

Rabies

**REPORT HUMAN
CASES IMMEDIATELY**

(Also known as Hydrophobia and Lyssa)



Section 1:

ABOUT THE DISEASE

A. Etiologic Agent

The virus that causes rabies is a rhabdovirus of the genus *Lyssavirus*.

B. Clinical Description

Animal Rabies

Rabies is primarily a disease of the central nervous system. Animals with rabies can appear aggressive (“furious rabies”), or normal or meek (“dumb rabies”). Animals with furious rabies often exhibit aggressive or unusually excited behavior; they may excessively salivate and may attack other animals or humans. Dumb rabies may be more difficult to detect; animals may seem tame, wounded, or dazed. These animals have been described as acting “drunken” or disoriented, or as suffering from some paralysis. The behavior of an animal, however, is not a reliable indicator of whether or not it has rabies.

Human Rabies

Rabies is nearly always fatal in humans. It presents as a rapidly progressing illness, with a duration of 2–21 days. A prodromal phase, lasting about 2–10 days, is characterized by pain and numbness/tingling at the site of the bite (present in 50–80% of cases) and by nonspecific complaints such as fatigue, headache, and fever. Behavioral changes may also be apparent, including apprehension, anxiety, agitation, irritability, insomnia, and depression.

The prodromal phase is followed by the neurologic phase, during which the following can occur: disorientation and hallucinations, paralysis, episodes of terror and excitement, hydrophobia (fear of swallowing liquids), hyperventilation, hypersalivation, and seizures. These symptoms are invariably followed by coma and death. Once symptoms begin, drugs or treatments typically do not improve the patient’s condition.

C. Vectors and Reservoirs

Although all species of mammals are susceptible to rabies virus infection, only a few species are important for maintaining the disease in nature. In the U.S., raccoons, skunks, foxes, and coyotes are the major reservoirs in ground animals, and bats are the major non-ground animal reservoir. Two strains of rabies are present in Massachusetts, the bat strain and the raccoon strain. In developing countries, dogs are the principal problem. Any rabies strain can be passed to other animals and humans through exposure to infectious saliva. Small rodents (e.g., squirrels, hamsters, guinea pigs, gerbils, chipmunks, rats, and mice) and lagomorphs (rabbits and hares) have not been known to transmit rabies to humans and are almost never found to be infected with rabies. The exception is rodents and lagomorphs (specifically, rabbits) caged outdoors. Cages may allow exposure to rabid animals but may also provide enough protection for the caged animal to survive and later develop rabies.

D. Modes of Transmission

Rabies virus is spread through the saliva of an infected animal from a bite or scratch, or through contact with mucous membranes or a fresh break in the skin. Bites by some animals, such as bats, can inflict injury so minor that it goes undetected. Indirect exposure to saliva of a rabid animal can also occur through contact with a pet that has had recent contact with a rabid animal. Broken skin or mucous membrane exposure to nervous tissue (e.g., brain, spinal cord) of an infected animal may also pose a risk of transmission. After thousands of years of reports on rabies, direct person-to-person transmission has not been documented. However, there have been cases documented after corneal and solid organ transplants from individuals with unappreciated infection. Droplet transmission (e.g., in a cave with a multitude of bats or in a laboratory handling rabies virus) has occurred. Rabies is not transmitted through contact with blood, urine, skunk spray, or feces of an infected animal.

E. Incubation Period

Animal Rabies

Depending on a number of factors, including the animal species, the virus strain and the anatomical site of exposure, the incubation period may vary from a few days to several years, but is typically 1–3 months. Some animals, such as dogs and cats, have been studied extensively, and the incubation period for these animals rarely exceeds six months.

