Rabies Prevention and Control in Florida, 2012

Bureau of Environmental Public Health Medicine

FLORIDA DEPARTMENT OF HEALTH
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Executive Summary

The purpose of this compendium is to provide recommended policies and procedures for rabies prevention and control in Florida. It is intended primarily for use by county health department staff, animal control specialists, veterinarians, health care providers and others with related responsibilities or interests. This publication, while produced and distributed by the Florida Department of Health, Division of Environmental Health, has been developed by a multidisciplinary *Florida Rabies Advisory Committee* that represents the major agencies, institutions and organizations involved with rabies prevention and control in the state.

Much of the information presented has been derived from materials previously published by the department as an operational manual (*Rabies and Animal Bite Investigation,* HRSM 150-10, 1987), an informational monograph (*Rabies in Florida,* Burridge, Sawyer and Bigler, 1986) and various policy statements issued over the past decade. Rabies Prevention and Control in Florida, 2008 is referenced as procedural guidelines in 64D-3 of the Florida Administrative Code. Procedural guidelines recommended in this document follow national standards published in the annual *Compendium of Animal Rabies Control* by the National Association of State Public Health Veterinarians. All material included on the management of human exposure and treatment of rabies is consistent with recommendations published in "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, "Humans Rabies Prevention - United States, 2008 Recommendations of the Advisory Committee on Immunization Practices" (MMWR Early Release 2008;57:1-28), and *Control of Communicable Diseases Manual* (Heymann, APHA, 2008,19th edition).

Specific areas addressed are coordination between relevant organizations, agencies and institutions; clinical descriptions of disease symptoms in animals and humans; protocols for proper handling, packing and shipping and testing of animals for rabies examination; confinement and management of biting animals; disposition of animals exposed to rabies; investigation of animal bites to people; human pre-exposure immunization and post-exposure prophylaxis; access to human rabies vaccine; and guidelines for epidemic control measures.

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Rabies Advisory Committee Position Statements

Translocation of Raccoons and Other Wild Mammals (updated January 2007)

The translocation of raccoons from Florida to Virginia in the early 1970s is considered a major factor responsible for the expanding epidemic of animal rabies in the eastern part of the country. Within the state, the translocation of nuisance raccoons accounts for epizootics in counties previously unburdened by animal rabies problems.

The Florida Rabies Advisory Committee supports the Florida Fish and Wildlife Conservation Commission rule (68A-24.005, Florida Administrative Code) that prohibits the transport of wild-trapped, live raccoons within, into, or from Florida unless authorized by FWC permit due to the high prevalence of rabies in this species. The Rabies Advisory Committee strongly discourages the translocation of other rabies vector species.

Further, translocation of any wild animal species raises the possibility of the spread of other zoonotic diseases (e.g. plague) and should be discouraged.

Multi-year Rabies Vaccinations for Dogs and Cats (updated January 2008)

The Rabies Advisory Committee adopts the recommendation of the National Association of Public Health Veterinarians' Compendium of Animal Rabies Control, 2008 in regard to 3-year rabies vaccines for dogs and cats:

"Vaccines used in state and local rabies control programs should have at least a 3-year duration of immunity. This constitutes the most effective method of increasing the proportion of immunized dogs and cats in any population."

Additionally, the Rabies Advisory Committee considers animals vaccinated by a licensed veterinarian using a United States Department of Agriculture-approved multi-year vaccine to be currently vaccinated in accordance with the schedule for which the vaccine is licensed. Local governments cannot mandate revaccination of currently vaccinated animals except in instances involving post-exposure booster for rabies (Florida Statutes 828.30).

Managing Feral/Free-roaming/Un-owned/Stray Cats (updated January 2007)

The concept of managing free-roaming/feral domestic cats (*Felis catus*) is not tenable on public health grounds because of the persistent threat posed to communities from injury and disease. While the risk for disease transmission from cats to people is generally low when these animals are maintained indoors and routinely cared for, free-roaming cats pose a continuous concern to communities. Children are among the highest risk for disease transmission from these cats.

While free-roaming cats can be vaccinated against rabies, this does not address the ongoing need to provide them health care, medications and prevention of other zoonotic diseases. Should one of these cats bite or scratch a person, it would need to be captured and observed for 10 days for signs and symptoms of rabies, even if it had been previously vaccinated. If the cat is not found, the person bitten would need to undergo rabies post-exposure treatment (average cost >$3,000 for previously unvaccinated individual).

In the past 10 years, cats were reported with rabies more frequently than dogs in Florida. The overwhelming majority of these cats were free-roaming animals. Human rabies in Florida was largely controlled by the removal of stray dogs when dog rabies was common during the first half of the 1900s.

Ideally, cats should have regular veterinary care and be maintained inside people's homes. Allowing cats to roam free is not in the best interests of the community's health and deliberate release or abandonment of feral or domestic cats is not sanctioned under Florida's conservation and cruelty laws. Domestic cats are not "indigenous" or native to Florida, and relocating and releasing non-native species into the wild is a violation of Florida Statute 379.231 and Florida Administrative Code 68A-4.005. Due to their adverse impact on wildlife, the Florida Fish and Wildlife Conservation Commission does not issue permits to make lawful either the release of cats to the wild or the establishment of feral/free-roaming cat colonies.

Exhibition, Sale, or Trade of Exotic or Wild Indigenous Mammals (updated June 2010)

The Rabies Advisory Committee condemns the practice of using most wild or exotic mammals for public contact activities (i.e., picture taking with Class II Wildlife).

Captive bred rabies vector species (e.g., raccoons, skunks, bats, foxes or bobcats) are being offered for exhibition, sale, or trade at a variety of venues (flea markets, pet fairs, exotic animal shows, swap meets, etc.). All persons in possession of these animals must be appropriately permitted by Florida Fish and Wildlife Conservation Commission (Florida Statute 379.3761) and the Rabies Advisory Committee recommends that both vendors and purchasers be pre-immunized against rabies.

Due to the high potential for bites or scratches and difficulty of follow-up investigations, the Rabies Advisory Committee recommends that county government monitor all events of this type. Florida Fish and Wildlife Conservation Commission law enforcement officers can seize illegally possessed wildlife including wild caught rabies vectors (Florida Administrative Code 68A-6.002).

CHAPTER 1

LEGAL AUTHORITY AND RESPONSIBILITIES

A. Background

The first known human case of rabies in Florida was recorded as "hydrophobia" on a death certificate of a 38 year-old man from Key West in 1881. Since then, a total of 73 human cases of rabies have been reported as Florida-acquired. Historical documents indicate that rabies was considered rare in 1894 but was becoming more common in northern Florida counties. In 1895, despite legislation giving authority to the state health officer to prevent rabies among dogs, the disease continued to increase. By the turn of the century, severe outbreaks of canine rabies were occurring in most major cities resulting in 14 human cases reported between 1911 and 1913. The last case of human rabies acquired in Florida was reported in 1948 when a man from Tampa was bitten by a neighbor's dog. Three additional cases have been reported in adult males in 1994, 1996 and 2004. All three were found to have been bitten by dogs while visiting either Haiti (1994, 2004) or Mexico (1996).

The disease in dogs was finally brought under control in the early 1950s as public concern stimulated passage of rabies vaccination and animal control ordinances in many Florida cities and counties. Vaccination of cats was not initially included in many of these local ordinances. However, cat vaccination is now required as part of a statewide rabies law passed by the legislature in 1994. Additionally, in 1998, rabies vaccination of ferrets was legislatively mandated. Rabies in raccoons and other wildlife is considered endemic throughout the state with four to six epizootics occurring sporadically each year. There was a dramatic rise in cases of animal rabies during 1996 and 1997 with over 250 cases reported each year. According to the Florida Department of Health (DOH)-Bureau of Laboratories (BOL), 128 confirmed rabid animals were reported in 2010. Raccoons, foxes and bats represent the greatest number of cases in wildlife. Among domestic animals reported, rabid cats outnumber any other domestic species and in recent years are similar in number to rabid foxes. Urban and suburban epizootics of raccoon rabies that spill over into foxes, bobcats, otters, and unvaccinated cats, dogs, horses and livestock present unique control problems for local authorities.

Rabies continues to be a feared zoonotic disease. Human exposure to rabies most frequently involves the bite of a rabid animal. Accurate figures are not available, but it is estimated that at least 60,000 Florida residents and visitors (especially children) are bitten each year by some type of domestic or wild animal. Dogs are the major source of animal bites in Florida, followed by cats, rodents, raccoons, bats, and other species. The threat of rabies transmission from animals to humans warrants the maintenance of a statewide surveillance system with thorough investigation and follow-up of all humans exposed to a suspected rabid animal. Successful control of this disease in any community ultimately depends upon a coordinated effort to: 1) immunize a large proportion of all dogs, cats and ferrets kept as pets; 2) manage domestic and wild nuisance and stray animals; 3) implement an effective public information campaign; and 4) provide continuous education and training for health care providers, animal control workers and employees of other allied agencies and organizations.

B. Legislative Authority (see Chapter 6, Attachment 3)

1. Chapter 381, Florida Statutes (F.S.), "Public Health": authorizes the DOH to ".... administer and enforce laws and rules relating to sanitation, control of communicable diseases, illness and hazards to health among humans and from animals to humans, and the general health of the people of the state." Records maintained as a result of rabies exposure investigations are confidential and made public only when necessary to public health (381.0031 (4), F.S.).

2. Chapter 64D-3, (64D-3.040 (12)) Florida Administrative Code (*F.A.C.*), "Procedures for Control of Specific Communicable Diseases": details general DOH polices and procedures related to rabies control including, but not limited to the following: 1) requiring that animal bites to humans by a potentially rabid animal be reportable to the county health officer, 2) establishing authority for quarantine, outlining quarantine requirements and specifying conditions for the transportation and removal of quarantined persons and animals, and 3) outlining procedures for preventing rabies in humans, managing animals involved in bite incidents and declaring area-wide quarantines.

3. Chapter 474.203(5) (a), F.S., "Veterinary Medical Practice": states that ".... only a veterinarian may immunize or treat an animal for diseases which are communicable to humans and which are of public health significance."

4. Chapter 828.30, F.S., "Cruelty to Animals": requires that all dogs, cats and ferrets shall be vaccinated by a licensed veterinarian against rabies with a United States Department of Agriculture (USDA) - approved vaccine. The cost of the vaccine shall be borne by the animal's owner. Thereafter, the interval between vaccinations shall conform to the vaccine manufacturer's directions." It also provides for exemptions, defines requirements for veterinarians to report essential information to animal control agencies and defines penalties for violation of the law.

5. Chapter 585, F.S., "Animal Industry": requires that the Florida Department of Agriculture and Consumer Services (FDACS), Division of Animal Industry is authorized to...establish, maintain, and enforce quarantine areas within the state, or the entire state...to protect animals in the state.

6. Chapter 379, F.S., "Wildlife" and Chapter 68A, *F.A.C.*, "Florida Wildlife": outlines the basic authority of the Florida Fish and Wildlife Conservation Commission and responsibility relative to wildlife.

7. Most counties and some municipalities conduct rabies control programs under the auspices of animal control ordinances that may have more strict requirements than state statutes.

C. Florida Department of Health Responsibilities

The effectiveness of the rabies control program is dependent upon the coordinated efforts of several official agencies in collaboration with allied organizations, institutions and associations. Specific responsibilities of the Florida Department of Health (DOH) represent official policies and

procedures. Those presented for other agencies and allied providers only represent suggested activities that might appropriately augment any collaborative community rabies control initiative.

1. County Health Departments (CHDs)

Contact: local county health departments www.doh.state.fl.us

Statutorily (Chapter 381, F.S. and Chapter 64D-3, *F.A.C.*), the CHD Director/Administrator has primary responsibility for the management of human exposures to rabid or suspect rabid animals and control of animal rabies including quarantine. CHDs may elect to engage in memoranda of agreement with other agencies to transfer certain responsibilities and activities. Collaborating agencies may include animal control, the Fish and Wildlife Conservation Commission (FWC), sheriff's offices, the local veterinary community, the Department of Environmental Protection (DEP) and other CHDs.

- Investigate human and pet rabies exposure incidents. Assure that health care providers of exposed persons are informed about appropriate treatment recommendations, in consultation with the DOH Division of Environmental Health when necessary. Maintain proper records as required.
- Conduct an epidemiological investigation in every instance where a laboratory report indicates a positive case of rabies to elicit all possible persons or animals exposed.
- Ensure that local rabies control ordinances are established and updated as appropriate.
- Ensure, working with private health care providers, that rabies vaccine and human rabies immunoglobulin (HRIG) is available in the community within 24h of the rabies exposure diagnosis.
- Collect and maintain confidentiality of animal bite reports and related investigation notes.
- Report all cases in which a person receives or is recommended to receive post-exposure prophylaxis (PEP) via Merlin to the Bureau of Epidemiology.
- Report all monkey bites that could result in Herpes B virus infection via Merlin to the DOH Bureau of Epidemiology.
- Segregate, quarantine, and destroy domestic and wild animals having or suspected of having rabies.
- Facilitate human rabies PEP vaccinations for those in need.
- Arrange for specimen collection and expedited transportation of specimens to the DOH Bureau of Laboratories for analysis.
- Continually assess rabies trends, and when appropriate, declare a community "Alert" or "Quarantine," and conduct a public information campaign.
- Inform the Bureau of Environmental Public Health Medicine (BEPHM) of cases involving quarantine or testing of unvaccinated livestock in a timely manner.
- In cooperation with other parties as necessary, assure that confined animals are kept in isolation in safe, sanitary, and humane conditions.
- As appropriate, facilitate pre-exposure vaccination of those at high risk of rabies exposure.

In some counties, the CHD Director/Administrator has delegated responsibility for carrying out certain portions of this responsibility (such as collection of animal bite reports, investigation of bite

incidents, and confinement of biting dogs and cats) to local animal control or other appropriate agencies through the development of local ordinances and intergovernmental agreements (Chapter 6, Attachment 7).

2. Bureau of Environmental Public Health Medicine (BEPHM)
Contact: (850) 245-4299

- Develop appropriate regulations and procedures and update standards for statewide human rabies prevention and control activities.
- Provide technical assistance (such as advice regarding rabies post-exposure prophylaxis, animal quarantine, risk assessment, and animal testing) to CHDs.
- Coordinate animal exposure investigations as appropriate with FWC and the FDACS, Inform FDACS Animal Industry of cases involving quarantine or testing of unvaccinated livestock in a timely manner.
- Approve rabies quarantines.
- Assist in coordination of interstate activities for the follow-up of animal bite and suspected rabies cases.
- Collect and collate data to monitor and evaluate program's effectiveness in preventing human rabies and cost of inappropriate post-exposure treatment.
- Conduct statewide rabies surveillance.
- Submit reports to the Centers for Disease Control and Prevention (CDC) on the number of animal rabies cases identified statewide and provide periodic rabies reports and information to CHDs.
- Issue press releases and maintain internet websites with information related to rabies, rabies quarantine, location of outbreaks, and rabies incidents of public interest.

Serve as the liaison for: 1) other state agencies for the implementation of cooperative programs; 2) other states for the exchange of information and follow-up of animal bite incidents and rabies; and 3) other countries [especially those in the Caribbean, Central and South America, through the Pan American Health Organization and the World Health Organization (WHO)], for the exchange of information and follow-up of animal bite incidents and rabies.

- Inform FDACS of cases involving domestic animals in a timely manner.
- Convene annual meeting of the Florida Rabies Advisory Committee (RAC) to update state compendium.

3. Bureau of Laboratories
Contact: see Attachment 16 for more information

The BOL, with locations in Jacksonville, Miami, Pensacola, and Tampa are the sole source of rabies diagnostic testing in Florida. Testing for surveillance purposes is available through other DOH approved sources.

- Examine brain specimens by use of the Direct Fluorescent Antibody (DFA) technique (the CDC standard rabies diagnostic technique). Conduct monoclonal antibody (MAB) testing on samples from positive terrestrial mammals that are not analyzed using molecular typing to identify rabies variants in the state.

- Enter results into Merlin within one working day. Provide hard copy reports to agencies not using Merlin by mail or fax within one working day.
- Report to submitting agency immediately by telephone any animal that tests positive for rabies or unsatisfactory for testing.
- Report to BEPHM on a monthly basis, the total number and species of all specimens examined (positive and negative).

4. Bureau of Statewide Pharmaceutical Services (BSPS)

Contact: (850) 922-9036; after-hours for County Health Departments: 850-445-9446

- **In the event of an unanticipated local or industry shortage, BSPS will order**, stock, and ship human vaccine and human rabies immune globulin (HRIG) to CHDs on request within one working day of the request.
- Monitor emergency stockpile for inventory control and dating.
- Store and ship as per manufacturer's guidelines.
- Obtain payment for vaccine and HRIG from CHDs
- Prepare and disseminate advisories to CHDs and BEPHM regarding the availability or recall of rabies pharmaceuticals or changes in BSPS policies related to rabies pharmaceuticals.

D. Responsibilities of Other Agencies and Contributions by Allied Providers

1. Florida Animal Control Agencies and Florida Animal Control Association (FACA)

Contact: 866-303-3222

Disparate levels of funding, coupled with a lack of statewide statutory mandates, create unique situations for each county. Activities for local animal control include, but are not limited to: 1) coordination of licensure programs; 2) enforcement of vaccination requirements; 3) initiation of home confinement; and 4) provision of confinement for animals for which home confinement is not suitable. Larger units may be involved in oral vaccine programs or low cost veterinary services. In all cases, the county, in concert with the local veterinary community and the CHD share a joint responsibility for dissemination of accurate and timely rabies information. In quarantine situations, counties may assist in the establishment of vaccine clinics as part of an overall epizootic situation.

FACA has established uniform standards for personnel, training, and facilities. These standards should be adopted by animal control agencies. Local (city/county) animal control offices maintain regular liaison with the DOH's BEPHM for the purpose of coordinating and unifying statewide prevention and control efforts and disseminating information related to rabies. This is achieved through periodic meetings with members of the Association, local meetings with concerned groups, correspondence and telephone calls. By arrangement with the local CHD, local Animal Control Units may be responsible for:

- Collecting and managing information relating to suspect rabies exposures through interagency agreement with CHDs (Chapter 6, Attachment 6). All information collected on these reports is confidential, exempt from the provisions of s.119.07 (1), F.S (381.0031, F.S.).

- Capture/confinement of domestic animals and, in some areas, the capture and euthanasia of rabies vector species involved in potential exposure incidents or as deemed necessary by the animal control authority.
- Enforcing area quarantine, including euthanasia of rabies vector species, established by the local CHD.
- Advising the local CHD of individual home confinement and the release date.
- Assisting or providing decapitation services for laboratory analysis.

2. Florida Fish and Wildlife Conservation Commission (FWC)
Contact: (850) 488-6253

The FWC's authority and responsibilities are derived from the Florida Constitution (Article IV, Section 9), state statutes and executive orders of the Governor. The majority of the state statutes that pertain to the FWC are found in Chapter 379, F.S. The mission of the FWC is "managing fish and wildlife resources for their long-term well-being and the benefit of people." The agency's authority over the regulation of wildlife includes taking for recreational and commercial uses, as well as possession of wildlife for exhibition, sale, or personal use. FWC regulations ban people from intentionally feeding raccoons, bears, foxes, and sand hill cranes. Violators can be charged with a second-degree misdemeanor, punishable by a $500 fine and 60 days in jail.

The FWC regulates the wildlife industry and has specialized captive wildlife investigators to perform inspections of zoos, circuses, importers, exporters, venomous snake dealers, alligator farms, pet shops, and exotic bird dealers. Inspectors seize illegally possessed wildlife, recapture captive wild animals that have escaped from zoos and private animal keepers, and investigate cases involving wildlife possession to ensure appropriate permits have been acquired. Other FWC personnel that may become involved with rabies/bite issues include law enforcement officers and wildlife biologists, and wildlife veterinarians.

This agency provides a number of wildlife-related services including:

- Response to requests from the CHD to assist in the seizure of captive wildlife for rabies examinations. The FWC becomes involved when such wildlife has bitten or scratched individuals (other than the immediate family) and the owner/possessor refuses to surrender it to health authorities. Most common wildlife, such as raccoons and skunks, may only be possessed under permit from the FWC (68A, *F.A.C.*). Permit requirements specify that wildlife must be borne in captivity (raccoons, skunks, fox, bats, white tail deer), and held safely and in a manner that does not pose a safety threat to non-family members (68A-6.002. *F.A.C.*). **All permits for species at high risk for rabies as specified by Rabies Prevention and Control in Florida, 2010 (Chapter 3, Section C) include a warning to pet owners that the animal must be tested for rabies if it bites a person** (Chapter 6, Attachment 5).
- Assistance with the destruction of rabies vector wildlife in limited situations. The FWC will attempt to respond when such wildlife is acting in an aggressive manner and has attacked, or presents an immediate physical threat to citizens. (The agency cannot respond to reports of the mere presence of rabies vector wildlife in neighborhoods during rabies alerts or otherwise.)
- Assistance with management of outbreak/epidemic control by disseminating rabies-related information to persons permitted to possess or handle wildlife. Information could include

prohibitions, proscriptions and/or sanctions that may be imposed by CHDs (i.e., translocation issues, transport of wildlife to rehabilitators, prohibition of feeding wildlife).

- Assistance with the dissemination of rabies-related information to hunters, trappers, nuisance animal control agents, zoos, game farms, hunting preserves and fox/coyote enclosure owners.
- Limited technical assistance to cooperators regarding wildlife capture and handling methods and techniques.
- Assistance in providing locations of wildlife permit holders licensed by the FWC in the various counties.

3. Florida Department of Agriculture and Consumer Services, Division of Animal Industry
Contact: (850) 410-0900

This agency cooperates in the confinement and disposition of farm animals suspected of infection with, or exposure to, rabies. FDACS also requires that dogs and cats imported into the state be accompanied by a health certificate stating that the dog or cat is free from symptoms of communicable disease, and did not originate within an area under quarantine for rabies (5C-3.009, *F.A.C.*). The Department is responsible for overall assistance and management of disease issues of livestock (including horses) and show/zoo animals. Responsibilities include:

- Management of livestock in quarantine-delineated areas.
- Enforcement of quarantine, as needed.
- Approval of rabies vaccines and tests for animals
- Management of disease issues for show animals and zoo populations.
- Establishment of restrictions of importing animals known to have rabies into the state.

4. Florida Department of Environmental Protection (DEP), Division of Recreation and Parks
Contact: (850) 245-3104

Within the department, the Division of Recreation and Parks (Florida State Parks) and the Office of Coastal and Aquatic Managed Areas (state aquatic preserves and National Estuarine Research Reserves) are responsible for controlling populations of rabies vectors (e.g., raccoons, foxes and feral cats) in public use areas, particularly during epizootics, to reduce the risk of exposure to visitors. County and city parks and recreation officials are expected to follow suit, especially during quarantine situations in high use areas.

DEP discourages the feeding of wildlife and also provides information to the public regarding avoidance of animal bites, encourages visitors to report bite incidents to rangers and reports rabies outbreaks and animal bite incidents to the appropriate CHDs.

5. Florida Veterinary Medical Association (FVMA), Florida Medical Association (FMA) and Florida Osteopathic Medical Association (FOMA)
Contact: FVMA (800) 992-3862, FMA (800) 762-0233, FOMA (850) 878-7364.

The FVMA maintains liaison with the DOH's BEPHM for dissemination of information concerning rabies guidelines through its publications. Veterinarians are responsible for reporting potentially rabid animals or noting trends in their respective communities. Further, veterinarians play

the primary role in maintaining a high level of vaccinated pets. In rabies quarantine situations, the private community through their local association may assist in the provision of vaccine clinics.

The FMA and FOMA can assist by educating hospital emergency rooms and primary care physicians/clinics to promptly report suspected human exposures to rabies to the CHD and to provide appropriate post-exposure prophylaxis.

6. State and Local Law Enforcement (includes: Florida Highway Patrol and county sheriffs' offices)
Contact: local agency; Florida Highway Patrol (for local offices: http://www.flhsmv.gov/offices/)

When required, state and local law enforcement agencies will provide assistance to the County Health Officer as needed to fulfill the rabies control requirements detailed in Chapter 64D-3, *F.A.C.* Police dogs that bite people are exempted from confinement provided that they have current rabies vaccination that was administered by a licensed veterinarian (767.16, F.S.).

7. The Centers for Disease Control and Prevention (CDC)
Contact: (404) 639-1050

As an agency of the US Department of Health and Human Services, this federal agency maintains liaison with the DOH for the disposition of dogs arriving in Florida from foreign countries, provides current information about rabies in foreign countries and other states, coordinates consultations with health care providers, veterinarians and the general public regarding appropriate pre- and post-exposure immunization procedures and other prevention and control measures. Technical assistance includes: consultation and assistance with difficult rabies prophylaxis and risk assessments; ante-mortem laboratory testing for suspected human rabies cases; national rabies testing guidelines, and conducting molecular testing for rabies virus variants to characterize epizootics.

8. U.S. Department of Agriculture (USDA) APHIS (Animal and Plant Health Inspection Service)
Contact: (352) 333-3120

USDA APHIS Veterinary Services (VS) is the federal agency which licenses animal rabies vaccine and cooperates in the confinement and disposition (slaughter or destruction) of farm animals with suspected or confirmed exposure to rabies. USDA APHIS Wildlife Services (WS) coordinates the national oral rabies vaccine (ORV) program.

9. U.S. Department of Interior (Fish and Wildlife Service, Park Service, Forest Service)
Contact: (202) 208-3100

This federal agency manages multiple use resources, including wildlife, in concert with or separate from the FWC. Regulations apply to minimize risk of exposure by potentially rabid wildlife in campgrounds and other high-traffic public use areas.

10. Humane Society Organizations
Contact: local organization

While the mission of humane organizations is to prevent cruelty to animals, these are important groups involved with community rabies control. Some municipal animal shelters are operated by local humane society chapters. These shelters may be responsible for housing dogs or cats for rabies observation when potential human exposures occur. The humane societies may also provide animal control services via contract thereby playing an integral role in enforcement activities associated with rabies vaccinations, animal bite investigations, and confinements. They also contribute to the control of stray dog and cat populations. In this regard, shelter policies must conform to state and local rules and regulations related to rabies prevention and control.

11. Kansas State University (KSU) Rabies Laboratory
Contact: (785) 532-4483; http://www.vet.k-state.edu/depts/dmp/service/rabies/index.htm

Available for fee based animal rabies surveillance testing with consent of the appropriate CHD and provides sequencing data on select diagnostic samples as a public health service.

12. University of Florida
Contact: http://www.ufl.edu/

Conduct research to better understand rabies ecology in Florida.

13. World Health Organization (WHO) and Pan American Health Organization (PAHO)
Contact: WHO http://www.who.int/rabies/en/
PAHO (202) 974-3000; http://www.paho.org/English/HCP/HCV/ZNS/rabia.htm

These international health agencies provide reciprocal assistance in the surveillance, confinement and recommendations/guidelines for follow-up of animals involved in bites to humans. The World Health Organization has been collecting rabies data electronically on a yearly basis through "Rabnet", an interactive information system able to generate interactive maps and graphs using human and animal rabies data: http://www.who.int/rabies/rabnet/en/

CHAPTER 2

RABIES VIRUS GENERAL INFORMATION

A. Virus Characteristics

Rabies is caused by a neurotropic (nerve-loving) virus of the genus *Lyssavirus* in the family *Rhabdoviridae* that occurs in most countries throughout the world. The bullet-shaped rabies virion consists of a helical ribonucleoprotein capsid enclosed within a lipoprotein envelope covered with glycoprotein projections. The virus is sensitive to ether, sunlight, heat, strong acids/bases and formalin and is not persistent in the environment.

The virus is usually transmitted to people when they are bitten or have an open wound or mucous membrane exposed to the infectious saliva of a rabies vector. The virus initially replicates in muscle, connective tissue, or nerves at the site of inoculation with subsequent entry into nerve endings and on to the spinal cord and brain. The virus then spreads from the brain to the salivary glands and other organs. Infection of the salivary glands produces large volumes of virus in the saliva that, in turn, promotes opportunities for continued virus transmission. Infected animals can transmit rabies virus not only while clinically ill, but also for a number of days prior to onset of symptoms. Incubation periods are variable in all species. The majority of cases develop clinical disease 20-60 days after exposure and almost all cases occur within 6 months of exposure, although more prolonged incubation periods have been reported in both animals and humans.

Morbidity (illness) periods in most animal species are typically short, lasting only a few days to about two weeks. Studies have shown that some animals can survive natural infection and antibodies to rabies virus have been isolated from the blood of asymptomatic raccoons captured during urban epizootics in Florida.

Other rabies-related viruses in two phylogroups (I and II) have been isolated in Africa, Europe, Australia and Eurasia. Bats appear to act as the primary reservoir for these viruses except for Mokolo Virus, which may be maintained in shrews. Rare human deaths have been associated with several of these viruses. Rabies vaccine and immunoglobulin will cross-protect against other *Lyssavirus* members in phylogroup I, but do not appear to neutralize viruses in phylogroup II. Currently there is no commercially available post-exposure treatment available for phylogroup II lyssaviruses.

B. Clinical Signs

Rabid animals exhibit certain clinical signs that are typical of rabies, with variations peculiar to carnivores, ruminants and bats. This chapter presents information regarding the animal species that elicit most rabies-associated questions. Persons requiring more detailed information on these and other species are referred to "Rabies in Florida" (Burridge, Sawyer, and Bigler, 1986). **Due to a number of factors including exposure dose, virus strain and host immunity, incubation periods may occasionally extend beyond ranges provided in this chapter.** It is also important to consider that noticeable signs of rabies (i.e., a morbidity period) in wild animals may be lacking. Following the

general rule that all warm-blooded animals are potentially susceptible to the disease should lead to due consideration of rabies in all such cases.

Signs: The signs described below for a series of species are what have been observed in a large number of animals. It is extremely rare to observe all signs in a single infected animal. Any clinical suspicion of rabies must be confirmed by laboratory examination

1. Dogs

- Virus excretion can begin 4 days before onset of illness.

- The incubation period (time from infection to clinical signs) for dogs ranges from 9 to 182 days, with most cases showing clinical disease (morbidity) within 21 to 56 days.

- The morbidity period (time from onset of clinical signs to death) is usually 1 to 7 days.

  - The "prodromal phase" of the morbidity period is generally 2 to 3 days' duration. The dog may exhibit a subtle change in temperament with a slight rise in temperature, dilation of pupils and a sluggish corneal reflex.

  - The "excitatory phase" of the morbidity period is 1 to 7 days' duration. The dog becomes increasingly irritable, restless or nervous. Photophobia (avoids light), hyperesthesia (increased sensitivity to stimulation), and pica (eats unusual items) may be present. At this time, the dog is very dangerous because of its tendency to bite anything that is encountered.

  - Signs of the impending "paralytic phase" soon become apparent with a change in bark (due to paralysis of laryngeal muscles) and difficulty in swallowing (due to spasms and eventual paralysis of pharyngeal muscles), leading to drooling of saliva. Toward the end of this phase, convulsive seizures and muscular incoordination develop, as well as a "far- off" look in the eyes. The paralytic phase of the morbidity period is usually from 1 to 7 days. Most dogs have a predominant excitatory phase ("furious rabies") but some will seemingly progress rapidly into the paralytic phase ("dumb rabies"). Paralysis rapidly becomes generalized, and the animal slips into a coma and soon dies from respiratory arrest.

- Because there is no readily available test to determine if a dog is the product of a wolf cross, owners who represent their animals as "part wolf" will be subjected to managing the animal differently than dogs. No information is available on the incubation and morbidity periods of rabies in wolf-dog crosses.

2. Cats

- Virus excretion can begin 4 days before onset of illness.

- The incubation period for cats typically ranges from 9 to 51 days, with most cases showing clinical disease within 14 to 21 days.

