

Animal Management:

2016 NASPHV Rabies Compendium Guidance **Prospective Serologic Monitoring (PSM) Protocol** **Category 4. Overdue with NO Appropriate Documentation)**

Introduction

Prospective Serologic Monitoring (see Part I B.5(4B) [NASPHV Compendium of Animal Rabies Prevention](#)) is for use with rabies-exposed ([G.S. 130A-197](#)) dogs and cats that are overdue or current for rabies vaccination with NO appropriate documentation. Appropriate documentation of prior rabies vaccination is a valid rabies vaccination certificate (or possibly an official veterinary record) that indicates the dog or cat was previously vaccinated (at least one) with a USDA licensed rabies vaccine. In some circumstances there may be other evidence that supports prior rabies vaccination including the owner's statement of prior rabies vaccination, history of adoption from a shelter that vaccinates prior to adoption, evidence of neuter or spay, a microchip, or an ear notched cat. The following guidance is adapted from the NASPHV *Prospective Serologic Monitoring Protocol*, available at <http://www.nasphv.org/documents/Compendia.html>. This guidance is subject to change.

Prospective Serologic Monitoring: Preliminary Action Steps

1. Dogs and cats shall be seen by a North Carolina licensed Veterinarian (here forward the attending Veterinarian) immediately, no later than 96 hours following an exposure to a confirmed or suspect rabid animal that is not available or suitable for testing.
2. Prior to rabies vaccination, the attending Veterinarian shall:
 - a. Provide medical care, assess the animal, and provide wound cleansing and care.
 - b. Immediately report the incident to the Local Health Department (LHD) in the residence jurisdiction of the exposed animal.
3. The LHD (or Animal Control delegate) shall conduct a thorough review of the exposed animal's rabies vaccination history, the animal's health status (immune-competence) and all factors associated with the animal's current rabies exposure (severity of wounds, number and location) to determine if Prospective Serologic Monitoring is indicated and allowed.
4. If the LHD determines that PSM is not an option, then the animal shall be managed as unvaccinated (Category 2.: immediately receive a rabies vaccination and be placed in a strict four month quarantine (see [Algorithm: 2016 NASPHV Rabies Compendium Postexposure Management Control Measures for Dogs and Cats by Rabies Vaccination Status](#) and [Compendium Part I. B.5.a\)\(2\)](#)).
5. If **PSM** is allowed by the LHD, then the animal is placed in an immediate strict quarantine and the protocol is begun. The LHD shall work with the Veterinarian and the owner to define a timeline during which the protocol must be implemented.

Prospective Serologic Monitoring (PSM) Protocol

1. The PSM testing is a five to seven day process; the first day is Day 0.
2. The dog or cat shall remain in strict quarantine during the testing process and until the results of the Rapid Fluorescent Focus Inhibition Test (RFFIT) are interpreted and finalized by the LHD. Other arrangements must be approved by the LHD.
3. The owner/guardian and attending (submitting) Veterinarian shall assume responsibility for all fees (strict quarantine, testing, submission of specimens, and associated fees).
4. **The Attending Veterinarian Actions:** The attending Veterinarian is responsible for ensuring the accuracy of specimen collection, storage, identification, submission form completion and shipping.
 - a. **Day 0**
 - i. Collect 1-2 mL of serum
 - ii. Label and store serum refrigerated until the second serum specimen is collected. The paired sera (day 0 and 5) will be submitted together to the testing laboratory. Serum held for more than 7 days may need to be frozen. Follow the instructions provided by the approved rabies laboratory (see page 3)* that will be performing the testing.
 - iii. Administer a USDA licensed rabies vaccine, and
 - iv. Schedule the second serum collection for 5 - 7 days later.
 - b. **Day 5 (but not later than Day 7)**
 - i. Collect the second (paired) serum specimen (1-2 mL).
 - ii. Label and store the specimen appropriately according to the instructions from the laboratory* where it will be submitted.
 - iii. Submit the paired serum specimens to an approved Rabies Laboratory* for Rapid Fluorescent Foci Inhibition Test (RFFIT) testing with the appropriate forms completed. Carefully follow shipping instructions provided by the Rabies Laboratory.
 - iv. The submitting form for the appropriate laboratory must be complete, accurate and the paired specimens properly labelled.
 - v. Contact the LHD to document submission (dates) of the specimens
 - c. **Results** Upon receipt of the RFFIT results, the attending Veterinarian shall immediately provide the results to the LHD and coordinate with the LHD for interpretation and finalization of the results.
5. **LHD Actions: Interpretation of RFFIT Results**
 - a. Interpretation of RFFIT results must be done in conjunction with the approved Rabies Laboratory* that performs the testing.
 - b. Results of paired sera must show evidence suggestive of previous vaccination:
 - i. a statistically significant (greater than a two-fold increase) in titer between the first and second serum specimens, AND
 - ii. second titer must be greater than 0.5 IU/mL.
 - c. If either of the criteria in (5. b.) are not met, then the animal is considered unvaccinated and the control measures are implemented for category 2. (see [Algorithm: 2016 NASPHV Rabies Compendium Postexposure Management Control Measures for Dogs and Cats by Rabies Vaccination Status and Compendium Part I. B.5.a\)\(2\)](#)).