Human Rabies

The incubation period for human rabies is usually 3–8 weeks, but can be as short as 9 days (although 9-day incubation periods have not been documented in the U.S. with native strains) or as long as 7 years. Less than 1% of human cases have an incubation period longer than 6 months. The incubation period is typically related to the site of exposure; for example, the incubation period is usually shorter if the virus is inoculated closer to the central nervous system or in an area that is more highly innervated (such as the hand). The incubation period also depends on the severity of exposure (a larger dose of virus results in a shorter incubation period), the age of the exposed person (younger age generally results in a shorter incubation period), and the strain of the virus.

F. Period of Communicability or Infectious Period

Animal Rabies

Animals are not infectious until virus appears in their saliva, generally toward the end of the incubation period. Dogs, cats, and ferrets may shed virus for about 3–7 days before the onset of clinical signs and may continue shedding throughout the course of their illness. The shedding/communicability period for most wild animals has not been determined, although skunks may shed virus for up to 18 days before death. Carcasses of animals with rabies may contain infectious virus, depending on temperature and environmental conditions. Rabies virus may persist in a frozen carcass for many weeks. Drying and sunlight rapidly deactivate rabies virus. Dried saliva or a dried animal carcass would not contain live rabies virus.

Human Rabies

The period during which a patient infected with rabies is infectious may begin up to one week before symptom onset and will last until death. Saliva is considered potentially infectious, as are other bodily tissues and fluids. It should be noted, however, that with the exception of corneal and solid organ transplants from infected persons, there have been no documented cases of person-to-person transmission of rabies.

G. Epidemiology

Animal Rabies

Animal rabies exists in most parts of the world. In the U.S., Hawaii is the only state that has never reported an indigenously-acquired rabies case in humans or animals. In 2003, wild animals accounted for more than 91% of reported cases of rabies in the U.S. Raccoons continued to be the most frequently reported rabid wildlife species (37% of all animal cases during 2003), followed by skunks (29%), bats (17%), and foxes (6%). Most of the continental U.S. has endemic rabies in terrestrial mammals; bat rabies is endemic in Alaska, as well as throughout the continental U.S. Dogs are a primary reservoir for human rabies in Mexico and much of Central and South America, Asia, and Africa. In the U.S., children are exposed to rabid and potentially rabid animals more often than are adults.

In Massachusetts, the terrestrial (raccoon) rabies epidemic began in 1992, with peak years in 1994 and 1998. Rabies occurs in cycles through the animal population. Summer months are peak months for exposure to animals, as people and animals are both outside and likely to encounter each other. From 1992–2004, over 4,400 animals tested positive for rabies, including 120 cats and 8 dogs. Nearly all of the cities and towns in Massachusetts have had rabid animals reported; exceptions include the Islands of Martha's Vineyard and Nantucket. The first positive raccoon on Cape Cod was identified in March 2004. In 2004, as part of an enhanced surveillance project to track the spread of the virus on the Cape, 470 raccoons were submitted from Barnstable County, with 103 testing positive.

Human Rabies

In the U.S. over the past century, the number of human deaths attributed to rabies has declined from 100 or more each year to an average of 1–2 each year. The decline is due to pet vaccination and animal control programs, begun in the 1940s, that have essentially eliminated the domestic dog as a reservoir of rabies, and to the development of effective human rabies vaccine and immune globulin. Since 1980, 41 human rabies deaths in the U.S. have been reported to the Centers for Disease Control and Prevention (CDC), with 21 of those associated with bat variants. Twelve of these deaths are believed to have been caused by contact with rabid animals (mostly dogs) outside the U.S. In 2004, a case of rabies in an organ donor and four cases of rabies in organ recipients were identified. Worldwide, an estimated 35,000–40,000 human rabies deaths occur each year. The vast majority of these deaths occur in developing countries. The last indigenous case of human rabies in Massachusetts was in 1934 and was due to the dog strain. There was a human case in a Massachusetts resident in 1983, although the disease was contracted in Africa after a dog bite.

H. Bioterrorist Potential

This pathogen is not considered to be of risk for use in bioterrorism.



