STATE OF COLORADO

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Colorado Department of Public Health and Environment

Rabies Specimen Submission Policy
Colorado, 2014

BACKGROUND: Rabies in Colorado is maintained in two vector species, bats and striped skunks (*Mephitis mephitis)*. Bat rabies is reported statewide in multiple bat species. In eastern Colorado and along the Front Range, skunk rabies is now considered endemic. Since the re-establishment of skunk rabies in Colorado, spillover into other species (wildlife, domestic animals, and livestock) has significantly increased. Although few people are usually exposed to a rabid bat or skunk, rabies virus infected domestic animals greatly increase the risk and number of human exposures that occur. Veterinarians are encouraged to consider rabies in the differential diagnosis of domestic animals (including companion animals and livestock) exhibiting rapidly progressive neurological signs and symptoms, especially in areas where skunk rabies has been identified.

INDICATIONS FOR RABIES TESTING: Exposure is defined as a bite or scratch that breaks the skin or, less commonly, direct, physical contact of open wounds or mucous membranes with saliva or central nervous system tissues from a suspect animal. Any carnivorous, wild mammal (skunk, fox, raccoon, etc.) or bat that has bitten a human or domestic animal should be submitted for testing. In situations where the exposure risk is uncertain (i.e. a bat found in the bedroom, a dead skunk in backyard, non-bite exposure) the animal or carcass should be safely contained and held until consultation with public health officials is obtained. Rabies testing is rarely indicated for rodents and lagomorphs (rabbits and hares).

For healthy dogs, cats and pet ferrets involved in a human bite, a 10 day post-bite observation period is required. Biting pets should not be euthanized for testing unless they are exhibiting neurological symptoms, would not survive the 10 day period (injury, terminal disease) or have severe aggression that makes the animal too dangerous to handle. Contact your local public health agency (LPHA) or state health department for the management of bites from other domestic animals and livestock.

TESTING: Two laboratories perform rabies testing in Colorado:

Colorado State University Veterinary Diagnostic Laboratories (CSU VDL):

CSU VDL is best equipped to handle large animal submissions such as livestock. CSU can also handle veterinary diagnostic rule outs in which rabies is one of several diagnoses being considered or when a full necropsy is wanted. All testing is on a fee for service basis. Submission guidance and forms can be found at: http://www.dlab.colostate.edu

The Colorado Department of Public Health and Environment laboratory (CDPHE):

CDPHE laboratory provides rabies testing only: no other veterinary diagnostic services are available. Livestock submissions are accepted but the brain must be extracted prior to submission. Submissions meeting the below criteria will be tested at no charge to the submitter. For submission assistance and forms, please contact your LPHA. For additional lab information please visit: http://www.colorado.gov/cs/Satellite/CDPHE-Lab/CBON/1251594505201

Specimens eligible for rabies testing for no charge at the CDPHE lab:

- Domestic animals involved in a human bite that become ill, die, or sustain a terminal injury during the 10 day post-bite observation period;
- Feral cats or dogs too aggressive to safely quarantine for 10 days;
- Wild carnivores or bats involved in human, domestic pet or livestock exposure;
- Wildlife exhibiting neurological symptoms or strange behavior (i.e. out in mid-day, no fear of natural enemies, aggressive, inability to walk).

Specimens meeting the above criteria do not need pre-approval to waive the fee and be tested. **Pre-approval is required** from your LPHA or CDPHE for any exceptions to these criteria. Animals that are submitted that do not meet the criteria and did not receive pre-approval may be charged a fee for service.

Fee for service rabies testing:

- Healthy domestic pets (dogs, cats, and ferrets) that have bitten a human.
    - Mandatory 10 day observation period.
- Secondary exposure situations (i.e. cat kills bat, owner wants cat tested);
- Occupational or workman's compensation covered exposures (i.e. vet tech bitten by patient);
- Situations in which no public health risk exists (i.e. testing bats with no human or domestic animal exposure, submitting rodents or lagomorphs without approval, a veterinary diagnostic rule out when rabies is unlikely); and
- Other circumstances which are not covered in the free testing.

CDPHE SPECIMEN PREPARATION: To ensure a valid test an appropriate specimen must be submitted. For bats, the entire carcass should be sent. For dogs, cats, skunks, raccoons, and similarly sized animals, the **head must be removed** and sent. For livestock and other large animals the brain should be removed and submitted. To prevent exposure to rabies virus during specimen preparation, removal of heads or brains should only be done by persons with proper training, adequate personal protective equipment, and preferably pre-exposure rabies prophylaxis. Specimens must be refrigerated immediately and held at 35-40°F until shipped. A properly refrigerated specimen can be held for several days (i.e. over the weekend) and still ensure an accurate test. DO NOT FREEZE OR PLACE THE SPECIMEN IN A PRESERVATIVE SUCH AS FORMALIN.

SHIPMENT: Specimens should be double-bagged, placed in an inner waterproof container with cold packs and then placed in an outer shipping container. Do not use dry or wet ice. It is the responsibility of the submitting agency to ensure no leakage occurs. A completed Lab Requisition Form 272 must accompany each specimen. Multiple specimens can be shipped together but each specimen should be bagged separately, be clearly marked, and have its own form. Forms are available through your LPHA or by contacting the CDPHE laboratory at 303-692-3485.

TRANSPORT SERVICES: The CDPHE laboratory offers a courier service which provides sample pick-ups along a specified route. Contact your LPHA for regularly scheduled courier pick-ups in your area. A one to two day delay for non-emergency samples is acceptable. Agencies scheduling courier pickups themselves will be charged the associated fee. Submitters can also use other overnight deliveries at their own cost or may bring the specimen to the lab in Denver directly.

CONSULTATION: For consultation on situations not listed above, submission assistance, testing, bite follow-up, and rabies pre- and post-exposure prophylaxis, contact your LPHA or CDPHE's Disease Control and Environmental Epidemiology Division at (303) 692-2700 during business hours. For after hours, weekend and holiday emergencies call (303) 370-9395. Testing and submissions during non-business hours will require pre-approval.