- The morbidity period is generally from 1 to 8 days.

- The "prodromal phase" of the morbidity period is 1-day duration. Low-grade fever and a pronounced change in behavior characterize this phase; the cat may also become unusually affectionate or withdrawn.

- The "excitatory phase" of the morbidity period is 2 to 4 days' duration. It may begin with increased accumulation of saliva, slight incoordination or muscular tremors, often accompanied by nervousness, aggressiveness, and irritability. At this time the cat may be particularly dangerous, often attempting to bite and scratch anything encountered.

- The "paralytic phase" of the morbidity period is 3 to 4 days' duration. Difficulty in swallowing develops, causing the animal to drool saliva; convulsions may occur at this point. The cat develops ascending and generalized paralysis; coma and death soon follow.

3. Raccoons

- The incubation period ranges from 10 to 107 days.

- The morbidity period is usually 1-13 days. The most common type of abnormal behavior observed in raccoons is aggressiveness. Other clinical abnormalities noted in rabid raccoons include incoordination leading to an inability to walk or unusual behavior such as wandering aimlessly in daylight, and showing no fear of dogs or humans. Although many raccoons die of rabies, serologic testing of healthy raccoons indicates some develop immunity to the virus and survive the infection.

- It is possible raccoons, as other animals, shed virus before developing symptoms of the disease. On several occasions, rabies virus has been isolated from the brain and salivary glands of normal acting free-roaming raccoons trapped during urban outbreaks (Burridge, Sawyer, and Bigler, 1986).

4. Bats

- The incubation period ranges from 16 to 209 days.

- The morbidity period is usually 4 to 17 days. Infected bats may die from rabies with or without evidence of neurologic disease (i.e., may show no signs of illness at all before death).

  - Behavioral changes associated with rabies may differ markedly between colonial and non-colonial species of bats. Solitary non-colonial species typically become furious and may attack without provocation, whereas most colonial species, especially the highly colonial free-tailed bats, do not usually become aggressive.

  - While bats commonly transmit rabies virus by biting, the bite wounds may be small and difficult to recognize. Rare airborne transmission of rabies virus has occurred in two Texas caves heavily populated by infected bats.

5. Foxes and Coyotes

- Foxes are extremely sensitive to rabies virus and the incubation period in both gray and red foxes generally ranges from 9 to 109 days.

- The morbidity period in foxes is usually 1 to 15 days. The behavior of rabid foxes usually conforms to either a pattern of aggression or confusion and their normal caution toward humans is lost. The persistence and success of the attack of an aggressive fox is determined by its condition, since in many cases the animal is too weak or uncoordinated to launch an effective attack. The fox that exhibits confusion as a predominant sign bites people and other animals only when approached by them.

- No information is available on the incubation and morbidity periods of rabies in Florida coyotes. In 1994, an outbreak of rabies in foxhunting dogs was reported from Alachua County[1]. These animals were diagnosed with the coyote strain of rabies, presumably from coyotes illegally translocated from South Texas. Since then, no other rabid animals were reported with this rabies strain in Florida.

6. Ferrets, Skunks and Otters

The family of *Mustelidae* includes skunks, otters, minks, weasels and ferrets. In Florida, wild skunks and otters become involved in outbreaks of raccoon rabies as incidental hosts and vectors. Mustelids in general are considered to be highly susceptible to, and capable of, transmitting rabies if infected.

Ferrets sold as pets in the United States are derived from European stock, which have been domesticated for centuries and selectively bred for productivity and behavior traits. The popularity of the ferret as a personal pet has led to increased biting incidents. This is a cause of concern because owners in some circumstances allow animals to either escape or free range in their yards or neighborhoods. As a result of their exposure to wildlife, several have been diagnosed with rabies in the United States with the latest from Brevard County, Florida in 1996. The CDC concluded a series of infection experiments using several strains of rabies virus to evaluate incubation periods, viral shedding and transmission in the domestic ferret.[2] Based upon the results of this research and the availability of an approved vaccine, it is required by Florida Law that ferrets be vaccinated for rabies, and are managed in the same way as dogs and cats.

- Virus excretion can begin 2 days before onset of illness.

- The incubation period for ferrets ranges from 10 to 96 days.

- The mean morbidity period for ferrets ranges 1 to 10 days. Clinical signs included ataxia, lethargy, fever, paresis, and aggression.

- The incubation period for skunks ranges from 12 to 177 days. CDC[3].

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[1] CDC. Translocation of coyote rabies – Florida, 1994. MMWR 1995; 44(31):580-581,587.
[2] Niezgoda M, Briggs DJ, Shaddock J, Rupprecht CE. Viral excretion in domestic ferrets (Mustela putorius furo) inoculated with a raccoon rabies isolate. Am J Vet Res 1998 Dec;59(12):1629-32
[3] Human rabies -- Alabama, Tennessee, and Texas, 1994. MMWR 1995; 44:269-72.

- The morbidity period for skunks is usually from 1 to 18 days. Anorexia is one of the most reliable indicators of the onset of clinical rabies in this species. The virus does not infect the scent glands of skunks and, consequently, rabies is not transmitted via their musk spray. Rabid skunks often become extremely aggressive, reacting violently to external stimuli such as sound or movement. During such reactions, skunks will bite and hold on to their victims tenaciously. Paralysis and coma commonly follow these furious signs before death. A small proportion of rabid skunks will show neither furious nor paralytic signs of rabies, but may be just found dead.

- No information is available on the incubation or morbidity periods for rabies in Florida otters.

7. Horses and Mules

- The incubation period is generally short although periods up to six weeks have been recorded.

- The morbidity period is usually 5 to 8 days.

  - "Prodromal" signs of the morbidity period include low-grade fever, behavioral changes, and rubbing or biting at the site of exposure.

  - Rabid horses usually show a marked "excitatory phase" lasting from one to four days. They become restless, grind their teeth, foam at the mouth, whinny as if in great pain, strain at the bowels, and show signs of severe colic. They may lash out with incredible fury at any perceived threat or restraint and may exhibit an increase in sexual excitement. In some horses, the excitatory phase may be absent or very transient. These animals often exhibit a paralytic clinical syndrome akin to dumb rabies in dogs and very similar to that seen in arboviral equine encephalitis.

  - The "paralytic phase" of the morbidity period is 1 to 4 days. As paralysis develops, rabid horses fall down repeatedly, finally remaining down and thrashing their legs prior to death.

- It is highly recommended that horses be immunized by a licensed veterinarian against rabies annually with an approved vaccine (see Chapter 6, Attachment 8), both for the protection of the animal and to allow free movement of the horse into Florida. The American Association of Equine Practitioners (AAEP) now categorizes rabies as a core equine vaccine. If a horse is unvaccinated and exposed to a rabid animal while out-of-state, it must complete the required 6-month quarantine before it is allowed transport into Florida.

8. Rodents and Rabbits

Rabies is uncommon in most rodents although they are susceptible to the disease. Infection is seen most often in large rodents such as woodchucks. Small rodents such as mice, rats, and squirrels rarely survive attacks from rabid animals. Prior to 1938, five cases of rabies had been reported in rodents in Florida. From 1957 through 1983, 17,487 squirrels, rats, and mice were examined for rabies in Florida; only one was found to be rabid. The positive case was a flying squirrel collected from Pinellas County in 1961. In 2001, the first rabid beaver was reported in Florida

Rabies is very uncommon disease in pet rodents. However, it is important to avoid contact between pet rodents and wildlife. In 2004, raccoon-variant rabies was found in pet rabbits (7 cases) and a guinea pig in New York State; all rodents had contacts with raccoons while caged outdoors.[4]

- The response of rodents to rabies virus has been investigated in five species and it was found that the majority (55-100%) of animals inoculated with the virus died of rabies, with incubation periods ranging from 10-86 days.[5]

- The clinical signs of rabies were markedly different between squirrels and the other rodents in the Winkler study. About half of the squirrels died without demonstrable clinical illness. The other half died after exhibiting signs of furious rabies for approximately one day. In contrast, the rats and mice exhibited progressive ascending paralysis of 3-6 days duration without any signs of aggressive behavior.

9. Monkeys and Other Non-Human Primates (NHPs):

Monkeys and other NHPs are believed to be relatively resistant to rabies infection similar to humans and considered low risk in captive-borne vaccinated NHP with limited exposure risk. However, a rabies variant has been identified in marmosets in Brazil demonstrating that this group of animals is not entirely without risk for rabies infection.[6] Bites should be evaluated on a case by case situation. Herpes B virus prophylaxis should be considered for all bites caused by macaque monkeys or other NHP in close contact with macaques (http://www.cdc.gov/herpesbvirus/index.html). Health status of the animal should be determined by the animal's regular veterinarian or another veterinarian familiar with NHP's. All monkey bites should also be reported to the appropriate regional FWC Captive Wildlife Law Enforcement Investigator as they are the permitting entity.

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[4] Eidson M, Matthews SD, Willsey AL, Cherry B, Rudd RJ, Trimarchi CV. Rabies virus infection in a pet guinea pig and seven pet rabbits. J Am Vet Med Assoc. 2005 Sep 15; 227(6):932-5, 918.

[5] Winkler WG, Schnieider NJ, Jennings WL. Experimental rabies infection in wild rodents. J Wildl Dis. 1972; 8:99-103.

[6] Favoretto SR, de Mattos CC, Morais NB, Alves Araújo FA, de Mattos CA. Rabies in marmosets (*Callithrix jacchus*), Ceará, Brazil. Emerg Infect Dis. 2001 Nov-Dec;7(6):1062-5.

CHAPTER 3

RABIES: ANIMAL MANAGEMENT

The DOH BOL, then the State Board of Health Laboratory, first documented animal rabies in Florida in 1905. During the first quarter of the 20th century, rabies in dogs was a major problem. When a reliable vaccine became available in the 1940s, cases in dogs and cats decreased dramatically. Since 1960, only sporadic canine cases have been reported, averaging 3 per year. Still, since the late 1980s, the number of cases in cats has been increasing while the trend in dogs has remained the same. Currently the number of rabid cats in Florida is similar to the number of fox rabies cases. Cats were not included in many of the rabies vaccination and animal control ordinances of the 1940s, but attention is now being focused on including them in prevention programs. A state law enacted in 1994 requires that dogs and cats be vaccinated against rabies. In 1998, the legislation was modified to require ferret vaccination.

Among wildlife, raccoons, bats, and foxes are the animals most frequently diagnosed with rabies in Florida. The first reported case of rabies in raccoons occurred in 1947 in Brevard County. Raccoons are now the main rabies reservoir species in Florida. The widespread distribution of this species, its ability to thrive near high-density human populations, its gregarious behavior, and the lack of consistently recognizable signs of disease in the raccoon make it a constant public health hazard. The other rabies reservoir in Florida are bats. Rabies in insectivorous bats in the United States was first recognized in 1953 in a yellow bat from Hillsborough County. Signs of the disease in this species may not initially be visible. Although the fox is not considered a rabies reservoir in Florida, they are highly sensitive to the virus and infections are common in this species due to spillover from raccoons. In the 1950s, outbreaks of fox rabies in the Panhandle were common, but in the 1960s, cases in foxes declined in this area. Since then, only sporadic cases in foxes associated with “spillover” during raccoon epizootics have been reported. However, since 1993, cases of rabies in gray foxes increased throughout the state and on average now account for approximately 15% of rabies cases.

In July 1998, the DOH BOL-Jacksonville began monoclonal antibody (MAB) testing of rabies positive specimens from terrestrial mammals. MAB tests identify the strain of rabies virus, an important tool in describing the epidemiology of rabies. MAB testing confirms that the dominant rabies virus line in terrestrial animals in Florida is the raccoon strain. In more recent years the CDC and Kansas State Rabies Laboratory have provided molecular typing for many of the Florida samples.

Analysis of DOH bat rabies data collected from 1953-1973 compared with similar data collected from 1994-2006 demonstrated changing bat rabies epidemiology in Florida. Historically, over 75% of bats testing positive for rabies in Florida were *Lasiurus intermedius,* the northern yellow bat. Current DOH BOL data suggest that *Tadarida brasiliensis,* the Brazilian free-tailed bat, is now the bat species most likely to be involved in human and domestic pet rabies exposures. There are insufficient data to conclusively determine whether the increasing number of *T. brasiliensis* rabies cases are due to increased human contacts or increased rabies prevalence within the species. However, in a rapidly developing state such as Florida, this colonial species’ ability to utilize roost sites in man-made structures, compared with the less adaptable solitary, tree-roosting *L. intermedius* suggests habitat availability may be favoring *T. brasiliensis,* increasing chances of bat to human contact and possible rabies exposure. Data analyses also demonstrated that although bat rabies cases still typically

peak in August, cases are seen more commonly in the winter than was reported in the past, likely because the Brazilian free-tailed bat is more active in winter than the northern yellow bat.

Rabies viruses from 27 bats collected in Florida between 2005-2007 and sequenced by CDC were found to fall into six different clades including four *L. borealis* (red bat) clades, one *L. cinereus* (hoary bat) clade and an apparently emerging *T. brasiliensis* virus clade[7]. Per CDC data, human cases of rabies outside of Florida have been associated with *T. brasiliensis* variants. Sequencing of select diagnostic samples from 2009 submitted to Kansas State University Rabies Laboratory revealed eastern US raccoon rabies variant in three fox, two cats, and one dog. Variants identified in 11 bat samples included five *T. brasiliensis* bats with *T. Brasiliensis* variant, one *T. brasiliensis* bat with uncharacterized variant, two *L. intermedius* bats with *L. intermedius* variant, two *L. seminolus* with *Lasiurus* variant, and one unknown bat species with *Eptesicus* (big brown bat) variant.

A. Animal pre-exposure vaccination

1. Vaccines: There are currently 16 parenteral animal rabies vaccines licensed by the U.S. Department of Agriculture (USDA) for use in dogs, cats, sheep, cattle, horses and/or ferrets. Some are approved for dogs or cats for a multi-year immunity period and others for only a 1-year period. All dogs and cats should be revaccinated 12 months after initial vaccination regardless of the length of immunity period of the initial vaccine. Thereafter, the interval between vaccinations will conform to the manufacturer's directions, either one year or multiple years except for instances involving post-exposure treatment of rabies. More frequent use of these vaccines is considered "off-label" and may be injurious to the animal. Peak rabies antibody titers are reached within 28 days of the primary vaccination. An animal is considered currently vaccinated if it has received its' primary vaccination in accordance with the guidelines of this Compendium at least 28 days prior to the rabies exposure incident. Because a rapid anamnestic response is expected, an animal is considered currently vaccinated immediately after a booster vaccination. Obtaining a booster vaccination immediately following an exposure to a rabid animal is important to ensure adequate protection against the virus. Although uncommon, rabies has occurred in vaccinated animals that did not receive a rabies booster vaccination following exposure.[8] For a list of USDA-approved vaccines see Chapter 6, Attachment 8. The recommended National Association of State Public Health Veterinarians (NASPHV) rabies vaccination certificate can be found in Chapter 6, Attachment 9. Veterinarians in Florida are required to maintain medical records including rabies vaccination records for at least three years [61G18.18.002 (1 & 2), *F.A.C.*]

Wolves and wolf-dog crosses, and wild cats (lions, pumas, bobcats, etc.), raccoons, wild cat/housecat crosses, and other wild animals are not recommended as pets. However, if owned, captive bred animals must be properly permitted through the FWC. Because of the possible protective effect of vaccination, veterinarians are encouraged to vaccinate these animals against rabies providing: 1) the owner signs a statement recognizing the current "off-label" use of the

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[7] Stanek DR, Orciari L, Mock V, Yager P. Rabies in Florida Bats. XIX International Conference on Rabies in the Americas, Atlanta, GA, September 28th-October 3rd, 2008.
[8] Murray KO, Holmes KC, Hanlon CA. Rabies in vaccinated dogs and cats in the United States, 1997-2001. JAVMA. 2009:235(6):691-95.

vaccine; and 2) the owner understands that the animal will be euthanized and tested for rabies should it bite or expose a person or be exposed to a rabid animal.

Animals NOT meeting the definition of "currently vaccinated" include:

- dog, cat, ferret, horse, cattle, or sheep whose first vaccination was given less than one month before exposure
- dog, cat, ferret, horse, cattle, or sheep whose previous vaccination expired
- dog or cat that was given an initial vaccination and not boosted one year later
- dog, cat, ferret, horse, cattle, or sheep vaccinated by anyone other than a licensed veterinarian
- any wild animal, or wild and domestic animal crosses

Titers are NOT acceptable in lieu of revaccination.

Zoo-keepers may elect to vaccinate valuable zoo animals against rabies. It should be noted that this is "off-label" use of the vaccine. Should a vaccinated zoo animal bite a person it may have to be tested for rabies.

Oral vaccination for wildlife is available under limited circumstances to control epidemics but not for use in individual animals. See Chapter 5 for more information.

2. Serologic Confirmation of Antibody Titer for International Export: Rabies antibody titers for dogs, cats or ferrets may be obtained via serologic testing with the rapid fluorescent focus inhibition test (RFFIT) examination (see Chapter 4A for a list of laboratories). **Evidence of circulating rabies virus antibodies must not be used as a substitute for current vaccination in managing rabies exposure or determining the need for booster vaccinations.**

B. Definition of rabies exposure

A rabies exposure is any bite, scratch, or other contact in which saliva or nervous tissue of a suspect or known rabid animal enters an open wound, or comes in contact with mucous membranes by entering the eye, mouth, or nose of another animal or person.

C. Types of confinement

Confinement should be by fence or cage, inside the living quarters or related buildings or on a leash under control of a responsible person. The word confinement has been used to describe different rabies control activities. To clarify, please note the following:

- **Isolation and Observation Periods:** Dogs, cats, and ferrets that bite or otherwise potentially expose a person to rabies can be confined for observation for 10 days. Horses can be confined for a 14-day observation period.
- **Quarantine Period:** Dogs, cats, ferrets, horses, cattle, and sheep may be confined and observed when they are bitten or otherwise potentially exposed to rabies by other animals. The quarantine period is 45 days for vaccinated dogs, cats, ferrets, horses, cattle, and sheep, and 180 days for unvaccinated dogs, cats, ferrets, horses, cattle, and sheep.

1. **Isolation and Observation Periods -- Suspect Rabid Animal Exposes A Person**:
When the report of an animal biting a human is received, the investigating officer should make contact with the owner and the victim as soon as possible. Initial contact with the animal owner and the victim by telephone should be sufficient unless circumstances warrant a field visit. The officer should also obtain and verify documentation of current veterinarian-administered rabies vaccination. (See Chapter 6, Attachment 18, for the Animal Bite Report Form.)

a. **10-Day Isolation and Observation Period for Dogs, Cats or Ferrets**: Dogs, cats and ferrets involved in biting incidents of humans, regardless of their vaccination status should be captured alive, if possible, and confined for a period of 10 days. The observation period is to begin from the time of the bite for a 10-day period, not 10 days from the time of capture. If confinement of the animal is not possible or practical, the animal can be euthanized and its brain submitted for laboratory examination at the owner's expense. Testing may not be necessary for animals with virtually no rabies risk (i.e. currently vaccinated older animals with a history of multiple rabies vaccinations, strictly indoor pet).

Observation is of value because the length of time that virus may be excreted in the saliva prior to onset of signs can be predicted. It is known that dogs, cats, and ferrets may excrete rabies virus only a few days prior to onset of illness. The observation period is longer to allow for a wide safety margin. If the biting animal is alive after 10 days from the exposure, it was not shedding rabies in the saliva at the time of the bite. Conversely, if the animal exhibits signs of rabies, it should be euthanized and the head submitted for rabies testing immediately. If the sick animal can not be immediately tested, post-exposure prophylaxis (PEP) should be initiated for persons who were exposed.

- In most cases, wolves, wolf-dog crosses and exotic cat crosses will be euthanized and tested for rabies should they bite or otherwise expose a person.
- Rabies vaccine should not be administered to the suspect rabid dog, cat, or ferret during the observation period because this would necessitate other people being exposed to the animal. In rare cases, side effects from the vaccine administration can also be confused with rabies signs and animals may be euthanized and tested unnecessarily as a result. The 10-day period is not altered should the animal be inadvertently vaccinated.

Vaccinated Animals - If the animal is "currently vaccinated," it may be isolated and observed at home provided: 1) the investigating officer certifies the adequacy of the isolation site; 2) the owner signs a confinement responsibility statement; 3) there is no record of noncompliance with animal control regulations (Chapter 6, Attachment 10). The animal owner should be informed that termination of isolation may, in extenuating circumstances, require examination of the animal by a licensed veterinarian prior to release, and that cost for the examination will be borne by owner. It is the owner's responsibility to immediately report any unusual behavior indicative of rabies in the animal, or the death of the animal during the isolation period. If possible, the victim should be encouraged to monitor and report violations of home confinement. When the animal is not isolated at home, it should be held in a CHD approved facility at the owner's expense. CHD staff must immediately notify the exposed individual if the animal develops rabies. Police dogs and service dogs that have current rabies vaccination administered by a licensed veterinarian are exempt from the isolation and observation period (F.S. 767.16).

Unvaccinated Animals - If the animal is unvaccinated, the 10-day observation is recommended in a city or county animal shelter or at a licensed veterinary clinic having recognized isolation procedures, at the owner's expense. Any abnormal behavior or sign of rabies must be reported immediately to the investigating officer (signs of rabies in animals are included in Chapter 2). The animal may be isolated and observed at home at the discretion of the CHD or their designees if this can be accomplished safely and: 1) the investigating officer certifies the adequacy of the isolation site; 2) the owner signs a confinement responsibility statement; 3) there is no record of noncompliance with animal control regulations (Chapter 6, Attachment 10). **The animal must be vaccinated against rabies at the owner's expense by a licensed veterinarian following termination of the observation period**.

Termination of Observation Period - Animals can be released from the isolation and observation period status only upon approval of the CHD director/administrator or designee. The investigating officer will notify the exposed individual and the animal owner, and complete the Animal Bite Report Form, Attachment 18.

b. **Livestock:** When livestock (cattle, sheep, goats or pigs) other than horses are involved in a biting incident or other possible exposure of an individual to rabies, they should be evaluated on an individual basis at the discretion of the CHD director/administrator to determine the need for laboratory examination. Pot bellied pigs occupy a unique niche within any consideration of livestock exposure. While some meet the definition of conventional (i.e. pen-reared) livestock, others have low risk exposure no different than indoor pets. For bites by these animals, careful evaluation of all the circumstances surrounding the incident should be considered against the relative risk of rabies. **Please immediately notify BEPHM if rabies is suspected in livestock (including horses) to ensure FDACS Animal Industry is alerted**; FDACS can assist with animal assessment and livestock confinement.

- Animals exhibiting unusual behavior should be euthanized and tested for rabies. Under certain circumstances, asymptomatic biting animals can be isolated and observed for a period of 14 days at the owner's expense. Typically, rabid livestock show signs and symptoms very quickly. Therefore, confinement to their owner's premises may be appropriate in most circumstances. If testing of livestock is necessary, FDACS Animal Diagnostic Laboratories located in Kissimmee or Live Oak can assist with collection of the brain (for contact information see Chapter 6, Attachment 2). The animal must be transported to the laboratory and sampling should be arranged with the FDACS laboratory prior to transport. Alternatively, a veterinarian should remove the head or brain for rabies testing. In counties where a veterinarian is unavailable, the rabies authority should have a staff member trained in safe decapitation procedures. If at all possible, the individual must be previously immunized, and wear mask, gown, gloves, and eye protection.

1. Horses

Several incidents involving horses biting humans have led to the development of the following DOH policy for isolation and observation of horses. The recommended 14-day observation period is based on current understanding of the pathology of rabies in animals and reflects standard practices of states that have large numbers of horses, including Kentucky and Maryland.

If a horse that bites a human is (1) exhibiting altered behavior or (2) if the horse has no owner or (3) the owner is not interested in preserving the animal's life, the horse should be humanely destroyed and its brain submitted for laboratory examination. A valuable animal, regardless of vaccination status, may be spared by placing it under observation for 14 days from the date of the bite. If the CHD determines that the owner is unwilling or unable to comply with the requirements for placing the animal under observation, the horse should be destroyed in a humane manner and its brain submitted for rabies examination.

- The horse should be confined and isolated on the owner's premises, in a stable or securely fenced pasture that is isolated from humans and other animals and that has been inspected and approved by the CHD or designee.

The horse should remain under the control of the owner or of a responsible individual designated by the owner, who will stay on the premises or visit daily during the 14 days to observe the horse. During the observation period, the horse should be under the supervision of a licensed veterinarian. At the owner's expense, the veterinarian should examine the horse at least at the beginning and at the end of the observation period and certify in writing to the CHD that the animal is free of signs of rabies upon release from observation.

- If, at any time during the observation period, the owner or designee notices unusual behavior in the horse, the veterinarian should be notified immediately. If the veterinarian determines that the horse is showing signs of rabies, the CHD should be notified and the horse immediately destroyed and its brain submitted for rabies examination.

- If the horse under observation is sacrificed and tests positive for rabies upon examination or the CHD loses contact with the horse before the end of the observation period, the individual(s) bitten should immediately begin rabies post-exposure prophylaxis.

- Vaccination is recommended when the horse is released from observation.

c. **Wildlife:** The time that rabies virus may be excreted in the saliva of wild carnivores (i.e., raccoons, foxes, and skunks) and bats is not known. Therefore, there is no established confinement period for these animals.

Free-roaming: The investigating officer should make contact with the exposed individual immediately and, if the species is appropriate for rabies risk, and the location of that specific animal is known, the animal should be submitted for testing. If the animal cannot be located, the person exposed should be notified within 24 hours and informed about their risk of exposure to rabies, their options regarding post-exposure prophylaxis, and advised to consult a physician promptly. Captured animals that have bitten or exposed a human shall be disposed of immediately in a manner such that the intact brain can be submitted to a DOH BOL location (Chapter 6, Attachment 17 for appropriate BOL) for examination for rabies.

Personal Pets: The DOH opposes keeping wild animals as pets. The commercial sale of high-risk species, such as raccoons, foxes, bats, skunks, or bobcats, as pets, should be discouraged. Although it is legal (but not recommended) to keep these types of animals if they are captive-born and the owner has the appropriate FWC permit, it is against the law to capture and adopt them from the wild. At the time of permitting, FWC will provide rabies risk information to the pet owner indicating that any bite incident will require euthanizing and testing the animal http://myfwc.com/permits/ . CHDs should also notify their regional FWC Captive Wildlife Law Enforcement Investigator when people are bitten by pet wildlife or exotic animals.

In cases where a high-risk wildlife species is involved, such as bobcats, foxes, raccoons, otters, bats, or skunks, the recommendation is to sacrifice the animal, regardless of how or where the animal was obtained, and its vaccination status. CHD's working with FWC Captive Wildlife Investigators and County Animal Services personnel may seize and test such animals. In cases where sacrifice is recommended, the animal can be spared in special circumstances if the victim: 1) opts to take the antirabies treatment at the owner's cost; or 2) refuses treatment and signs an informed consent form stating that they understand the potential consequences of this choice and release the CHD and animal owner from responsibility in the event rabies occurs.

Wildlife in Licensed Zoos/Tourist Attractions: Captive wild mammals such as those kept in licensed zoos or tourist attractions that bite or potentially expose a human to rabies must be evaluated individually with regard to confinement or examination in accordance with the history of possible exposure to rabies and the relative risk as a species.

2. **Animal Quarantine - Animal Exposes Another Animal (Chapter 6, Attachment 14)**

When domestic animals are exposed to known or suspected rabid animals, the owner of the domestic animal shall be required to either: 1) euthanize the exposed animal; or 2) confine the exposed animal until the suspect animal is tested negative or the appropriate quarantine period (victim) or isolation period (if the biting animal is a domestic dog, cat, ferret, or livestock) is ended. If the suspect rabid animal is not located, the domestic animal shall be quarantined according to the provisions below based on the vaccination status of the animal victim. Wild, high-risk species (raccoon, fox, skunk, bat, and bobcat) that cannot be located for testing should be considered rabid for quarantine purposes. If the biting animal is totally unknown, but suspected to be a high-risk rabies vector, the veterinarian should counsel the owner on signs, symptoms, and incubation period of rabies. A veterinarian should be consulted if symptoms occur.

ANIMAL EXPOSES A *VACCINATED* ANIMAL

Dog, Cat, Ferret, Horse, Cow or Sheep: Currently vaccinated animals exposed to a known or suspected rabid animal shall be revaccinated immediately by a licensed veterinarian and quarantined for 45 days in a place approved by the CHD director/administrator or designee (or euthanized if the pet owner elects). "Currently vaccinated" means vaccinated by a licensed veterinarian with a USDA-approved rabies vaccine appropriate for the species of one- or three-years duration of immunity, with the date of the animal's exposure to rabies being before the one-, three or four-year period (whichever is applicable) has elapsed. Dogs shall be leashed and muzzled when taken outdoors, or restricted by

fencing from exposure to others and pets of others. Cats and ferrets must be quarantined indoors. Any illness must be evaluated by a licensed veterinarian on premise and, if considered possibly rabid, reported immediately to the rabies investigative authority.

Home Quarantine. An immunized dog, cat, or ferret should immediately receive a rabies booster vaccination and may then be placed under quarantine for 45 days on the owner's premises as determined by the CHD director/administrator or designee. It is the owner's responsibility to produce documentation of current rabies vaccination by a licensed veterinarian. **In the absence of proof, the animal should be considered unvaccinated. Owner-administered vaccinations are not considered valid.** The owner should be advised of the report, quarantine requirement, and procedures to be followed during quarantine. The owner should be sent a letter with a Home Confinement Agreement Form (Chapter 6, Attachment 10) and a Rabies Fact Sheet (Ch. 6, Attachment 6). If the signed agreement is not received by the agency within seventy-two (72) hours, a home visit should be made.

Livestock: Currently vaccinated livestock should receive a booster vaccination and be confined and observed for a period of 45 days.

ANIMAL EXPOSES AN *UNVACCINATED* ANIMAL

Unvaccinated Dog, Cat or Ferret: Any dog, cat, or ferret not currently vaccinated that is exposed to a known or suspected rabid animal shall be euthanized or, if the owner desires, placed under rabies quarantine for six months (at the owner's expense) in a place approved by the CHD director/administrator or designee with no contact from other animals and reduced contact with people. At a minimum, CHD staff or animal control officers should inspect the animal on a weekly basis for eight weeks, then monthly, unless the animal exhibits signs or symptoms of rabies. Place of quarantine may include the owner's home if facilities are approved by the CHD or designee (Chapter 6, Attachment 10) and owner cooperation is such that secondary exposures off the premises are unlikely. Exposed animals that are not currently up to date on rabies vaccinations, but have documentation from a veterinarian demonstrating that they have received at least 2 prior rabies vaccinations, may have some protective immunity which can also be taken into consideration along with the factors above when determining appropriate quarantine facilities. If the owner declines to euthanize an animal with no documentation of ever having received rabies vaccination, the animal should be vaccinated upon entry into quarantine **OR** 30 days before being released from quarantine to comply with pre-exposure vaccination recommendations. If the owner declines to euthanize an animal designated unvaccinated because they are overdue for vaccination at the time of exposure, the animal should be boosted immediately on entry into quarantine.

If the dog, cat, or ferret is killed or dies within the quarantine period and there is a potential for human exposure, the head must be detached from the body without mutilation, properly cooled, and forwarded to the closest DOH BOL for rabies examination. The owner is responsible for any costs associated with the animal's quarantine.