Section 2:

REPORTING CRITERIA AND LABORATORY TESTING**A. What to Report to the Massachusetts Department of Public Health (MDPH)***Animal Rabies*

Rabies in animals is reportable to the Massachusetts Department of Agricultural Resources (MDAR). However, since all animal testing for rabies in Massachusetts is done by the MDPH State Laboratory Institute (SLI), the flow of testing results will generally be from the SLI Virology Laboratory to the submitter of the animal specimen, epidemiologists at the MDPH Division of Epidemiology and Immunization, and the MDAR. Negative results are mailed to submitters. Positive results are called out directly to the submitter and the local board of health (LBOH).

Animal Bites

Animal bites are not reportable to the MDPH. However, an epidemiologist is available 24/7 for consultation on animal bite management regarding possible rabies exposures.

Note: Under MDAR regulations, 330 CMR. 10:00. Prevention of the Spread of Rabies, animal bites are reportable to the local animal inspector. Each town/LBOH is required to appoint an animal inspector. The animal inspector has legal authority to issue animal quarantine orders. (Note: In some communities the “animal inspector,” who has legal authority to issue quarantine orders, may also be the “animal control officer” who, working for the local police department or the LBOH, has the legal authority to enforce local animal control regulations.)

Human Rabies

Report any suspect case of human rabies based on a health care provider’s medical opinion or a laboratory result indicating rabies.

B. Laboratory Testing Services Available*Animal Rabies*

The SLI performs rabies testing on animal specimens. LBOH, animal control officers, and the public must make arrangements for testing and transport of specimens to the SLI. Animal control officers and veterinarians need to be familiar with the proper way to euthanize, preserve, and ship the animal specimens to the laboratory. Except for whole bats and other very small animals, only heads will be accepted.

For more information on specimen submission, contact the SLI Rabies Laboratory at (617) 983-6385.

Human Rabies

All clinical samples from suspect cases of human rabies should be sent to the SLI for forwarding to the CDC for testing. Contact the SLI Virus Isolation Laboratory, at (617) 983-6382, for specific instructions regarding types of specimens to submit and the proper methods for submission.



Section 3:

REPORTING RESPONSIBILITIES AND CASE INVESTIGATION**A. Purpose of Surveillance and Reporting**

- ◆ To understand the risk of rabies in people who are bitten or exposed to animal saliva or other potentially infectious materials, so those who are determined to be at risk can receive the proper treatment.
- ◆ To ensure prompt reporting of animal bites to animal control officers to help prevent rabies, unnecessary treatment, and the needless killing of pets by ensuring appropriate quarantine.

B. Laboratory and Health Care Provider Reporting Requirements*Human Rabies*

Human rabies is reportable to the LBOH. The MDPH requests that health care providers immediately report to the LBOH in the community where the case is diagnosed, all confirmed or suspect cases of human rabies, as defined by the reporting criteria in Section 2A.

Note: Due to the rarity and potential severity of human rabies, the MDPH requests that information about any known case of human rabies be immediately reported to the LBOH where diagnosed. If this is not possible, call the MDPH Division of Epidemiology and Immunization at (617) 983-6800 or (888) 658-2850. Normally, a confirmed human rabies diagnosis will not be made without the extensive involvement of the MDPH and the CDC.

Laboratories performing examinations on any specimens derived from Massachusetts residents that yield evidence of rabies infection shall immediately report such evidence of infection, directly by phone, to the MDPH Division of Epidemiology and Immunization at (617) 983-6800 or (888) 658-2850.

Animal Bites

In most cities/towns, animal bites are reportable to the LBOH. Animal bites are not reportable to the MDPH.

C. Local Board of Health (LBOH) Reporting and Follow-Up Responsibilities*Reporting Requirements*

MDPH regulations (*105 CMR 300.000*) stipulate that human rabies is reportable to the LBOH and that each LBOH must report any case of human rabies or suspect case of human rabies, as defined by the reporting criteria in Section 2A. Refer to the *Local Board of Health Reporting Timeline* at the end of this manual's *Introduction* section for information on prioritization and timeliness requirements of reporting and case investigation.

