoid injection of multiple vaccines at a single site (a putative risk factor for sarcoma formation), and to aid in documenting vaccine placement, the American Association of Feline Practitioners recommends that rabies vaccine be administered subcutaneously on the right hind limb distal to the stifle joint.

**d) Canine rabies vaccination (HSC §121690; 17 CCR §2606.4, §2606.6)**

The owner of every dog over the age of four months must ensure that the dog is vaccinated for rabies by a licensed veterinarian and secure a license for the pet as provided by local city or county ordinance. A current rabies vaccination certificate

must accompany dogs over four months of age entering the state. Dogs less than four months of age must be confined at home or kept under close leash supervision by the owner when off property.

Twenty-eight days after primary vaccination peak rabies antibody level is reached and a dog is considered currently vaccinated for one year.[3]

Regardless of the age of the dog at primary vaccination, a booster vaccination should be given one year later. All vaccines approved for use in dogs in California follow a three-year booster schedule thereafter. There are no laboratory or epidemiologic data to support the annual or biennial administration of three-year vaccines following the initial immunization series. Because a rapid anamnestic response is expected, a dog is considered currently vaccinated immediately after receiving a booster vaccination. An animal that is overdue for a rabies booster should be vaccinated as soon as possible and the three-year booster schedule re-established.[3]

Only canine rabies vaccines licensed by USDA and approved by the California Department of Public Health (CDPH) can be used in the California Rabies Control Program (17 CCR §2651). The rabies vaccines currently approved for use in California are listed in Part III of the Compendium.

**e) Feline rabies vaccination**

Vaccination of domestic cats for rabies is not mandated by California statute. However, because cats are the domestic species that is most frequently reported as rabid in the United States, feline rabies vaccination is required by some local ordinances and is strongly recommended for all cats. A USDA-licensed feline rabies vaccine should be administered according to the vaccine label instructions (see Part III of the Compendium). Cats are considered currently vaccinated from 28 days to one year following primary vaccination, and 1, 3, or 4 years following booster vaccinations, depending on the vaccine used.[3]

**f) Ferret rabies vaccination**

It is illegal in California to possess a ferret as a pet (FGC §2118). Nevertheless, owners of illegally kept ferrets may occasionally seek veterinary care (California Business and Professional Code §4826.2). As a public health measure, veterinarians should vaccinate ferrets against rabies using a USDA-licensed rabies vaccine administered according to vaccine label instructions (see Part III of the Compendium). Ferrets are considered currently vaccinated from 28 days to one year following primary vaccination, and for one year following each booster.[3]

**g) Livestock rabies vaccination**

Routine vaccination of all livestock against rabies is economically impractical. However, vaccination of horses and livestock with a USDA licensed vaccine (see



Part III of the Compendium) should be considered in areas where wildlife rabies is highly endemic, for valuable individual animals, for horses kept in boarding stables or racetracks or traveling inter-state, and for animals having frequent contact with humans (e.g., petting zoos).[3]

**h) Wildlife and non-domestic rabies vaccination**

No rabies vaccines are licensed for use in animal species other than dogs, cats, cattle, horses, sheep, and ferrets in the U.S. The effectiveness of rabies vaccination in other species is unknown. Because of their susceptibility to rabies, wild carnivores and bats should not be kept as pets.[3] Bats and certain species of carnivores may not enter California without an importation permit from CDPH (17 CCR §30070-86) and are subject to a 90–day rabies quarantine upon importation into California. Carnivores and bats must be housed in a manner that precludes direct contact with the public.[3] Due to the special rabies risk, the trapping, transport, sale, and exchange of skunks in California is prohibited (17 CCR § 2606.8). Zoos and research institutions may establish vaccination programs intended to protect valuable animals, but these programs do not substitute for appropriate preventive measures to protect humans.

The effectiveness of rabies vaccination in the progeny of domestic dogs or cats bred to wild animals (e.g., wolf-dog hybrids, civet-cat hybrids) is unknown. Complete rabies vaccine challenge and viral shedding studies have not been conducted for these animals. There is no definitive evidence that the vaccine is protective in these animals. Vaccination may afford some rabies protection to the animal; however, there are no rabies vaccines currently licensed for use in wild animals or in wild-domestic animal hybrids. Vaccination of these animals is considered an extra-label use of a biologic.