Unvaccinated Livestock: In all instances of livestock exposure, FDACS staff must be informed. Livestock known to have been bitten by rabid animals should be euthanized or slaughtered within 7 days. If the owner is unwilling to have this done and if approved by the CHD director/administrator,

the animal must be kept away from other animals and under very close observation for six months (at the owner's expense). During this time, it may not be slaughtered, no milk may be consumed or sold, no semen may be collected, and proper handling procedures must be outlined and followed to minimize potential human exposure. Multiple rabid animals in a herd or herbivore to herbivore rabies transmission are uncommon; therefore, restricting the rest of the herd if a single animal has been exposed to or infected by rabies is usually not necessary. Unvaccinated horses exposed to a known or suspect rabid animal out-of-state must complete the 180-day quarantine prior to (re)entering Florida.

The following are recommendations to livestock owners and carcass processors:

- If slaughtered within 7 days of being bitten and providing that the exposed area inclusive of musculature and other tissues is disposed of, remaining meat may be eaten without risk of infection. USDA Food Safety and Inspection Services (FSIS) meat inspectors may reject for slaughter any animal that has been exposed to rabies within the past eight months and should be consulted to determine whether animals slaughtered within 7 days of being exposed to a rabid animal, or following 6 months of observation are acceptable for slaughter. Euthanized animals not acceptable for slaughter should be buried or incinerated at the direction of the FDACS and DEP. Persons who slaughter, skin, or otherwise process suspect rabid animals should use appropriate barrier protection and work with care to prevent possible exposure to the bite wound areas.

- No tissues or secretions from a clinically rabid animal should be used for human or animal consumption. If consumption of rabid animals occurred, the CHD should be notified. However, because pasteurization temperatures will inactivate rabies virus, inadvertently drinking pasteurized milk or eating completely cooked meat does not constitute a rabies exposure.

Wild Animals: Any wild mammal species bitten by a known rabid animal should be sacrificed, if capture is possible. In the case of zoos or controlled attractions, the rabies authority may permit certain endangered animal(s) to be quarantined for a period of six months in a manner and place approved by the rabies authority at the owner's expense in lieu of sacrifice. In all instances, the FWC will be informed about the circumstances of the disposition and their assistance requested if necessary. See Section F4 for information regarding safe capture of live bats.

3. **Rabies Alert/Area Quarantine**

During outbreak situations, CHDs may issue a rabies alert or, in unusual circumstances, an area quarantine to decrease human exposure to rabid animals, increase pet vaccination rates, and restrict the movement of animals. Please refer to Chapter 5, Section C for detailed information.

D. Confidentiality

Information contained in a notifiable disease report made from a health care provider to the Department of Health is confidential per F.S. 381.0031. However the information can be released to animal control officers and other agencies when necessary to public health. The statute limits both the type of information shared and the number of people in receipt of the records. Confidential information should only be given to persons who need it to complete the public health response. For example, to ensure that the animal bite is investigated appropriately the identity of the victim may have to be

released to animal control officers, when the victim is needed to identify the biting animal. If the animal can be classified as a dangerous dog (F.S. 767.11) it may also be necessary to share details about the attack such as wound site and the severity of the injury.

E. Animal Post-Exposure Prophylaxis

Findings from a study conducted by Hanlon et al[9] suggested that 5 doses of canine rabies vaccine administered on days 0, 3, 14, 21 and 35 along with murine anti-rabies antibody on day 0 may be effective in protecting a previously unvaccinated animal exposed to rabies. Dogs that received only rabies vaccine following rabies challenge all died. Unfortunately, murine anti-rabies antibody is not routinely available, making this protocol impractical at this time. In a different study, Texas Department of State Health Services reported that all 1,014 unvaccinated animals including dogs, cats, horses, cattle, sheep and a llama, that were suspected or known to have been exposed to rabies and which received a Texas approved rabies PEP treatment survived. The protocol required rabies vaccination immediately following exposure with booster doses at 3 and 8 weeks.[10] Any attempt at using experimental rabies PEP protocols in animals does not preclude the need for a 6-month quarantine.

F. Laboratory Testing, Billing and Sample Submittal Policies and Procedures

1. General Public Health Testing & Billing Policy:

The following information is provided to clarify the criteria used by the DOH BOL to test and charge fees for rabies examinations. Due to the large volume of testing from animal exposures that pose a true risk of rabies, the Florida DOH is unable to provide rabies testing of animals that pose no risk to an individual or the public at large. **Consultation with the local CHD is required prior to submission of specimens for rabies testing.** An accurate description of the type of exposure including the signs and symptoms of the animal is required. **Specimens received omitting the type of exposure will not be tested until that information is obtained.**

The DOH BOL testing and billing policies are as follows:

a. **High priority situations**; DOH BOL will process specimens from suspected rabid animals using DFA procedures within 24 hours (Monday - Friday) or 48 hours (Saturday - Sunday) turn-around time. There will be no charge for this testing. Weekend testing will be done for high priority situations. Emergency testing service is also available in special situations with specimens arriving by 9:00 a.m., reported out by 5:00 p.m. The time from exposure to testing will be taken into consideration for weekend testing. In addition to the Rabies Test Form (Chapter 6, Attachment 16) an Animal Bite Report Form (Chapter 6, Attachment 18) must be submitted along with the

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[9] Hanlon CA, Niezgoda M, Rupprecht CE. Post-exposure prophylaxis for prevention of rabies in dogs. Am J Vet Res 2002; 63:1096-110. web link to abstract: http://www.ncbi.nlm.nih.gov/pubmed?term=Hanlon%20Post-exposure%20prophylaxis%20for%20prevention%20of%20rabies%20in%20dogs

[10] Wilson PJ, Oertli EH, Hunt PR. Evaluation of a postexposure rabies prophylaxis protocol for domestic animals I Texas: 2000-2009; 237:1395-1401. web link to abstract: http://www.ncbi.nlm.nih.gov/pubmed?term=.%20Evaluation%20of%20a%20postexposure%20rabies%20prophylaxis%20protocol%20for%20domestic%20animals%20I%20Texas%3A%202000-2009

specimen. **Specimens received omitting the type of exposure will not be tested until that information is obtained.**

- A bite to a **human** from a wild or stray rabies vector. This includes animals at high or moderate risk for acquiring rabies, e.g., foxes, raccoons, skunks, otters, bats, stray cats, and stray dogs.
- Bats that are found in the same room with an unattended **child or someone** who was sleeping, or other situations with a reasonably high probability of contact, with or without proof of exposure.
- A bite to a **human** from a stray or domestic animal (including pets and livestock) that exhibits neurological signs, regardless of vaccination status.
- Domestic animals involved in a **human** exposure that die during the observation period.

b. Moderate priority risk situations; turn-around time of 72 hours or less. Submission requirements as for high priority situations.

- A bite to a domestic animal (including pets and livestock) from wild or stray rabies vectors (see Section C-2).
- A bite to a domestic animal (including pets and livestock) from a domestic animal with neurological signs. The neurological signs need to be validated by a veterinarian, animal control officer or county health department employee.
- A scratch to a person from wild or stray rabies vectors (see Section C-2) or from a domestic animal with neurological signs.
- Exposures (including bites) to humans involving **unprovoked** bites from rabbits, opossums, and small rodents. Such situations are extremely rare. These cases must be approved for testing by BEPHM.

c. **All animals that are tested and do not meet the criteria above (sections a or b) will be subject to an $80 testing fee by the DOH BOL unless written (including e-mail) approval is obtained from DOH BEPHM**. Examples of testing that will be subject to the testing fee include:

- Domestic animals or livestock involved in a human or pet exposure, which are euthanized because of owner's surrender during the 10- or 14-day observation period.
- Domestic animals or livestock involved in a human or pet exposure that die or are euthanized due to an unrelated illness during the 10-14 day observation period.

d. In situations where it was determined by CHD or BEPHM staff that an exposure did not occur, but testing is desired for surveillance purposes, fee based testing is available through KSU Rabies Laboratory. Information and submittal forms are available at: http://www.vet.ksu.edu/depts/dmp/service/rabies/index.htm . Required to submit:

- Consent from CHD to ensure exposure assessment has been done
- KSU submission form should also include CHD contact name, phone and fax number
- All positive test results should be reported to the CHD
- Samples must be submitted through a veterinarian
- Samples should be packaged as described in section E5

- Submitter is responsible for all costs of sample collection, shipping, testing, etc.

KSU Rabies Laboratory Shipping and contact information:

The Rabies Laboratory
Kansas State University
2005 Research Park Circle
Manhattan, KS 66502
Website: http://www.vet.ksu.edu/depts/dmp/service/rabies/index.htm
Main Phone: (785) 532-4483
Fax: (785) 532-4474

2. Policies related to FDACS Animal Disease Diagnostic Laboratories:

The FDACS Animal Diagnostic Laboratories have offered assistance removing brains from large animals if the county health departments call ahead and arrangements can be made for the animals to be transported to the Bronson Animal Diagnostic Laboratory (BADL) or Live Oak Animal Diagnostic Laboratory (LOADL). Please call prior to shipping: Kissimmee (321) 697-1499 or Live Oak (386) 330-5700. In addition, some veterinarians and other entities occasionally submit samples to the FDACS animal disease diagnostic laboratories for rabies testing without realizing their county health departments should be consulted first. Samples submitted through the state veterinary laboratories are generally tested at BOL-Tampa. Rabies policies related to the FDACS animal diagnostic laboratories are as follows:

- BADL staff will contact and direct any client who submits an animal for rabies testing to their local CHD before shipping the specimen to the DOH BOL-Tampa for testing. The sample will be held refrigerated at BADL until the CHD (or the County Animal Services group) provides a bite/exposure form to BADL to be submitted to DOH-BOL Tampa with the specimen.

- DOH BOL-Tampa will provide rabies testing for livestock samples being screened for West Nile virus (WNV) infection, Eastern equine encephalitis (EEE), or bovine spongiform encephalitis (BSE) free of charge for BADL to enhance safety of BADL staff.

- BADL and LOADL will provide rabies sample collection from large animals (horses, cattle, etc.) by request of the submitting CHD.

- DOH BOL-Tampa will bill the submitter of the rabies sample, rather than BADL. The Animal Bite Report Form (Ch. 6, Attachment 18) will contain information needed for billing purposes.

3. Sample Collection and Testing Procedure

Rapid submission of specimens for laboratory analysis: With the predominance of high temperature and high humidity in Florida, many specimens are lost to test due to delays in submission. In all instances where the circumstances of the biting incident or the behavior of the biting animal indicate the probability of rabies infection, the animal bite investigator should make provisions for the humane sacrifice of the animal and proper shipment of the appropriate specimen to the *nearest* DOH Laboratory for examination (see Chapter 6, Attachments 16 and 17). County health departments can enlist the assistance of an appropriate qualified, pre-vaccinated person to decapitate suspect animals.

The FDACS BADL or LOADL can assist the counties with large animal brain removal. Please call prior to shipping to Kissimmee (321) 697-1499 or Live Oak (386) 330-5700.

- **THE SUBMITTOR MUST CALL THE RESPECTIVE DOH BOL PRIOR TO SUBMITTING SPECIMENS FOR RABIES TESTING (Chapter 6, Attachments 16 & 17).**

- DO NOT SHOOT ANIMALS IN THE HEAD OR DAMAGE OR DESTROY THE HEAD OR BRAIN OF ANIMALS THAT BITE/EXPOSE PEOPLE.

- DO NOT DISPOSE OF ANIMALS THAT HAVE BITE/EXPOSE PEOPLE UNTIL A RABIES ASSESSMENT IS MADE

- ANIMAL VICTIMS EUTHANIZED IMMEDIATELY AFTER A RABID ANIMAL EXPOSURE SHOULD NOT BE SUBMITTED FOR RABIES EXAMINATION.

- Examination of brain tissue is necessary to diagnose cases of animal rabies and enable proper medical treatment of persons exposed. Currently, there are no conclusive antemortem diagnostics available.

- The current standard for confirmation of animal rabies is the DFA test (http://www.cdc.gov/rabies/docs/standard_dfa_protocol_rabies.pdf). Smears from the brain stem and cerebellum are air dried, fixed in acetone (>1 hour or overnight), stained, washed, dried and read with a fluorescent microscope. The DOH BOL will report results as positive or negative. Unsatisfactory specimens (e.g., due to cellular degradation, or insufficient material -- such as lack of brainstem) will be reported as unsatisfactory. Sections from both sides of the brain stem are required for livestock testing.

- An unsatisfactory laboratory result should be treated as if the animal were positive.

- Currently, there are no USDA licensed rapid test kits available for rabies diagnosis. Unlicensed tests should not be used due to several concerns: the sensitivity/specificity are not known; the tests have not been validated against current standard methods; the excretion of virus in the saliva is intermittent and the amount varies over time; any test result would need to be confirmed by more reliable methods such as DFA testing on brain tissue; and the interpretation of results may place exposed animals and persons at risk. In addition**,** FDACS Division of Animal Industry has not approved licensing needed for sale of any type of rapid kit in Florida, and requests that any such unauthorized sales be reported to Dr. Mike Short at 850-410-0900.

4. Instructions for Preparing, Packing, and Shipping Specimens for Rabies Examination
   - Animals should be euthanized consistent with the "2007 AVMA Guidelines on Euthanasia" (http://www.avma.org/issues/animal_welfare/euthanasia.pdf). Humane euthanasia methods recommended for bats produced by the Michigan Rabies Working Group may be found at:

http://www.michigan.gov/documents/emergingdiseases/Humane_Euthanasia_of_Bats-Final_244979_7.pdf

- Live bats: If there is a possibility that a person or pet has had contact with a bat, capture the bat, carefully avoiding direct contact with it and without damaging its head. To capture the bat, close windows, the room and closet doors, turn on dim light if room is dark, and wait for the bat to land. While wearing gloves, cover the bat with a coffee can or similar container. Slide a piece of cardboard under the can trapping the bat. Tape the cardboard tightly to the can. Immediately contact your local animal control to assist in arranging for testing.

- The respective DOH BOL must be called in advance of specimen shipment, and provided with the waybill number and the expected hour or arrival of the specimen. If the specimen is **shipped on a Friday, mark the area for Saturday delivery** on the shipping label and provide weekend contact information.

a. Specimen: Staff assigned to decapitate animals should have received rabies pre-exposure prophylaxis and be trained to use universal precautions. To ensure an adequate specimen, the CHD or designee must send:

- The whole body of bats (to identify the species). Counties may send the whole body of small rodents or any animal no larger than a squirrel.
- Only the head of dogs, cats, ferrets, raccoons, skunks, rabbits, and similarly sized animals. **The skin should not be removed from the head or the head mutilated in any way.**
- Only the brain and brainstem of large animals or animals with horns (cows, horses, pigs over 50 pounds, goats, etc.). The brain should be removed from the cranial vault by a veterinarian or other experienced persons who can protect themselves from tissue and aerosol exposure. The FDACS Animal Diagnostic Laboratories can provide brain sample collection from livestock transported to their facilities.
- Specimens may be submitted in instances where the animal was buried, or where trauma occurred to the animal's head; however, the validity of the test may be compromised.

Safe handling of rabies specimens

- Rubber gloves (2 pairs of disposable gloves or stainless steel mesh gloves) and protective clothing, as well as face and eye protection should be worn while the head is being removed and packaged. Pre-exposure rabies vaccination is recommended.
- Sever the head between the foramen magnum and the atlas. Local veterinarians can assist in this removal. **Do not use mechanized saws.**
- Allow fluids and blood to drain from the head. Keep as clean as possible and place the head in a double plastic bag for transport to the laboratory.
- Cutting surfaces and instruments should be thoroughly cleaned with detergent and water and disinfected. Gloves should also be cleaned and disinfected or discarded following use.

b. Specimen Storage: Until the specimen is ready to be packaged and shipped to the laboratory, it should be refrigerated and only frozen where no alternative method is available for cold storage. Without refrigeration, the brain deteriorates very rapidly and frozen specimens must be allowed to thaw before examination thus causing delayed test results. Frozen tissues can be tested

using the DFA test regardless of the length of time stored in this manner. When submitting a whole body or intact head, spray specimens with a flea and tick killer prior to packaging and submission to the laboratory.

c. Packaging: Specimens must be placed in two heavy plastic bags and packed in a watertight container. This inner container should be placed in a larger leak-proof outer container (Styrofoam) and the space between packed with freeze packs, cold cans, etc. Dry ice should not be used since freezing may occur. Each shipping container shall not contain more than one animal head of moderate to large size. For small mammals such as bats, more than one specimen may be enclosed in the container, but each animal specimen must be double-sealed with tape inside a zip-lock plastic bag and clearly identified as to its distinct character, species, and exposed individual or animal. These instructions are also on the back of the Rabies Test Form DOH Form 959 (Chapter 6, Attachment 16). **Under no conditions should an animal head be placed in a mixed shipment with human clinical specimens or potable and environmental water samples**.

d. **Forms Required:** An Animal Bite Report Form (Chapter 6, Attachment 18) must be completed and entered into Merlin. The hard copy, along with the Rabies Test Form DOH 959 (Chapter 6, Attachment 16), should be placed in a zip-lock bag and attached securely to the plastic-wrapped animal specimen in the shipping container.

- To ensure rapid turnaround of all results, please enter the animal case information into Merlin. The laboratory reports out positive and negative results in Merlin daily.

e. Shipping: The CHD is responsible for assuring that specimens associated with human and animal rabies exposure are appropriately submitted to the laboratory. Specimens submitted for rabies testing are considered diagnostic specimens. A 2" x 2" UN3373 Biological Substance Category B label should be placed on the outside of the box (can be hand-drawn).

Courier service (e.g. FedEx) is the best method for workday and emergency delivery to ensure minimum delay in transport. ***DO NOT use a bus service.***

f. Emergencies: DOH BOL will, upon request, perform emergency examinations on weekends. Generally, an emergency is one in which there is an unprovoked bite by a high risk animal, a feral domestic animal, or unvaccinated dog or cat that is showing signs of rabies. If special circumstances warrant such emergency examination, the CHD Director/Administrator should call first. For after hours and weekend rabies emergencies, contact the respective DOH BOL (Chapter 6, Attachments 16 and 17).

5. Reporting:

The DOH BOL will telephone all positive results and unsatisfactory specimens to the number given on the Rabies Test Form or Merlin Form. The DOH BOL will mail hard copies of all results to the appropriate CHDs submit the positive results via Merlin to the DOH Bureau of Epidemiology by the

next business day. Entry of positive domestic animal results in Merlin will generate an automatic alert sent to BEPHM personnel, who will forward reports and notifications to the FDACS Division of Animal Industry upon receipt. Parties interested in learning results may call the laboratory as arranged during the pre-submission telephone call.

See Rabies Test Form (Chapter 6, Attachment 16) for a listing of laboratories and BOL contact information.

CHAPTER 4

HUMAN RABIES PREVENTION

Human rabies is a rare disease in the United States, with 30 cases being reported from 2002 through 2011. Nine cases were known to be imported from outside the US and seven involved canine variants endemic to the country where exposure occurred. Of the twenty-one remaining cases, 19 were associated with bat rabies variants, 1 with eastern US raccoon variant, and 1 with Puerto Rican dog/mongoose variant. Specific bat variants were identified in fifteen of the US acquired cases and were strains associated with either silver-haired (*Lasionycteris noctivagans*), eastern pipistrelle (*Perimyotis subflavus*), or Brazilian free-tailed (*Tadrida brasiliensis*) bats.[11,12] Four fatal rabies infections occurred as a result of organ transplantations (liver, kidney and blood vessel) in 2004; the donor was later found to be infected with rabies virus.[13] The first human case associated with the raccoon rabies variant was diagnosed in Virginia in 2003, although the actual exposure history was not determined.[14] The first human case to survive symptomatic rabies without post-exposure prophylaxis (PEP) treatment was reported in 2004 when a fourteen year old Wisconsin girl survived symptomatic rabies acquired from a bat bite.[15] In 2011, an eight year old California girl with encephalitis who was treated using the Wisconsin protocol also survived apparent rabies infection; exposure likely occurred through feral cat contact. In 2008, a Brazilian boy who became symptomatic after receiving partial rabies PEP (no rabies immunoglobulin) recovered using a similar treatment protocol. However, the same treatment protocol has failed when used on numerous other occasions. In 2009, a 17 year old girl in Texas with exposure to bats two months prior appeared to have survived an abortive case of rabies with only minimal to moderate medical intervention.[16] In spite of these unusual cases, rabies continues to remain a nearly universally fatal disease once patients become symptomatic. In Florida, 76 fatal cases of human rabies have been reported between 1881 and 2011. Most of these involved children exposed to rabid dogs and cats. The last indigenous case in the state occurred in 1948 when a 35-year-old man from Tampa refused treatment after being bitten by his neighbor's dog. The most recent human rabies cases identified in Florida were in 1994, 1996 and 2004, and involved adult males who were bitten by rabid dogs in either Haiti (1994, 2004) or Mexico (1996).[17]

A. Primary or pre-exposure immunization and serologic testing

Rabies pre-exposure vaccine is recommended for 1) all persons at occupational risk for infection with rabies virus either by aerosol, injection, or animal exposure; and 2) persons traveling extensively in foreign countries where rabies is endemic. High-risk groups include veterinarians, veterinary students, veterinary hospital employees, animal control officers, wildlife workers, wildlife

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[11] CDC. Human Rabies---Alberta, Canada, 2007. MMWR. 2008;57(08):197-200.
[12] Blanton JD, Palmer D, Rupprecht CR. Rabies surveillance in the United States during 2009. JAVMA. 2010;237(6):646-57.
[13] CDC. Update: investigation of rabies infection in organ donor and transplant recipients---Alabama, Arkansas, Oklahoma, and Texas, 2004. MMWR 2204; 53:615-6.
[14] CDC. First human death associated with raccoon rabies - - Virginia, 2003. MMWR 2003; 52(45); 1102-1103.
[15] Willoughby RE, Tieves KS, Hoffman GM, Ghanayem NS, Amlie-Lefond CM, Schwabe MJ, Chusid MJ, Rupprecht CE. Survival after treatment of rabies with induction of coma. N Engl J Med 2005; 352:2508-14.
[16] CDC. Presumptive abortive human rabies—Texas, 2009. MMWR. 2010:59(7):185-90.
[17] CDC. Human rabies --- Florida, 2004. MMWR 2005;54(31):767-69.

rehabilitators, and animal handlers in zoological parks and exhibits. People involved in disaster animal response should consider being pre-immunized based on expected frequency of animal contact. Persons most at risk for accidental infection work with live rabies virus in diagnostic and research laboratories and in vaccine facilities.

1. Human Rabies Vaccine Pre-exposure vaccination consists of **three** 1.0 ml injections of vaccine given intramuscularly (IM), one injection on day 0, one on day 7, and one on either day 21 or 28. Injections are given into the lateral aspect of the upper arm over the deltoid.

2. Serologic Examination/Booster Doses of Vaccine. Once immunized, serologic titers should be checked at a frequency dependant upon risk group, as designated below. **Titers less than 1:5 serum dilution on the Rapid Fluorescent Focus Inhibition Test (RFFIT) indicate the need for an IM booster vaccination.**

Frequent risk - people who are at frequent risk of exposure to rabid animals either through their employment (e.g., workers in rabies diagnostic laboratories, animal control officers, veterinarians and staff, and wildlife workers handling wild animal reservoirs of rabies) or through their activities (e.g., spelunkers and members of wildlife rescue organizations) should determine their antibody titer every two years.

Infrequent risk - persons who are at infrequent risk of exposure to rabid animals (e.g., travelers who received pre-exposure prophylaxis) do not require serologic assessment of antibody titer.

3. Serologic Testing Using the Rapid Fluorescent Focus Inhibition Test (RFFIT)

The following laboratories may be contacted to perform rabies antibody testing:

The Rabies Laboratory
Kansas State University
2005 Research Park Circle
Manhattan, Kansas 66502
Phone: (785) 532-4483
Fax: (785) 532-4474
Email: rabies@vet.ksu.edu
http://www.vet.ksu.edu/rabies
Rush specimens available on request.

Dr. Robert Newhouse / Mary Yager
Atlanta Health Associates
309 Pirkle Ferry Road, Suite D300
Cumming, GA 30040
Phone: (770) 205-9091 or (800) 717-5612
Fax: (770) 205-9021
Email: info@atlantahealth.net
http://www.atlantahealth.net/

Dr. Kenny Brock / Krystyna Minc
Department of Pathobiology, Virology Laboratory
261 Greene Hall
College of Veterinary Medicine
Auburn, AL 36849-5519
Phone: (334) 844-2659
Fax: (334) 844-2652
http://www.vetmed.auburn.edu/index.pl/virology

ANIMAL SERA ONLY

B. Exposure Definitions

Rabies is transmitted by introducing the virus into open cuts or wounds in skin or via mucous membranes. The likelihood of rabies infection varies with the nature and extent of exposure. Human exposure to rabies virus warrants evaluation for possible antirabies treatment. When the assessment indicates the need for treatment, the CHD should assure that the exposed person's health care provider is made aware of the exposure and the ACIP (Advisory Committee Immunization Practices) / Florida DOH's guidelines for rabies post-exposure treatment.

- Petting or handling a rabid animal, contact with blood, urine or feces of a rabid animal, ingestion of pasteurized milk or well-cooked meat from a rabid animal or accidental inoculation with vaccines currently licensed for use in animals does not constitute rabies exposure.

1. Bite Exposure: Any penetration of the skin by the teeth of a known rabid animal necessitates prompt post-exposure treatment.

- In recent years bats have been increasingly implicated as wildlife vectors capable of transmitting rabies to humans. It is most important to carefully evaluate the circumstances of every incident that involves a bat in close proximity to a person, since bites from bats may be very small and not easily recognized. This is particularly important in cases where interviews with young children or persons with limited recall may not reveal a minor or undetectable injury inflicted by a bat bite. As a general rule, in situations where a bat is physically present and the possibility of a bite exposure or mucous membrane contact is reasonably certain, post-exposure prophylaxis should be given unless capture and testing of the bat has excluded rabies.

2. Non-bite Exposures: Terrestrial animals rarely transmit rabies through non-bite exposure. Contamination of scratches, abrasions, open wounds or mucous membranes with saliva or other potentially infectious material (i.e., nervous tissue or cerebrospinal fluid) from a rabid animal must be considered an exposure to the rabies virus. On rare occasions human rabies has been acquired by inhalation of airborne virus. Such exposure occurred in two specific environments, namely, in laboratories working with live rabies virus and in caves with millions of bats.

- Rabies virus is known to have been transmitted between humans on eight separate occasions by corneal transplants including once in the United States.[18] In 2004, seven patients (four residing in the U.S.) acquired rabies from organ transplantations of either kidney, liver, arterial blood vessel tissues, lung, or pancreas.[19, 20, 21]

C. Risk Assessment and Investigation

When evaluating the circumstances surrounding a bite or other exposure, consideration should be given to the following: 1) the behavior, health, species, housing status, and other characteristics of the biting animal; 2) vaccination status; 3) type of encounter; i.e., provoked or unprovoked; and 4) current status or disposition of the animal. (Chapter 6, Attachments 19 and 20)

1. Animal Behavior, Health and Characteristics - Any animal, wild, domestic, caged, or feral that shows signs of rabies typical to that species should be considered possibly rabid. Most free-ranging wild animals, not otherwise conditioned by artificial feeding, instinctively avoid humans. Those that approach people or their pets and attack should also be considered possibly rabid. For instance, any squirrel that, unprovoked, lunges at a person, bites them and runs off should be suspected of being rabid, even though most rodents are not considered to be at high risk for infection. All high-risk wildlife species should be considered highly suspect regardless of their health or behavior status, as these animals have been shown to sometimes have virus in their saliva for a week or more before becoming ill and may lack reliable signs of the disease, and/or because of their status as a rabies reservoir or a member of a species which is diagnosed with rabies on a regular basis. Animals housed or living outside are at greater risk of exposure than those living in a home or other enclosed buildings.

High-Risk Animals: Any exposure inflicted by a raccoon, bat, skunk, coyote, fox, otter, or bobcat, or by a stray dog, cat, or ferret should be considered as high risk for rabies infection in Florida. The number of rabid outside, unvaccinated cats in recent years is similar or greater than the number of rabid foxes. Any wild animal in this group should be considered highly suspect regardless of its health or behavior status, as these animals have been shown sometimes to have virus in their saliva for a week or more before becoming ill.

Moderate-Risk Animals: Exposures inflicted by such species as unvaccinated dogs, or ferrets maintained as pets should be considered to be moderate risk for rabies infection in Florida.

Low-Risk Animals: Exposures inflicted by pet rats, mice, hamsters, guinea pigs, hedgehogs, domestic rabbits, armadillos, opossums, wild rodents, caged monkeys,[22] and immunized dogs, cats, and ferrets

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[18] CDC. Human-to-human transmission of rabies via a corneal transplant -- France. MMWR 1980;29:25-6
[19] CDC. Investigation of rabies infections in organ donor and transplant recipients---Alabama, Arkansas, Oklahoma, Texas. MMWR 2004;26:586-89.
[20] Srinivasan, A., et al. Transmission of rabies virus from an organ donor to four transplant recipients. N Engl J Med 2003:352(11):1103-11
[21] Hellenbrand, W., C. Meyer, G. Rasch, I. Steffens, A. Ammons. Cases of rabies in Germany following organ transplantation. Euro Surveill. 2005;10(2):52-3.
[22] Any species of macaque monkey should be reported in Merlin and considered as potentially infected with Herpes B virus. Guidelines for management can be found in: Cohen, JI, DS Davenport, JA Stewart, S Deitchman, JK Hilliard, LE

are considered to be very low risk for rabies infection and seldom require antirabies treatment of the exposed individual. Exposure to farm animals while feeding or handling should be individually evaluated and seldom require antirabies treatment.

- **Prompt reporting and consultation is recommended of all exposures involving "Old World monkeys" due to possible transmission of life-threatening Herpes simiae B virus (see http://www.cdc.gov/herpesbvirus/index.html and reference 21).**

2. Animal Vaccination Status - Vaccinations of dogs, cats, livestock, and ferrets play an important role in protecting not only the animal from rabies but also by reducing the risk of human exposure to infection if the animal is involved in a biting incident. It is important to document that vaccinations for rabies are current (within the advertised duration of the vaccine, one, three or four years) and veterinarian-administered. Vaccination status is important in biting dogs, cats, and ferrets because they can usually be isolated and observed for 10 days at the home of the owner, while animals determined to be unvaccinated may be confined to a secure public facility or veterinary clinic.

- Vaccination status will not alter the decision-making process when wolf-dogs, zoo animals, and pet wildlife are involved in rabies exposure incidents.

3. Type of Encounter - Provoked exposures are ones in which it was a natural reaction of the animal to bite. Such circumstances might include, in the cases of domestic dogs and cats: 1) threatening or injuring the animal or the pet owner(s); 2) handling or removing the animal's food; 3) disturbing the animal while eating; 4) invading the animal's living space; 5) restraining or handling sick or injured animals; 6) disturbing the animal's offspring; and/or 7) startling a sleeping animal. Under these circumstances, treatment is usually not recommended because the biting animal can be observed for 10 days. However, bites by feral or unidentified cats and dogs that are not available for either observation or testing usually require treatment.

Unprovoked bites are those which are initiated for no apparent reason; i.e., the behavior cannot be explained by any of the circumstances listed above or ones similar to them. Unprovoked bites are usually considered to be suspicious of rabies, although it may be "in character" for some ill-tempered animals to bite for no apparent reason. A history of the animal's usual behavior patterns should be obtained if possible. Any bite from a high-risk species, whether provoked or unprovoked, should be considered a rabies exposure unless proven otherwise by laboratory testing of the animal or observation for 10 days in the case of healthy appearing stray dogs, cats or ferrets. While in most instances, bites by squirrels and other wild rodents are associated with provocation by feeding and do not require treatment, bites resulting from unprovoked attacks would require treatment if the animal escaped.

4. Status or Disposition of the Animal - At the present time, only dogs, cats, ferrets, and livestock can be isolated and observed to determine their rabies status after exposing a person to rabies. Animals killed during attacks, euthanized, or dying after capture should be tested as soon as possible so decisions regarding treatment of the exposed individual is not delayed any longer than necessary.