Approved Rabies Laboratories*: Rapid Fluorescent Foci Inhibition Test

Approved rabies laboratories are licensed by CLIA and have been approved to participate in the Prospective Serologic Monitoring Protocol program by NASPHV's Compendium Committee.

Kansas State University (<http://www.ksvdl.org/rabies-laboratory/rffit-test/index.html>)
2005 Research Park Circle
Manhattan, KS 66502
Email: rabies@vet.k-state.edu
Tel: 785-532-4483
Fax: 785-532-4474
Fax: 785-532-4522

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

**NC DPH PROSPECTIVE SEROLOGIC MONITORING PROTOCOL RECOMMENDATIONS
For Dogs and Cats only**

NOTE: The exposed dog or cat shall be examined by a Veterinarian immediately, preferably the same day as the exposure. Day 0 must be completed no later than 96 hours after the exposure

DAY 0

ATTENDING VETERINARIAN ACTIONS

1. Examine animal; document extent of exposure, provide wound cleansing & care; obtain vaccination history
2. Immediately report the incident to the LHD (in owner's county of residence)
 - a) Provide LHD: animal's vaccination history, animal health assessment (immune-compromising conditions), and exposure assessment (number and location of wounds)
3. Begin PSM (the LHD determines if PSM will be allowed) and Document all actions.
 - a) Strict Quarantine (until LHD interprets final results and makes management decision)
 - b) Collect Day 0 serum specimen (1 – 2 mL) of paired sera, label, refrigerate
 - c) Administer rabies vaccination
4. The owner is responsible for all fees associated with the examination, rabies vaccination, strict quarantine, RFFIT testing and health care of the animal.

LHD ACTIONS

1. Coordinate with the attending Veterinarian and owner. Review the animal's vaccination history and animal health assessment, and extent of exposures. Obtain copy of veterinary record.
2. If PSM allowed: enforce strict quarantine, define timeline and protocol. Provide PSM contract.
3. If PSM NOT allowed, enforce immediate rabies vaccination & strict four month quarantine contract.

DAY 5 (no later than Day 7)

ATTENDING VETERINARIAN ACTIONS

1. Collect Day 5 serum specimen (1 – 2 mL) of paired sera, label. Refrigerate with Day 0 specimen.
2. Submit the paired (Day 0 and 5) serum specimens (properly labeled) with the appropriate forms completed to an approved Rabies Laboratory for Rapid Fluorescent Foci Inhibition Test (RFFIT).
3. Notify the LHD that the specimens were submitted: provide the animal and owner ID information, date of shipment and name of approved Rabies Laboratory.

LHD ACTIONS

1. Document the dates of serum submission for RFFIT including Rabies Laboratory.
2. Continue to enforce the strict quarantine.

INTERPRETATION OF RESULTS

ATTENDING VETERINARIAN ACTIONS

1. Upon receipt of RFFIT results, immediately notify the LHD. Fax a copy of results to LHD.
2. Coordinate with LHD for interpretation of results. LHD will notify owner of final animal management.

LHD ACTIONS

1. Interpret RFFIT results in conjunction with the Rabies Laboratory that performed the RFFIT testing.
2. Minimal Criteria for Evidence of Previous Vaccination (both criteria must be met)
 - a) Statistically significant 2-fold titer increase (must be interpreted WITH Rabies Laboratory), AND
 - b) Day 5 titer is greater than 0.5 IU/mL
3. If both criteria (in 2.) are met and the Rabies Laboratory is in agreement, then the dog or cat is released from the strict quarantine and the 45 day owner Observation Period (from date of exposure) begins,
4. If either criteria (in 2.) are NOT met, the animal is managed as Unvaccinated (Category 2).