

Rabies in Animals, Texas - 2017

Prepared by Zoonosis Control

Rabies is a viral zoonosis affecting the central nervous system of warmblooded animals. Transmission occurs when saliva containing rabies virus is introduced into an opening in the skin, usually via the bite (or possibly scratch) of a rabid animal. Though rare, transmission can also occur through contamination of mucous membranes. Animals considered to be high risk for transmitting rabies in Texas include bats, skunks, foxes, coyotes, and raccoons. Bats and skunks are the primary reservoirs for specific rabies virus variants (types) in Texas. Rabies infection in a species other than the reservoir species for the variant is considered "spillover." An example of spillover would be a cat infected with a skunk variant of rabies virus.

In 2017, 679 (6%) of 10,752 animal specimens in Texas that were tested (this report refers only to specimens confirmed as positive or negative) were positive for rabies. This was a 10% decrease in cases from the 751 cases confirmed in 2016. In 2017, there were 63 positive rabies cases per 1,000 specimens tested, which was down from 65 positive rabies cases per 1,000 specimens tested in 2016. Yearly totals for 1994 through 2017 are illustrated in Figure 1.

During 2017, the highest monthly number of laboratory-confirmed rabies cases (87) occurred in September with bats (70) being the predominant rabid species reported; August had the second highest number of cases (81) with bats (60) being the predominant rabid species. In contrast, March of 2016 had the highest number of reported cases (105, including 56 skunks), while April had the second highest number (94, including 42 bats). Cases of rabies were confirmed in 118 of the 254 Texas counties (Figure 2) compared with 116 counties with reported cases in 2016. Travis County had the highest number of reported rabies cases per county statewide with 109 cases (107 of which were bats) in 2017; Williamson County had the second highest number of cases with 86 (78 of which were bats). Similarly, in 2016, Travis County had the highest number of reported cases (116, including 114 bats) and Williamson County had the second highest (101, including 92 bats).

Rabid wildlife accounted for 637 (94%) of the confirmed cases throughout the state in 2017; in 2016, rabid wildlife accounted for 705 (94%) of the confirmed cases (Table 1). Bats were the primary source of positive cases reported in 2017 (58% of all positive cases). During 2017, 396 bats were

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positive for rabies compared with 430 (57% of all positive cases) in 2016. Of all bats tested for rabies, 15% were positive in 2017 and 14% were positive in 2016. Rabies in bats is enzootic (endemic in animals) in Texas; there are numerous bat variants of rabies virus throughout the state. In 2017, there were no identified cases in which there was spillover of a bat rabies virus variant to a terrestrial animal.

During 2017, skunks had the second highest number of confirmed rabies cases with 210 (31% of all positive cases) compared with 237 (32% of all positive cases) in 2016. Of all skunks tested for rabies, 35% were positive in 2017 and 38% were positive in 2016. South-central skunk (SCS) remains an established variant of terrestrial rabies virus in Texas. Rabies cases in 2017 in which the SCS rabies virus variant could be confirmed included 206 skunks, 20 cats, 17 raccoons, 12 dogs, 12 foxes, 8 bovines, 2 equines, 1 coyote, and 1 bobcat.

Rabid domestic animals continue to be a concern because they are more likely to have contact with humans than are rabid wildlife. In 2017, there were 42 reported rabies cases in domestic animals (6% of all positive cases); of these rabies cases, 20 were cats and 12 were dogs (Table 2). In 2016, there were 46 reported rabies cases in domestic animals (6% of all positive cases); of these rabies cases, 24 were cats and 10 were dogs.

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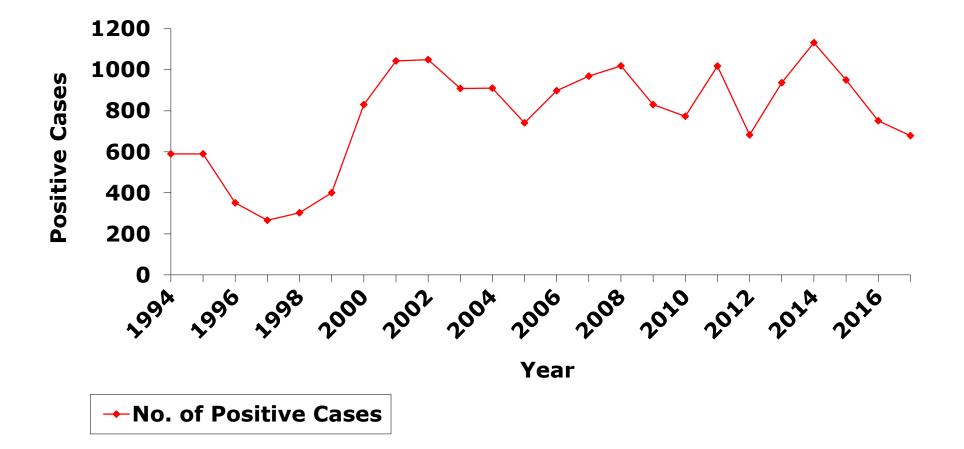
Oral Rabies Vaccination Program