Chapman and the B Virus Working Group. Recommendations for prevention of and therapy for exposure to B virus (*Cercopithecine Herpesvirus* 1). CIN. 2002;35;1191-203 or at http://www.cdc.gov/ncidod/diseases/bvirus.htm

Animals frozen are usually suitable for testing, although results may be delayed and therefore freezing is not recommended. Those buried more than a day or preserved in formalin may not be suitable for testing. Consultation with the DOH BOL staff prior to submission can help resolve issues related to specimen quality and expected test results.

D. Post-Exposure Prophylaxis (PEP)

Rabies PEP is not uncommon. It is estimated that in Florida at least 1,600 rabies post-exposure treatments are administered annually for a rate of 8.6 per 100,000 population. PEP treatment can be avoided if the animal is available for observation (i.e., dogs, cats, ferrets, or livestock) and found to be non-rabid, or tests negative. Further, attending physicians should understand what constitutes a potential exposure (for example, merely petting a rabid animal is not an exposure). **Each CHD should assure that all health care providers within their jurisdiction have 24-hour access to knowledgeable consultation**. When necessary the DOH BEHP can also provide necessary expertise, if unique questions arise regarding rabies post-exposure treatment (see Chapter 6, Attachment 2 for contact information).

- Currently two rabies vaccines are available for humans and can be used interchangeably if necessary. RabAvert ® is a chicken embryo cell culture vaccine (PCEC) produced by Novartis Vaccines and Diagnostics, and Imovax is a human diploid cell culture vaccine (HDCV) produced by Sanofi Pasteur. RabAvert ® is not recommended for people with allergies to eggs. Human rabies immunoglobin is produced by Sanofi Pasteur (Imogam® Rabies-HT) and Telecris Biotherapeutics (HyperRab™).
- **Both vaccines and HRIG can be ordered and administered by any licensed physician in the state.** The DOH BSPS (850-922-9036) can help provide the ordering information if needed.
- Morbidity and Mortality Weekly Report (MMWR) Recommendation and Reports for Human Rabies Prevention -- United States, 2008 is available at the following website**:** http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5703a1.htm. and Use of a Reduced (4-Dose) Vaccine Schedule for Post Exposure Prophylaxis to Prevent Human Rabies available at: http://www.cdc.gov/mmwr/pdf/rr/rr5902.pdf

The essential components of rabies PEP are local treatment of wounds and treatment with vaccine in previously immunized persons, and HRIG and vaccine in non-immunized persons (Chapter 6, Attachments 20 and 21). When a rabies exposure has occurred, PEP is indicated regardless of the length of delay, provided the clinical signs of rabies are not present. If a person refuses PEP, county health departments are recommended to have the bite victim sign a PEP refusal letter (Chapter 6, Attachment 22). PEP, in general, should be considered as an urgent matter rather than an emergency. If the animal involved is being tested, the initiation of treatment can generally wait until laboratory testing has confirmed the animal was rabid as long as the animal is tested in a timely manner. PEP should not be delayed further. Face bites may require immediate treatment and should be evaluated on a case by case basis.

1. Local Wound Treatment - Immediate and thorough washing of all wounds with soap and water is perhaps the most effective initial measure for preventing rabies. Local treatment should include a thorough cleansing and debridement followed by swabbing and irrigation of the wound with copious amounts of soap and water, or even water alone. Tetanus prophylaxis and measures to control

bacterial infection should be given as indicated. Suturing should depend upon cosmetic factors and the possibility of bacterial infection.

2. Treatment of Previously Immunized Humans - **HRIG should not be administered to a person who was previously vaccinated against rabies with HDCV or PCEC. (**Use of these products began in approximately 1980 in the US.) Persons who have received these or other modern cell culture-based derived vaccines as approved by WHO are also considered previously immunized.[23] However, previously immunized persons should receive two intramuscular (IM) doses (1.0 ml each) of vaccine, one immediately and one on day three. On rare occasions, when immune status is not known and a titer is required, it is best to wait for test results before administering a full primary post-exposure antirabies treatment, including HRIG.

3. Treatment of People Not Previously Immunized - Post-exposure antirabies treatment of individuals not previously immunized should always include both passively administered antibody (HRIG) and vaccine. Because of the duration of time and concerns of low antigencity, patients previously immunized with older products (non-cell culture derived vaccines-see previous paragraph) should be managed as not immunized. The combination of globulin and vaccine is recommended for both bite exposures and non-bite exposures, regardless of the interval between exposure and treatment.[24, 25, 26, 27, 28] The sooner treatment is begun after exposure, the better, unless the animal is available for testing/ observation as appropriate.

HRIG is administered only once at the beginning of antirabies prophylaxis to provide immediate antibodies until the patient responds to vaccination. The recommended dose of HRIG is 20 IU/kg or approximately 9 IU/lb body weight. No more than the recommended dose of HRIG should be given as it can partially suppress vaccine response. If anatomically feasible, the full dose of HRIG should be thoroughly infiltrated in the area around and into the wounds. Any remaining volume should be administered IM at an anatomical site distant from vaccine administration. In addition, HRIG should not be administered in the same syringe as vaccine.

- If HRIG was not given when the first vaccination was begun, it can be given through the seventh day after the first dose of vaccine was given. From about the eighth day on, HRIG is unnecessary since an antibody response to the vaccine is presumed to have occurred.

- Current recommendations for post-exposure prophylaxis call for HRIG plus only 4 doses of vaccine, with the exception of immunosuppressed individuals who should receive 5

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[23] WHO. Rabies vaccines WHO position paper. Weekly Epidemiologic Record. 2007; 82:425-436. http://www.who.int/wer/2007/wer8249_50.pdf
[24] Warrell, MJ, Warrell DA. Rabies and other lyssavirus diseases. Lancet. 2004; 363:959-69.
[25] Bleck, T.P. Rabies. 2005. In: Guerrant RL, Walker DH, Weller PF, editors. Tropical infectious diseases: principles, pathogenesis, and practice. 2nd ed. Elsevier/Elsevier/Churchill Livingston, Philadelphia. p.839-851.
[26] McQuiston, JH, Childs JE. 1999. Rabies exposure and clinical disease in humans. In: Merial's *Rabies: Guidelines for Medical Professionals*. Trenton, NJ, Veterinary Learning Systems. p.27-35.
[27] Fishbein, D.B. Rabies in humans. 1991. In: Baer, G.M. (Ed.), *The Natural History of Rabies*, second ed. CRC Press, Boca Raton, pp. 519–549 519-549.
[28] Rupprecht, CE, Gibbons RV. Prophylaxis against rabies. N Eng J Med 2004; 351(25):2626-2635.

vaccinations and have follow-up testing for RFFIT rabies neutralizing antibody within one to two weeks after the fifth vaccination.[29]

Vaccine is administered at a recommended dose of 1.0 ml IM in the deltoid area on days 0, 3, 7, and 14. Immunosuppressed persons should receive vaccine on days 0, 3, 7, 14 and 28, followed by a RFFIT antibody titer within one to two weeks after completing the series. Vaccine may be administered in the anterolateral aspect of the thigh in children. The gluteal area should never be used due to reduced production of antibody. Every effort should be made to keep the administration of the first three doses of vaccine on a strict schedule. Appointments for the last dose (day 14) can vary up to a few days. At this point, the person being treated should be developing a substantial antibody response to the early doses of vaccine. However, any interruption of the treatment schedule by more than a week could require starting the series over again *without the administration of HRIG*. Once initiated, PEP may be discontinued if the exposing animal tests negative for rabies or is released from the 10-day observation period.

Precautions - Corticosteroids and immunosuppressive agents should not be administered during post-exposure therapy unless essential for the treatment of other conditions. These drugs can interfere with the development of active immunity and thus predispose the patient to developing rabies. When post-exposure treatment is given to persons with immunosuppressive illness or to persons receiving immunosuppressive therapy, it is especially important that their sera be tested for rabies antibody by RFFIT to ensure that adequate responses have developed.

- Pregnancy is **not** a contraindication to rabies PEP because of the fatal consequences of inadequately treated rabies exposure and (limited) data indicating that fetal abnormalities have not been associated with rabies (killed virus) vaccine. If there is a substantial risk of exposure to rabies, pre-exposure prophylaxis is also indicated during pregnancy.

Adverse Reactions - Vaccine can cause local reactions such as pain, erythema, and swelling or itching at the injection site and mild systemic reactions, such as headache, nausea, abdominal pain, muscle aches, and dizziness. To counteract the unlikely occurrence of an allergic or anaphylactic reaction, it is advisable to have antihistamines and epinephrine readily available during treatment, especially with patients having a history of hypersensitivity. The vaccine RabAvert ® is not recommended for people with allergies to eggs.

Once initiated, rabies prophylaxis 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, antipyretic, and antihistaminic agents (aspirin and/or Benadryl, for example). When a person with a history of atopy or hypersensitivity to rabies vaccine must be given subsequent doses, antihistamines may be given before, during, or after treatment; epinephrine and life support equipment should always be readily available to counteract anaphylactic reactions, and the person should be carefully observed immediately after immunization for 20 minutes.

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[29] CDC. 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.

- **All serious systemic meningeal, neuroparalytic, or anaphylactic reactions to a rabies vaccine should be immediately reported to the DOH, Bureau of Epidemiology at any time night or day: (850) 245-4401.**
- Access to rabies PEP is not restricted to use by or through DOH. Private providers may contact the manufacturers directly for product.
- If a person refuses PEP, it is recommended that a refusal letter be signed by that person (Chapter 6, Attachment 22).

E. Rabies Post-Exposure Prophylaxis Costs / Indigent Patient Programs

Most health insurance policies will cover the cost of PEP; however, prior negotiation may be needed with some companies (prior to an exposure event) to establish an agreement for full fee recovery.

Indigent Patient Programs

Both rabies vaccine manufacturers have patient assistant programs that provide medications to uninsured or underinsured patients and information can be obtained at: http://www.cdc.gov/rabies/medical_care/programs.html Sanofi Pasteur's Patient Assistance Program (providing Imogam ® Rabies-HT and Imovax ® Rabies as well as other vaccines) is now administered through the Franklin Group. A healthcare professional or patient can either contact the Franklin Group directly, or call the customer service team (1-800-VACCINE) who will transfer them to the Franklin Group. The Franklin Group will review the application against the eligibility criteria. For more information about the program or to request an application, please contact the Sanofi Pasteur, Inc. Patient Assistance Program (Franklin Group) at 1 (866) 801-5655.

Novartis' Patient Assistance Program for RabAvert ® is managed through Rx for Hope and can be accessed at 800-244-7668. Instructions and request forms are also available at the Rx for Hope website: https://www.rxhope.com/PAP/info/PAPList.aspx?drugid=319&fieldType=drugid

F. Diagnosis of Clinical Rabies in Humans

Rabies in humans affects multiple organ systems and most characteristically presents as a viral encephalitis. With few exceptions, clinical illness with this disease results in death. Fortunately, humans are relatively resistant to the development of clinical disease following rabies infection. The likelihood that a person will develop rabies depends upon a variety of factors including the amount of virus inoculated, the location of inoculation, the number of nerve endings at the site of the exposure, and the timing and procedures used for the administration of PEP. Suspect human rabies cases should be reported to the CHD immediately.

- In general, contact protection should provide adequate protection for health care workers. Droplet precautions should be used during suctioning of saliva or while performing other activities that may create an artificial aerosol. Human to human rabies transmission is rare.

Signs of Clinical Illness*

Clinical illness is divided into five stages: incubation period, prodrome, acute neurologic stage, coma, and recovery or death. The incubation period can be as short as 9 days or as long as a year or more after exposure, with most cases occurring 20-90 days after exposure. The initial symptoms noted during the prodrome are usually nonspecific and consist of malaise, fatigue, headache, anorexia, and fever. About one-half of the patients complain of pain or numbness at the site of the exposure. Other symptoms include cough, chills, sore throat, abdominal pain, nausea, vomiting or diarrhea. Apprehension, anxiety, agitation, irritability, nervousness, insomnia, or depression sometimes also occurs to suggest neurologic involvement. Following the prodromal period that usually lasts 2-10 days, the first definite signs of neurologic involvement appear. These include hyperactivity, disorientation, hallucinations, seizures, bizarre behavior, or paralysis that can last from hours to days. Coma occurs 4-10 days after the onset of symptoms and may last for hours or months before death depending upon the intensity and duration of supportive care.

In the United States almost all patients are admitted to a hospital an average of 4.4 days after the onset of symptoms and the admitting diagnosis is rabies in less than 1/3 of patients. Other admitting diagnoses include viral encephalitis, polio, Guillain-Barré syndrome, cerebrovascular accident, brain tumor, tetanus, psychosis, phenothiazine toxicity, myocardial infarction, pneumonia, and a variety of other diseases.

- Excerpted from Bernard, K.W., "Clinical Rabies in Man" in Rabies Concepts for Professionals ed. Winkler WG and published by Merieux Institute, Inc. 1984.

Clinical Specimens for Antemortem Diagnosis

NOTE: Physicians attending possible human rabies cases originating in Florida must contact the DOH, Division of Environmental Health (850) 245-4299 to arrange specimen submission to the CDC Rabies Laboratory. The Florida DOH BOL will conduct DFA testing of postmortem brain tissue. A questionnaire to determine potential contact exposures to human rabies cases is available through BEPHM.

- ***Serologic testing for rabies diagnosis in humans does not provide conclusive results.***

Patient History – Record a complete account of the patient's history beginning with the exposure, if known. If exposure is unknown, begin with the first related clinic, emergency room, or hospital visit.

Positive Indicators for Rabies

- Nonspecific prodrome prior to onset of neurologic signs
- Neurologic signs consistent with encephalitis or myelitis
    - dysphagia
    - hydrophobia
    - paresis

- Progression of neurologic signs
- Negative test results for other etiologies of encephalitis

Negative Indicators for Rabies

- Improvement or no change in neurologic status
- Illness with ≥ 2 to 3 week duration

Saliva Specimen - Collect saliva (not sputum) for possible virus isolation in a small sterile container(s) which can be securely sealed. No preservatives or additional materials should be added. Seal the container securely (tape around the cap will ensure that it does not loosen). This specimen should be frozen immediately on dry ice (-70° C). This and all other specimens must be shipped in sealed mailing cans.

Neck Biopsy Specimen - A full thickness skin biopsy, 3-6 mm in diameter should be taken from the posterior aspect of the neck just above the hairline. The area from which the specimen is taken should contain as many hair follicles as possible. Shave the area prior to taking the specimen. Place the specimen in a small sterile, sealed container such as a screw top tube with a small amount of gauze moistened with phosphate buffered saline or other isotonic solution such as viral transport medium (tissue culture medium) sufficient to prevent it from drying (no preservatives or additional fluids). Seal container securely as indicated above. Also freeze this specimen on dry ice (-70° C).

CSF and Serum Specimens - Neutralizing antibody is usually not present until the 8th -10th day of clinical illness. Specimens collected before the 8th day are usually not helpful except as the first of paired samples with the second samples being collected 8 or more days after onset. **Do not ship whole blood**! When possible, serum specimens should be of at least 2.0 ml volume to ensure completed testing. No preservatives or additional materials should be added. Seal these containers securely as indicated above.

Handling, Shipping and Notification - ***Contact the Bureau of Environmental Public Health Medicine prior to shipping specimens – (850) 245-4299.*** Neck biopsies and saliva must be sent to CDC on dry ice. Serum and CSF can also be shipped on dry ice or without refrigeration. It may be more convenient to send all specimens on dry ice when any one of them must be frozen. Specimens must be placed in sealed mailing cans containing sufficient absorbent material to contain any leakage in the event of rupture of any or all of the enclosed specimen containers. Such containers will also prevent possible exposure of the specimens to carbon dioxide. Sealed mailing containers should be placed in a foam shipping container with at least 10 pounds of dry ice and shipped by the most expeditious mode (e.g., Federal Express). The following information is required for shipping: Specimens shipped, mode of shipment, expected arrival time, and airway bill or other packing tracing number. The package should be addressed as follows: Rabies Laboratory, DASH, Building 4, Room B32, Centers for Disease Control and Prevention, 1600 Clifton Road NE, Atlanta, GA 30333.

Treatment

The primary treatment for rabies is supportive. Two patients treated against rabies with antivirals (ribavirin, vidarabine, ketamine, amantadine, and interferon-alpha)[30] and induction of coma survived the disease. Patients should be tested for rabies at CDC prior to initiating the modified treatment protocol used for these patients. If treatment is initiated, the protocol and an associated rabies treatment registry is available at:
http://www.mcw.edu/display/router.asp?docid=11655

[30] Willoughby RE Jr., Tieves KS, Hoffman GM, Ghanayem NS, Amlie-Lefond CM, Schwabe MJ, Chusid, MJ, Rupprecht CE, N. Engl. J. Med., 2005 June 16; 352(24):2508-14.

CHAPTER 5

EPIDEMIC CONTROL MEASURES

Most Florida counties currently address the problem of epizootic raccoon rabies via a coalition of state and county public health agencies and collaborators using some combination of the following preventive measures: 1) Rabies Alert and in rare cases Area Quarantine; 2) enforcement of pet vaccination ordinances; 3) low-cost rabies vaccination clinics; 4) apprehension of stray dogs, cats, and nuisance wildlife; 5) selective reduction of concentrated raccoon populations; and 6) public information campaigns. The prevention and control measures in this compendium represent a model developed over the years by various CHDs and local animal control agencies. Every jurisdiction must address their particular situation within the context of existing conditions and constraints.

In general, any unusual increase in the number of rabid animals elicits the declaration of a **Rabies Alert** by the CHD director/administrator. When an outbreak situation continues to escalate, a limited **Area Quarantine** may be imposed following discussions with BEPHM. In all raccoon rabies outbreaks, it is essential that planned prevention and control measures are discussed with allied collaborators and interested parties. Once a decision is made to initiate an alert or quarantine, the media should be advised immediately to facilitate public understanding and acceptance of any actions taken. The following recommended guidelines for controlling raccoon rabies outbreaks, although not all inclusive, have proven over time to be effective in a variety of settings.

A. Coalition Development and Public Awareness

Rabies control programs are more effective when local coalitions are formed to plan and implement prevention strategies. County health departments should take the lead in developing these coalitions which may include community members from: animal control; medical and veterinary medical associations; hospitals, Health Maintenance Organizations (HMOs) and walk-in clinics; FWC; state-chartered humane organizations; wildlife rehabilitation centers; public parks and recreational lands; and contract wildlife trappers.

Media involvement (press releases, radio, and TV coverage) early in Rabies Alerts and Area Quarantines generally sets the stage for better public understanding of rabies and its modes of transmission, and community acceptance of control measures taken (see Chapter 6, Attachments 24 and 25 for rabies awareness and alert press release templates).

B. Enforcement of State Rabies Laws and Local Ordinances

- Dogs, cats, and ferrets must be vaccinated against rabies by licensed veterinarians only.
- Pets must be under leash control or in a fenced setting when outdoors. All stray dogs and cats must be captured, impounded, and sacrificed if not claimed or adopted within a reasonable time (usually 14 days - local ordinances vary).
- The public should be advised not to keep wildlife as pets or interact with strange or sick domestic animals (including feral cats), livestock, or wild animals.
- Strategies must be devised to reduce human-wildlife contact in residential and recreational areas.

C. Rabies Alert and Area Quarantine

Increased levels of rabies in a community require the notification of the citizens in the affected area. Alerts and quarantines should be utilized judiciously to prevent lack of suitable public response due to overuse of the terms. A local rabies control network (CHD personnel, animal control officers, veterinarians, FWC officers, and animal shelter staff) established prior to the onset of problems would assist with the coordination of later interventions. The CHD Director/Administrator may declare and establish an area-wide Rabies Alert or Area Quarantine under authority of state laws (Ch. 381, F.S.), public health regulations (Ch. 64D-3.91, F.A.C.), and local ordinances, in cooperation with BEHPM, appropriate livestock authorities (FDACS) and wildlife conservation agencies (FWC, DEP).

Rabies Alert: A Rabies Alert may be called when:

- a confirmed diagnosis of a rabid domestic animal occurs;
- a geographic clustering of wildlife rabies cases occur;
- an area experiences several confirmed rabid animals (e.g., raccoons) in a short period of time (e.g., up to 50% increase from previous 5-year average); or
- a clear shift towards furious behavior in a population of raccoons occur.

Animals found dead with no human or pet exposure that tested positive for rabies should not be counted in this total, nor should they be tested by DOH BOL as a practical matter.

The CHD or designee should notify the State Public Health Veterinarian, the local rabies control coalition, the media, and neighboring CHD(s) (if close to or overlapping geographic borders) of the Rabies Alert.

Information contained in the alert should include:

- number and type of animals involved
- delineation of the alert area
- change in rabies demographics, if applicable
- the need to immunize pets
- advisories to reduce exposure to wildlife (e.g., not leaving pet food out, garbage control)

Other control measures include:

- Requesting the local animal control agency to increase surveillance for the identification and capture of stray dogs and cats and wildlife vectors.
- Requesting the state-chartered humane organizations and other agencies that deal with unwanted pets to use discretion when adopting out stray animals.
- Coordinating with the local veterinary medical association to heighten awareness about the possibility of rabies exposure in staff and need for pre-exposure prophylaxis.
- Considering rabies vaccination clinics.
- Coordinating with local FWC officials, animal control agencies, and other local law enforcement to assure that wildlife complaints are handled expeditiously and translocation of rabies vector species is prohibited.
- Alerting local health care providers

Alerts should be evaluated and **removed** after rabies activity has ceased. A 60-day period is a general guideline for this in practice unless the CHD or designee in consultation with the State Public Health Veterinarian deems a longer period appropriate.

Area Quarantine: The decision to enact a rabies quarantine should be made carefully. A rabies quarantine is a very specific set of activities that must be judiciously applied. Area Quarantines should be considered for implementation only with clear and compelling evidence that the situation is beyond the scope of rabies activity for that area or the state in general. Conditions for establishing a quarantine include the diagnosis of a translocated strain of rabies (e.g., coyote) or the laboratory confirmation of **epidemic** levels of rabid animals above those levels and conditions for creating a Rabies Alert. As with the alert, the positive test of road-killed or other dead animals should not be counted in this total, nor should they be tested as a practical matter.

The Division of Environmental Health must approve plans for an Area Quarantine. Information required by the BEPHM includes: a description of the area to be covered by the quarantine; the reason for the quarantine; the duration of the quarantine; the agencies involved; and any other particulars necessary to gain a full understanding of the current situation. If approval is given, the Bureau must be kept fully informed of quarantine-related activities in the area.

Quarantine requires the following steps:

- Notifying media and other members of the local rabies control coalition. Holding meetings/updates to assess the situation and determine further activities.
- Ensuring that all dogs and cats roaming at-large will be impounded by animal control agencies. (Animals may be released to their owners upon payment of assessed impounding fee and board. If the impounded dog or cat is not currently vaccinated by a licensed veterinarian, it must be vaccinated while impounded. If such a service is not available at the animal shelter, the owners shall be required to show a valid vaccination certificate or document evidence of appointment with a licensed veterinarian within 24 hours.)
- Confining all dogs, cats and captive wild mammals to their owners' premises. Confinement should be by fence or cage, inside the living quarters or related buildings, or on a leash under control of a responsible person.
- Restricting the movement of animals. Dogs, cats or horses may be moved outside of the quarantine area if they are vaccinated by a licensed veterinarian not less than 30 days or longer than a year prior to intrastate movement and have had no exposure to a potentially rabid animal. Other animal movement is at the discretion of the CHD director/administrator and State Agriculture Veterinarian or their designees.
- Prohibiting adoption from animal shelters of previously free-roaming dogs, cats, or other animals that have no proof of vaccination or rabies vaccination tag in quarantined areas until quarantine is terminated by the county health officer or his/her designee.
- Conducting rabies vaccination clinics.
- Educating the public about rabies (consider a newsletter for rural areas where livestock may be impacted).
- Restricting importation and exportation of domestic animals susceptible to rabies by enforcing importation/exportation guidelines.
- Humanely destroying free-roaming wild mammals determined to be a contributing factor to the epidemic in residential areas. **Translocation of trapped rabies vector species to other areas is absolutely forbidden because of the risk of spreading the epizootic to other areas.**

It has been generally recognized that trapping, antifertility agents, and toxic baits are not necessarily efficient or effective ways to reduce the incidence of rabies in most wildlife populations. However, in Florida, population reduction through live trapping has limited the duration and intensity of rabies epizootics in selected concentrations of urban raccoons. The effectiveness of such wildlife rabies control operations depended upon the density, range, and characteristics of the population involved, its susceptibility to the technique used, public acceptance of the program, and the extent of the local support and assistance. Also, this technique of selective control has only been cost efficient and effective when applied in conjunction with other prevention and control measures.

Quarantine must be time-certain and removed as soon as the threat subsides. Notification of all parties should be done with the same diligence as the imposition of the quarantine

D. Rabies Vaccination Campaign for Dogs and Cats During an Area Quarantine

When a rabies quarantine area is established, a CHD-sponsored, low-cost rabies vaccination clinic should be conducted. These vaccine clinics can be done in a variety of formats; the following procedures are by no means exhaustive. The key issues in development of a clinic are: 1) local veterinary assistance; 2) coordination with county animal control agencies, if available; 3) the availability of vaccine at reasonable rates; 4) a suitable staging area for the clinic; and 5) suitable media coverage to assure turnout.

- **The local veterinary community** is the single best source for a program of this type. If the local veterinarians will sponsor this program in their offices on given days, many of the logistical issues are solved, and the only issues are vaccine supply and media coverage.

In the event that the vaccine clinics cannot be held in veterinarians' offices, participating veterinarians are encouraged to follow the recommendations of the American Veterinary Medical Association (AVMA) Professional Liability Insurance Trust with proper attention to safety and AVMA guidelines.

- **Animal control** has the capability to provide, in many cases, the space to stage a vaccine clinic program. They can provide cages for controlling animals brought to the site, and assist in maintaining separation of species. They should have officers stationed throughout the event in case of an escape requiring capture.

- In general, the staging area should be confined with ingress and egress limited to no more than two ways. This can be done, for example with automobiles in a mall parking lot if necessary. Volunteers, animal control, or CHD staff can fill out the necessary paperwork for processing. If outdoors, local funeral homes may have tents available for shade for these personnel. Rotate these personnel on 2-hour shifts, as these programs are quite demanding.

  The area should allow for two lines (one for dogs, one for cats) and be clearly marked. Personnel should be at the entrance to advise citizens of the path they should take. They can also stop citizens who have unrestrained animals. Staff should be at various places in line to monitor separation of the animals. If the parking area is away from the site, staff with cages should be

placed there (particularly for cats); they can also retrieve the cages upon the owner's return. Leashes should be available, as a substantial number of citizens will not come prepared.

- These events are usually well covered by the media. Publicize the program at least one week in advance. After the event, provide follow-up data (e.g., number of pets vaccinated).

The clinics should be held on two different schedules (e.g., Wednesday evening from 5 p.m. - 8 p.m. and then again on Saturday morning from 9 a.m.-1 p.m.). This allows for most people's schedules to be accommodated. Overall, the key to a successful program is that all members of the community work together in the effort. Think through the site of the program, and all the possible problems. Location, for example, too close to a major highway can cause problems if an animal escapes.

E. Oral Rabies Vaccine

Oral rabies vaccination (ORV) has been in use in the United States since 1990, in Canada since 1985, and in Europe since 1980. The currently licensed oral rabies vaccine in the U.S (a recombinant vaccine) is available to the USDA and its cooperators for distribution to wildlife. The use of ORV has been combined with other wildlife management techniques to successfully control raccoon rabies in urban and rural environments, limiting the spread of raccoon rabies to uninfected areas, in 16 states, and to dramatically control rabies in coyotes and gray fox in south Texas. The goal of these coordinated programs is to stop the spread of wildlife rabies and eventually eliminate terrestrial wildlife rabies. *USDA APHIS WS has provided leadership, funding and program support to assist states with ORV programs and to coordinate regional rabies control efforts.*

In situations of epizootic raccoon rabies, the state or county government might consider the distribution of ORV to control the outbreak. Given a properly designed and executed program, ORV has been demonstrated to be effective in reducing or eliminating the number of raccoon rabies cases. Baiting densities of 70 baits per square kilometer twice a year or 100-150 baits once per year have proven effective in some settings. The cost effectiveness of the program depends upon the success of ORV and other wildlife management techniques and the continued value placed on public safety and on animal health. State funding for ORV programs is not available.

NOTE: *Counties interested in beginning an ORV program must submit proposals to the Florida Rabies Advisory Committee for approval (c/o Dr. Carina Blackmore, Department of Health, 4052 Bald Cypress Way, BIN A08, Tallahassee, FL, 32399-1710; please see Chapter 6, Attachment 26).*

Questions about the proposal can be directed to Dr. Blackmore at 850-245-4732

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Attachment 1

List of Acronyms, Abbreviations and Definitions

The following list is not intended to be all-inclusive. It is, however, a short list of acronyms or terms likely to be used in this document and other publications on rabies.

