

Animal Rabies

2010 Case Total 62

2009 Case Total 49

During 2010, the number of animals testing positive for rabies amounted to a 27% increase from 2009. Animal rabies activity in Oklahoma tends to follow a cyclical trend with activity peaks occurring approximately every six to eight years. The peaks correspond to increases in the skunk population. During the most recent peak in 2003, 204 animals were found to be positive for rabies by laboratory testing (refer to Figure 1). Although rabid animals are identified throughout the year, more cases are identified in the spring and summer months. In 2010, 63% of cases occurred between March and August. Generally, the geographic distribution of animal rabies is spread across the state; 32 counties were the origin of at least one animal that tested positive for rabies. Logan County had the highest number of rabid animals (n = 5), followed closely by Grady County with four rabid animals. Beckham, Haskell, Jefferson, LeFlore, McClain, and Roger Mills counties each had three rabid animals. A large percentage of the rabid animals were found in western Oklahoma, with the northwest and southwest regions of Oklahoma accounting for 53% of the rabid animals (refer to Figure 2).

When an animal tests positive for rabies or the result is inconclusive, an epidemiologist in the Acute Disease Service (ADS) of the Oklahoma State Department of Health (OSDH) initiates a thorough investigation of all potentially exposed animals and humans. Recommendations for human postexposure prophylaxis (PEP) and/or requirements for animal quarantine or euthanasia are made based upon the findings of the investigation. The highest risk of exposure to rabies virus results from the bite of a rabid animal, but exposure may also occur if saliva, cerebrospinal fluid, or brain tissue comes in contact with the mucous membrane or broken skin of a contact.

A total of 71 animals were identified as exposed to a confirmed rabid animal. Of the exposed animals, 11 (16%) were currently and properly vaccinated for rabies by a licensed veterinarian and therefore, only required to receive a booster dose of the rabies vaccine along with a 45-day observation period on the owner's property. Of the 60 (84%) exposed pets that were not currently vaccinated, owners of 6 (10%) elected placement in a six-month quarantine under the supervision of a licensed veterinarian, and owners of 54 (90%) chose to have the animal euthanized. According to the Oklahoma Administrative Code 310:599-3-9.1., domestic dogs, cats, or ferrets should be vaccinated against rabies by the time the animal is four months of age and at regular designated intervals thereafter.ⁱ

In 2010, a total of 270 humans were assessed for exposure to a confirmed rabid animal, with 51 (19%) recommended to receive PEP through their health care provider, as it is not provided through Oklahoma state or county health departments. Human rabies is rare in the United States, with most human rabies cases associated with rabid bats. In developing countries dogs are the most common reservoir and vector species.ⁱⁱ Human rabies prophylaxis is nearly 100% effective, and human fatalities in the US are very rare, but do occur in people who fail to seek medical assistance or were unaware of their exposure. The last case of human rabies in Oklahoma occurred in 2004 and was associated with an organ transplant from an undiagnosed rabid donor who had been infected by the bat variant of rabies virus. Prior to that, the most recent human rabies case in Oklahoma was in 1981. While the 1981 human rabies investigation was unable to identify a specific exposure responsible for the infection, testing revealed that the infection was caused by the skunk variant of rabies virus.ⁱⁱⁱ Consultation regarding animal bites and the rabies PEP series is available by contacting the Epidemiologist-on-Call at (405) 271-4060 during or after regular business hours.

The OSDH Public Health Laboratory (PHL) is the only lab in the state of Oklahoma with the capability of testing an animal for rabies. In 2010, a total of 1,178 animals were submitted to the OSDH PHL for rabies testing. Of these, 1,096 (93%) were negative, 19 (2%) had inconclusive (unsatisfactory) results due to a crushed or decomposed head, and the remaining 63 (5%) were positive for rabies.¹ During 2010, 38 of 65 (58%) skunks and 6 of 39 (15%) bats tested positive for rabies.² The most commonly tested animals are dogs and cats; however, they historically have a low percent

¹ Not all animals testing positive for rabies reside in Oklahoma.

² Skunks and bats are the most common reservoir for rabies in Oklahoma

