

Animal Rabies

2008 Case Total	42
2007 Case Total	78

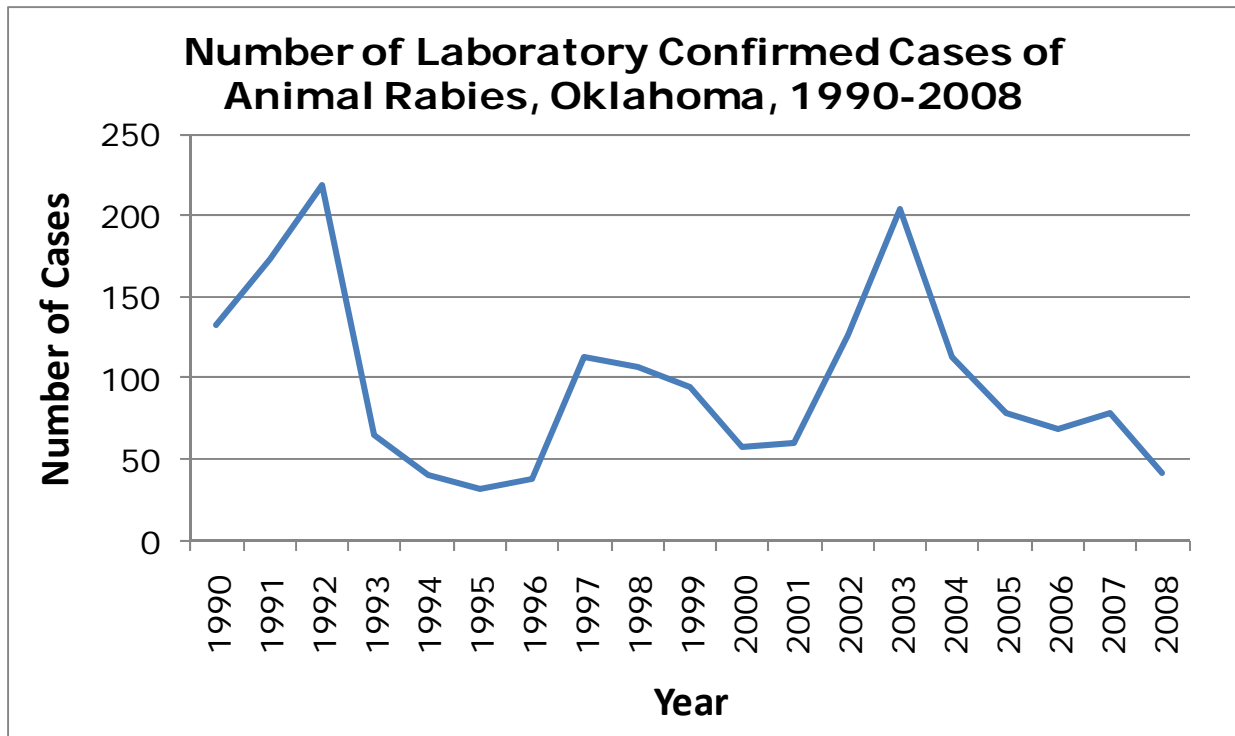
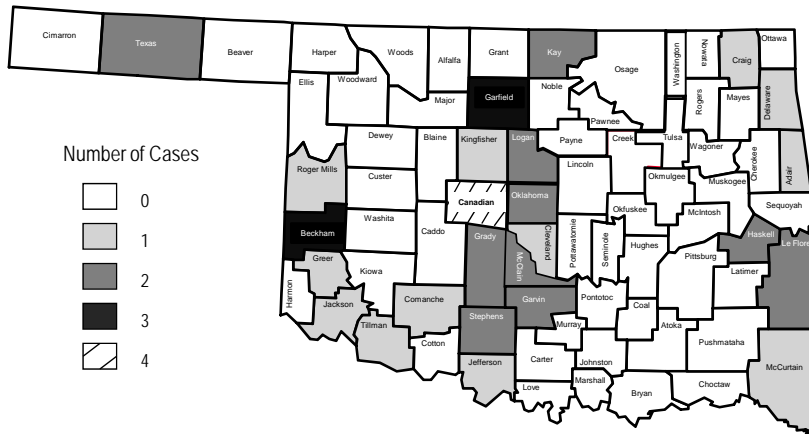
The number of rabid animals in Oklahoma during 2008 decreased to 42 confirmed cases compared to 78 cases in 2007. Sixty-nine percent (29/42) of the rabies diagnoses were in skunks. Animal rabies activity in Oklahoma tends to follow a cyclical trend with increases or activity peaks occurring approximately every six to eight years. The most recent peak was in 2003 when 204 animals were identified as rabid by laboratory testing. Since 2003, animal rabies incidence has steadily declined with the exception of a small increase in 2007. Rabies incidence also has a seasonal trend with most cases occurring in the spring and summer months. In 2008, 62% of cases occurred in March through August.

