REQUEST FOR BOARD ACTION

ITEM NO. _33_

DATE OF MEETING: June 20, 2016

REQUESTED BY: Carolyn Moser, Health and Human Services Director

SHORT TITLE: Rabies Prevention Update

Nothing Compares

NORTH CAROLINA

NCALHD: Core Public Health Committee Meeting
2016 Rabies Compendium Changes
18 MAY 2016

Marilyn Goss Haskell, BS, DVM, MPH

Postexposure Management Dogs and Cats

THE CHANGES

1. Currently Vaccinated
(dogs, cats and ferrets)

- No Change – Immediately receive veterinary care, be administered a booster rabies vaccine, and kept under the owner's observation for 45 days.

2. Never Vaccinated

- Euthanasia: Unvaccinated dogs, cats and ferrets that are exposed to a rabid or suspected rabid animal should be euthanized.
- If the owner is unwilling to euthanize, the animal should immediately receive veterinary care and be administered a rabies vaccine.
- The strict quarantine period for dogs and cats has been reduced from six months to four months, following a review of likely incubation period data available from a few states. Longer incubation periods have occasionally been documented but are extremely rare.
- The strict quarantine period for ferrets remains six months due to a lack of data to support a change.

3. Overdue with Appropriate Documentation of Prior Rabies Vaccination (but not current)

Dogs and Cats:

- Immediately receive veterinary care, be administered a booster rabies vaccine, and kept under the owner's observation for 45 days.
- Published data demonstrates that previously vaccinated dogs and cats will mount a robust anamnestic response to a booster rabies vaccination despite being out-of-date.

4. Overdue with NO Appropriate Documentation of Prior Rabies Vaccination

Dogs and Cats:

- Immediate veterinary care.
- They can be treated as unvaccinated and receive a rabies vaccination followed by a 4 month strict quarantine.
- If the owner or guardian wants to avoid euthanasia or strict quarantine, the veterinarian may, in consultation with the local rabies control official, use a prospective serologic monitoring protocol to demonstrate whether the animal mounts an adequate anamnestic response to rabies vaccination.

Implications to Owners
2016 Compendium Changes

- Fewer dogs and cats euthanized

- More "never vaccinated" dogs and cats placed under quarantine (instead of euthanasia) for a shorter period of time (four months instead of six months)

- Decreased emotional and financial burden on owners (i.e., dogs and cats with appropriate documentation, if immediately boostered, would be observed 45 days at home with owner)

Implications to LHDs
2016 Compendium Changes

- Human Resources Requirements
  - Decrease
    - Fewer dogs and cats euthanized
    - Shorter quarantine periods
  - Increase
    - More quarantines to enforce
    - More interactions with veterinarians

- Decreased emotional burden, "compassion fatigue"
  - Decreased turnover of employees

Questions ?

References

1. National Association of State Public Health Veterinarians Rabies Compendium Committee 2016. Compendium of of Animal Rabies Prevention and Control, 2016. *J Am Vet Med Assoc* 2016;248:505-517.
2. N.C. Division of Public Health website. North Carolina Rabies Public Health Program Manual. Available at: http://epi.publichealth.nc.gov/cd/lhds/manuals/rabies/human.html. Accessed Apr. 28, 2016..
3. Moore MC, Davis RD, Kang Q, et al. Comparison of anamnestic responses to rabies vaccination in dogs and cats with current and out-of-date vaccination status. *J Am Vet Med Assoc* 2015;246:205–211.
4. North Carolina General Assembly website. North Carolin General Statutes. Chapter 130A. Available at http://www.ncga.state.nc.us/gascripts/statutes/statutelookup.pl?statute=130A. Accessed Apr. 28, 2016.

References

5. National Association of State Public Health Veterinarians Website. Rabies Vaccination Certificate, NASPHV Form 51. Available at http://nasphv.org/Documents/RabiesVacCert.pdf. Accessed on Apr. 28 2016.
6. Monroe MP, Yager P, Blanton J, et al. Rabies surveillance in the United State during 2014. *J Am Vet Med Assoc* 2016;248:777-788.