- **ACIP** – Advisory Committee Immunization Practices
- **APHIS-Animal and Plant Health Inspection Service**
- **BADL-**Bronson Animal Diagnostic Laboratory formerly Kissimmee Animal Diagnostic Laboratory (KADL)
- **BEPHM** – Bureau of Environmental Public Health Medicine (DOH)
- **BOL** – Bureau of Laboratories (DOH)
- **BSPS-**Bureau of Statewide Pharmaceutical Services (DOH)
- **CDC** – Centers for Disease Control and Prevention
- **CHD** – County Health Department
- **Class I Wildlife –** Animals that should not be owned as personal pets.
- **Class II Wildlife –** Animals considered being a real or potential threat to human safety.
- **Confinement** – Being kept apart from people and other animals by fence, cage or on a leash under the control of a person using proper animal handling procedures to minimize potential exposure, subject to the approval of the CHD director/administrator, or designee, of both the particular confinement and the particular person in control of the animal. The termination of confinement is subject to the approval of the CHD director/administrator or designee. All times for confinement are calculated from the date of exposure.
- **FDACS** – Florida Department of Agriculture and Consumer Services
- **DEP** – Department of Environmental Protection
- **DEH** – Department of Environmental Health
- **DFA-**Direct fluorescent antibody test for rabies also referred to as FRA- The most common diagnostic tool for rabies analysis; 98% accuracy rate.
- **DOH** – Florida Department of Health
- **Domestic animal** – Any dogs, cats, and ferrets
- **Excitatory phase** – Often called" furious" rabies where the animal displays classic aggression
- **Exposure-** Any bite, scratch or other contact in which saliva or nervous tissue of a Rabid Animal or a Suspect Rabid Animal enters an open wound, or comes into contact with the mucous membranes by entering the eye, nose or mouth of another animal or person.
- ***F.A.C.*** – Florida Administrative Code
- **FDA-Food and Drug Administration**
- **FRA** – Fluorescent Rabies Antibody test also referred to as DFA - The most common diagnostic tool for rabies analysis; 98% accuracy rate.
- **F.S. –** Florida Statute
- **FSIS –** Food Safety Inspection Service of USDA
- **FMA-Florida Medical Association**
- **FOMA-Florida Osteopathic Medical Association**
- **FVMA-Florida Medical Association**
- **FWC** – Fish and Wildlife Conservation Commission

- **HDCV** – Human diploid cell vaccine, Imovax™
- **Home confinement** – An immunized dog, cat or ferret may be placed under confinement on the owner's premises as determined by the CHD director/administrator or designee
- **HRIG** – Human rabies immune globulin, Immogam™
- **Hyperesthesia** – Extreme sensitivity to touch or other sensory stimuli
- **IM-intramuscular or injection into the muscle**
- **Isolation** – confinement of a domestic animal or livestock suspected to have exposed a person, domestic animal, or livestock to rabies. The isolation period is determined from the date of rabies exposure.
- **KSU-**Kansas State University
- **Livestock** – Any non-feral horse, cattle, sheep, goat, or pig
- **LOADL-**Live Oak Animal Diagnostic Laboratory
- **MMWR-**Morbidity and Mortality Weekly Report
- **MAB** – monoclonal antibody
- **Morbidity period** - The time from onset of clinical signs until death
- **NASPHV-**National Association of State Public Health Veterinarians
- **Neurotropic** – Having an affinity for the nervous system
- **Off-label** – The use of a prescription drug to treat a disease or condition for which the drug has not been approved by the US Food and Drug Administration
- **ORV** – Oral rabies vaccine
- **PAHO-**Pan American Health Organization
- **Paralytic phase** – Often called "dumb" rabies
- **PEP** – Rabies Post-exposure prophylaxis
- **PCEC** – Purified chick embryo culture vaccine, RabAvert ®
- **Photophobia** – Fear of light
- **Pica** – Perverted appetite (e.g., eating fecal material, rocks, sticks)
- **Prodrome** – The time *prior* to onset of symptoms when the animal is infectious without showing overt signs/symptoms of rabies.
- **Provoked exposure/attack** – Any incident where the animal has bitten or scratched due to fear, feeding, maternal territoriality, or defense of family members.
- **Quarantine** – confinement of a domestic animal or livestock exposed to a suspect rabid animal. The quarantine period is determined from the date of rabies exposure.
- **RAC-Florida Rabies Advisory Committee**
- **Rabid animal** – any animal that tests positive for rabies.
- **Rabies exposure** – a rabies exposure is any bite, scratch, or other contact in which saliva or nervous tissue of a suspect or known rabid animal enters an open wound, or comes in contact with mucous membranes by entering the eye, mouth, or nose of another animal or person.
- **Rabies test** – Refers to a rabies DFA test performed by the state public health laboratory or other facility approved by the Department for such purpose.
- **RFFIT** – Rapid fluorescent focus inhibition test; a type of virus neutralization assay
- **Suspect rabid animal –** In the absence of a test result, any animal reasonably believed by the CHD director/administrator or designee to be rabid, based on animal species, symptoms, behavior, and vaccination status.
- **Temporal** – Time

- **Unvaccinated animal** – any wild animal; any domestic or livestock animal that has never been vaccinated for rabies or is of unknown vaccination status; or any domestic or livestock animal that is not currently vaccinated according to the schedule for which the vaccine is licensed (one day or more past the labeled immunity period).
- **USDA APHIS VS –** United States Department of Agriculture Animal and Plant Health Inspection Service Veterinary Services
- **USDA APHIS WS-**United States Department of Agriculture Animal and Plant Health Inspection Service Wildlife Services
- **Vaccinated** – For a domestic animal, means that such animal is currently vaccinated for rabies in accordance with the requirements of section 828.30, F.S. For any other animal, "vaccinated" means such animal received the FDA-approved rabies vaccine from a licensed veterinarian consistent with the vaccine label and is within the duration of immunity granted per the vaccine label.
- **Wild animal** – Any animal that is a mammal and neither a domestic animal nor livestock. Any animal that is a cross between a wild animal and a domestic animal shall be treated as a wild animal.
- **WHO-**World Health Organization

Rabies Contacts **Attachment 2**

Human or Animal Exposure Consultations

Dr. Carina Blackmore, FL DOH, BEPHM 850-245-4732
Dr. Danielle Stanek, FL DOH, BEPHM 850-245-4117
Local County Health Department

Diagnostic Rabies Testing: Florida DOH, Bureau of Laboratories (see Attachment 16 for full listing)

BOL-Jacksonville 904-791-1540
BOL-Pensacola 850-595-8895
BOL-Miami 305-324-2432
BOL-Tampa 813-974-8300

Assistance collecting samples from large animals by FDACS (must arrange transport to FDACS laboratories)

Director: Dr. Alice Agasan
Bronson Animal Diagnostic Laboratory
2700 N. John Young Parkway
Kissimmee, FL 34741-1266
321-697-1499

Director: Dr. James Maxwell
Live Oak Animal Diagnostic Laboratory
912 Nobles Ferry Road
Live Oak, FL 32064-8463
386-330-5700

Rabies Surveillance Testing (non-exposure cases only-see Chapter 3, Section F for details):

The Rabies Laboratory
Kansas State University
2005 Research Park Circle
Manhattan, KS 66502
Website: **www.vet.ksu.edu/rabies**
Email: rabies@vet.ksu.edu
Main Phone: (785) 532-4483 Fax: (785) 532-4474

Emergency HRIG or Human Rabies Vaccine for County Health Departments

FL DOH Bureau of Statewide Pharmaceutical Services
850-922-9036; after-hours 850-445-9446

Indigent Human Rabies PEP Programs

Sanofi Pasteur / Franklin Group	866-801-5655	General number 800-822-2463
Novartis/Rx Hope	800-244-7668	General number 800-244-7668

Reporting Wildlife Permitting Violations and Injured Wildlife

Florida Fish and Wildlife Conservation Commission Wildlife Alert Hotline 1-888-404-3922 or #FWC on some cellular phones

Seizure of Wildlife in Bite Situations

Regular working hours: Investigators Linda Harrison or Jason Marlow 850-488-6253
Weekends Wildlife Alert Hotline 1-888-404-3922

Intrastate Livestock Movement and State Regulation Consultations (includes Pet Health Certificates):

FDACS, Division of Animal Industry, Dr. Samuel Lamb 850-410-0950

Reporting rabies in horses & livestock or livestock quarantine assistance
FDACS, Division of Animal Industry, Dr. Bill Jeter 850-410-0900

Reporting use of unlicensed rabies rabid test kits, vaccines or other biologics
FDACS, Animal Industry, Dr. Mike Short 850-410-0900

Requirements for Shipping Pets on Airlines:
USDA, Voice response service 800-545-8732

Reporting Stray and Nuisance Animal Problems:
Contact county animal services & control agency

Reporting Abused or Neglected Animals
Contact local humane society or animal control agency

Serology/Titer Testing

The Rabies Laboratory
Kansas State University
2005 Research Park Circle
Manhattan, Kansas 66502
Phone: 785-532-4483
Fax: 785-532-4474
Email: rabies@vet.ksu.edu
www.vet.ksu.edu/rabies

Screen $37, endpoint $45 (January 2012)
Send 2 ml of serum packed in ice
overnight or second day delivery

Dr. Richard Newhouse / Mary Yager
Atlanta Health Associates
309 Pirkle Ferry Road, Suite D300
Cumming, GA 30040
Phone: 770-205-9091 or 800-717-5612
Fax: 770-205-9021
Email: info@atlantahealth.net
http://www.atlantahealth.net

Screen $35 (January 2012)
endpoint $45 human, $55 for animal sera
Send 2 ml of serum packed in ice

Dr. Kenny Brock / Krystyna Minc
Dept. of Pathobiology, Virology Lab
261 Greene Hall
College of Veterinary Medicine
Auburn, AL 36849-5519
Phone: 334-844-2659
Fax: 334-844-2652
http://www.vetmed.auburn.edu/index.pl/virology

Endpoint $36 (January 2012)
ANIMAL SERA ONLY
Send 1 ml (or at least 0.5 ml)
of serum in cold packs
with accompanying vaccination history

Public Health

381.0011 Duties and powers of the Department of Health.--It is the duty of the Department of Health to:

(1) Assess the public health status and needs of the state through statewide data collection and other appropriate means, with special attention to future needs that may result from population growth, technological advancements, new societal priorities, or other changes.

(2) Formulate general policies affecting the public health of the state.

(3) Develop a comprehensive public health plan that addresses all aspects of the public health mission and establishes health status objectives to direct the use of public health resources with an emphasis on prevention.

(4) Administer and enforce laws and rules relating to sanitation, control of communicable diseases, illnesses and hazards to health among humans and from animals to humans, and the general health of the people of the state.

(5) Cooperate with and accept assistance from federal, state, and local officials for the prevention and suppression of communicable and other diseases, illnesses, injuries, and hazards to human health.

(6) Declare, enforce, modify, and abolish quarantine as the circumstances indicate. Any health regulation that restricts travel or trade within the state may not be adopted or enforced in this state except by authority of the department.

(7) Provide for a thorough investigation and study of the incidence, causes, modes of propagation and transmission, and means of prevention, control, and cure of diseases, illnesses, and hazards to human health.

(8) Provide for the dissemination of information to the public relative to the prevention, control, and cure of diseases, illnesses, and hazards to human health. The department shall conduct a workshop before issuing any health alert or advisory relating to food-borne illness or communicable disease in public lodging or food service establishments in order to inform persons, trade associations, and businesses of the risk to public health and to seek the input of affected persons, trade associations, and businesses on the best methods of informing and protecting the public, except in an emergency, in which case the workshop must be held within 14 days after the issuance of the emergency alert or advisory.

(9) Act as registrar of vital statistics.

(10) Cooperate with and assist federal health officials in enforcing public health laws and regulations.

(11) Cooperate with other departments, local officials, and private boards and organizations for the improvement and preservation of the public health.

(12) Cooperate with other departments, local officials, and private organizations in developing and implementing a statewide injury control program.

(13) Adopt, repeal, and amend rules consistent with law. This subsection does not authorize the department to require a permit or license unless such requirement is specifically provided by law.

(14) Perform any other duties prescribed by law.

381.0012 Enforcement authority.--

(1) The department may commence and maintain all proper and necessary actions and proceedings to enforce the rules adopted pursuant to this chapter and may defend all actions and proceedings involving the department's powers and duties.

(2) The department may apply for an injunction to the proper circuit court, and the judge of that court upon hearing and for cause shown may grant a temporary or permanent injunction, or both, restraining any person from violating or continuing to violate any of the provisions of this chapter or from failing or refusing to comply with the requirements of this chapter. A permanent injunction may be issued without bond. However, a temporary injunction may not be issued without bond except after a hearing of which the respondent has been given not less than 7 days' prior notice. A temporary injunction may not be issued without bond which limits or prevents operations of an industrial, manufacturing, or processing plant, unless at the hearing, it is shown by clear, certain, and convincing evidence that irreparable injury will result to the public from the failure to issue the temporary injunction. If a temporary injunction or restraining order is improperly or erroneously granted, the state is liable in damages and to the extent provided for in chapter 768.

(3) The department may commence and maintain all proper and necessary actions and proceedings to compel the performance of any act specifically required of any person, officer, or board by any law of this state relating to public health.

(4) The department may appear before any magistrate empowered to issue warrants in criminal cases and request the issuance of a warrant. The magistrate shall issue a warrant directed to any sheriff, deputy, or police officer to assist in any way to carry out the purpose and intent of this chapter.

(5) It shall be the duty of every state and county attorney, sheriff, police officer, and other appropriate city and county officials upon request to assist the department or any of its agents in enforcing the state health laws and the rules adopted under this chapter.

381.0031 Report of diseases of public health significance to department.--
(3) Reports required by this section must be in accordance with methods specified by rule of the department.
(4) Information submitted in reports required by this section is confidential, exempt from the provisions of s. 119.07(1), and is to be made public only when necessary to public health. A report so submitted is not a violation of the confidential relationship between practitioner and patient.

381.006 Environmental health.--The department shall conduct an environmental health program as part of fulfilling the state's public health mission. The purpose of this program is to detect and prevent disease caused by natural and manmade factors in the environment. The environmental health program shall include, but not be limited to:

(9) A function to control diseases transmitted from animals to humans, including the segregation, confinement, and destruction of domestic pets and wild animals having or suspected of having such diseases.

Veterinary Medical Practice

474.203 Exemptions.--This chapter shall not apply to:

(4) Any person, or the person's regular employee, administering to the ills or injuries of her or his own animals, including, but not limited to, castration, spaying, and dehorning of herd animals, unless title has been transferred or employment provided for the purpose of circumventing this law. This exemption shall not apply to out-of-state veterinarians practicing temporarily in the state. However, only a veterinarian may immunize or treat an animal for diseases which are communicable to humans and which are of public health significance.

Cruelty to Animals

828.30 Rabies vaccination of dogs, cats and ferrets--

(1) All dogs, cats and ferrets 4 months of age or older must be vaccinated by a licensed veterinarian against rabies with a United States Government-approved vaccine. The cost of vaccination must be borne by the animal's owner. Thereafter, the interval between vaccinations shall conform to the vaccine manufacturer's directions. The cost of vaccination must be borne by the animal's owner. Evidence of circulating rabies virus neutralizing antibodies shall not be used as a substitute for current vaccination in managing rabies exposure or determining the need for booster vaccinations.

(2) A dog, cat or ferret is exempt from vaccination against rabies if a licensed veterinarian has examined the animal and has certified in writing that at the time vaccination would endanger the animal's health because of its age, infirmity, disability, illness, or other medical considerations. An exempt animal must be vaccinated against rabies as soon as its health permits.

(3) Upon vaccination against rabies, the licensed veterinarian shall provide the animal's owner and the animal control authority with a rabies vaccination certificate which must contain at least the following information:

(a) The license number of the administering veterinarian.

(b) The name and address of the veterinarian and the name, address and phone number of the owner.

(c) The date of vaccination.

(d) The expiration date of the vaccination.

(e) The species, age, sex, color, breed, weight, and name of the animal vaccinated.

(f) The rabies vaccine manufacturer.

(g) The vaccine lot number.

(h) The type and brand of vaccine used.

(i) The signature or signature stamp of the licensed veterinarian.

(j) The rabies tag number.

(k) The microchip number.

(4) Violation of this section is a civil infraction, punishable as provided in s. 828.27(2).

(5) This section does not prohibit or limit municipalities or counties from enacting requirements similar to or more stringent than the provisions of this section for the implementation and enforcement of rabies-control ordinances.

Animal Industry

585.145 Control of animal diseases.--

(1) The department shall take such measures as may be necessary and proper for the control, suppression, eradication, and prevention of the spread of contagious, infectious, and communicable disease and to protect animals in the state. The department shall also quarantine such animals as it shall find, or have reason to believe, to be infected with or exposed to any such disease.

(2) No animal shall be imported into the state, moved within the state, or the ownership thereof transferred within the state without the owner, broker, or transferor first obtaining such health tests, official certificates of veterinary inspection, or other certificates and documents as shall be required by rules adopted by the department. Evidence of compliance with this subsection shall accompany the owner or agent having jurisdiction of such animals imported, moved intrastate, or to which ownership is being transferred. However, unless an emergency is declared, the department may not require Florida residents to carry evidence of compliance in intrastate travel for privately owned domestic canines or domestic felines which are not offered for sale. The department may provide by rule specific exceptions to this subsection upon finding that certain importations, intrastate movements, or transfers pose no threat to affected industries in Florida.

(3) A person who forges, counterfeits, simulates or alters, or who knowingly possesses, uses, presents or utters, any forged, counterfeited, altered or simulated official certificate of veterinary inspection or any other document relating to animal health requirements or substitutes, represents, or tenders an official certificate of veterinary inspection or any other document relating to animal health requirements of one animal for another animal commits a felony of the third degree, punishable as provided in s. 775.082, s. 775.083, or s. 775.084.

585.15 Dangerous transmissible disease or pest a public nuisance.--The department may declare by rule that a certain pest or disease of animals is a public nuisance. When a pest or disease is thus determined to be dangerous, transmissible, or threatening to an agricultural interest of the state, it shall be known as a "reportable disease." Each reportable disease shall be included by rule on the department's dangerous transmissible disease list. When necessary because of the possible impact of an animal disease on public health, the department may consult with the Department of Health regarding an animal disease that is transmissible to humans.

Wildlife

379.3311 Police powers of commission and its agents – .

(1) The Fish and Wildlife Conservation Commission, the executive director and the executive director's assistants designated by her or him, and each wildlife officer are constituted peace officers with the power to make arrests for violations of the laws of this state when committed in the presence of the officer or when committed on lands under the supervision and management of the commission. The general laws applicable to arrests by peace officers of this state shall also be applicable to said director, assistants, and wildlife officers. Such persons may enter upon any land or waters of the state for performance of their lawful duties and may take with them any necessary equipment, and such entry shall not constitute a trespass.

(2) Such officers shall have power and authority to enforce throughout the state all laws relating to game, nongame birds, fish, and fur-bearing animals and all rules and regulations of the Fish and Wildlife Conservation Commission relating to wild animal life, marine life, and freshwater aquatic life, and in connection with said laws, rules, and regulations, in the enforcement thereof and in the performance of their duties thereunder, to:
(a) Go upon all premises, posted or otherwise;
(b) Execute warrants and search warrants for the violation of said laws;
(c) Serve subpoenas issued for the examination, investigation, and trial of all offenses against said laws;
(d) Carry firearms or other weapons, concealed or otherwise, in the performance of their duties;
(e) Arrest upon probable cause without warrant any person found in the act of violating any of the provisions of said laws or, in pursuit immediately following such violations, to examine any person, boat, conveyance, vehicle, game bag, game coat, or other receptacle for wild animal life, marine life, or freshwater aquatic life, or any camp, tent, cabin, or roster, in the presence of any person stopping at or belonging to such camp, tent, cabin, or roster, when said officer has reason to believe, and has exhibited her or his authority and stated to the suspected person in charge the officer's reason for believing, that any of the aforesaid laws have been violated at such camp;
(f) Secure and execute search warrants and in pursuance thereof to enter any building, enclosure, or car and to break open, when found necessary, any apartment, chest, locker, box, trunk, crate, basket, bag, package, or container and examine the contents thereof;
(g) Seize and take possession of all wild animal life, marine life, or freshwater aquatic life taken or in possession or under control of, or shipped or about to be shipped by, any person at any time in any manner contrary to said laws.
(3) It is unlawful for any person to resist an arrest authorized by this section or in any manner to interfere, either by abetting, assisting such resistance, or otherwise interfering with said executive director, assistants, or wildlife officers while engaged in the performance of the duties imposed upon them by law or regulation of the Fish and Wildlife Conservation Commission.
(4) Upon final disposition of any alleged offense for which a citation for any violation of this chapter or the rules of the commission has been issued, the court shall, within 10 days after the final disposition of the action, certify the disposition to the commission.

Damage by Dogs
767.16 Bite by a police or service dog; exemption from quarantine.—Any dog that is owned, or the service of which is employed, by a law enforcement agency, or any dog that is used as a service dog for blind, hearing impaired, or disabled persons, and that bites another animal or human is exempt from any quarantine requirement following such bite if the dog has a current rabies vaccination that was administered by a licensed veterinarian.
History.—s. 1, ch. 91-228.

Draft 64D-3, *F.A.C.* Extract Rabies Prevention and Control in Florida Attachment 4

A. Definitions:

1. Vaccinated – For a domestic animal, means that such animal is currently vaccinated for rabies in accordance with the requirements of section 828.30, Florida Statutes. For any other animal, "vaccinated" means such animal received the FDA-approved rabies vaccine from a licensed veterinarian consistent with the vaccine label and is within the duration of immunity granted per the vaccine label.

2. Test, Tests, Testing and Tested – Refers to a fluorescent rabies antibody test performed by the state public health laboratory or other facility approved by the Department for such purpose.

3. Domestic Animal – Any dog, cat or ferret.

4. Livestock – Any non-feral horse, cattle, sheep, goat or pig.

5. Wild animal - Any animal that is a mammal and neither a domestic animal nor livestock. Any animal that is a cross between a Wild Animal and a domestic animal shall be treated as a Wild Animal for purposes of this rule.

6. Exposure – Any bite, scratch or other contact in which saliva or nervous tissue of a Rabid Animal or a Suspect Rabid Animal enters an open wound, or comes into contact with the mucous membranes by entering the eye, nose or mouth of another animal or person.

7. Rabid animal – Any animal that tests positive for rabies.

8. Suspect rabid animal – In the absence of a test result, any animal reasonably believed by the CHD director/administrator or designee to be rabid, based on animal species, symptoms, behavior, and vaccination status.

9. Confinement – Being kept apart from people and other animals by fence, cage or on a leash under the control of a person using proper animal handling procedures to minimize potential Exposure, subject to the approval of the CHD director/administrator, or designee, of both the particular confinement and the particular person in control of the animal. The termination of Confinement is subject to the approval of the CHD director/administrator or designee. All times for Confinement are calculated from the date of Exposure.

10. Exhibitor – An entity accredited in good standing by the Association of Zoos and Aquariums.

B. Procedure when Suspect Rabid Animal causes human Exposure - The Suspect Rabid Animal, if Livestock, shall be in Confinement for at least 14 days; if a Domestic Animal, shall be in Confinement for at least 10 days. Absent Confinement, or if it exhibits signs of rabies, or if neither Livestock nor a Domestic Animal, the Suspect Rabid Animal shall be immediately euthanized and Tested. The final requirement prior to termination of Confinement for an unvaccinated Domestic Animal is that it must be Vaccinated.

C. Procedure when Suspect Rabid Animal causes Exposure to Livestock or Domestic Animal -

1. Vaccinated Domestic Animals or Livestock that suffered an Exposure shall be in Confinement for at least 45 days or until the Suspect Rabid Animal is Tested negative. This option is available for Domestic Animals or Livestock conditioned upon immediate revaccination by a licensed veterinarian. Absent Confinement, or if the animal exhibits signs of rabies while in Confinement, the animal shall be immediately euthanized.

2. Unvaccinated Domestic Animals or Livestock that suffered an Exposure shall be in Confinement for at least 180 days or until the Suspect Rabid Animal tests negative. If the Suspect Rabid Animal cannot be tested, a Domestic Animal in Confinement must be Vaccinated at least 30 days prior to release from Confinement. Livestock in Confinement may not be slaughtered, no milk may be consumed or sold, and no semen may be collected. Absent Confinement, or if the animal exhibits signs of rabies while in Confinement, the animal shall be immediately euthanized (or may be slaughtered within 7 days of Exposure if Livestock).

3. Any Wild Animal held captive by anyone other than an Exhibitor that suffers an Exposure must be immediately euthanized.

4. Any Wild Animal held captive by an Exhibitor that suffers an Exposure shall either be euthanized immediately or placed in Confinement by the Licensee for at least 180 days. The Exhibitor must euthanize the Wild Animal immediately if it exhibits signs of Rabies.

5. Unvaccinated horses that suffered an Exposure out-of-state must complete Confinement for at least 180 days out-of-state prior to reentry into Florida.

D. Vaccination, Confinement, euthanizing and Testing, and the expenses associated therewith are the responsibility of the private entity whose animal is subject to this rule. All expenses to the Department as a result of refusal on the part of the private entity to comply with all or part of this responsibility shall be billed to and collected from the private entity.

Statutory Source and current rule.

381.0011 Duties and powers of the Department of Health.--It is the duty of the Department of Health to:

(5) Declare, enforce, modify, and abolish quarantine of persons, animals, and premises as the circumstances indicate for controlling communicable diseases or providing protection from unsafe conditions that pose a threat to public health, except as provided in ss. 384.28 and 392.545-392.60.
(a) The department shall adopt rules to specify the conditions and procedures for imposing and releasing a quarantine. The rules must include provisions related to:

1. The closure of premises.

2. The movement of persons or animals exposed to or infected with a communicable disease.

3. The tests or treatment, including vaccination, for communicable disease required prior to employment or admission to the premises or to comply with a quarantine.

4. Testing or destruction of animals with or suspected of having a disease transmissible to humans.

5. Access by the department to quarantined premises.

6. The disinfection of quarantined animals, persons, or premises.

7. Methods of quarantine.

64D-3.040 Procedures for Control of Specific Communicable Diseases.

(2) Rabies Control in Humans.

(a) Reporting of Suspected Human Exposure to Rabies – Any person having knowledge of an incident in which a person is bitten by or otherwise exposed to any known or suspected rabid animal shall notify the county health department director or administrator or their designee where the bite occurred immediately by telephone, facsimile, electronic data transfer or other confidential means.

(b) Prevention in Humans – Persons bitten or otherwise exposed to suspect rabid animals shall be evaluated for post-exposure treatment by the county health department director or medical director or their designee according to recommendations of Human Rabies Prevention- United States, 2008, Recommendations of the Advisory Committee on Immunization Practices (ACIP), published in the Centers for Disease Control and Prevention Morbidity and Mortality Weekly Report, Vol. 57, No. RR-3, May 26, 2008, incorporated by reference, available online at: http://www.cdc.gov/mmwr/PDF/rr/rr5703.pdf.

(3) Rabies Control in Animals.

(a) The county health department director or administrator or their designee shall promptly investigate reported bites or exposures by suspected rabid animals.

(b) The county health department director or administrator or their designee shall cause to be captured, confined or seized suspected rabid animals and isolate and quarantine or humanely euthanize and provide for laboratory examination, as outlined in the guidebook, Rabies Prevention and Control in Florida 2008, incorporated by reference, available at: www.myfloridaeh.com/community/arboviral/Zoonoses/RabiesguideUpdated.pdf. This includes animals involved in human exposure (bite and non-bite) and animals exposed to rabid or suspected rabid animals. Other methods of controlling rabies in domestic or wild animals shall be administered by order of the county health department director or administrator or their designee according to recommendations of the Florida Rabies Advisory Committee.

(c) Upon official request from the health agency of another state or country, the appropriate county health department designee shall provide assistance in locating and placing in quarantine the suspect animal as required for proper completion of investigation of a potential rabies exposure incident.

(d) Epizootic Rabies. The State Health Officer, or the county health department director or administrator or their designee shall declare an area wide quarantine when prevalence of rabies so indicates. The conditions of the quarantine shall control the movement, sale, impoundment or required euthanasia of animals in the quarantine area as specified by departmental policy and procedure guidelines as defined in paragraph 64D-3.040(3)(b), F.A.C.

Attachment 5

Rabies and Wildlife Pets

In the interest of public health and safety, Florida Statutes 381 and Florida Administrative Code 64D-3 require that all persons with knowledge of human exposure to a suspect rabid animal report the incident to the county health department. Certain species kept as pets are considered suspect rabid animals. Permitees keeping species at high risk of transmitting rabies involved in bite/scratch exposure incidents must be prepared to surrender the animal to county health department or animal control authorities for euthanasia and rabies testing upon demand.

Of all the high-risk species, the raccoon is the most important wildlife rabies host in Florida. During the past one-half century at one time or another, cases of rabies in these animals have been reported from every county. Currently, the entire state is considered to be at risk for rabies. All raccoons, even those kept as personal pets, regardless of their origin or vaccination status, are considered at high risk for rabies.

Whenever wildlife pets such as raccoon bites, scratches or otherwise exposes a person to saliva, there is the possibility that the animal could be infected with rabies virus. Research has shown that raccoons can shed rabies virus in their saliva without showing any signs or symptoms of the disease.[31] In order to define whether the person involved in the incident was exposed to a rabid animal, it will be necessary to euthanize the animal and test its brain for the presence of rabies virus.

[31] Burridge MJ, Sawyer LA, Bigler WJ. Rabies in Florida. HRS, 1986.

Attachment 6

WHAT YOU SHOULD KNOW ABOUT RABIES

Florida Department of Health

What is rabies?

Rabies is a deadly viral disease that can be prevented but not cured. The virus attacks the nerves and brain tissue of warm-blooded animals including people.

How is it spread?

When an animal is sick with rabies, the virus is shed in the saliva and can be passed to another animal or a person, usually through a bite. Transmission may also occur if saliva or the animal's nervous tissue enters open wounds, the mouth, nose or eyes of another animal or person.

What does a rabid animal look like?

Animals with rabies may show strange behavior – they can be aggressive, attacking for no apparent reason. Some animals can act very tame (especially wild animals). They may not be able to eat, drink, or swallow. They may drool because they cannot swallow their saliva. They may stagger or become paralyzed. Eventually they will die.

What do I do if an animal bites me?

1. Immediately scrub the wound with lots of soap and running water for five to ten minutes.
2. Try to get a complete description of the animal and determine where it is so that it can be picked up by Animal Control for confinement or rabies testing.
3. Go to your family doctor or the nearest emergency room.
4. Call your County Health Department or Animal Control Agency promptly with the animal's description and location of the animal. The animal will either be confined for ten days (if it is a dog, cat or ferret) or be tested for rabies.
5. If you kill the animal, be careful not to damage the head and avoid further contact with the animal even when it is dead.

What do I do to protect myself, my family and my pets from rabies?

1. Have your veterinarian vaccinate all of your dogs, cats, and ferrets against rabies and make sure you follow your veterinarian's instructions for revaccination. Rabies vaccination is also recommended for horses.
2. Avoid contact with wild or stray animals.
3. Never feed wild or stray animals -- avoid attracting them with outdoor food sources (like uncovered trash). Feed your pets indoors.
4. Do not allow your pets to run free. Follow leash laws by keeping pets and livestock secured on your property.
5. If your animal is attacked by a wild, stray or unvaccinated animal, DO NOT examine your pet for injuries without wearing gloves. Wash your pet with soap and water to remove saliva from the attacking animal. Do not let your animal come into contact with other animals or people until the situation can be dealt with by Animal Control or the County Health Department.

Attachment 7

Model Memorandum of Agreement for Rabies Control Activities

For the mutual benefit of the parties involved, this memorandum of agreement is between the _____ County Health Department and the _____ (animal control agency) in the interest of protecting the health and safety of the population of _____ County and consolidating the county rabies control program.

The _____ County Health Department agrees to:

1. Provide medical consultation regarding anti-rabies treatment for victims.
2. Perform surveillance of post-exposure prophylaxis use and report to the State Heath Office.
3. Provide the pre-exposure and post-exposure vaccinations for employees of _____ (animal control agency).
4. Notify victims of the rabies test results of submitted animal specimens.
5. Release animals at the end of the confinement period and notify all parties.
6. Provide assistance in a court of law, when needed, with the enforcement of rabies control regulations.
7. Provide technical assistance regarding animal status determinations.
8. Provide rabies guidebooks, legislative material and other rabies control documents as appropriate.

The _____ (animal control agency) agrees to:

1. Assume responsibility for the _____ County animal rabies control program as expressed in Chapter 64D-3 of the Florida Administrative Code and in the *Rabies Control and Prevention in Florida, 2008* guidebook. Duties related to those responsibilities include:
   a) Search for and attempt to locate animals involved in bite attack once reported to the agency by victims, health care providers or by the _____County Health Department.
   b) Confine animals for rabies as appropriate. Or verify that animals held at home are healthy at the end of the observation period.
   c) Observe animals under confinement for signs of rabies.
   d) Remove or contract for the removal of animal heads for rabies testing as appropriate.
   e) Submit animal specimens to the Florida DOH branch laboratory for rabies testing.
2. Provide epidemic control measures in accordance with the _____ County Health Department as outlined in the *2008 Rabies Control and Prevention in Florida* guidebook and authorized by FS 381.
3. Inform the _____ County Health Department when actions in a court of law are needed to enforce rabies regulations in the interest of involving both parties to the memorandum in such actions.
4. Promptly notify the _____ County Health Department when any of the following occurs:
   a) The death of an animal under confinement.
   b) The escape of an animal under confinement.
5. Refer all medical inquiries regarding antirabies treatment to the _____ County Health Department.
6. Submit Animal Bite Reports to the _____ County Health Department on a _____ basis.
7. Honor FS 381 provisions relative to the confidentiality of animal bite patient records.