State law does not prohibit the use of rabies vaccines in domestic-wild animal hybrids. However, it is illegal to license domestic-wild canine hybrids as “dogs” under the California Rabies Control Program because they are considered wild animals (14 CCR §671(c)(2)(K)). A rabies vaccine certificate issued for a vaccinated hybrid must identify the animal as a "domestic-wild animal hybrid." Local jurisdictions may institute domestic dog-wolf hybrid permitting programs and issue such permits in order to identify these animals in the community (HSC §121695). Canine or feline hybrids previously vaccinated are nonetheless considered “unvaccinated” for purposes of isolation/observation in the event of a bite incident or contact with a rabid or suspect rabid animal. All hybrids are considered "wild animals" under these circumstances and managed according to sections 2(d) and 3(c) in this Compendium.[3]

**i) Canine licensing and vaccination procedure (17 CCR §2606.4)**

The vaccination of all dogs four months of age or older is required for licensure. Completion of the licensing procedure consists of issuing a license tag or vaccination tag bearing the license data only after presentation of a current valid

official rabies vaccination certificate. Official rabies vaccination certificates must contain the following information:

a) name, address, and telephone number of the dog's owner;
b) description of the dog, including breed, color, age, and sex;
c) date of immunization;
d) type of rabies vaccine administered;
e) name of the manufacturer, product, and lot number of the rabies vaccine used.

Each certificate must bear the signature of the veterinarian administering the vaccination or a signature authorized by him or her. The certificate must be stamped, printed, or typed with the vaccinating veterinarian's name, address, and telephone number.

**j) Rabies immunization exemptions (HSC §121690)**

A veterinarian may request from the local health officer an exemption from rabies vaccination for a dog for which the veterinarian determines that vaccination would endanger the dog's life because of disease or other considerations. If approved by the local health officer, the exempted dog may be issued a license but is considered unvaccinated and confined to the premises of the owner. Licensure of an exempted dog may not extend beyond one year; at or before the end of the one-year license period, the dog must be vaccinated for rabies or a request for vaccination exemption must be resubmitted to and reapproved by the local health officer.

**k) Rabies serologic testing**

Serologic evidence of rabies neutralizing antibodies in an animal is not a substitute for current rabies vaccination in managing rabies exposures or determining the need for booster vaccinations.[3] Serum antibody titer is a measure of the animal's response to vaccine or infection and not a reliable indicator of protection. Elevated serologic titers do not necessarily indicate protection from rabies, nor do low or undetectable serologic titers reflect absence of protection. An ability to measure and interpret all the immunologic factors that interact to protect against rabies is not well developed.

**5. "Actual cost" rabies vaccination clinics (HSC 121690)**

Each city, city and county, or county shall provide or arrange for canine rabies vaccination clinics in the community. No charge in excess of the actual cost may be made for vaccination administration. The CDPH establishes the actual cost that vaccination clinics may charge. Fees in excess of the CDPH-established actual cost require cost documentation and prior approval by CDPH. Procedures and forms to request approval are available by request from the CDPH Veterinary Public Health Section.



# Part II.
# Human Rabies Prevention

## A. Rabies postexposure prevention

Prevention of rabies following a possible exposure to rabies virus consists of two fundamental components: immediate cleaning and medical attention of the site of virus deposition, and post-exposure prophylaxis (PEP)--administration of human rabies immune globulin (HRIG) and rabies vaccine. Persons who have transdermal or mucous membrane contact with saliva or nervous tissue from a confirmed rabid animal, whether by bite or other means, should begin rabies PEP immediately. Persons exposed to a suspected rabid animal should begin PEP if rabies testing of the animal is not immediately available. To appropriately manage potential human exposure to rabies, the risk of infection must be accurately assessed. It is important to remember that rabies PEP is a medical urgency, not a medical emergency. With the exception of direct inoculation of rabies virus into the central nervous system (e.g., severe bite to the head that penetrates the neurocranium), there is time for information to be assembled and the risk to be rationally assessed. Nevertheless, decisions regarding PEP should not be delayed.

Extensive field experience from many parts of the world indicates that prompt wound treatment, passive immunization, and vaccination are consistently effective in preventing development of clinical rabies when administered appropriately. However, rabies has developed in humans when recommended preventive protocols were not performed completely or correctly. Rabies PEP can be effective when initiated any time prior to onset of clinical disease. There have been many instances in which rabies PEP was not initiated until months after exposure due to delays in recognition of the exposure. Although onset of clinical rabies typically occurs between 60 and 90 days following exposure, incubation periods of one year or more have been reported. PEP should not be denied solely because a prolonged period of time has elapsed since the exposure event.