Case Investigation

If a LBOH learns of a suspect or confirmed case of human rabies, it should immediately call the MDPH Division of Epidemiology and Immunization, any time of day or night, at (617) 983-6800 or (888) 658-2850.

1. Case investigation of human rabies in Massachusetts residents will be directed by the MDPH Division of Epidemiology and Immunization.
2. Following immediate notification of the MDPH, LBOH may be asked to assist in investigating any case living within their communities, including gathering the following:
 - a. Name, age, address, phone number, status (hospitalized, at home, deceased), and parent/guardian information, if applicable.
 - b. The name and phone number of the hospital where the case is or was hospitalized.
 - c. The name and phone number of the attending physician.
 - d. The name and phone number of the infection control official at the hospital.
 - e. If the patient was seen by a health care provider before hospitalization or was seen at more than one hospital, these names and phone numbers.
3. There is no official case report form required from a LBOH.
4. Institution of disease control measures is an integral part of case investigation. It is the responsibility of the LBOH to understand, and if necessary, institute the control guidelines listed in Section 4.



Section 4:

CONTROLLING FURTHER SPREAD

A. Isolation and Quarantine Requirements (*105 CMR 300.200*): Human Rabies

Minimum Period of Isolation of Patient

For duration of illness.

B. Minimum Period of Quarantine of Contacts

People with high-risk exposures to suspect rabid animals or suspect humans with rabies should receive vaccine prophylaxis as appropriate.

Exposed animals should either be euthanized immediately or quarantined and boosted, as appropriate under MDAR regulations. (See Section 4C for more information.)

C. Managing Special Situations

Protection of Humans Exposed to Animals

Domestic animals (i.e., dogs, cats, and ferrets) that have bitten, scratched, or otherwise exposed a human and appear healthy should be quarantined for ten days in lieu of euthanasia and testing. Studies on these animals indicate that they quickly show signs of rabies after they start to shed the virus. A dog, cat, or ferret that remains healthy for the ten-day quarantine could not have transmitted rabies virus at the time of the exposure. Quarantine periods for livestock that expose humans are determined on a case-by-case basis by the MDAR Division of Animal Health, Dairy Services, and Biosecurity (DAH), which is reachable at (617) 626-1795.

Wild animals may be classified as low, intermediate, or high risk. High-risk animals are those that commonly carry rabies. In Massachusetts, these include raccoons, skunks, foxes, coyotes, woodchucks, and bats. Since viral shedding periods are not known for these animals, quarantine is not appropriate for these animals, and they must be euthanized and submitted for rabies testing. In most cases in which wild animals are unavailable for testing, they must be assumed to be rabid. Low-risk wild animals almost never carry rabies. These include small animals such as mice, squirrels, chipmunks, and wild rabbits. Bites by these animals almost never require rabies vaccination, unless the circumstance surrounding the exposure was highly unusual (i.e., an unprovoked bite). Bites by trapped mice and rats, by squirrels being fed, by chipmunks and other animals captured by cats or dogs, are considered provoked, and prophylaxis is rarely warranted after such a bite. For exposure to other animals, decisions are made on a case-by-case basis. Contact the epidemiologist on-call at the MDPH Division of Epidemiology and Immunization for consultation. For more information, refer to the algorithm in *Attachment A: Management of Human Exposure to Suspect Rabid Animals* (found at the end of this chapter).