This agreement shall be reviewed annually

_____ _____

Signed _____ County Health Department Director (animal control)

Date: _____ Date: _____

Please check with your local legal personnel

Attachment 8

USDA-Approved Animal Rabies Vaccines

Table 1. Rabies Vaccines Licensed and Marketed in the U.S., 2012

Product Name	Produced by	Marketed by	For Use in	Dosage	Age at Primary Vaccination[a]	Booster Recommended	Route of Inoculation
A) MONOVALENT (Inactivated)							
RABVAC 1	Boehringer Ingelheim License No. 112	Boehringer Ingelheim	Dogs Cats	1 ml 1 ml	3 months[b] 3 months	Annually Annually	IM or SC IM or SC
RABVAC 3	Boehringer Ingelheim License No. 112	Boehringer Ingelheim	Dogs Cats Horses	1 ml 1 ml 2 ml	3 months 3 months 3 months	1 year later & triennially 1 year later & triennially Annually	IM or SC IM or SC IM
DEFENSOR 1	Pfizer, Incorporated License No. 189	Pfizer, Incorporated	Dogs Cats	1 ml 1 ml	3 months 3 months	Annually Annually	IM[c] or SC[d] SC
DEFENSOR 3	Pfizer, Incorporated License No. 189	Pfizer, Incorporated	Dogs Cats Sheep Cattle	1 ml 1 ml 2 ml 2 ml	3 months 3 months 3 months 3 months	1 year later & triennially 1 year later & triennially Annually Annually	IM or SC SC IM IM
NOBIVAC 3	Merck Animal Health License No. 189	Merck Animal Health	Dogs Cats Sheep Cattle	1 ml 1 ml 2 ml 2 ml	3 months 3 months 3 months 3 months	1 year later & triennially 1 year later & triennially Annually Annually	IM or SC SC IM IM
NOBIVAC 1	Merck Animal Health License No. 189	Merck Animal Health	Dogs Cats	1 ml 1 ml	3 months 3 months	Annually Annually	IM or SC SC
EQUIRAB	Merck Animal Health License No. 165A	Merck Animal Health	Horses	1 ml	4 months	Annually	IM
IMRAB 1	Merial, Incorporated License No. 298	Merial, Incorporated	Dogs Cats	1 ml 1 ml	3 months 3 months	Annually Annually	SC SC
IMRAB 1 TF	Merial, Incorporated License No. 298	Merial, Incorporated	Dogs Cats	1 ml 1 ml	3 months 3 months	Annually Annually	SC SC
IMRAB 3	Merial, Incorporated License No. 298	Merial, Incorporated	Dogs Cats Sheep Cattle Horses Ferrets	1 ml 1 ml 2 ml 2 ml 2 ml 1 ml	3 months 3 months 3 months 3 months 3 months 3 months	1 year later & triennially 1 year later & triennially 1 year later & triennially Annually Annually Annually	IM or SC IM or SC IM or SC IM or SC IM or SC SC
IMRAB 3 TF	Merial, Incorporated License No. 298	Merial, Incorporated	Dogs Cats Ferrets	1 ml 1 ml 1 ml	3 months 3 months 3 months	1 year later & triennially 1 year later & triennially Annually	IM or SC IM or SC SC
IMRAB Large Animal	Merial, Incorporated License No. 298	Merial, Incorporated	Cattle Horses Sheep	2 ml 2 ml 2 ml	3 months 3 months 3 months	Annually Annually 1 year later & triennially	IM or SC IM or SC IM or SC

B) MONOVALENT (Rabies glycoprotein, live canary pox vector)							
PUREVAX Feline Rabies	Merial, Incorporated License No. 298	Merial, Incorporated	Cats	1ml	12 weeks	Annually	SC
C) COMBINATION (Inactivated rabies)							
Equine POTOMAVAC + IMRAB	Merial, Incorporated License No. 298	Merial, Incorporated	Horses	1 ml	3 months	Annually	IM
D) COMBINATION (Rabies glycoprotein, live canary pox vector)							
PUREVAX Feline 3/ Rabies	Merial, Incorporated License No. 298	Merial, Incorporated	Cats	1ml	8 weeks 3 months	Every 3 weeks until 3 months & annually 3 weeks later & annually	SC
PUREVAX Feline 4/ Rabies	Merial, Incorporated License No. 298	Merial, Incorporated	Cats	1ml	8 weeks 3 months	Every 3 weeks until 3 months & annually 3 weeks later & annually	SC
E) ORAL (Rabies glycoprotein, live vaccinia vector) - RESTRICTED TO USE IN STATE AND FEDERAL RABIES CONTROL PROGRAMS							
RABORAL V-RG	Merial, Incorporated License No. 298	Merial, Incorporated	Raccoons Coyotes	N/A	N/A	As determined by local authorities	Oral

a. Minimum age (or older) and revaccinated one year later.
b. One month = 28 days
c. Intramuscularly
d. Subcutaneously

Rabies Vaccine Descriptions

Based upon information provided on the vaccine labels and provided by the manufacturers, Table 2 lists descriptions of the licensed rabies vaccines in the U.S. by vaccine name, cell line, virus strain, adjuvant, inactivation method, and preservative.

Table 2. Rabies Vaccine Description

Manufacturer	Name	Cell Line	Virus Strain	Adjuvant	Inactivation	Preservative
Boehringer Ingelheim	Rabvac 1, 3	Not Disclosed	Not Disclosed	Yes, Not Disclosed	ß-propriolactone	Gentamicin
Pfizer	Defensor 1, 3	Baby Hamster Kidney	PV-Paris/BHK/ purify.paff3,svr 289	Aluminum hydroxide	ß-propriolactone	Thimerosal Gentamicin
Merck Animal Health	Nobivac 1, 3	Baby Hamster Kidney	Pasteur	Yes	Chemically inactivated	Gentamicin
	EquiRab	Not Disclosed	Not Disclosed	Havlogen®	Not Disclosed	Thimerosal, Neomycin, Polymyxin B
Merial	Imrab 1, 3 Imrab 1, 3 TF Imrab Large Animal POTOMAVAC + Imrab	Murine	Pasteur (PV-11)	Aluminum hydroxide	Not Disclosed	Gentamicin
	Purvax Feline Rabies 3/Rabies 4/Rabies	----------	Recombinant canarypox vector	N/A	N/A	Gentamicin
	Raboral V-RG	----------	Recombinant vaccinia vector	----------	N/A	----------

Table 3. Rabies Vaccine Manufacturer Contact Information

Rabies Vaccine Manufacturer Contact Information

Manufacturer	Phone Number	Internet Address
Boehringer Ingelheim	800-325-9167	http://us.boehringer-ingelheim.com/
Merck Animal Health	800-224-5318	http://www.merck-animal-health-usa.com/
Merial, Incorporated	888-637-4251	http://us.merial.com/
Pfizer, Incorporated	800-366-5288	http://www.pfizerah.com

ADVERSE EVENTS: Adverse events should be reported to the vaccine manufacturer and to USDA, Animal and Plant Health Inspection Service, Center for Veterinary Biologics (Internet: http://www.aphis.usda.gov/animal_health/vet_biologics/vb_adverse_event.shtml; telephone: 800-752-6255; or e-mail: CVB@usda.gov).

Attachment 9

RABIES VACCINATION CERTIFICATE
NASPHV FORM 51 (revised 2007)

			RABIES TAG #		
Owner's Name & Address Print Clearly			MICROCHIP #		
LAST	FIRST	M.I.	TELEPHONE #		
NO.	STREET		CITY	STATE	ZIP
SPECIES Dog ☐ Cat ☐ Ferret ☐ Other: ☐ _____ (specify)	AGE _____ Months ☐ Years ☐ SEX ☐ Male ☐ Female ☐ Neutered	SIZE Under 20 lbs. ☐ 20 - 50 lbs. ☐ Over 50 lbs. ☐	PREDOMINENT BREED _____ ANIMAL NAME _____	PREDOMINANT COLORS/MARKINGS _____ _____ _____	
Animal Control License ☐ 1 Yr ☐ 3 Yr ☐ Other_____					
DATE VACCINATED _____ Month / Day / Year	Product Name: _____ Manufacturer: (First 3 letters) ☐☐☐		Veterinarian's Name: _____ License Number: _____		
NEXT VACCINATION DUE BY: _____ Month / Day / Year	☐ 1 Yr USDA Licensed Vaccine ☐ 3 Yr USDA Licensed Vaccine ☐ 4 Yr USDA Licensed Vaccine ☐ Initial dose ☐ Booster dose _____ Vaccine Serial (lot) Number		_____ Veterinarian's Signature Address: _____ _____ _____ _____		

Model letter to victim (English)

_____ County Health Department

(Date)

(Name)
(Address)
(City, State, Zip)

Dear_____:

Our agency has conducted an investigation in response to a report that you were exposed to a known or suspected rabid animal. The results of the investigation are as follows:

____ 1) We located the animal and it is under confinement. We will advise you of the health status of the animal upon completion of confinement.

____ 2) We located the animal and it is being tested for rabies. We will advise you of laboratory results within 72 hours.

____ 3) We were unable to locate the animal for confinement or testing. We recommend that you discuss this incident with your physician to determine the need for rabies post-exposure treatment. If you do not have access to a physician, call _____ County Health Department for assistance.

____ 4) _____

Please call us at _____ if you have any additional questions or wish information about rabies.

Sincerely,

Model letter to victim (Spanish)

Departamento de Salud del condado de_____

(Fecha)

(Nombre)
(Dirección)
(Ciudad, Estado, Código postal)

Estimado/a_____:

Nuestra agencia ha llevado a cabo una investigación en respuesta a un informe que indica que usted ha estado expuesto a un animal que, según se sabe o se sospecha, tiene rabia. Los resultados de la investigación son los siguientes:

____ 1) Hemos ubicado al animal y se encuentra en cuarentena. Le informaremos acerca del estado de salud del animal cuando finalice la cuarentena.

____ 2) Hemos ubicado al animal y se le están realizando los análisis para detectar rabia. Le informaremos acerca de los resultados de laboratorio en el término de 72 horas.

____ 3) No hemos podido ubicar al animal para ponerlo en cuarentena ni para realizarle los análisis correspondientes. Le recomendamos que hable sobre este incidente con su médico para determinar si es necesario que reciba tratamiento post-exposición a la rabia. Si no tiene acceso a un médico, llame al Departamento de Salud del condado de_____ para obtener asistencia.

____ 4) _____

Llámenos al_____ si tiene alguna otra pregunta o desea obtener información sobre la rabia.

Atentamente,

Model letter to victim (Haitian Creole)

Depatman Sante Konte_____

(Dat)

(Non)
(Adrès)
(Vil, eta, kòd postal)

Chè_____:

Biwo nou mennen yon ankèt akòz yon rapò ki endike ou te fè kontak ak yon bèt yo konnen oswa yo sispèk ki anraje. Men rezilta ankèt la:

____ 1) Nou te jwenn bèt la epi li nan izòlman kounye a. N ap fè w konnen eta sante bèt la lè li sòti nan izòlman.

____ 2) Nou te jwenn bèt la epi nou fè tès laraj pou li. N ap fè w konnen rezilta laboratwa a nan 72 èdtan.

____ 3) Nou pa t anmezi pou jwenn bèt la pou izole li oswa pou teste li. Nou te rekòmande pou w diskite ensidan sa a avèk doktè ou pou detèmine bezwen pou tretman. Si w pa ka jwenn yon doktè, rele Depatman Sante Konte _____ pou jwenn asistans.

____ 4) _____

Tanpri rele nou nan nimewo _____ si w gen lòt kesyon oswa si w bezwen enfòmasyon sou maladi laraj.

Sensèman,

Model letter to animal owner (English)

_____ County Health Department

(Date)

(Name)
(Address)
(City, State, Zip)

Dear_____:

We received a report on _____ at _____AM/PM that your pet, a

____, _____. _____, named_____,
(sex) (color) (breed)

was involved in a bite or other exposure on _____.
(date)

Chapter 64D-3, Florida Administrative Code, requires dogs, cats and ferrets involved in such incidents to be confined for 10 days. If the investigating officer determines that home confinement is acceptable in this instance and the requirements of the Home Confinement Agreement are met, the animal may be confined at your home during the observation period.

We have attached a Rabies Home Confinement Agreement. This Agreement must be read, confinement access indicated, signed and signature witnessed, and the top copy returned to this department within twenty-four hours. Failure to comply with this requirement will result in the denial of home confinement.

We appreciate your cooperation in this matter. Please contact us at _____ if you have any questions.

Sincerely,

Model letter to animal owner (Spanish)

Departamento de Salud del Condado de_____

(Fecha)

(Nombre)
(Dirección)
(Ciudad, Estado, Código postal)

Estimado/a_____:

El día _____ a las _____a.m. /p.m., recibimos un informe que indica que su mascota, un

____, _____, _____, llamado_____,
(raza) (sexo) (color)

estuvo involucrado en un hecho en el que se produjo una mordedura u otro tipo de exposición el
_____.
(fecha)

El Capítulo 64D-3 del Código Administrativo de Florida (Florida Administrative Code) exige que los perros, gatos y hurones involucrados en dichos incidentes permanezcan en cuarentena durante 10 días. Si el funcionario a cargo de la investigación determina que la cuarentena domiciliaria es aceptable en esta instancia y se cumplen los requisitos del Acuerdo de Cuarentena Domiciliaria, el animal podrá permanecer encerrado en su casa durante el período de observación.

Hemos adjuntado un Acuerdo de Cuarentena Domiciliaria por Rabia. Debe leer este acuerdo, indicar quién tendrá acceso a la propiedad durante el período de cuarentena, firmarlo ante testigos y enviar la primera copia a este departamento en el término de veinticuatro horas. En caso de incumplimiento de estos requisitos, se denegará la cuarentena domiciliaria.

Agradecemos su cooperación en este incidente. Comuníquese con nosotros al _____ si tiene alguna pregunta.

Atentamente,

Model letter to animal owner (Haitian Creole)

Depatman Sante Konte_____

(Dat)

(Non)
(Adrès)
(Vil, eta, kòd postal)

Chè_____:

Nou te resevwa yon rapò nan dat _____ a _____AM/PM. Rapò a endike bèt ou gen lakay ou a,

____, _____. _____, ki rele_____,
(sèks) (koulè) (ras)

te fè pati yon ensidan mòde oswa te nan lòt kontak nan dat _____.
(dat)

Chapit 64D-3 Kòd Administratif Eta Florid mande pou chen, chat, ak firè ki gen pou wè ak ensidan konsa izole pandan 10 jou. Si ofisye ki mennen ankèt la detèmine izòlman nan kay akseptab nan ka sa a epi obligasyon pou Home Quarantine Agreement (Angajman pou Izòlman Lakay) satisfè, bèt la ka izole lakay ou pandan peryòd obsèvasyon an.

Nou mete dokiman Rabies Home Quarantine Agreement (Angajman pou Izòlman Lakay akòz Maladi Laraj) nan lèt sa a. Ou dwe li Angajman sa a, endike aksè pou izòlman, pou ou menm ak temwen siyen Angajman an, epi pou ou voye orijinal la tounen nan depatman sa a nan 24 èdtan. Si w pa konfòme w avèk obligasyon sa a, sa ap lakòz yo pa kite w izole bèt la lakay ou.

Nou apresye kolaborasyon ou nan zafè sa a. Tanpri kontakte nou nan nimewo _____ si w ta gen nenpòt kesyon.

Sensèman,

RABIES PROGRAM HOME CONFINEMENT AGREEMENT

Owners of animals involved in bites/exposures are required to isolate their animal(s) for rabies observations for a minimum of ten (10) days. The County Health Department/Animal Control may authorize home confinement for certain animals when the following criteria are met and the investigating officer concurs that it is in the best interest to all parties and the public's health to do so. The officer may, however, require stricter confinement requirements.

I, _____, understand and agree to the following conditions and requirements:

1. My animal is currently vaccinated with a rabies vaccine administered by a licensed veterinarian. Proof is attached.
2. The animal will be isolated from other animals and will have minimal contact with people.
3. The animal will be leashed and under control of a person competent to restrain the animal when outside for exercise or relief, and shall not be allowed to leave my property except to receive emergency veterinary care. In such case, the veterinarian will be advised of the confinement.
4. Check as appropriate:

   ___ a) County Health Department/Animal Control may have access to my property at all reasonable times to monitor the health status of the animal throughout the confinement period.

   ___ b) The victim and/or their designee may have access to my property, once a day at a reasonable time, to monitor the health status of the animal throughout the confinement period.

5. If the animal becomes sick, exhibits abnormal behavior, or dies during the confinement period, I will notify the (County Health Department/Animal Control) immediately. If the animal dies, I will surrender the body for rabies testing.
6. I understand that confinement is from _____ through _____.

   (mm/dd/yy) (mm/dd/yy)

7. I fully understand and agree that a breach of any of the restrictions and conditions imposed for the confinement period will subject the animal to be immediately placed in a kennel or veterinary hospital at my expense, and that I may be liable for any penalties prescribed by law. If necessary, a veterinarian-administered examination may be required. I agree to pay all costs.
8. I understand and agree to the above conditions and restrictions and further agree to indemnify and hold harmless _____ County, The Department of Health, the Board of County Commissioners, and their agents or employees, against all claims, liabilities, or suits of any nature whatsoever arising out of, because of, or due to the confinement of my animal at my home, including, but not limited to, costs and reasonable attorney's fees, and that if any of them are called upon to make any payments arising out of any action against them by virtue of this instrument, then I shall further indemnify and make them whole for any such sums expended.

Under penalties of perjury, I declare that I have read the foregoing and the facts stated in it are true.

Owner's signature_____ Date_____

Please Print: Name_____ Phone No._____

Address_____

[Spanish]

ACUERDO DE CUARENTENA DOMICILIARIA DEL PROGRAMA CONTRA LA RABIA

Los dueños de animales involucrados en mordeduras/exposiciones deben poner a su(s) animal(es) en cuarentena para que permanezca(n) en observación en relación con la rabia durante un mínimo de diez (10) días. El Departamento de Salud/Control de Animales del Condado puede autorizar la cuarentena domiciliaria para determinados animales cuando se cumplan los siguientes criterios y el funcionario a cargo de la investigación considere que al proceder de esta manera se están protegiendo los intereses de todas las partes y la salud del público. Sin embargo, el funcionario podrá exigir requisitos de cuarentena más estrictos.

Yo, _____, comprendo y acepto las siguientes condiciones y requisitos:

1. Mi animal está vacunado actualmente con una vacuna antirrábica administrada por un veterinario con licencia. Se adjunta el comprobante correspondiente.
2. El animal permanecerá aislado de otros animales y tendrá un contacto mínimo con las personas.
3. Se le colocará una correa al animal y permanecerá bajo el control de una persona competente para sujetarlo cuando salga a hacer ejercicio o a hacer sus necesidades, y no se permitirá que abandone mi propiedad excepto para recibir atención veterinaria de emergencia. En dicho caso, se le informará al veterinario acerca de la cuarentena.
4. Marque según corresponda:

   ___ a) El Departamento de Salud/Control de Animales del Condado puede tener acceso a mi propiedad en cualquier momento razonable, para monitorizar el estado de salud del animal durante todo el período de cuarentena.

   ___ b) La víctima o la persona que esta designe podrán tener acceso a mi propiedad, una vez por día en un momento razonable, para monitorizar el estado de salud del animal durante todo el período de cuarentena.

5. Si el animal se enferma, muestra un comportamiento anormal o muere durante el período de cuarentena, notificaré de inmediato al (Departamento de Salud/Control de Animales del Condado). Si el animal muere, entregaré el cuerpo para que se le realicen análisis para detectar rabia.
6. Comprendo que la cuarentena se extiende desde el _____ hasta el _____.

   (mm/dd/aa) (mm/dd/aa)

7. Comprendo plenamente y acepto que el incumplimiento de cualquiera de las restricciones y condiciones impuestas para el período de cuarentena derivará en el traslado inmediato del animal a una perrera o a un hospital veterinario, cuyos gastos correrán por mi cuenta, y que es posible que yo sea responsable por cualquier sanción establecida por ley. Si es necesario, se podrá exigir un examen realizado por un veterinario. Acepto pagar todos los costos.
8. Comprendo y acepto las condiciones y restricciones mencionadas anteriormente; asimismo, acepto indemnizar y mantener indemnes al condado de_____, el Departamento de Salud, la Junta de Comisionados del Condado y sus agentes o empleados por toda reclamación, responsabilidad o demanda de cualquier naturaleza que surja como consecuencia de tener a mi animal en cuarentena en mi casa, incluidos a modo de ejemplo, los costos y honorarios razonables del abogado; y si cualquiera de ellos debiera realizar algún pago como consecuencia de cualquier acción iniciada en su contra en virtud de este instrumento, deberé indemnizarles y restituirles todas las sumas desembolsadas.

Bajo pena de perjurio, declaro que he leído lo que antecede y que los datos consignados son verdaderos.

Firma del dueño_____ Fecha_____

Escriba en letra de imprenta: Nombre_____ Núm. de teléfono_____

Dirección_____

[Haitian Creole]

ANGAJMAN POU IZÒLMAN LAKAY NAN PWOGRAM ANTIRABIK

Tout moun ki gen bèt epi bèt la mòde yo oswa bèt la ka mòde yo gen obligasyon pou izole bèt la (yo) pou obsèvasyon maladi laraj pandan yon minimòm dis (10) jou. Depatman Sante Konte a/Kontwòl Bèt ka otorize izòlman lakay pou sèten bèt lè kondisyon sa yo satisfè ak lè ofisye k ap mennen ankèt la detèmine sa ap pi bon pou sante tout pati yo ak sante piblik la pou fè sa. Men tou, ofisye a ka egzije pou izòlman an fèt pi sevè.

Mwen menm, _____, mwen konprann epi mwen aksepte kondisyon ak obligasyon sa yo:

1. Bèt mwen an vaksinen avèk yon vaksen antirabik. Se yon veterinè lisansye ki ba li vaksen an. Mwen atache prèv la.
2. Bèt la ap izole bèt de lòt bèt epi l ap pran minimòm kontak avèk moun.
3. Bèt la dwe mare ak yon kòd epi anba kontwòl yon moun konpetan pou metrize bèt la lè li deyò pou egzèsis oswa soulajman, epi bèt la pa dwe kite kay la sof lè pou li resevwa swen ijans veterinè. Nan ka konsa, veterinè a ap resevwa avi pou izòlman an.
4. Tcheke sa ki apwopriye a:

   ___ a) Depatman Sante Konte/Kontwòl Bèt ka gen aksè lakay mwen nan moman ki rezonab pou kontwole eta sante bèt la pandan tout peryòd izòlman an.
   ___ b) Viktim nan ak/oswa moun li deziyen ka gen aksè lakay mwen, yon fwa pa jou nan yon moman rezonab, pou kontwole eta sante bèt la pandan tout peryòd izòlman an.

5. Si bèt la vin malad, montre konpòtman ki pa nòmal, oswa mouri pandan peryòd izòlman an, m ap fè (Depatman Sante Konte a/Kontwòl Bèt) konnen sa imedyatman. Si bèt la mouri, m ap remèt kadav la pou tès depistaj laraj.
6. Mwen rekonèt izòlman se nan dat ant _____ ak _____.

   (mwa/jou/ane) (mwa/jou/ane)

7. Mwen rekonèt epi mwen aksepte yon mankman nan nenpòt restriksyon ak kondisyon ki enpoze pou peryòd izòlman an ka fè yo mete bèt la imedyatman nan yon nich oswa nan yon lopital veterinè epi depans yo ap sou kont mwen, epitou mwen ka responsab pou nenpòt sanksyon lalwa prevwa. Si se nesesè, yo ka egzije yon egzamen pou yon veterinè fè. Mwen aksepte pou peye tout frè yo.
8. Mwen rekonèt epi mwen aksepte kondisyon ak restriksyon ki anwo yo epitou mwen dakò pou mwen pwoteje ak rekonèt inosans Konte _____, Depatman Sante, Konsèy Manm Komisyon Konte a, ak ajan oswa anplwaye li yo, kont tout reklamasyon, responsablite, oswa nenpòt kalite pwosè ki rive sou, poutèt, oswa akòz izòlman bèt mwen lakay mwen, avèk tou, men pa sèlman, depans ak frè rezonab avoka, epi si yo rele nenpòt ladan yo pou fè nenpòt peman ki dwe fèt sou nenpòt aksyon kont yo selon dokiman sa a, kidonk, mwen dwe konpanse yo epi garanti yo pou tout kantite lajan ki depanse.

Ap genyen konsekans si mwen bay manti, mwen deklare mwen li tout sa ki endike anwo a epi enfòmasyon mwen bay ladan li se enfòmasyon ki vrè.

Siyati pwopriyetè_____ Dat_____

Tanpri ekri ak lèt majiskil: Non_____ Nimewo telefòn: _____

Adrès_____

Attachment 11

FWC Construction Requirements for Wild Canids (wolves, coyotes)

1. Outdoor facilities: Construction material shall consist of not less than 11 1/2 gauge chain link or equivalent. Cages for wolves shall not be less than 20 feet by 10 feet, 6 feet high. Cages for coyotes shall not be less than 20 feet by 8 feet, 6 feet high.

- Cages under 1,000 square feet shall be covered at the top to prevent escape.
- Cages over 1,000 square feet (uncovered) shall have vertical jump walls at least 8 feet high with a 45 degree, inward angle overhang 2 feet wide; or jump walls 10 feet high without an overhang.
- Cages shall not be constructed on less than 2 ½ acres with a 35 feet buffer zone between the caged animal and the property line of the facility.

2. Indoor facilities: Potential escape routes shall be equipped with wire or grating not less than 11 ½ gauge or equivalent.

3. All cages shall be well braced and securely anchored at ground level to prevent escape by digging or erosion and shall utilize metal clamps, ties or braces of equivalent strength as that prescribed for cage construction. Footers are required for animals exhibiting digging behavior.

4. Cages shall be equipped with a safety entrance. A safety entrance is defined as any protected, secure area that can be entered by a keeper that prevents animal escape and safeguards the keeper, or any device that can be activated by a keeper that includes a double-door mechanism, interconnecting cages, a lock-down area, or other devices specifically approved. Safety entrances shall be constructed of materials that are of equivalent strength as that prescribed for cage construction.

5. The cages and facility must be surrounded by a perimeter fence not less than eight (8) feet high, or as an alternative, a fence of not less than six (6) feet high, with a 2-foot, 45 degree, inward angle overhang constructed of 11 ½ gauge chain link or equivalent.

6. Possessors of wolves or coyotes (or other Class I or II wildlife) must have a Critical Incident/Disaster Plan documenting a course of action to be taken in preparation for disasters or critical incidents.

7. Upon receipt of an initial application for possession of wolves or coyotes (or other Class I or Class II wildlife), the Florida Fish and Wildlife Conservation Commission shall notify the county or municipality wherein the proposed facility is to be located of a pending application.

RETURN ALL COPIES
ALL INCOMPLETE APPLICATIONS WILL BE RETURNED

Florida Fish and Wildlife Conservation Commission

P.O. Box 6150, Tallahassee, FL 32314-6150
(850) 488-6253
Application for
PPL - LICENSE TO POSSESS WILDLIFE FOR PERSONAL USE.....$140.00

New Applicant _____

Applicant Name _____ Email Address _____

Mailing Address _____ City _____ State _____ Zip _____
Facility Address _____ City _____ State _____ Zip _____
County Of Facility _____ Business Phone (_____) _____-_____

INVENTORY PAGE (New and renewal applicants must complete this section).

I currently possess the following classes of wildlife: Class I_____ Class II____

I plan to possess the following class of wildlife: Class II_____

MUST PROVIDE INVENTORY ON PAGE 3

ZONING STATEMENT & DOCUMENTATION OF EXPERIENCE

____ Notarized zoning statement regarding construction of facility attached

SEE INSTRUCTIONS ON BACK OF PAGE 3

____ Documentation of experience and 2 reference letters attached

____ Would like to take exam (Class II applicants only)

Property is owned by applicant? YES ___ NO ___ Property is leased by applicant? YES ___ NO ___ Number of Acres_____

If property is leased, a copy of the lease agreement must be attached.

I certify that the information provided is true and correct. I agree to adhere to the provisions of Chapter 372, Florida Statutes, and the rules and regulations of the Commission pertaining to the possession of wildlife. I understand that my wildlife facilities are subject to inspection by Commission personnel as required by Florida Administrative Code.

_____ (___) _____ _____ _____/_____/_____
Applicant Name (Please Print) Home Phone Applicant Signature Date

Date of Birth_____ Social Security #_____ Height____ Weight____ Hair___ Sex___ Race_____

FOR COMMISSION USE ONLY

Class I_____ Class II_____

Approved_____ Date_____

Denied_____ Date_____

Reason_____

Revised 06/03 VALID FOR 12 MONTHS

RETURN ALL COPIES

CLASS III PERSONAL USE APPLICATION AND QUESTIONNAIRE

Issued Under Authority of the Wildlife Code of the State of Florida
(Chapter 68A, Florida Administrative Code)

FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION

PLEASE PRINT OR TYPE (NO PENCIL) **ALL INCOMPLETE APPLICATIONS WILL BE RETURNED**

I, _____ dob _____ , hereby request authorization to maintain the
Permittee

following wildlife for personal use, _____
Number(s) and Type(s)

to be maintained at, Location Address: _____

_____ _____ _____
City State Zip Code

☐ Same as location address

Mailing Address: _____

_____ _____ _____
City State Zip Code

Home Telephone: ( ) - _____ Business Telephone: ( ) - _____

IMPORTANT: Terms and Conditions of Wildlife Pet Permits -- Permits are issued upon the provision that said wildlife be kept in a safe, sanitary and humane manner. All wildlife pets shall be kept under strict supervision by the permittee or safely caged at all times. Extreme caution shall be exercised to protect persons from being injured by wildlife. Failure to adequately protect the public from injury is a violation of permit guidelines. Because of the danger of rabies, especially in raccoons and skunks, incidents involving injury to persons shall be immediately reported to the county health department and the animal is subject to seizure by Florida Fish and Wildlife Conservation Commission (FWC) officers and submitted for rabies testing. Consideration must be given to the disposition of the above animal(s) should I no longer want it or am unable to provide proper care. I understand that 379.231, F.S. and 68-5.001 Florida Administrative Code, prohibits the release of any non-native animal. Furthermore, that 68A-6.0021, F.A.C., prohibits the acquisition or sale or transfer of wildlife to or from anyone not authorized to posses such wildlife.

I hereby agree to abide by all regulations of the FWC regarding the keeping of wildlife pets.

_____ _____
Signature Date

DO NOT WRITE BELOW LINE, FOR FWC USE ONLY.

NOT VALID WITHOUT FWC SEAL

FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION SEAL

Approved By: _____

Permit Expires: _____

Denied By: _____

Reasons: _____

_____

RETURN COMPLETED APPLICATION AND QUESTIONNAIRE TO:

FWC, Division of Law Enforcement
Investigation Section
620 South Meridian Street
Tallahassee, Florida 32399-1600

NOTE: ALL INCOMPLETE APPLICATIONS WILL BE RETURNED TO APPLICANT.