**1. Rabies exposure**

Rabies exposure is defined as transdermal or mucous membrane contact with saliva—or, rarely, nervous tissue--from a rabid animal. A break in the cutaneous barrier that permits virus access to subdermal tissue may be created concomitant with (e.g., classic animal bite) or prior to (e.g., open wounds, abrasions, or scratches) deposition of saliva or contact with nervous tissue. Contact with other tissues (e.g. skin, hair, blood), secretions (e.g., skunk spray), or excretions (e.g., urine, feces) of a rabid animal does not constitute an exposure. Rabies virus is inactivated by exposure to ultraviolet radiation and by desiccation, though the exact time required to inactivate the virus varies according to environmental conditions. Dried saliva or neurologic tissue is

generally considered noninfectious. Scenarios for secondary exposure or "contact-transfer" of rabies virus (e.g., dog bites a skunk and then licks a human) are hypothetical and very unlikely to transmit rabies.

**2. Assessment of rabies exposure**

Anti-rabies biologics are generally safe and in ready supply. Nevertheless, PEP should be allocated judiciously and reserved for individuals for whom exposure to rabies virus is likely. Decisions on PEP are ultimately made by the exposed individual and his/her healthcare provider, following a thorough assessment of the exposure incident and consultation with public health officials. No single set of criteria can determine the appropriateness of PEP for all situations. PEP decisions should be based on as much information about the exposure incident as can be assembled in a timely fashion. Factors that should be considered in PEP decisions include: species of biting animal, the physical and mental health of the biting animal, whether the bite was provoked, the severity of the bite, whether immediate wound care was implemented, the availability of the biting animal for isolation/observation or euthanasia/testing, and the bite victim's personal anxiety about rabies. Concerns about the bite victim's pre-existing medical conditions or ability to pay should never preclude initiation of PEP for an exposure incident in which PEP would be otherwise indicated (See Sections D and E).

Bats represent an important reservoir for rabies that deserves special consideration. Epidemiologic data suggest that transmission of rabies virus from bats can occur from very minor or even unrecognized bites. The limited injury inflicted by a bat bite (in contrast to wounds caused by carnivores) and equivocal recall of recognized exposure can hinder a health-care provider's ability to assess the risk of rabies resulting from an encounter with a bat.

Between 2000 and 2009, 18 human cases of rabies were identified in the U.S. with natural exposure to a bat variant virus. For only seven of these case-patients was a definite bat bite known; eight case-patients had known bat contact but no apparent bite, and for three case-patients no known contact with a bat was identified during the case investigation.

In all instances in which a human is possibly exposed to a bat, the bat in question should be safely collected, if possible, and tested for rabies. Rabies PEP is recommended for all persons who experience a bite, scratch, or mucous membrane contact with a bat, unless the bat is available for testing and is negative for evidence of rabies. Rabies PEP may be appropriate even when a bite, scratch, or mucous membrane contact is not apparent if there is reasonable probability that such exposure might have occurred.

Rabies PEP should be considered when direct contact between a bat and a human has occurred, unless the exposed person can be certain a bite, scratch, or mucous membrane exposure did not occur. In instances in which an apparently healthy bat is found indoors and there is no history of bat-human contact, the likely effectiveness of rabies PEP must be balanced against the low risk that such exposures appear to



present. In this setting, rabies PEP can be considered for persons who were in the same room as the bat and are uncertain whether a bite or direct contact occurred (e.g., a sleeping person awakens to find a bat in the room or an adult witnesses a bat in the room with a previously unattended child, mentally disabled person, or intoxicated person) and rabies cannot be ruled out by testing the bat. Rabies PEP would not be warranted for other household members.

**3. Local treatment of wounds**

Immediate and thorough washing of any bite or scratch wound with soap and water is an indispensable measure in preventing rabies. Animal experiments have shown that simple local wound cleaning and irrigation can markedly reduce the likelihood of rabies. Victims of animal bites should consult with their healthcare provider; medical or surgical attention, a tetanus toxoid booster, and antibiotic prophylaxis may be indicated independent of the assessed risk of rabies transmission.