If an animal tests positive for rabies, humans who were exposed to the infected animal's saliva through a bite, scratch, or mucous membrane exposure should receive post-exposure prophylaxis (PEP) as soon as possible. Bats pose a unique problem. The bite or scratch of a bat can be so small that it goes undetected. Current Advisory Committee on Immunization Practices (ACIP) recommendations suggest that persons who awaken to find a bat in their room and others who are unable to provide clear details of whether an exposure occurred, such as young children alone with a bat in a room, may require PEP. If an exposure cannot be ruled out and the bat is unavailable for testing, PEP should be given. For more information, refer to the algorithm in *Attachment A: Management of Human Exposure to Suspect Rabid Animals* (found at the end of this chapter).

All rabies-positive animal test results require prompt follow-up. In addition to notifying LBOH, results from the SLI are also relayed to the MDPH epidemiologist on-call. The epidemiologist will work with LBOH and animal control officers to obtain exposure information from victims who may need PEP. LBOH should work with the DAH concerning quarantines for domestic animals that may have been exposed to the rabid animal (see below for more information).

Protection of Domestic Animals Exposed to a Rabid or Potentially Rabid Animal

Longer quarantine periods exist for domestic animals exposed to a rabid or potentially rabid animal. The local animal control officer should make the appropriate determination for the handling of domestic animals that have been exposed to rabid or potentially rabid animals. Quarantines may range from 45 days to 6 months, depending on the vaccination status of the animal. Euthanasia may sometimes be recommended. The latest recommendations and requirements concerning the quarantine of animals exposed to a rabid or potentially rabid animal can be obtained from the DAH at (617) 626-1795. The Massachusetts Division of Fisheries and Wildlife (MDFW), at (617) 626-1591, handles domestic ferret quarantines.

Protection of Humans Exposed to a Rabid or Potentially Rabid Human

Contact precautions for respiratory secretions should be in place for persons suspected or confirmed to have rabies. Articles soiled with saliva should be disinfected. Attending personnel should be protected (e.g., gloves, gowns, face protection) against any exposure to saliva. If a patient who has rabies (or is suspected of having rabies) exposes another person to saliva (through a bite, an open wound, or a mucous membrane), rabies PEP of the contact should be started. Other people from the patient's home or work environment should be contacted to review their exposure.

D. Preventive Measures

Control of human rabies relies upon controlling rabies in the animal population. Therefore, MDAR animal quarantine regulations and MDPH animal vaccination regulations must be enforced.

Personal Preventive Measures/Education

Offer the following advice to the public to help prevent rabies:

- ◆ Vaccinate pets; cats, dogs, and ferrets are required by law to be vaccinated. Although not required by law, livestock vaccinations are encouraged.
- ◆ Do not feed or handle wild or stray animals. Avoid sick animals or animals that are acting strangely.
- ◆ Do not touch or handle dead animals.
- ◆ If there are questions regarding capture of an animal or handling of a carcass, contact the local animal control officer.
- ◆ Cover your garbage cans and keep pet food indoors so wild animals are not attracted to it.
- ◆ Do not keep wild animals as pets. This is illegal as well as dangerous.
- ◆ Never handle bats. A bat bite or scratch may be so small as to go unnoticed. Persons who awaken to find a bat in their room and others who are unable to provide clear details of whether an exposure occurred, such as young children alone with a bat in a room, may require PEP. Consult with the MDPH or a health care provider.

When a person calls about a secondhand or indirect exposure (usually contact with a pet that was previously bitten by a wild or potentially rabid animal), make sure that the person does not touch the pet's bite wound. Suggest gloves, soap, and water to clean the wound to avoid human exposure to the attacking animal's saliva.

Recommend that travelers to developing countries with endemic rabies receive pre-exposure prophylaxis if they are going to be in situations where exposure is likely (e.g., camping, hiking, backpacking or away from areas where they might receive treatment for a bite wound). Travelers should be warned to avoid petting or having other contact with stray animals.

Note: For more information regarding international travel and rabies, contact the CDC's Traveler's Health Office at (877) 394-8747 or on the CDC website at www.cdc.gov/travel.