Potential Fiscal Impact: 2016 Rabies Compendium

Situation	Current 13OA-197 Control measures	2016 Compendium Control measures	2016 Compendium Fiscal Impact
Dog/cat is: 1) Exposed to rabies AND 2) Currently vaccinated against rabies	Provide booster dose of rabies vaccine within 5 days of exposure ($25.00)	Provide booster dose of rabies vaccine immediately after exposure ($25.00)	Equal to existing standard
Dog/cat is: 1) Exposed to rabies AND 2) Is overdue for rabies vaccine AND 3) Has documentation of prior rabies vaccination	A) Euthanasia ($150.00) or B) Immediate vaccination against rabies and place in six month quarantine ($25.00 + $3600.00)	Provide rabies booster dose within 96 hours of exposure, keep under owner observation for 45 days ($25.00)	A) ~$125.00 less expensive than existing standard (does not include emotional cost of pet loss). B) $3600.00 less expensive
Dog/cat is: 1) Exposed to rabies AND 2) Is overdue for rabies vaccine AND 3) Has NO documentation of prior rabies vaccination	A) Euthanasia ($150.00) or B) Immediate vaccination against rabies and place in six month quarantine ($25.00 + $3600.00)	A) Euthanasia ($150.00) or B) Vaccinate within 96 hours of exposure against rabies and place in four month quarantine ($25.00 + $2400.00) or C) Prospective serologic monitoring ($134.00 + $420.00 strict quarantine) a. IF evidence of prior vaccination then keep under owner observation for 45 days b. IF NO evidence of prior vaccination then euthanize or quarantine as above	A) Equal to existing standard B) $1200.00 less expensive C) $554.00 more expensive includes additional cost for strict quarantine until lab evidence finalized. Note this may obviate the need for either A or B above and, while a new expense, is considerably less expensive than either A or B above
Dog/cat is: 1) Exposed to rabies AND 2) Has never been vaccinated against rabies	A) Euthanasia ($150.00) or B) Immediate vaccination against rabies and place in six month quarantine ($25.00 + $3600.00)	A) Euthanasia ($150.00) or B) Immediate vaccination (within 96 hours) against rabies and place in four month quarantine ($25.00 + $2400.00)	A) Equal to existing standard B) $1200.00 less expensive

NOTE: All prices are approximate except endpoint titer serologic testing. Table is not meant to be inclusive of all recommendations but addresses what are likely to be the most common situations with the most fiscal impact.

Draft Proposed Language:

N/A

2016 Rabies Compendium Guidance Justification

Moore MC, David RD, Kang Q, et al. Comparison of anamnestic responses to rabies vaccination in dogs and cats with current and out-of-date vaccination status. J Am Vet Med Assoc 2015;246:205-211

- Results: All animals had an antirabies antibody titer ≥0.5 IU/mL, 5 to 15 days after booster vaccination. Dogs with an out-of-date vaccination status had a higher median increase in titer, higher median fold increase in titer, and higher median titer following booster vaccination, compared with dogs with current vaccination status.

Postexposure Management Justification

- Most (26/33) cats, regardless of rabies vaccination status, had a titer ≥12 IU/mL, 5 to 15 days after booster vaccination.

- Results indicated that dogs with out-of-date vaccination status were not inferior in their antibody response following booster rabies vaccination, compared with dogs with current vaccination status.

- Thus, we believe that post-exposure management of any previously vaccinated dog or cat exposed to a confirmed or suspected rabid animal should be the same, regardless of vaccination status.

Source: (*J AM Vet Med Assoc* 2015;246:205-211)

Postexposure Management Justification

- Specifically, we believe that appropriate post-exposure management for dogs and cats with an out-of-date vaccination status is immediate booster vaccination followed by observation for 45 days.

- If additional reassurance is needed, titers could be measured prior to and again 5 to 7 days after booster vaccination to determine whether an anamnestic response has occurred.

Source: (*J AM Vet Med Assoc* 2015;246:205-211)

Summary: Anamnestic Response

- Dogs and cats that have previously received a USDA-licensed rabies vaccine which was administered in compliance with the manufacturers label insert, will mount a strong anamnestic (or secondary immune) response within days following the administration of a booster USDA-licensed rabies vaccine. The paper provides evidence that this is true regardless of the number of vaccines received (even a single vaccine) or the amount of time that has elapsed since the last vaccine was administered.

Source: (*J AM Vet Med Assoc* 2015;246:205-211)