**4. Passive immunization**

Human Rabies Immune Globulin (HRIG) is administered only once, at the beginning of rabies PEP, to previously unvaccinated persons to provide immediate antibodies until the patient responds to rabies vaccination by actively producing antibodies. If HRIG is not given with the first dose of vaccine, it can be given up to Day 7 of the vaccine series. After Day 7, HRIG should be avoided due to possible interference with the developing vaccine immune response. HRIG is administered at a dose of 20 IU/kg body weight for all age groups. No more than the recommended dose of HRIG should be used due its potential to partially suppress active immunization. As much as possible of the calculated dose of HRIG should be infiltrated into the subcutaneous tissue and/or muscle around the wound site(s). Any remaining amount of HRIG should be administered intramuscularly at an anatomic site distant from vaccine administration. HRIG should never be administered in the same syringe or at the same anatomical site as vaccine and should never be administered in the gluteal area unless that is the site of exposure. In the absence of a bite or other known site of virus introduction, the full dose of HRIG should be administered at a site distant from vaccine administration (e.g., contralateral deltoid). Regardless of the interval between exposure and initiation of PEP, both HRIG and vaccine should be administered for both bite and nonbite exposures in persons not previously rabies immunized.

**5. Active immunization**

Human Diploid Cell Vaccine (HDCV) or Purified Chick Embryo Cell Vaccine (PCEC) is administered in conjunction with HRIG at the beginning of postexposure treatment. A regimen of four 1-ml doses of HDCV or PCEC is given intramuscularly. The first dose should be given as soon as possible following an exposure (Day 0), with subsequent doses given on Days 3, 7, and 14. Vaccine should always be administered intramuscularly in the deltoid (lateral aspect of the upper arm). For pediatric patients, vaccine may be administered intramuscularly in the anterolateral aspect of the thigh.

Rabies vaccine should never be administered in the gluteal region, as this may result in lower, possibly inadequate neutralizing antibody levels.

Rabies PEP should always include both vaccine and HRIG except in persons who have previously received complete immunization regimens (pre- or postexposure prophylaxis) with a cell culture vaccine, or persons previously vaccinated with another type of vaccine who have documentation of adequate rabies virus neutralization antibody titers. These persons should immediately receive two 1-ml booster doses of HDCV or PCEC vaccine administered intramuscularly on Days 0 and 3.

Because antibody response has been universally satisfactory in persons receiving the currently recommended rabies PEP schedule, routine post-treatment serologic testing is not recommended. Verification of adequate neutralizing antibody levels by serologic testing may be indicated in unusual circumstances, such as when the patient is known to be immunosuppressed. Immunosuppressive agents should not be administered during rabies PEP unless they are essential for the treatment of other conditions.

## B. Pre-exposure prophylaxis

Persons at frequent risk of exposure to rabies virus should consider pre-exposure prophylaxis (PreEP). Occupations considered to be in the "frequent risk" category include veterinarians, animal handlers, animal control officers, laboratory workers potentially exposed to rabies virus, and others who have frequent contact with mammals likely to have rabies. PreEP might be considered for other persons who are likely to have contact with potentially rabid animals, such as wild mammal rehabilitators and persons traveling to foreign countries where canine rabies is endemic.

### 1. Primary or pre-exposure vaccination

Three 1.0 ml injections of HDCV or PCEC are administered intramuscularly in the deltoid (lateral aspect of the upper arm) on days 0, 7, and 21 or 28. Multiple studies have documented development of rabies antibodies that meet or exceed recommended neutralizing titers (>0.5 IU/ml) in all persons vaccinated according to this regimen. Persons who are immunosuppressed due to medication or illness should postpone PreEP if possible. Immunosuppressed persons who are at risk of rabies exposure can be vaccinated and should have their antibody titers measured following completion of the regimen.

### 2. Booster vaccination

Routine rabies booster vaccination is not indicated for any pre-immunized group. The need for booster vaccination should be individually assessed based on current rabies antibody levels and the person's risk of exposure to rabies virus. Persons classified as having "frequent risk" (see B above) should have a serum sample tested for rabies neutralizing antibody every two years--or every six months for persons working with rabies virus in a laboratory setting--following PreEP. If the titer is less than complete neutralization at 1:5 by the Rapid Fluorescent Focus Inhibition Test (RFFIT), the person should receive a single booster dose of rabies vaccine.