LBOH should:

- ◆ Help enforce pet vaccination laws and encourage livestock vaccination.
- ◆ Help enforce quarantine periods and encourage the public to take them seriously.
- ◆ Continue rabies awareness efforts within their city/town.

A Rabies Public Health Fact Sheet is available from the MDPH Division of Epidemiology and Immunization or on the MDPH website at www.mass.gov/dph. Click on the "Publications and Statistics" link, and select the "Public Health Fact Sheets" section under "Communicable Disease Control." Information regarding rabies, including an education curriculum for children, statistics on rabies, and educational posters, can also be found on the MDPH Rabies website at www.mass.gov/dph/cdc/epii/rabies/rabies.htm.



ADDITIONAL INFORMATION

The following is the formal CDC case definition for human rabies. It is provided for your information only and should not affect the investigation or reporting of a case that fulfills the criteria in Section 2A of this chapter. (The CDC and the MDPH use the CDC case definitions to maintain uniform standards for national reporting.) For reporting to the MDPH, always use the criteria outlined in Section 2A.

Note: The most up-to-date CDC case definitions are available on the CDC website at www.cdc.gov/epo/dphsi/casedef/case_definitions.htm.

Clinical Description

Rabies is an acute encephalomyelitis that almost always progresses to coma or death within ten days after the first symptom.

Laboratory Criteria for Diagnosis

- ◆ Detection by direct fluorescent antibody of viral antigens in a clinical specimen (preferably the brain or the nerves surrounding hair follicles in the nape of the neck);
- ◆ Isolation (in cell culture or in a laboratory animal) of rabies virus from saliva, cerebrospinal fluid (CSF), or central nervous system tissue; or
- ◆ Identification of a rabies-neutralizing antibody titer ≥ 5 (complete neutralization) in the serum or CSF of an unvaccinated person.

Case Classification

Confirmed

A clinically compatible case that is laboratory-confirmed.

Comment

Laboratory confirmation by all of the above methods is strongly recommended.