FWCDLE 621 (08/08) **PERMITTEE**

THIS PERMIT DOES NOT ALLOW FOR THE POSSESSION OF THE FOLLOWING WILDLIFE:

Class I Wildlife:

1. Chimpanzees (genus Pan)
2. Gorillas (genus Gorilla)
3. Gibbons (genus Hylobates)
4. Drills and Mandrills (genus Mandrillus)
5. Orangutans (genus Pongo)
6. Baboons (genus Papaio)
7. Siamangs (genus Symphalangus)
8. Gelada baboons (genus Theropithecus)
9. Snow leopards (*Panthera uncia*)
10. Leopards (*Panthera pardus*)
11. Jaguars (*Panthera onca*)
12. Tiger (*Pathera tigris*)
13. Lions (*Panthera leo*)
14. Bears (family Ursidae)
15. Rhinoceros (family Rhinocerotidae)
16. Elephants (family Elephantidae)
17. Hippopotamuses (family Hippopotamidae)
18. Cape Buffalos (*Syncerus caffer caffer*)
19. Crocodiles (except dwarf and congo) (family Crocodilidae)
20. Gavials (family Gavialidae)
21. Black caimans (*Melanosuchus niger*)
22. Komodo dragons (*Varanus komodoensis*)

Class II Wildlife:

1. Howler monkeys (genus Alouatta)
2. Uakaris (genus Cacajao)
3. Mangbeys (genus Cercocebus)
4. Guenons (genus Ceropithecus)
5. Bearded sakis (genus Cercocebus)
6. Guereza monkeys (genus Colobus)
7. Celebes black apes (genus Colobus)
8. Idris (genus Indri)
9. Macaques (genus Macaca)
10. Langurs (genus Presbytis)
11. Douc langurs (genus Pygathrix)
12. Snub-nosed langurs (genus Phinopithecus)
13. Proboscis monkeys (genus Nasalis)
14. European and Canadian lynx (*Lynx lynx*)
15. Servals (*Leptaillurus serval*)
16. Cheetahs (*Acinonyx Jabatus*)
17. Cougars panthers (*Puma concolor*)
18. African golen cats (*Profelis aureta*)
19. Bobcats (*Lynx rufus*)
20. Fishing cats (*Prionailurus viverrina*)
21. Caracals (*Characal caracal*)
22. Clouded leopards (*Neofelis nebulosa*)
23. Ocelots (*Leopardus pardalis*)
24. Gray wolves (*Canis lupus*) (including Wolf X domestic hybirds which are 25 percent or less domestic dog).
25. Coyotes (*Canis latrans*)
26. Asiatic jackals (*Canis aureus*)
27. Red wolves (*Canis niger*) (including wolf x domestic hybrids which are 25 percent or less domestic dog)
28. Side-striped jackals (*Canis adustus*)
29. Black-backed jackals (*Canis mesomelas*)
30. African hunting dogs (*Lycaon pictus*)
31. Indian dholes (*Cuon alpinus*)
32. Honey badgers (Mellivors capensis)
33. Wolverines (*Gulo gulo*)
34. Old World badgers (Meles meles)
35. American badgers (*Taxides taxus*)
36. Hyenas (all species) (family Hyaenidae)
37. Binturongs (*Arctictis binturong*)
38. Alligators, caimans (except *Alligator mississippiensis*) (family Alligatoridae)
39. Dwarf crocodiles (*Osteolaemus tetraspis*)
40. Ostrich (*Struthio camelus)*
41. Cassowary (*Casuarius* spp.)

FWCDLE 621 (08/08)

FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION

PERSONAL USE QUESTIONNAIRE

Please print with blue or black ink only

Name: _____ Age: _____

Address: _____

_____ _____ _____
City State Zip Code

Phone Number(s): (H) ( ) - _____ (W) ( ) - _____

The answers on this questionnaire indicate my knowledge about the habits, requirements, diet, health care and exercise needs of the animal(s) I plan to possess, as required under Florida Administrative Code 68A-6.0022. I understand my permit may be denied or revoked if I fail to meet the requirements of 68A-6.0022, F.A.C.

_____ _____
Signature Date

The following questions will be used to evaluate your knowledge of and experience with the animals you plan to possess. This information will be used to determine the approval or denial of the permit for which you are applying. Please attach additional pages as necessary.

1. What are the **common names** of the animals you plan to possess?

_____

_____

_____

2. What are the **scientific names** of the animals you plan to possess? **(Genus/species)**

_____

_____

_____

3. In what continent and country do the animals occur naturally in the wild?

_____

_____

_____

4. How large (length, height, etc.) will these animals get when they are adults?

_____

_____

_____

5. What is the average weight of the animals when they reach sexual maturity? (Approximately in pounds)

_____

_____

_____

FWCDLE 621 (08/08)

6. What do the animals eat in the wild?

_____

_____

_____

7. What foods are available to you to feed your animals while in captivity?

_____

_____

_____

8. How much do theses animals eat, as an adult, per day?

_____

_____

_____

9. Are the animals you plan to possess social or solitary animals in the wild (excluding the mating season)?

_____

_____

_____

10. What are the Florida Fish and Wildlife Conservation Commission's standard caging requirements for the animals you plan to possess?

_____

_____

_____

11. What are the additional safety requirements you must meet to maintain the animals as personal pets?

_____

_____

_____

12. What is the name of the veterinarian you intend to use for the health care of your animals?

Name: _____ Phone: ( ) -

Address: _____

_____ _____ _____

City State Zip Code

13. What is the address and telephone number of the closest office of the Florida Fish and Wildlife Conservation Commission office that you can contact regarding the lawful keeping of your animals?

_____

_____

_____

14. What is the name, address and license number (if in Florida) of the source of your wildlife? (It is unlawful to purchase wildlife from an unpermitted entity in Florida) **[You must have documentation of the source and supplier of your animals]**

_____

_____

_____

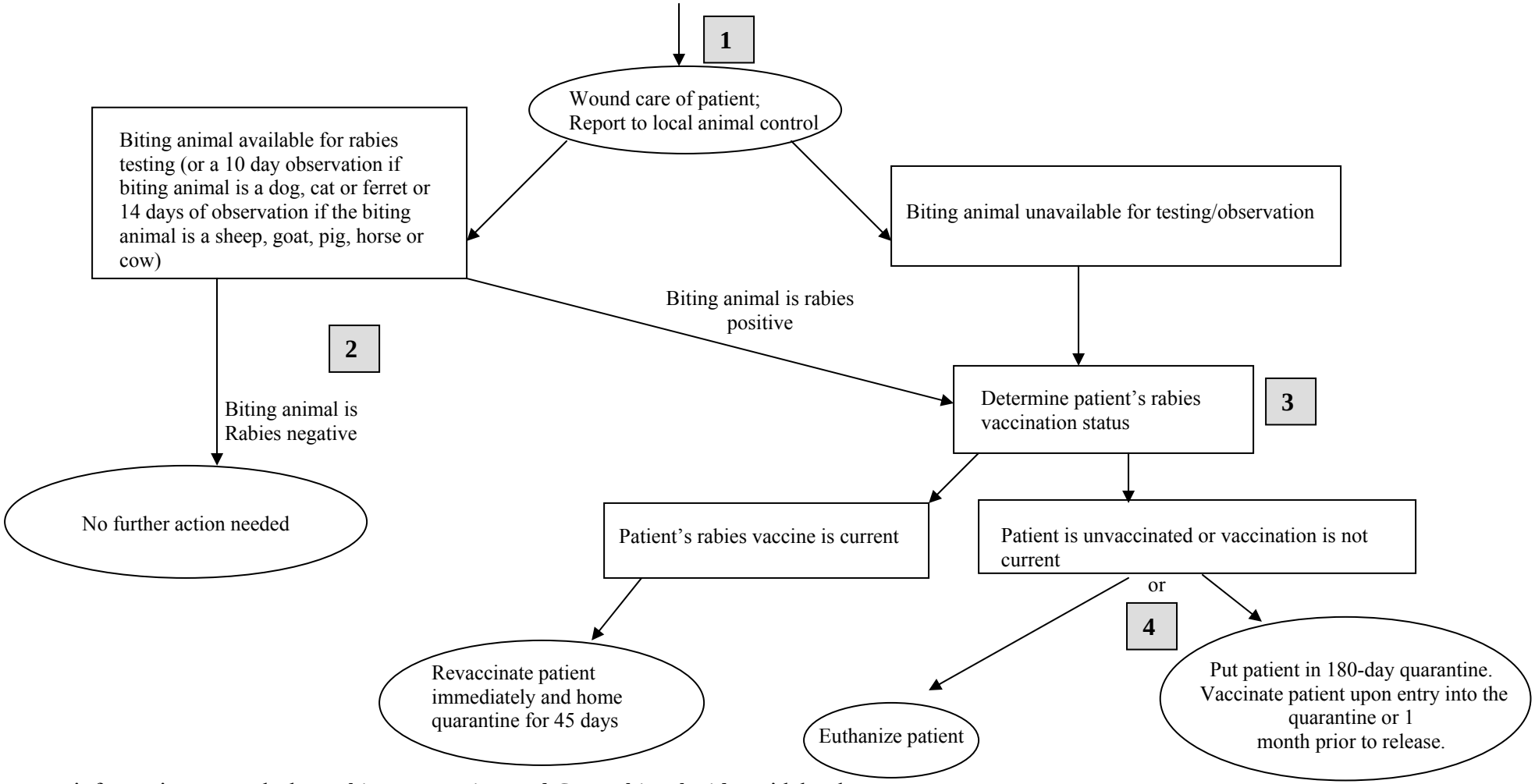
15. If your animals escape from their cage, enclosure, tether, or leash, are you required to report the incident to the Florida Fish and Wildlife Conservation Commission? Yes ☐ No ☐

16. If your animals bite or scratch an individual, are you required to report the incident to the Florida Fish and Wildlife Conservation Commission? Yes ☐ No ☐

FWCDLE 621 (08/08)

Management of Animal Patients Exposed to Known or Potentially Rabid Animals; Public Health Guidelines for Florida Veterinarians

Patient (dog, cat, ferret, horse, cattle or sheep) bitten by (or otherwise exposed to) second potentially rabid animal ("biting animal")



For more information, consult the *Rabies Prevention and Control in Florida* guidebook.
http://www.doh.state.fl.us/environment/medicine/rabies/rabies-index.html
or call the State Public Health Veterinarian at (850) 245-4732

Management of Animal Patients Exposed to Known or Potentially Rabid Animals; Public Health Guidelines for Florida Veterinarians

1 Note: Some counties do not have an animal control program. Others may only have limited animal control services and may not be able to assist you with receiving animal-to-animal bite reports.
Contact your local animal control staff or Fish and Wildlife Conservation Commission staff to assist in capturing the "biting" animal if appropriate. No definitive observation periods exist for mammals other than dogs, cats and ferrets. Livestock, if apparently healthy, may be confined and observed for clinical signs compatible with rabies at the discretion of the County Health Department.

2 For guidelines in shipping samples to Department of Health Laboratories for rabies testing, consult the *Rabies Prevention and Control in Florida* guidebook.

3 The duration of immunity is determined by the rabies vaccine used, either one year or multiple years. Place and details of quarantine are determined by the county health department or animal control designee.

4 For unvaccinated animals, if quarantine is selected over euthanasia, the animal must, under most circumstances, be kept in strict confinement at a veterinary clinic or animal control facility. Home quarantine is at the discretion of the county health department.

For more information, consult the *Rabies Prevention and Control in Florida* guidebook.
http://www.doh.state.fl.us/environment/medicine/rabies/rabies-index.html

Attachment 15

[*MODEL*]
AGREEMENT FOR CONFINEMENT AT A VETERINARY FACILITY

Unvaccinated animals involved in bites/exposure to a person(s) must be confined at the owner's expense for a ten (10) day observation period at either ___ County Animal Control, hereinafter Animal Control, or in a licensed veterinary facility. If the owner elects to utilize the services of a veterinarian, **that veterinarian must complete this agreement and forward it to Animal Control.**

1) The following animal: Species _____ Breed _____ Name_____
Belonging to (Owner) _____, at (Address) _____ _____,
(Phone) _____must be quarantined **beginnin**g on _____and **ending** on_____. **The animal must not be released prior to the end of the confinement period. However, if Animal Control notifies the undersigned veterinarian, his/her agent, or employee that the animal has caused severe injury or death to a human, the animal shall be immediately surrendered to Animal Services for completion of quarantine and investigation.**

2) If the animal becomes sick, exhibits abnormal behavior, or dies during the confinement period, Animal Services will be notified immediately at (xxx) xxx-xxxx. If the animal dies, the animal's body will be surrendered to Animal Services for rabies testing.

3) The animal must be isolated from other animals and will have minimal contact with people.

4) The animal shall not be allowed to leave the property and must be in a securely fenced area when outside its kennel. The animal will be leashed and muzzled and under the control of a person competent to restrain the animal when outside for exercise or relief.

5) **If not currently vaccinated, the animal must be vaccinated against rabies by the veterinarian at the time of its official release from confinement and not before.**

6) Animal Control/County Health Department officials may have access to the animal during normal business hours.

7) I understand and agree to the above conditions and restrictions and further agree to indemnify and hold harmless Animal Control, the ____ County Health Department, the Board of County Commissioners, _____ County, and their agents or employees against all claims, liabilities, or suits of any nature whatsoever arising out of, because of, or due to the quarantine of the animal, including but not limited to, costs and reasonable attorney's fees, and if any of them are called to make payments arising out of any action against them by virtue of this instrument, then I shall further indemnify and make them whole for any such sums expended.

Under penalties of perjury, I declare that I have read the foregoing and the facts stated in it are true.

Veterinarians
Signature_____ Date_____

Please Print:
Name_____ Phone No._____

Address_____

Attachment 16

RABIES TEST FORM	LABORATORY USE ONLY
Submitting Source: _____	Date Received: _____ Condition: _____
_____	Specimen No.: _____ Branch: _____
_____	RESULTS
Telephone No. Weekday: _____	
Weekend: _____	FRA Test: _____
Send Report To: _____	Date Reported: _____
_____	
_____	
RABIES DH 959, 9/07 Stock Number 5740-000-0959-7 (Replaces previous editions)	STATE OF FLORIDA DEPARTMENT OF HEALTH BUREAU OF LABORATORY SERVICES

(Fold line for mailing and filing purposes)

ANIMAL HISTORY

Kind of Animal: _____ Stray ( ) Pet ( ) Color: _____ Breed: _____

Symptoms: _____ Animal Killed ( ) Died ( ) Date: _____

Animal Inoculated Against Rabies: Yes ( ) No ( ) Date: _____

Owner: _____ Address: _____ Telephone: ( ) _____

Exposure: Human ( ) Animal ( ) Date: _____

Name: _____ Type of Exposure: _____

Address: _____ _____

City, Zip: _____ _____

Telephone: _____

SHIPPING INSTRUCTIONS ON BACK

DIRECTIONS FOR SUBMITTAL OF ANIMAL HEADS

(1) The animal head should be shipped or hand carried to the laboratory as soon as possible for a satisfactory examination. DO NOT FREEZE HEAD.

(2) Place the animal head inside two thick plastic bags (bags should be thick enough to not allow any leakage of blood or other body fluids) or in one bag inside a water-tight container. Bags should be sealed in a manner as to not allow any liquid to escape. Place the wrapped head into a leak proof shipping cooler. Add frozen cold packs sufficient to maintain refrigeration temperature.

(3) The complete rabies test form and bite report form should be placed in a water-tight bag. Attach bag to corresponding animal head in cooler.

(4) Please call the laboratory to advise the expected time of arrival, mode of shipment, and tracking number.

(5) All positive reports will be phoned to the health department. Weekend telephone numbers must be entered on the Rabies Test Form.

Weekend Emergency Contacts

BOL-Jacksonville
Rabies Laboratory
1217 Pearl Street
Jacksonville, Florida 32202
Laboratory Phone: (904) 791-1540
Fax: (904) 791-1542

24/7 Telephone (904) 945-4415

Valerie Mock (904) 286-1076
Pam Colarusso (904) 924-9252
Pager (888) 210-3415

BOL-Miami
1325 N.W. 14th Avenue
Miami, Florida 33125
Phone: (305) 324-2432
Fax: (305) 324-2429

24/7 Telephone (800) 539-4432
Dana Neumann (305) 409- 9926
Elesi Quaye (305) 322-1488

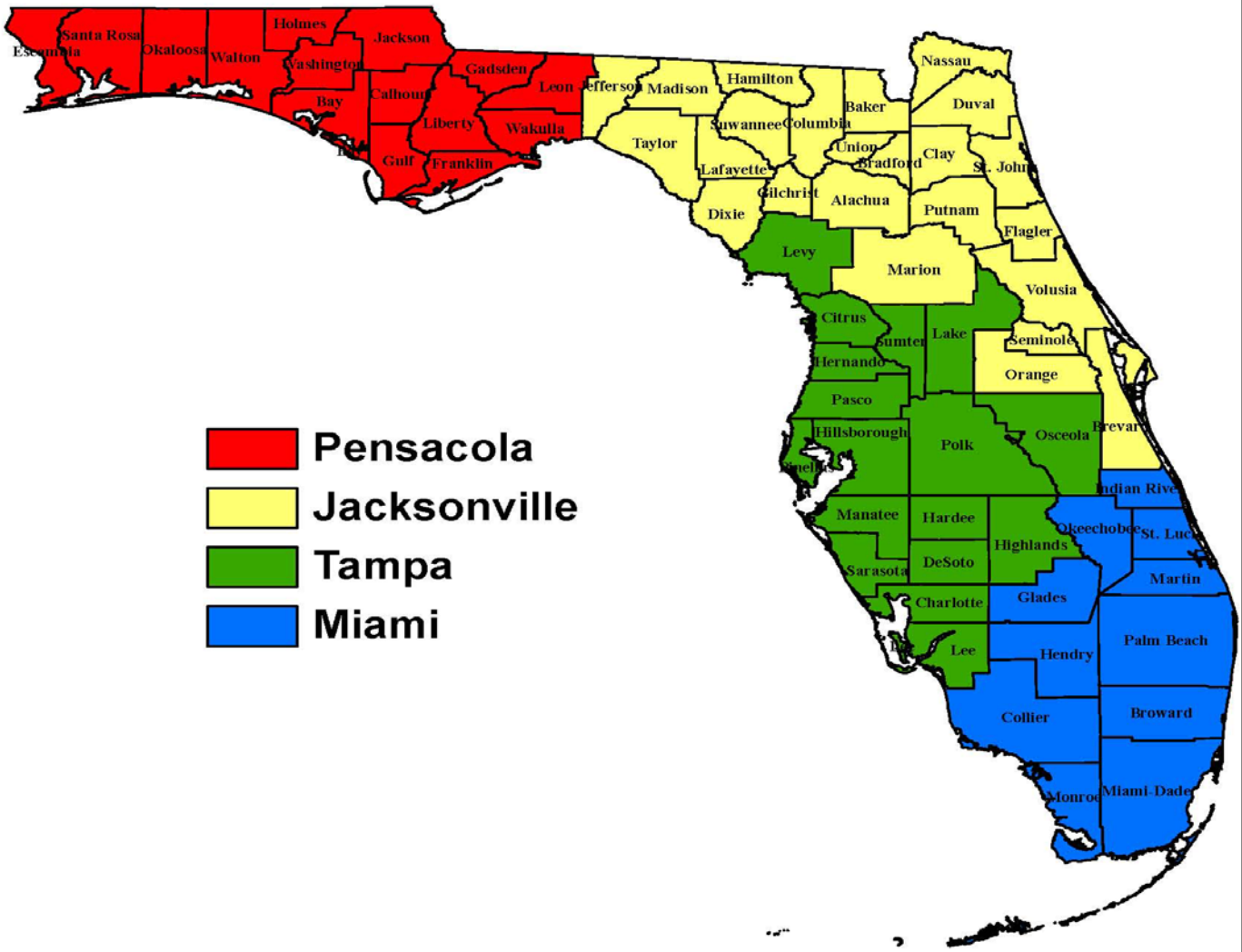
BOL-Pensacola
50 West Maxwell Street
Pensacola, Florida 32501
Phone: (850) 595-8895
Fax: (850) 595-6380

24/7 Telephone (888) 210-3285
Patti Jones (850) 777-0984 or
Bill Nakashima (850) 777-9075 or
Beverly Butler (850) 777-0982

BOL-Tampa
3602 Spectrum Boulevard
Tampa, FL 33612.
Phone: (813) 974-4052 or (813) 974-8556
Main: (813) 974-8300
Fax: (813) 974-7969 or (813) 974-3034

24/7 Telephone (813) 883-5929
David Wingfield cell (813) 376-3145
Alternate, pager 813-883-6208

Rabies Bureau of Laboratories Submission Regions



FLORIDA DEPARTMENT OF HEALTH

ANIMAL BITE REPORT

RABIES CONTROL INVESTIGATION

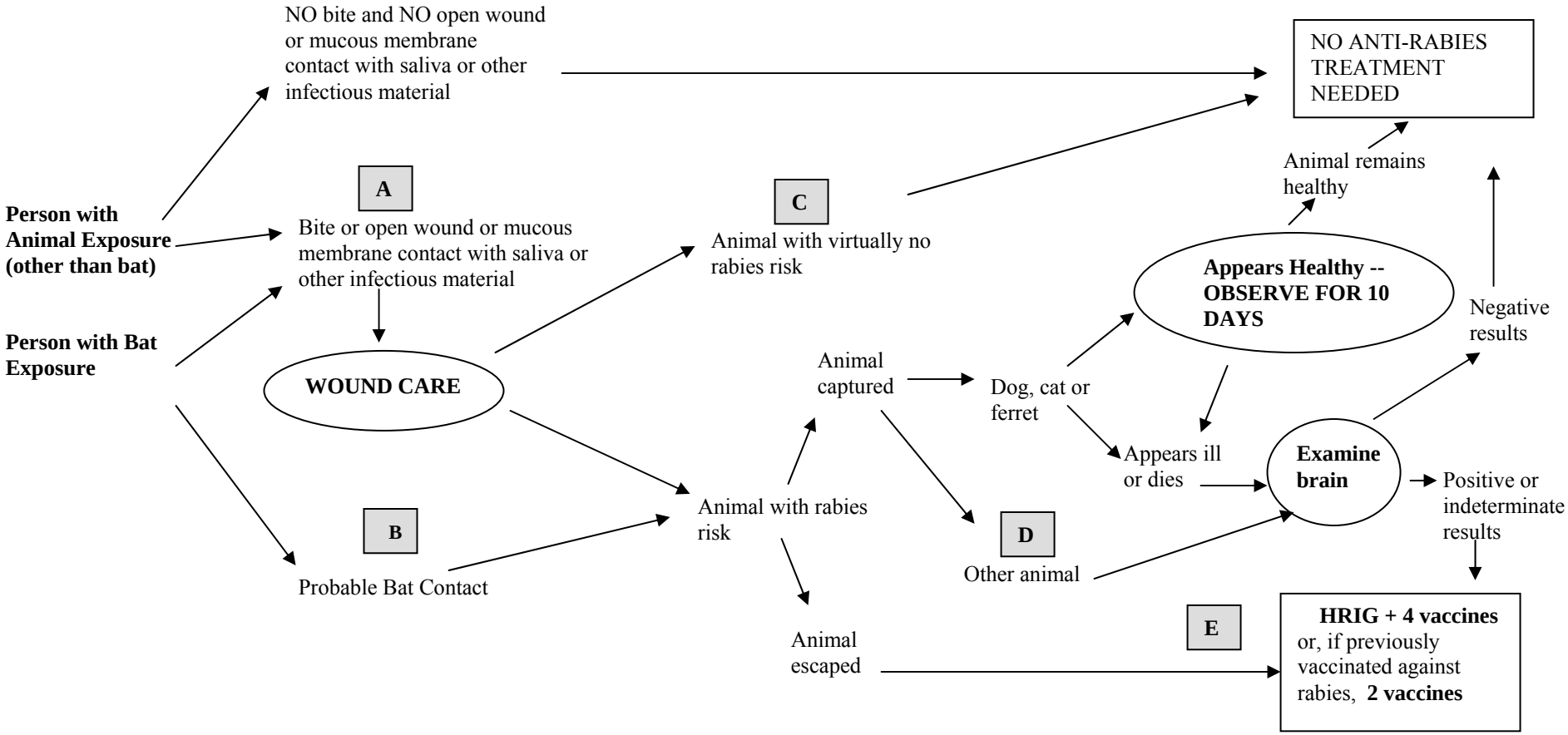
1. Case Number:

Date of Report: _____

2. Name (Last, First):	3. Sex: □Male □ Female	4. Age:	5. Telephone:
6. Address (No. & Street):	(City)	(State)	(Zip)
7. Name of Parent/Guardian (if victim is a minor):	8. Address (if different than above):		
9. Source of Information (Person or Office):	Telephone:		
10. Place of Attack:	11. Time and Date of Attack:		
12. Circumstances of Attack: □ K-9 (Police Action) □ Sick/Hurt	□ Unknown □ Other _____	□ Unprovoked	□ Playful □ Provoked
13. Animal Owner (Custodian):	Telephone:		
14. Address (No. & Street):	(City)	(State)	(Zip)
15. Type of Animal: □ Dog □ Cat □ Other (specify)_____	□ Owned □ Stray □ Wild	□ Male □ Female	□ Spayed/Neutered □ Unaltered □ Unknown Estimated Age:
16. Description (Breed, Color, Etc.):	17. License Number:	Date:	From:
18. Behavior: □ Normal □ Abnormal □ Unknown	19. Prior Bite History: □ Yes □ No		
20. Vaccination Status: □ Vaccinated □ Unvaccinated □ Unk. VET:_____	Vaccination Date:	Rabies Tag No.:	□ 1 Year Vaccine □ 3 Year Vaccine □ 4 Year Vaccine
21. Animal Location: □ Unable to Locate Animal □ Animal Confined	From Date:	To Date:	
22. If at owner's home, has Quarantine Agreement been signed? □ Yes □ No			
23. Cause of Death: □ Illness □ Injury □ Euthanasia Date:			
24. Quarantine Released:	Date:	By:	
25. Veterinarian □ Did □ Did Not See Animal	26. Head examination is: □ Requested □ Not Warranted		
27. Remarks:			
28. Head Sent to Lab:	Date: _____	By: _____	Telephone: _____
29. Results: □ POSITIVE □ NEGATIVE □ UNSATISFACTORY			
30. Victim Notified By: □ Person □ Phone □ Mail	Date:	By:	
31. □ Case Closed	Date:	By:	
32. Person Completing Form:	Telephone:		

DH 4042, 10/06
Stock No. 5744-000-4042-4

Management of Human Patients with Possible Rabies Exposure



For more information, consult the *Rabies Prevention and Control in Florida* guidebook.
http://www.doh.state.fl.us/environment/medicine/rabies/rabies-index.html

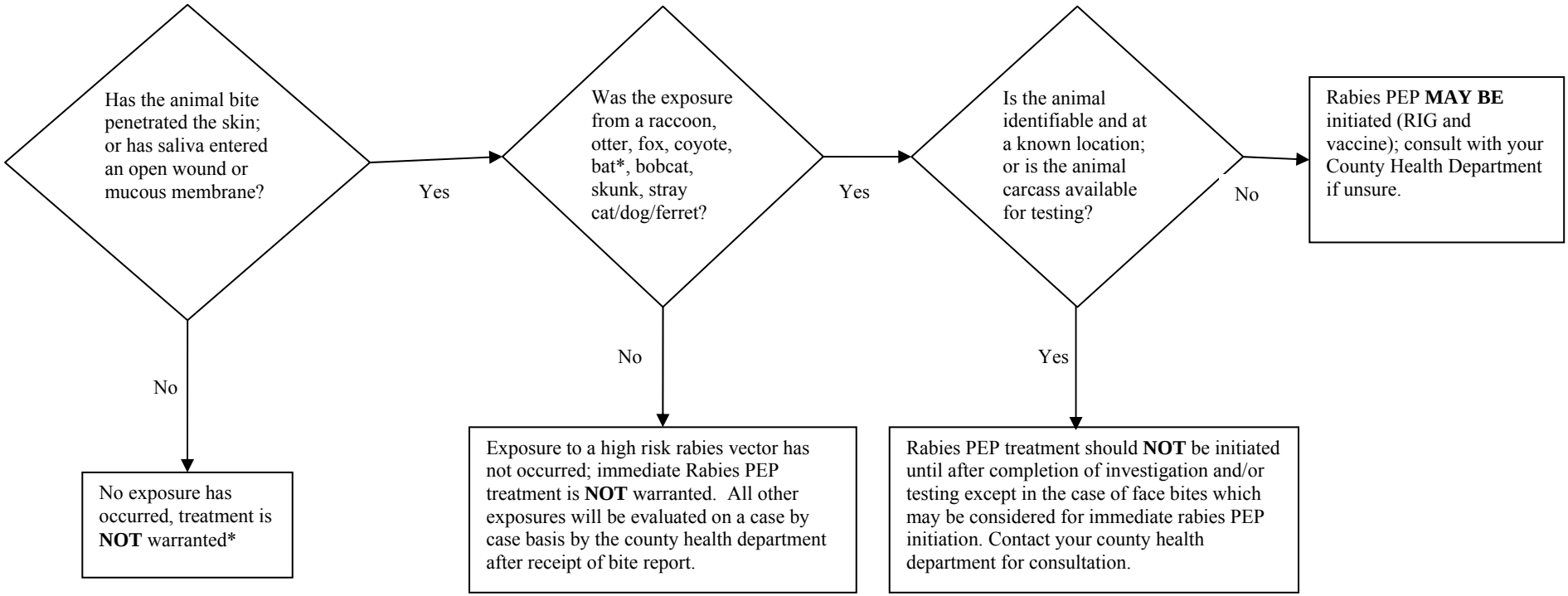
Adapted from: Istre, GR, Emerson, JK, and Hopkins, RS (1984). In *Critical Decisions in Trauma* (Moore, Eiseman, Van Way, eds). pp. 484-487. The C.V. Mosby Co., St. Louis.

Management of Human Patients with Possible Rabies Exposure

A. Individuals bitten on the head or neck by a high-risk animal (wild carnivore, raccoon, or stray dog, cat or ferret) may need post exposure prophylaxis (PEP) as soon possible after the exposure. If the animal is not rabid (tests negative or remains healthy during quarantine), PEP may be discontinued. For consultation contact your local county health department.
B. Because of the association of human rabies in the US with bat rabies variant, PEP is recommended in situations where there is a reasonably high probability that contact with bats occurred (e.g., awakening to find a bat in the room, or an adult witnesses a bat in a room with a previously unattended child).
C. Animals with no rabies risk include reptiles, birds and fish. Animals with virtually no rabies risk include animals reared in an environment where exposure to rabies can be eliminated.
D. No definitive observation periods exist for other mammals. However, large domestic animals such as horses and cows, if apparently healthy, may be confined and observed for clinical signs compatible with rabies at the discretion of the County Health Department.
E. Rabies (PEP) consists of human rabies immune globulin (HRIG) and rabies vaccines. **For persons NOT previously immunized against rabies**, HRIG is given once (20 IU/kg) -- as much as possible is infiltrated at the site of the wound and the remainder administered intramuscularly (IM) away from the vaccination site. Four 1.0 ml doses of rabies vaccine should be administered IM, in the deltoid one on day 0, 3, 7, and 14. **For persons previously immunized against rabies**, HRIG **should NOT be given** and only two doses of vaccine administered IM, one on day 0 and one on day 3.

For more information, consult the *Rabies Prevention and Control in Florida Guidebook*

FLORIDA DEPARTMENT OF HEALTH



* Bat bites may be difficult to see. Please contact your county health department for consultation on suspected bat bite exposures.

- Wound care should be given according to standard practices whether PEP is recommended or not.
- All possible rabies exposures must be reported as per Florida Administrative Code Chapter 64D-3 to your local health department, regardless of treatment provided.
- Rabies PEP: **For persons NOT previously immunized** against rabies, human rabies immune globulin (HRIG) is given once (20 IU/kg) according to labeled directions. Four 1.0 ml doses of rabies vaccine should be administered IM, in the deltoid, one each on day 0, 3, 7, and 14. For **persons previously immunized against rabies**, *HRIG should not be given* and only two doses of vaccine administered IM, one on day 0 and one on day 3. Please consult "Rabies Prevention and Control in Florida" for more information. It can be found on the web at: http://www.doh.state.fl.us/environment/medicine/rabies/rabies-index.html

Rabies Post-Exposure Prophylaxis (PEP) Administration Guidance and Schedule for Healthcare Providers

All rabies PEP should begin with immediate thorough cleansing of all wounds with soap and water. If available, a viricidal agent such as a povidone-iodine solution should be used to irrigate the wounds. Patient tetanus vaccination status should also be determined.

The rabies PEP regimens provided are applicable for all age groups, including children, and pregnant women. Vaccine should never be administered in the gluteal area or near the human rabies immunoglobin (HRIG) administration site. Day 0 is the day the first dose of vaccine is given, not the day the bite occurred. In cases that unexpected, extended delays in administering rabies PEP have occurred (i.e. patient delay in seeking medical care) up to one year following the exposure, PEP should be administered as soon as possible if the patient is not demonstrating signs of encephalitis. In cases that delay is greater than one year from the exposure or that the patient is demonstrating signs of encephalitis, please consult with your county health department.