Several laboratories offer RFFIT testing at a cost of approximately $35-$45 per sample. Instructions for submission of samples and pricing are available by calling the numbers below. (RFFIT testing may also be available through other laboratories.)

The Rabies Laboratory
Kansas State University
Manhattan, KS 66502
(785) 532-4483 Phone
(785) 532-4474 Fax
http://www.vet.ksu.edu/depts/

Maryland State Rabies Laboratory
Maryland Department of Health
201 W. Preston Street
Baltimore, MD 21201
(410) 767-6177 Phone
http://www.dhmh.state.md.us/labs

Atlanta Health Associates, Inc.
309 Pirkle Ferry Road, Suite D300
Cumming, GA 30040
(770) 205-9091,
(800) 717-5612 Phone
(770) 205-9021 Fax
http://www.atlantahealth.net

## C. Rabies immunizing products available in the United States

1. **Human rabies vaccine** stimulates an active immune response including production of neutralizing antibodies. These antibodies develop in approximately 7-10 days and usually persist for at least 2 years. The two vaccines currently available in the U.S. are considered equally efficacious and safe when used as indicated. The 1.0 ml dose of either HDCV or PCEC can be used for PEP or PreEP.

   a) **Human Diploid Cell Vaccine (HDCV) - Intramuscular (Imovax® Rabies)**

   HDCV is prepared from the Pitman-Moore rabies virus strain grown in MRC-5 human diploid cell culture. The vaccine is concentrated by ultrafiltration and inactivated with beta-propiolactone. A single dose vial containing lyophilized vaccine is reconstituted with diluent to a volume of 1.0 ml just before administration. Imovax® Rabies is manufactured and distributed by Sanofi Pasteur, Inc. (phone 800-VAC-CINE [800-822-2463], Sanofi Pasteur Inc. Imovax® product page).

   b) **Purified Chick Embryo Cell Culture (PCEC) – (RabAvert®)**

PCEC is prepared by growing the Flury LEP fixed-virus strain in primary culture of chicken embryonic fibroblasts. The virus is inactivated with beta-propiolactone, and further processed with zonal centrifugation in a sucrose density-gradient to separate the final product from media and cell culture antigens. The vaccine is then lyophilized after addition of a stabilizer solution. RabAvert® is manufactured and distributed by Bavarian Nordic (1-844-4BAVARIAN [1-844-422-8274], medical-information_US@bavarian-nordic.com).

2. **Rabies Immune Globulin - Human** is an antirabies gamma globulin concentrated by cold ethanol fractionation from plasma of hyperimmunized human donors. HRIG provides immediate passive immunity that endures for only a limited time (half-life of approximately 21 days).

   HRIG is available from Sanofi Pasteur, Inc., (Imogam® Rabies-HT; phone 800-VACCINE [800-822-2463], Sanofi Pasteur Imogan® product page), Kedrion Biopharma Inc. (KEDRAB™; phone 855-353-7466, KEDRAB™ Rabies Immune Globulin product page), and Grifols (HyperRAB®, phone 800-243-4153, Grifols HyperRAB® product page). Imogam® Rabies-HT, and KEDRAB™ are supplied in 2 ml and 10 ml vials of 150 IU/mL for pediatric and adult use, respectively. HyperRAB® is a more potent product of the previously licensed HyperRAB™ S/D and is supplied in 1, 3, and 5 ml vials of 300 IU/ml. All HRIG preparations are considered equally efficacious and safe when used as indicated.

**D. Adverse reactions to rabies immunizing products**

1. **Vaccine**

   Local reactions such as pain, erythema, and swelling or itching at the injection site were reported in approximately 30-75 percent of patients receiving HDCV or PCEC. Mild systemic reactions such as headache, malaise, dizziness, muscle aches, nausea, and abdominal pain have been reported in 5-50 percent of recipients. Anaphylactic, encephalitic, or neuroparalytic events have been rarely reported.

2. **HRIG**

   Local pain and tenderness at the injection site commonly occur following receipt of HRIG. A majority of recipients also experience mild systemic symptoms such as low-grade fever and headache. No serious adverse events such as hypersensitivity or immune complex disease have been associated with HRIG.

   HRIG products undergo multiple viral clearance procedures during preparation. There is no evidence that hepatitis B virus, human immunodeficiency virus, or other bloodborne pathogens have ever been transmitted by commercially available HRIG in the U.S.