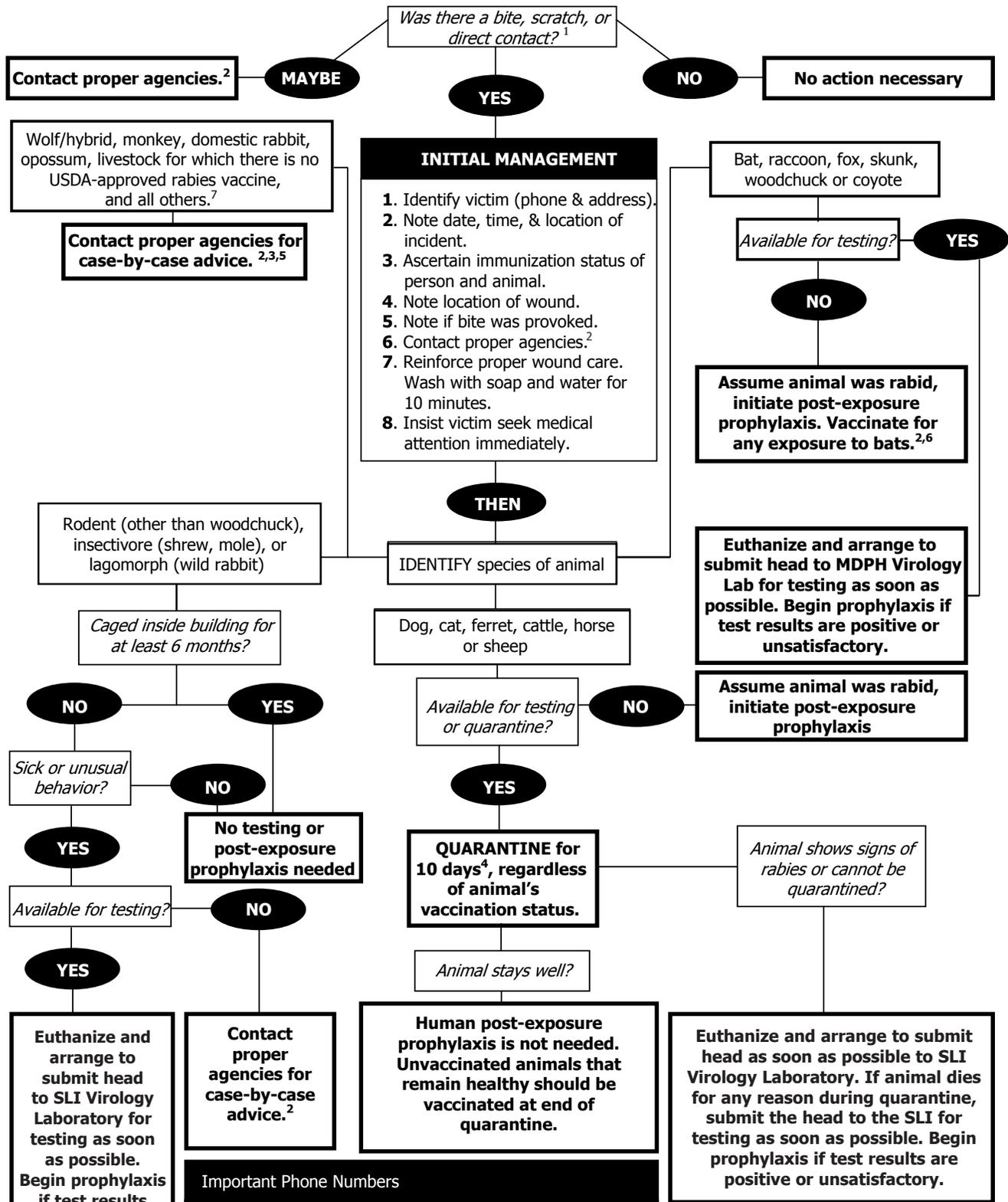
REFERENCES

- American Academy of Pediatrics. [Rabies.] Pickering L.K., ed. *Red Book: 2003 Report of the Committee on Infectious Diseases, 26th Edition*. Elk Grove Village, IL, American Academy of Pediatrics; 2003: 514–521.
- CDC. Case Definitions for Infectious Conditions under Public Health Surveillance. *MMWR*. 1997; 46(RR-10).
- CDC. Human Rabies Prevention—United States, 1999: Recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR*. January 8, 1999; 48(RR-1).
- CDC. Update: Investigation of Rabies Infections in Organ Donor and Transplant Recipients- Alabama, Arkansas, Oklahoma, Texas, 2004. *MMWR*. July 9, 2004; 53(Dispatch): 1.
- Heymann, D., ed. *Control of Communicable Diseases Manual, 18th Edition*. Washington, DC, American Public Health Association, 2004.
- Krebs, J., et al. Rabies Surveillance in the United States during 2003. *JAMA*. December 15, 2004; 225: 12.
- MDPH. *Regulation 105 CMR 300.000: Reportable Diseases, Surveillance, and Isolation and Quarantine Requirements*. MDPH, Promulgated November 4, 2005.
- National Association of State Public Health Veterinarians, Inc. Compendium of Animal Rabies Control, 2004. *MMWR*. June 25, 2004; 53(RR-9).

ATTACHMENTS

Attachment A: Management of Human Exposure to Suspect Rabid Animals

ATTACHMENT A: Management of Human Exposure to Suspect Rabid Animals



Important Phone Numbers

MDPH Division of Epidemiology	(617) 983-6800
SLI Virology Laboratory	(617) 983-6385, 86, 87
MDFW Division of Fisheries and Wildlife	(617) 626-1591
MDAR Division of Animal Health, Dairy Services, and Biosecurity	(617) 626-1795