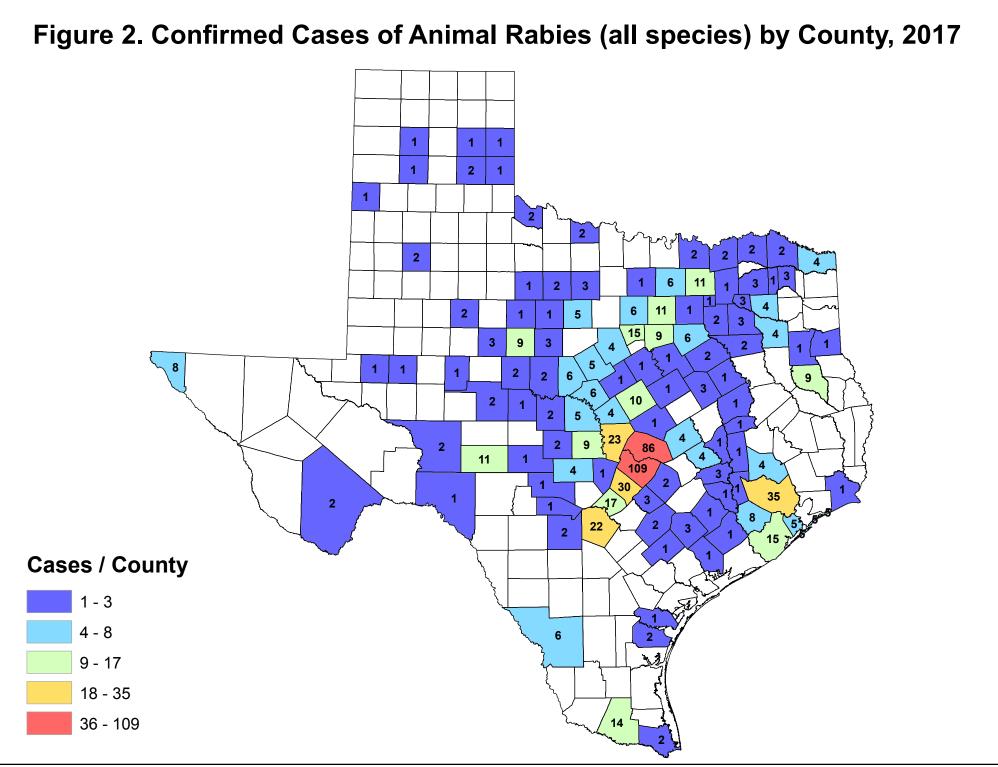
A canine rabies epizootic (an epidemic in animals) began in 1988 and ultimately involved 21 counties in South Texas. Statewide there were no reported cases with the domestic dog/coyote (DDC) variant of the rabies virus in 2017. The last reported case with the DDC rabies virus variant was in March 2004.

Similarly, a Texas gray fox rabies epizootic also began in 1988, but it eventually involved 53 counties in West-Central Texas. Statewide there were no reported cases with the Texas fox (TF) variant of the rabies virus in 2017. The last reported case with the TF rabies virus variant was in a bovine in May 2013; previous to this case, the last reported case was in May 2009.

To control the canine and gray fox rabies epizootics, the Department of State Health Services initiated the Oral Rabies Vaccination Program (ORVP) for coyotes in South Texas in February 1995 and for gray foxes in West-Central Texas in January 1996. The goals of the ORVP were to create zones of vaccinated coyotes and gray foxes across the epizootic areas or, at a minimum, along the leading edges of the areas where these rabies variants were detected in order to halt the geographic spread of those variants and eventually eliminate the epizootics. Immunization was accomplished by aerial distribution of edible baits containing oral rabies vaccine. The programs have continued annually and are now combined into a maintenance zone along the border with Mexico targeting reservoir species for the DDC and TF variants of the rabies virus, specifically coyotes and gray foxes, respectively. With the elimination of the DDC and TF variants from Texas, the ORVP now serves as an ongoing barrier to prevent reintroduction from Mexico.

Figure 1. Positive Animal Rabies Cases: Texas 1994 - 2017





Species	2016	2017	
Bats	430	396	
Bobcats	1	1	
Bushbuck (antelope)	1	0	
Coyote	0	1	
Foxes	18	12	
Raccoons	18	17	
Skunks	237	210	
Total	705	637	

Table 1. Confirmed Cases of Rabies in Wild Animal Species:Texas 2016 and 2017

Species	2016	2017	
Bovines	9	8	
Cats	24	20	
Dogs	10	12	
Equines	2	2	
Goat	1	0	
Total	46	42	

Table 2. Confirmed Cases of Rabies in Domestic Animal Species:Texas 2016 and 2017