3. **Management of adverse reactions**

   Once initiated, rabies PEP should not be interrupted or discontinued because of local or mild systemic adverse reactions to rabies vaccine. Usually such reactions can be



successfully managed with non-steroidal anti-inflammatory and antipyretic agents (e.g., ibuprofen or acetaminophen). For more severe reactions, consideration should be given to switching to another product. When a person with a history of hypersensitivity must be given rabies vaccines, pre-medication with antihistamines may be considered; epinephrine should be readily available to counteract anaphylactic reactions, and the person should be carefully observed immediately after administration.

Systemic anaphylactic or neuroparalytic reactions occurring during the administration of rabies vaccines, though rare, pose a serious dilemma for the attending physician. A patient's risk of developing rabies must be carefully considered before deciding to discontinue vaccination. The use of corticosteroids in the treatment of life-threatening neuroparalytic reactions carries the risk of inhibiting the development of active immunity to rabies. It is especially important in these cases that the patient's serum be tested for rabies antibodies following vaccination.

All serious systemic, neuroparalytic, or anaphylactic reactions to a rabies vaccine should be reported to the Vaccine Adverse Event Reporting System (VAERS) via a 24-hour toll-free telephone number: (800) 822-7967.

**4. Precautions and contraindications**

**a) Immunosuppression**

Persons with compromised immune function—whether by pre-existing medical condition (e.g., neoplasia) or exogenous immunosuppressives (e.g., corticosteroids)—may fail to develop complete and protective immunity after vaccination. Patients who are immunosuppressed should postpone PreEP if possible and consider avoiding activities for which rabies PreEP is indicated. Immunosuppressed persons for whom PreEP is critical should have their antibody titers checked following completion of the vaccine series. Failure to seroconvert after the third dose should be managed in consultation with appropriate public health officials. Immunosuppressive agents should not be administered during rabies PEP unless essential for the treatment of other conditions.

**b) Pregnancy**

Because of the potential consequences of inadequate treatment of a rabies exposure, pregnancy is not considered a contraindication to rabies PEP. No increased incidence of abortion, premature births, or fetal abnormalities has been associated with rabies vaccination. If the risk of exposure to rabies is substantial, PreEP might also be indicated during pregnancy. Rabies vaccine given to a nursing mother does not affect the safety of breastfeeding for either mother or infant, and breastfeeding is not a contraindication to administration of rabies vaccine.

**c) Antimalarials**

Concurrent use of antimalarial drugs may interfere with the immune response to rabies vaccination. In one study of persons undergoing PreEP with an intradermal

rabies vaccine, individuals who were concurrently taking chloroquine had a lower geometric mean titer of anti-rabies antibodies at all test points compared to persons who were not taking antimalarials.[4] Nevertheless, all study subjects had serum antibody titers that exceeded the threshold that is considered adequate for protection (complete neutralization at 1:5 on RFFIT). Data are not available as to whether this same immunosuppressive effect occurs with other antimalarial drugs or with rabies PreEP using an intramuscular vaccine.

**d) Allergies**

Persons who have a history of serious hypersensitivity to rabies vaccine should be revaccinated with caution.

**5. Cost**

Coverage for rabies immunization, for both PreEP and PEP, varies among health insurance plans. Options are available to persons in need of PEP who are uninsured or otherwise cannot afford treatment.

- Rabies vaccine (CPT Codes 90675/90676, and 90460/90461 or 90471/90472) and HRIG (CPT Codes 90375/90376 and 96372) are covered for Medi-Cal eligible persons. Eligibility may need to be determined by emergency certification request at the county welfare office.
- For individuals who are ineligible for Medi-Cal, have annual income at or below 200 percent of the federal poverty level, and reside in participating counties, the cost of rabies PEP may be covered through the California County Medical Services Program.
- Both rabies vaccine manufacturers have patient assistant programs that provide medications to uninsured or underinsured patients. To be eligible, patients must be indigent, uninsured, ineligible for Medicare or Medical, have household income below federal poverty level, and the attending physician must waive all fees associated with treatment. Eligibility requirements differ between companies and they should be contacted directly to discuss whether a patient is eligible for their program. Sanofi Pasteur's Indigent Patient Program (providing Imogam® Rabies-HT and Imovax® Rabies) is administered through the National Organization for Rare Disorders. Information is available by telephone (877-798-8716) or e-mail (nnadiq@rarediseases.org). Information on Bavarian Nordic's Patient Assistance Program for RabAvert® is available by telephone (1-844-4BAVARIAN [1-844-422-8274]) or email (medical-information_EU@bavarian-nordic.com).