If rabies PEP is not administered according to the recommended schedule, please consult with your county health department at (XXX) XXX-XXXX to determine the appropriate schedule for completing the series.

Administration schedule for persons *previously* *vaccinated* in the US since 1982

Product	Route	Site	Dose	#Doses	Schedule
Rabies Vaccine	IM	Deltoid	1.0mL	2	Day 0 and 3

Administration schedule for persons *not previously* *vaccinated*

Product	Route	Site	Dose	#Doses	Schedule
Human Rabies Immune Globulin	Infiltrate wound	Wound, if feasible; distant from vaccine (deltoid or quadriceps)	20 IU/kg or 9 IU/lb (0.06mL/lb)	1	Day 0
Rabies Vaccine	IM	Deltoid (or anterolateral thigh for small children)	1.0mL	4	Day 0, 3, 7, and 14
Rabies Vaccine for immunosuppressed patients	IM	Deltoid (or anterolateral thigh for small children)	1.0mL	5	Day 0, 3, 7, 14, and 28 with titer

Details for national rabies PEP guidelines can be found in:
CDC. 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.

CDC. Humans Rabies Prevention - United States, 2008 Recommendations of the Advisory Committee on Immunization Practices. MMWR Early Release 2008;57:1-28.

Manufacturers and Distributors of Rabies Biologics

Product	Product Name	Manufacturer
Human diploid cell vaccine	Imovax® Rabies	Sanofi Pasteur Phone: (800) 822-2463 Website: https://www.vaccineshoppe.com/ or http://www.vaccineplace.com/products/
Purified chick embryo cell vaccine	RabAvert®	Novartis Vaccines and Diagnostics Phone: (800) 244-7668 Website: http://www.rabavert.com
Rabies immune globulin	Imogam® Rabies-HT	Sanofi Pasteur Phone: (800) 822-2463 Website: https://www.vaccineshoppe.com/ or http://www.vaccineplace.com/products/
	HyperRab™	Talecris Biotherapeutics Phone: (800) 243-4153 Website: http://www.talecris-pi.info BDI Pharma: (800) 948-9834

Patient Assistance/Indigent Programs

Sanofi Pasteur Inc. Patient Assistant Program
Products : Imogam ® Rabies-HT and Imovax ® Rabies
Phone: (866) 801-5655

Novartis Patient Assistance Program / RX Hope
Products: RabAvert®
Phone: (800) 244-7668 / 800-589-0837
Fax: 513-618-0056
Website: http://www.rxhope.com

Rabies Post-Exposure Prophylaxis Patient Handout

Rabies Post-Exposure Treatment for (Patient Name):_____

Date:_____

Provider Name and Contact:_____

To prevent rabies infection it is very important that you continue treatment on the schedule recommended by your health care provider. Treatment today included one or more shots given in and around the bite wound (rabies immunoglobin) and a rabies vaccination given in the arm similar to other vaccinations like flu or tetanus. To complete the treatment you will need to get three more rabies vaccinations in your arm over the next two weeks; one in three days, another one week from today, and the last vaccination two weeks from today. If you skip vaccinations or go off schedule the treatment may not work, putting you at risk of getting rabies. **Rabies is almost always fatal, but if you get all the shots on time you will be fully protected.** To help you get your treatment on schedule, the dates you need treatment and who you need to contact to schedule the last three shots are listed below. **Please contact the provider as soon as possible to ensure they have vaccine available in time for your first visit.**

To schedule the last three vaccinations as soon as possible please call:

The dates you need to get vaccinations are:

	Day 0 dose	**Day 3 dose**	**Day 7 dose**	**Day 14 dose**
Vaccination Date				
Rabies Immunoglobin Treatment Date		xxxxxxxxx	xxxxxxxxx	xxxxxxxxx

If you have any questions about rabies or rabies treatment you may contact your XXXXXX county health department at XXXXXXXXXX.

Patient's signature:_____

Date:_____

Attachment 22

Date: _____

Dear_____

Enclosed you will find the _____ County Health Department Rabies Refusal Letter. Please take time to read this letter outlining your risk for infection with the rabies virus and the outcome of such an infection. If you still do not wish to receive this protective treatment, please initial all lines and sign and date the letter at the bottom of the page. Please mail it back to the Health Department in the provided addressed and postage paid envelope.

This will allow me to close your case.

Thank you for your cooperation on this matter.

Sincerely,

_____

Epidemiology
(xxx) xxx-xxxx

Name: _____ D.O.B. _____ Sex: M F

Parent/Guardian: _____ Phone: (H) _____ (W) _____

Address: _____ City: _____ Zip: _____

Date of Exposure: _____ Animal: _____Exposure Type: _____

Please read all of the material below and initial in the area provided.

_____ Rabies is present in raccoons throughout Florida. The time period between infection and onset of illness in raccoons is not known, but could be more than 107 days.
_____ Domestic animals such as dogs and cats may acquire rabies from being bitten by a rabid wild animal. Other animals that may get infected include: bats, foxes, coyotes, ferrets, skunks, and bobcats.
_____ Rabies virus is found in the saliva and nervous system of rabid animals. A rabid animal can transmit the virus through a bite or if infectious material gets into an open wound or mucous membrane.
_____ I have been advised that a treatment is available to me that can prevent me from getting rabies.
_____ This post exposure treatment consists of receiving passive immunity with the rabies immune globulin and then active immunity with rabies vaccine. The immune globulin is given only once on the first visit. The vaccine is given 4 times – one during the initial visit then on days 3, 7 and day 14 following the first vaccine. People who have received pre-exposure vaccine, would be boosted on day 0 and 3. The most common side effects with the immune globulin are soreness at the injection sites and a mild temperature. The most common side effect with the vaccine is pain, redness, swelling and itching at the injection site. Mild reactions such as headache, nausea, abdominal pain, muscle aches and dizziness may occur.
_____ Rabies is fatal if not prevented. Death occurs from respiratory arrest.
_____ I have been advised that my animal exposure could place me at risk for rabies.

Please initial one of the following:

_____ Having read all the above information and initialed the highlighted areas I **REFUSE** the post exposure treatment for rabies offered to me by the _____ County Health Department or my doctor.
_____ Having read all the above information and initialed the highlighted areas I **ACCEPT** the post exposure treatment for rabies offered to me by the _____ County Health Department or my doctor.

Signature: _____ Date: _____

Nombre: _____

Fecha de Nacimiento: _____ Sexo: M F

Padres de Familia/ Custodios: _____

Teléfono: Casa:_____ Otro: _____
Trabajo: _____

Dirección: _____ Ciudad: _____
Código Postal: _____

Fecha en que fue expuesto: _____ Tipo de Animal: _____
Tipo de Exposición: _____

Por favor lea la siguiente información y ponga sus iniciales en el área proporcionada.

_____ A través de la Florida el virus de la rabia se encuentra presente en los mapaches. El período de tiempo entre la infección y el inicio de la enfermedad en los mapaches no se conoce, pero puede ser de más de 107 días.

_____ Los animales domésticos como perros y gatos pueden adquirir la rabia al ser mordidos por un animal salvaje (no doméstico) rabioso. Otros animales que pueden infectarse incluyen: murciélagos, zorros, coyotes, hurones (ferrets), zorrillos, y gato montés (linces).

_____ El virus de la rabia se encuentra en la saliva y el sistema nervioso del animal rabioso. Un animal rabioso puede transmitir el virus mediante una mordida o si el material infeccioso entra por medio de una herida (abierta) o una membrana mucosa.

_____ Yo he sido aconsejado que esta a mi disposición un tratamiento que puede ayudarme a prevenir contagiarme con la rabia.

_____ Para una persona que **no** ha sido vacunada anteriormente contra la rabia, el tratamiento después (post-exposure) de que la persona estuvo expuesta consiste en recibir immunidad pasiva con inmunoglobulina contra la rabia y luego recibir inmunidad activa con la vacuna de la rabia. La inmunoglobulina se administra solamente una vez durante la primera visita. La vacuna se administra 4 veces en la siguiente manera:
una vez durante la visita inicial y luego en los días # 3, 7 y día 14 después de la primera visita
ó: Para una persona que **sí** ha sido vacunada contra la rabia anteriormente (pre-exposure), el tratamiento consiste en recibir vacunas en los días # 0 y 3.

Los efectos secundarios más communes con la inmunoglobulina son dolor en el área de la inyección y una temperatura leve. Los efectos secundarios más communes con la vacuna son dolor, enrojecimiento, hinchazón o picazón en el lugar de la inyección. Reacciones leves como dolor de cabeza, nausea, dolor abdominal, y mareos pueden ocurrir.

_____ La rabia puede ser fatal si no se previene. La muerte ocurre por paro respiratorio.
_____ Yo he sido aconsejado de que el haberme expuesto a un animal (potencialmente rabioso) puede ponerme en riesgo de contraer la rabia.

Por favor ponga sus iniciales al lado **de una** de las siguientes dos opciones presentadas:

_____ He leído toda la información en la parte superior y he puesto mis iniciales en el área proporcionada. Yo **RECHAZO** el tratamiento (post-exposure) para la rabia que me ofrece el Departamento de Salud del Condado _____ o mi doctor.

_____ He leído toda la información en la parte superior y he puesto mis iniciales en el área proporcionada. Yo **ACEPTO** el tratamiento (post-exposure) para la rabia que me ofrece el Departamento de Salud del Condado _____ o mi doctor.

_____ _____

Firma

Attachment 23

FLORIDA DEPARTMENT OF HEALTH

CONFIDENTIAL RABIES POST EXPOSURE PROPHYLAXIS (PEP)

REPORT FORM

(see reverse for instructions and routing procedures)

SECTION I: PATIENT INFORMATION

Social Security Number_____ Driver's License Number (optional)_____

Last Name_____ First Name_____ MI_____

Address_____

City_____ State_____ Zip_____ County _____

Phone Number: (_____) _____ Date of Birth ____/____/_____ Age_____

Gender:

Male ☐
Female ☐
Unknown ☐

Race (check one):

Am. Indian/Alaskan ☐
Asian/Pacific Islander ☐
Black ☐
White ☐
Other ☐
Unknown/not specified ☐

Ethnicity (check one):

Hispanic ☐
Non-Hispanic ☐
Unknown ☐

SECTION II: BASIC CASE INFORMATION

Type of animal: _____ Date of the exposure: ____/____/_____

Was animal tested for rabies? Yes ☐ No ☐ Unknown ☐

If Yes,

Date tested: ___/___/___

Result?

Positive ☐
Negative ☐
Unsatisfactory ☐
Not done ☐

Why was animal tested?

Wild ☐
Neurologic ☐
Injured ☐
Unknown ☐
Other ☐
└> (specify): _____

If No,

Why was animal not tested?

Observed 10 days ☐
Quarantined ☐
Escaped ☐
Unknown ☐
Other ☐
└> (specify): _____

Was PEP recommended?
Yes ☐ No ☐ Unknown ☐

Was PEP initiated?
Yes ☐ No ☐ Unknown ☐

Animal was:

Owned ☐
Stray ☐
Wild ☐
Unknown ☐

Patient relationship to animal:

Owner ☐
Occupational ☐ → (specify): _____
Other ☐ → (specify): _____
Unknown ☐

Type of exposure (check one):

Bite ☐ → Where was the bite (anatomically)? _____
Scratch ☐
Other ☐ → (specify): _____
Unknown ☐

Animal ever vaccinated against rabies?
Yes ☐ →
No ☐
Unknown ☐

If Vaccinated:
Vaccinated by: Vet ☐ Owner ☐ Unknown ☐
Most recent vaccination: ___/___/_____
Type of vaccination: _____
(e.g., 1st vaccine, 1-year, 3-year, unknown, etc.)

Was the attack provoked? Yes ☐ No ☐ Unknown ☐

SECTION III: OPTIONAL INFORMATION (FOR CHD USE ONLY)

Incident reported to Animal Control (AC)? Yes ☐ No ☐ No AC in County ☐ Unknown ☐

Wound care information:

Patient washed wound: Yes ☐ No ☐ Unknown ☐ How long after exposure?:_____

Physician's wound care:

Patient saw physician on (date): ___/___/___

Washed/flushed wound	Yes ☐	No ☐	Unknown ☐
Gave tetanus	Yes ☐	No ☐	Unknown ☐
Gave antibiotics	Yes ☐	No ☐	Unknown ☐
Sutured wound	Yes ☐	No ☐	Unknown ☐

Other treatment (specify): _____

PEP Information:

Who was consulted for PEP recommendation?
County Health Department ☐
State Health Office ☐

If neither consulted, who recommended PEP?
Name: _____
Telephone :(_____)_____

Date PEP initiated: ___/___/___

Was patient previously vaccinated?
Yes ☐ No ☐ Unknown ☐

If yes, date of vaccination: ____/____/_____

Type of PEP:
HRIG + 4 vaccines ☐
2 vaccines (previously vaccinated) ☐
Continuing vaccinations ☐ → Begun in County_____ State _____
Other ☐ → Specify_____
PEP not given ☐ → Specify_____

PEP supplied by: DOH (State or CHD pharmacy) ☐ Private MD ☐
PEP administered by: CHD ☐ ER ☐ Private MD ☐

Form Completed by (print name) **County Health Department** **Date**

_____

Purpose:
This form is to be completed for each person for whom PEP is recommended in Florida in order to help evaluate the Rabies Prevention and Control Program.

Routing Procedures:
After completing this form, please enter into Merlin.

Forms Retention Schedule:
This form is subject to the retention period specified in DOH Schedule 1, Item 2. Once data is entered into the Florida morbidity reporting system database, backed-up, and verified as entered, the electronic copy becomes the permanent record and the hard copy of the disease reporting form becomes a duplicate.

Instructions:
For instructions on how to complete this form, please see the following website:
http://www.doh.state.fl.us/environment/medicine/rabies/rabies-index.html

Attachment 24
Rabies Awareness Template Press Release

FOR IMMEDIATE RELEASE
Date XXX

Contact: Name XXX
Phone XXX

Health Officials Urge Residents to Avoid Contact with Wild and Stray Animals

XXXX County health officials urge residents to avoid contact with wild and stray animals to protect themselves from the risk of rabies exposure.

In Florida, raccoons, bats, foxes, and unvaccinated cats are the animals most frequently diagnosed with rabies. Other animals that are at high risk for rabies include skunks, otters, coyotes, bobcats, and stray or unvaccinated cats, dogs and ferrets. Each year XXX County receives reports of rabid animals. In Year, # rabid animals including # of specific animal species of animals reported in XXX County. Most recently, # and type of animals with exposure to people/pets were reported in month & year.

"Rabies is a potentially fatal disease. It is important not to handle wild animals, to be aware of unusual acting animals, and to keep pets vaccinated against rabies," said XXX, Director XXX County Health Department.

Rabies is transmitted through exposure to the saliva and nervous tissue from a rabid animal through a bite, scratch, or contact with mucous membranes such as the eyes, nose, or mouth. XXX County Health Department works with XXX County Animal Services in responding to incidents of animal bites, tests animals for rabies through the Department of Health state laboratory, and quarantines animals as necessary. XXX County Health Department also provides rabies vaccinations to victims of animal bites, the only known effective treatment for rabies prevention in humans.

The following are steps you can take to protect yourself and your loved ones against rabies:

- Keep rabies vaccinations up to date for all pets.
- Keep your pets under direct supervision so they do not come in contact with wild animals. If your pet is bitten by a wild animal, seek veterinary assistance for the animal immediately and contact XXX County Animal Services at phone number.
- Call your local animal control agency to remove any stray animals from your neighborhood.
- Spay or neuter your pets to help reduce the number of unwanted pets that may not be properly cared for or regularly vaccinated.
- **Do not** handle, feed, or unintentionally attract wild animals with open garbage cans or litter.
- **Never** adopt wild animals or bring them into your home.
- Teach children **never** to handle unfamiliar animals, wild or domestic, even if they appear friendly.
- Prevent bats from entering living quarters or occupied spaces in homes, churches, schools, and other similar areas, where they might come in contact with people and pets.

Unusual acting animals should be reported to XXX County Animal Services at phone number for handling. Anyone who is bitten or scratched by wild animals or strays should report the incident to their doctor immediately, as well as XXX County Animal Services and their local health department. The contact number to report an animal bite to the XXX County Health Department is phone number.

###

For Immediate Release
Date: XXXXX

Contact Person: XXXXX
Environmental Health, Director
XXXXX County Health Department
Phone: XXXXXX

Rabies Alert

Town of XXXXX: XXXXXX, Director, XXXXXX County Health Department, has issued a rabies alert for the central geographical region of XXXXX County. This is in response to XXXXX that tested positive for rabies reported on XXXXXX (date).

All citizens in XXXXX County should be aware that rabies is present in the wild animal population and domestic animals are at risk if not vaccinated. The public is asked to maintain a heightened awareness that rabies is active in XXXXX County. Alerts are designed to increase awareness to the public, but they should not give a false sense of security to areas that have not been named as under an alert.

The recent rabies alert is for 60 days. The center of the rabies alert is at (geographic location) XXXXXX and includes the following area boundaries in XXXXX County:

- XXXX
- XXXX
- XXXX
- XXXX

An animal with rabies could infect other wild animals or domestic animals that have not been vaccinated against rabies. All domestic animals should be vaccinated against rabies and all wildlife contact should be avoided, particularly raccoons, bats, foxes, skunks, otters, bobcats and coyotes. Rabies is a disease of the nervous system and is fatal to warm blooded animals and humans. The only treatment for human exposure to rabies is rabies specific immune globulin and rabies immunization. Appropriate treatment started soon after the exposure, will protect an exposed person from the disease.
The following advice is issued:

- Keep rabies vaccinations up to date for all pets.
- Keep your pets under direct supervision so they do not come in contact with wild animals. If your pet is bitten by a wild animal, seek veterinary assistance for the animal immediately and contact XXX County Animal Services at phone number.
- Call your local animal control agency to remove any stray animals from your neighborhood.
- Spay or neuter your pets to help reduce the number of unwanted pets that may not be properly cared for or regularly vaccinated.
- **Do not** handle, feed, or unintentionally attract wild animals with open garbage cans or litter.
- **Never** adopt wild animals or bring them into your home.
- Teach children **never** to handle unfamiliar animals, wild or domestic, even if they appear friendly.
- Prevent bats from entering living quarters or occupied spaces in homes, churches, schools, and other similar areas, where they might come in contact with people and pets.

For further information on rabies, go to the Florida Department of Health website: website: http://www.doh.state.fl.us/environment/medicine/rabies/rabies-index.html or contact XXXXX County Health Department, (phone number) XXXXX. Or XXXXX Animal Control (phone number)

###

Attachment 26

Issues to be Addressed in Government–Sponsored Oral Rabies Vaccine Proposal

BACKGROUND

Describe the:

- History of rabies in area
- Habitats in the area of the proposed baiting
- Estimates of human and companion animal populations in the area
- Support for the project from local community and political groups with an interest in rabies control
- Rationale for use of oral rabies vaccine in this situation including expected outcome

PRE-BAITING EVALUATION

Describe how population studies/estimates of target species for vaccination will be done to find out the:

- Background levels of biomarker in target and non-target species
- Background levels of rabies antibodies in target and non-target species
- In case placebo baiting trials have been performed, describe here

VACCINE PACKAGE

Description of bait and rationale for use of this particular product.

VACCINE DISTRIBUTION

Describe the proposed:

- Vaccine distribution mode (airplane, helicopter, vehicle, or foot) with rationale
- Bait density (even distribution or targeted) with rationale
- Timing (time of year, frequency) with rationale
- Duration – estimate of number of years needed to continue (long-term commitment needed)
- Contingency plans if a rabid animal is identified in the baited area

POST-BAITING EVALUATION

Describe how the following will be evaluated:

- Distribution and frequency of positive rabies cases
- Biomarker levels in target and non-target species after baiting
- Antibody levels in target and non-target species after baiting

STAFFING

Describe how staff will be selected, trained and monitored.

Significant professional oversight by a veterinarian and wildlife biologist will be needed. Describe how these services will be obtained.

COOPERATION WITH FEDERAL, STATE AND LOCAL AGENCIES

Partnerships are very important for the vaccination project to succeed.

Describe your partnerships with:

Centers for Disease Control and Prevention
US Department of Agriculture
Florida Department of Health (including neighboring county health departments)
Florida Department of Agriculture and Consumer Services
Florida Fish and Wildlife Conservation Commission
Animal Control officials
Law Enforcement officials

PUBLIC RELATIONS PLAN

How public will be notified
Who will handle calls from public

SAFETY
How the human and animal medical community will be notified and educated.
What recommendations will be given for humans and animals exposed to vaccine
Any special recommendations for immunocompromised persons exposed to vaccine

BUDGET
Estimated costs for the program
Sources of funding

CERTIFICATION OF APPROVAL BY LOCAL GOVERNING BODY
Should be submitted

Submit request to Rabies Advisory Committee
c/o Dr. Carina Blackmore
Division of Environmental Health
4052 Bald Cypress Way, Bin #A08
Tallahassee, FL 32399

Attachment 27

[Template] Raccoon Relocation Letter

Date

Re: Relocation of Rabies Vector Species (Raccoons)

An oral wildlife rabies vaccine bait distribution campaign is underway in x county. In order to protect areas that have not been affected, and maintain the gains accomplished by previous years' baiting, the "**NO RELOCATION"** policy for raccoons has been put in place. This policy prohibits the relocation of raccoons into X County from another county.

This important epidemic control measure is outlined in Florida Rabies Control and Prevention, 2008 Guidebook. (Chapter 5)

> "**Humanely destroy free-roaming wild mammals determined to be a contributing factor to the epidemic in residential areas. Transportation of trapped rabies vector species to other areas must be absolutely forbidden because of the risk of spreading the epidemic to other areas**." (5-3)

This especially applies to "**NO RELOCATION**" of vector species (raccoons) to public parks and recreation areas.

Wildlife rehabilitators may release in X County only those rehabilitated raccoons that were rescued in X County. Such releases must be made within a mile of the original point of rescue.

Further, this policy is strongly supported by Dr. Carina Blackmore, D.V.M., Ph.D., State Public Health Veterinarian.

Humane organizations and individual permittees who continue to trap raccoons MUST comply with the above guidelines. Failure to comply may result in a **Five Hundred Dollar ($500.00)** fine levied against the offending organization or individual.

Arrangements for the humane euthanasia of captured raccoons and disposition of the remains must be made with a private source and is the responsibility of each permittee. All raccoons must be considered potentially infected. Permission for euthanasia and disposition of remains must be approved by the X County Health Department, Environmental Health Division; telephone ( ) .

Due to their high risk of contracting rabies, all individuals involved in trapping or handling raccoons should consider undergoing pre-exposure vaccination. The X County Health Department offers the pre-exposure series. Contact (name) for further details.

Questions about rabies should be directed to (name)

Sincerely,

X County Animal Services Director/Administrator X County Health Department

Have you seen these?

These are oral rabies vaccination baits. They are being distributed in your area by fixed-wing aircraft, helicopters, and ground personnel to vaccinate raccoons against the virus that causes rabies. The vaccine in these baits cannot cause rabies and has been shown to be safe in more than 60 different species of animals, including cats and dogs.

If you find a bait, please leave it alone unless it is on your lawn, driveway, or some other area not likely to attract a raccoon. While wearing a glove or other protective covering (e.g., plastic bag, paper towel), you can move the bait to an area of thicker cover, where a raccoon will be more likely to find it.

If you should pick up a bait without wearing a glove, wash your hands thoroughly with soap and water. Also, do not handle partially eaten or damaged baits with bare hands. Damaged baits should be placed in a bag and disposed of with normal trash. Do not attempt to remove a bait from a pet's mouth (especially a dog's mouth). Doing that might cause you to be bitten.

If you have any questions, please visit the National Rabies Management Program Web site at http://www.aphis.usda.gov/ws/rabies/index.html or call the U.S. Department of Agriculture's Wildlife Services toll-free number: **1–866–4–USDA–WS**.

U.S. Department of Agriculture
Animal and Plant Health Inspection Service
USDA is an equal opportunity provider and employer.

Program Aid No. 1934
Issued June 2007

If you see a wild animal:

- Stay away and keep children away.
- Keep pets indoors.

If you are bitten by an animal, domestic or wild:

- Immediately wash the wound with lots of soap and running water.
- Call your doctor or local health department.
- If it's a domestic animal, get the name and address of the animal's owner.
- If it's a wild animal, contact a professional trapper to confine the animal. It's best not to try to trap the animal yourself to prevent further injuries.
- If the animal is dead and needs to be picked up for testing, wear gloves or use a shovel to place the carcass into a heavy plastic bag and put it in a cold place away from people and other animals.

To prevent wildlife encounters:

- Don't feed, touch, or adopt wild animals or stray dogs or cats.
- Vaccinate your dogs, cats, and ferrets against rabies.
- Keep garbage secure in an enclosed trashcan.
- Feed pets indoors or immediately remove all food when they are done eating outdoors.
- Teach children to appreciate wildlife from a distance.

Photo credits: The raccoon image was taken by APHIS photographer R. Anson Eaglin. The shots of the sachets and polymer baits were taken by Wildlife Services employee John Forbes.

APHIS Factsheet
Wildlife Services August 2009

Questions and Answers: Rabies and Oral Rabies Vaccination

Q. What is rabies?
A. Rabies is an invariably fatal disease caused by a virus that affects the central nervous system in mammals. Rabies can be prevented with vaccines that are available to protect people and pets.

Q. How do you contract rabies?
A. The rabies virus is almost always spread through contact with an infected animal's saliva when an infected animal bites through the skin of an uninfected animal or person.

Q. Why should I be worried about rabies in wildlife?
A. Rabies is a serious public health concern because if left untreated it is always fatal. The costs associated with detection, prevention, and control of rabies exceed $300 million annually. According to the Centers for Disease Control and Prevention, about 90 percent of reported rabies cases are in wildlife. As human populations expand into suburban and rural areas there is more interaction with wildlife, increasing the risk of rabies exposure.

Q. How can I tell if an animal has rabies?
A. To determine if an animal has rabies, it must be euthanized and a brain tissue sample tested. The visible signs of rabies may include any of the following: aggressive behavior, lethargy, confusion, attacking for no reason, or walking in a circle. Wildlife should never be approached at any time. If you have questions about wildlife, please contact the U.S. Department of Agriculture's (USDA) Wildlife Services at 1–866–4–USDA–WS (1–866–487–3297).

Q. What should I do if I am bitten by an animal?
A. Wash the wounds thoroughly with soap and water right away. Contact your doctor, local health department, or hospital emergency room. If it is a domestic animal, get the name and address of the animal's owner. If it is a wild animal, contact your local health department, animal control, or professional wildlife trapper for assistance. If the animal is dead, wear gloves or use a shovel to move the animal. Put the carcass into a heavy plastic bag and place it in a cold area away from people and other animals. The area can be cleaned with one part bleach to ten parts water. Call your local health department for further instructions.

Q. What can I do to prevent rabies?
A. Avoid all contact with all wild animals. Make sure your pets are vaccinated in accordance with State and local laws. Report any animal acting suspiciously to USDA's Wildlife Services at 1–866–4–USDA–WS (1–866–487–3297). Do not relocate wildlife.

Q. What is an oral rabies vaccination (ORV) bait and what does it look like?
A. WS and its cooperators distribute the ORV baits in targeted areas to vaccinate wildlife species—such as coyotes, foxes, and raccoons—to prevent the spread of rabies. An ORV bait consists of a sachet, or plastic packet containing Raboral V-RG® rabies vaccine. To make the baits attractive to wildlife, the baits are either waxed to the inside of a fishmeal or dogmeal outer shell or covered with fishmeal crumbs.

Q. Can I get rabies from contact with the vaccine?
A. No. The vaccine does not contain the live rabies virus. It contains only a single gene that is passcoded with the outer coating of the rabies virus. The virus that carries this single gene may cause a local pox-type infection in people who are pregnant or immunosuppressed. If you come into contact with the vaccine, wash the exposed area thoroughly with soap and water and contact your local public health officials at 1–877–RABORAL (1–877–722–6725).

Q. What if I find an oral rabies vaccination (ORV) bait near my home?
A. It is best to leave a bait where you find it unless it is on your lawn, driveway, or other area where it is not likely to attract a raccoon, fox, or coyote. While wearing a glove or other protective covering (i.e., plastic bag, paper towel), you can move bait to a wooded area where a wild animal will be more likely to find it. Wash your hands thoroughly with soap and water after any contact with a bait.

Q. Why do I need to wear a glove when handling an ORV bait?
A. An intact bait will not harm you, but the smell, which is objectionable to people, may get on your skin. If the sachet is broken, pink liquid (vaccine) may be visible. While wearing gloves, you may place the bait in a bag and dispose of it with your regular trash. Wash your hands thoroughly with soap and water after any contact with a bait. If you suspect you may have been exposed to the vaccine please contact your local public health officials at 1–877–RABORAL (1–877–722–6725).

Q. What if I do not have a glove?
A. You can use a plastic bag or paper towel to prevent you from coming into direct contact with the bait and vaccine. Be sure to dispose of it after use.

Q. What if my child finds an ORV bait?
A. The smell of the bait generally prevents children from playing with them or tasting them. If your child were to bring you an intact bait, you may place the bait into an area of thick cover. If your child brings you a broken bait, wash the exposed skin and contact your local public health officials at 1–877–RABORAL (1–877–722–6725), for further instructions and referral. Wash your hands thoroughly with soap and water after any contact with a bait.

Q. What if my dog or cat eats an ORV bait?
A. This vaccine has been shown to be safe in more than 60 different species of animals, including domestic dogs and cats. Eating a large number of baits may cause a temporarily upset stomach in your pet, but it does not pose a long-term health risk. Do not attempt to remove a bait from your pet; doing so may cause you to be bitten and could lead to vaccine exposure. If your pet becomes ill from bait consumption, please contact your veterinarian for more information.

Q. How long do ORV baits last in the environment?
A. Studies have shown that most baits are eaten within 4 days, and almost all baits are gone in 1 week. If baits are not found and eaten, they will dissolve exposing the vaccine packet. Sunlight and exposure to air inactivates the vaccine.

Q. Can I use the ORV bait to vaccinate my dog or cat?
A. No. This vaccine is only approved for use in wildlife. Your pet should be vaccinated by a veterinarian in accordance with State and local laws.

Q. How does a raccoon/coyote/gray fox get vaccinated by eating the ORV bait?
A. The vaccine is contained inside a plastic packet, which is waxed to the inside of the bait's fishmeal outer shell or covered with fishmeal crumbs. When an animal eats through the coating, the vaccine packet inside is punctured allowing the animal to swallow the vaccine. The animal's immune system is then tricked into thinking it has been exposed to the rabies virus, and it makes antibodies to fight the disease. The blueprint on how to make these antibodies is stored in the animal's immune system allowing it to respond quickly if it is later exposed to a rabid animal.

Q. How long does the vaccine last?
A. Research suggests this vaccine should be effective for more than a year; however, it is difficult to determine how immune systems in individual animals will respond to the vaccine.

Q. How do you distribute ORV baits in cities and suburban areas?
A. Working with employees from cooperating agencies, WS distributes baits in urban and suburban areas by hand. This is the most effective approach for distributing the bait and minimizing human contact with them.

Q. How else does WS distribute ORV baits?
A. In rural or open areas, WS distributes baits using aircraft. Depending on the distribution area and availability of aircraft, a helicopter or fixed wing aircraft may be used.

Q. How can I find out more information about this program?
A. You can dial 1–866–4–USDA–WS (1–866–487–3297) to speak with staff from Wildlife Services or visit www.aphis.usda.gov/ws/rabies.

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