Massachusetts Department of Public Health
September 2002

See back for flow chart notes

RABIES FLOW CHART NOTES

1. Defined as a bite, scratch, or direct contact where there is contamination of a scratch, abrasion, mucous membrane, or open wound (one that has been bleeding in the past 24 hours) with potentially infectious material such as saliva or central nervous system tissue or fluid.
2. Contact the MDPH Division of Epidemiology and Immunization for advice on human exposure. Domestic animal exposure should be reported to the local animal control official or the Massachusetts Department of Agricultural Resources (MDAR), Division of Animal Health, Dairy Services, and Biosecurity (DAH). Questions about wild animal exposures and ferret exposures should be addressed to the Massachusetts Division of Fisheries and Wildlife (MDFW).

IMPORTANT TELEPHONE NUMBERS

MDPH, Division of Epidemiology and Immunization: (617) 983-6800 or (888) 658-2850

MDPH, State Laboratory Institute (SLI), Virology Laboratory: (617) 983-6385, -6386, -6387

MDFW, Division of Fisheries and Wildlife: (617) 626-1591

MDAR, Division of Animal Health, Dairy Services, and Biosecurity (DAH): (617) 626-1795

3. Wolf/hybrids are considered unvaccinated despite vaccination history.
4. The type of quarantine will be determined by the local animal inspector. Questions about all domestic animal quarantines, except ferrets, should be addressed to the DAH. Questions about ferret quarantines should be addressed to the MDFW.
5. Wild rabbits are at low risk for rabies, but rabbits caged outdoors are at greater risk. Bites by wild rabbits rarely warrant prophylaxis. However, a rabbit caged outdoors that bites a human should be tested for rabies.
6. Post-exposure prophylaxis should be given in any situation where a bat is physically present and a bite, or any other exposure/contact, cannot be ruled out. In situations when there is reasonable probability that such contact occurred (e.g., a sleeping individual awakes to find a bat in the room, an adult witnesses a bat in the room with a previously unattended child, person of diminished competence, intoxicated individual), post-exposure prophylaxis is appropriate even in the absence of a demonstrable bite or scratch.
7. If a person is bitten or otherwise exposed to the saliva of a wild animal or a domesticated animal for which there is no USDA-approved rabies vaccine, the animal may need to be euthanized and tested for rabies. Since the shedding period of rabies virus in such animals is unknown, a quarantine period (e.g., of two weeks) is not appropriate in the event that a person is bitten or otherwise exposed to the animal's saliva. Contact the MDPH Division of Epidemiology and Immunization for advice on human exposures to these animals. In addition, exposures to these animals should also be reported to the local animal control official or to the DAH.

Rabies

**REPORT HUMAN
CASES IMMEDIATELY**

(Also known as Hydrophobia and Lyssa)



LBOH Action Steps

This form does not need to be submitted to the MDPH with the case report form. It is for LBOH use and is meant as a quick-reference guide to rabies exposure and case investigation activities.

LBOH staff should follow these steps when a human rabies case is suspected or confirmed in the community. For more detailed information, including disease epidemiology, reporting, case investigation and follow-up, refer to the preceding chapter.

Note: Due to the rarity and potential severity of human rabies, case investigation of human rabies in a Massachusetts resident will be directed by the MDPH. Normally, a confirmed human rabies diagnosis will not be made without the extensive involvement of the MDPH and the CDC.

- Immediately notify the MDPH Division of Epidemiology and Immunization, at (617) 983-6800 or (888) 658-2850, to report any suspect or confirmed case(s) of human rabies.
- To report a case or suspect case of rabies in an animal, contact the Massachusetts Department of Agricultural Resources (MDAR), Division of Animal Health, Dairy Services, and Biosecurity (DAH) at (617) 626-1795 or fax the information to the DAH at (617) 626-1850.
- Assist MDPH with obtaining clinical specimens needed for laboratory confirmation, if necessary.
- Identify potentially exposed persons.
- Institute isolation and quarantine requirements (*105 CMR 300.200*), as they apply to a particular case.