**References**

[1]Human Rabies Prevention – United States, 2008 Recommendations of the Advisory Committee on Immunization Practices. MMWR 2008; 57(RR-1): 1-28. http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5703a1.htm

[2] Use of a Reduced (4-Dose) Vaccine Schedule for Postexposure Prophylaxis to Prevent Human Rabies Recommendations of the Advisory Committee on Immunization Practices. *MMWR* 2010; 59(RR-2):1-9. http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5902a1.htm

[3] Compendium of Animal Rabies Prevention and Control, 2011 National Association of State Public Health Veterinarians.http://www.nasphv.org/documentsCompendia.html

[4] Pappaioanou M, Fishbein DB, Dreesen DW, et al. Antibody response to pre-exposure human diploid cell rabies vaccine given concurrently with chloroquine. *N Engl J Med* 1986;314:280–4.

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**Route of Administration:** Approved canine vaccines must be administered to dogs according to the manufacturers' recommendations either intramuscularly (IM) or subcutaneously (SC). Administration via other routes may reduce effectiveness or be unsafe. For species other than dogs, refer to the vaccine label.

**A) MONOVALENT – INACTIVATED**

| Product | Licensed and Labeled For Use In | Approved for Use in Dogs in California? | Dosage | Route of Administration | Minimum Age at Primary Vaccination | Booster Recommendation |
|---|---|---|---|---|---|---|
| VANGUARD RABIES 1 YEAR<br><br>Product by: Zoetis License No. 190 Marketed by: Zoetis | Dogs Cats | **No** | 1 ml | SC (cats) | 3 months | Annually |
| VANGUARD RABIES 3 YEAR<br><br>VANGUARD RABIES 3 YEAR (CA)<br><br>Product by: Zoetis License No. 190 Marketed by: Zoetis | Dogs Cats | **Yes** | 1 ml | IM or SC (dogs) SC (cats) | 3 Months | 1 year later, then triennially |
| VANGUARD RABIES 3 YEAR<br><br>Product by: Zoetis License No. 190 Marketed by: Zoetis | Sheep Cattle | N/A | 2 ml | IM | 3 Months | Annually |



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| Product | Licensed and Labeled For Use In | Approved for Use in Dogs in California? | Dosage | Route of Administration | Minimum Age at Primary Vaccination | Booster Recommendation |
|---|---|---|---|---|---|---|
| NOBIVAC 1<br><br>Produced by: Merck Animal Health License No. 190 Marketed by: Intervet Inc. | Dogs Cats | **No** | 1 ml | SC (cats) | 3 Months | Annually |
| NOBIVAC 3<br>NOBIVAC 3 CA<br><br>Produced by: Merck Animal Health License No. 190 Marketed by: Intervet Inc. | Dogs Cats | **Yes** | 1 ml | IM or SC (dogs) SC (cats) | 3 Months | 1 year later, then triennially |
| NOBIVAC 3<br>NOBIVAC 3 CA<br><br>Produced by: Merck Animal Health License No. 190 Marketed by: Intervet Inc. | Sheep Cattle | N/A | 2 ml | IM | 3 Months | Annually |
| EQUI-RAB<br><br>Produced by: Merck Animal Health License No. 165A Marketed by: Intervet Inc. | Horses | N/A | 1 ml | IM | 4 Months | Annually |

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| Product | Licensed and Labeled For Use In | Approved for Use in Dogs in California? | Dosage | Route of Administration | Minimum Age at Primary Vaccination | Booster Recommendation |
|---|---|---|---|---|---|---|
| RABVAC 1<br><br>Produced by: Elanco License No. 196 Marketed by: Elanco | Dogs<br>Cats | **No** | 1 ml | IM or SC (cats) | 3 Months | Annually |
| RABVAC 3<br><br>Produced by: Elanco License No. 196 Marketed by: Elanco | Dogs<br>Cats | **Yes** | 1 ml | IM or SC | 3 Months | 1 year later, then triennially |
| RABVAC 3<br><br>Produced by: Elanco License No. 196 Marketed by: Elanco | Horses | N/A | 2 ml | IM | 3 Months | Annually |
| IMRAB 3<br><br>Produced by: Merial Inc. License No. 298 Marketed by: Merial Inc. | Dogs<br>Cats<br>Ferrets | **Yes** | 1 ml | IM or SC (dogs, cats)<br>SC (ferrets) | 12 weeks | 1 year later, then triennially |
| IMRAB 3<br><br>Produced by: Merial Inc. License No. 298 Marketed by: Merial Inc. | Sheep<br>Cattle<br>Horses | N/A | 2 ml | IM or SC | 12 Weeks | 1 year later, then triennially |