The risk of animal rabies is present throughout the state of Oklahoma, but multi-focal geographic clustering is frequently observed and varies from year to year. Counties with the highest number of cases in 2008 were Canadian (4), Beckham (3), and Garfield (3). Ten counties had two cases and 11 counties had one animal that tested positive for rabies.

When an animal tests positive for rabies or the laboratory result is inconclusive, an epidemiologist in the Acute Disease Service (ADS) of the Oklahoma State Department of Health (OSDH) initiates a thorough investigation of potentially exposed animals and humans. Recommendations for human post exposure prophylaxis (PEP) and/or requirements for animal quarantine or euthanasia are made based upon the findings of the investigation. In 2008, 61 animals and 12 humans were deemed exposed to rabid animals. Exposure to rabies virus usually results from the bite of a rabid animal, but may also occur by mucous membrane or broken skin contact with the rabid animal's neural tissue, cerebrospinal fluid or saliva. Of the exposed animals, 14 (23%) were properly vaccinated 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 47 exposed pets that were not currently vaccinated, owners of 6 (13%) elected placement in a six-month quarantine under the supervision of a licensed veterinarian, and owners of 41 (87%) chose to have the animal euthanized. All persons who are assessed as having potential exposure to rabies are advised to seek rabies PEP through a health care provider. Consultation regarding animal bites and the PEP series is available by contacting the epidemiologist-on-call at (405) 271-4060.

The OSDH Public Health Laboratory (PHL) tested a total of 1151 animals for rabies in 2008. Of these, 1084 (94%) were negative, 23 had unsatisfactory results due to a crushed or decomposed head, and the remaining 44 were positive for rabiesⁱ. In Oklahoma, skunks are more likely to test positive for rabies because the south central skunk rabies virus variant is the enzootic strain of rabies virus in the state. Of 58 skunks tested in 2008, 50% (29) tested positive. In contrast, only two of 539 dogs (0.4%), two of 357 cats (0.6%), one of 27 bats (3.7%), six of 49 cattle (12.2%), one of 23 horses (4.4%), and one of 3 bobcats (33.3%) tested positive for rabies. Human rabies is rare in the United States with most human rabies cases associated with rabid bats, whereas in developing countries, dogs are the most common reservoir and vector speciesⁱⁱ. Human rabies prophylaxis is nearly 100% effective, and human fatalities in the US due to rabies 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. Prior to this incident, the most recent human rabies case in Oklahoma was in 1981. In the event that an animal is suspected to be rabid, the OSDH PHL is the only lab in the state of Oklahoma with the capability of testing the animal. For questions regarding testing, please consult the OSDH PHL at (405) 271-5070.

County Location of Animal Rabies in Oklahoma, 2008



ⁱTwo rabies cases in 2008 were reported to other states through interstate notification.

ⁱⁱCDC. Imported Human Rabies—California, 2008. MMWR 2009; 58(26):713-716.