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| Product | Licensed and Labeled For Use In | Approved for Use in Dogs in California? | Dosage | Route of Administration | Minimum Age at Primary Vaccination | Booster Recommendation |
|---|---|---|---|---|---|---|
| IMRAB 3 TF<br><br>Produced by: Merial Inc. License No. 298 Marketed by: Merial Inc. | Dogs<br>Cats | **Yes** | 1 ml | IM or SC | 12 weeks | 1 year later, then triennially |
| IMRAB 3 TF<br><br>Produced by: Merial Inc. License No. 298 Marketed by: Merial Inc. | Ferrets | N/A | 1 ml | SC | 12 Weeks | Annually |
| IMRAB Large Animal<br><br>Produced by: Merial Inc. License No. 298 Marketed by: Merial Inc. | Horses<br>Cattle | N/A | 2 ml | IM or SC | 3 Months | Annually |
| IMRAB Large Animal<br><br>Produced by: Merial Inc. License No. 298 Marketed by: Merial Inc. | Sheep | N/A | 2 ml | IM or SC | 3 Months | 1 year later, then triennially |
| IMRAB 1<br><br>Produced by: Merial Inc. License No. 298 Marketed by: Merial Inc. | Dogs<br>Cats | **No** | 1 ml | SC (cats) | 12 Weeks | Annually |

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| Product | Licensed and Labeled For Use In | Approved for Use in Dogs in California? | Dosage | Route of Administration | Minimum Age at Primary Vaccination | Booster Recommendation |
|---|---|---|---|---|---|---|
| IMRAB 1 TF<br><br>Produced by: Merial Inc. License No. 298 Marketed by: Merial Inc. | Dogs<br>Cats | No | 1 ml | SC (cats) | 12 Weeks | Annually |

**B) MONOVALENT- RABIES GLYCOPROTEIN, LIVE CANARY POX VECTOR**

| Product | Licensed and Labeled For Use In | Approved for Use in Dogs in California? | Dosage | Route | Minimum Age at Primary Vaccination | Booster Recommendation |
|---|---|---|---|---|---|---|
| PUREVAX Feline Rabies<br><br>Produced by: Merial Inc. License No. 298<br>Marketed by: Merial Inc. | Cats | N/A | 1 ml | SC | 12 weeks | Annually |



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**C) COMBINATION - INACTIVATED RABIES**

| Product | Licensed and Labeled For Use In | Approved for Use in Dogs in California? | Dosage | Route | Minimum Age at Primary Vaccination | Booster Recommendation |
|---|---|---|---|---|---|---|
| EQUINE POTOMAVAC + IMRAB<br><br>Produced by: Merial Inc. License No. 298<br>Marketed by: Merial Inc. | Horses | N/A | 1 ml | IM | 3 months | Annually |

**D) COMBINATION – RABIES GLYCOPROTEIN, LIVE CANARY POX VECTOR**

| Product | Licensed and Labeled For Use In | Approved for Use in Dogs in California? | Dosage | Route | Minimum Age at Primary Vaccination | Booster Recommendation |
|---|---|---|---|---|---|---|
| PUREVAX FELINE 3/ RABIES<br><br>Produced by: Merial Inc. License No. 298<br>Marketed by: Merial Inc. | Cats | N/A | 1 ml | SC | 8 weeks | 3-4 weeks later, then annually |
| PUREVAX FELINE 4/ RABIES<br><br>Produced by: Merial Inc. License No. 298<br>Marketed by: Merial Inc. | Cats | N/A | 1 ml | SC | 8 weeks | 3-4 weeks later, then annually |

Adapted from the Compendium of Animal Rabies Prevention and Control, 2011, National Association of State Public Health Veterinarians, Incorporated
Rev. 10/15/13, 12/31/13, 4/25/17, 3/14/19, 9/1/20, 12/22/21