Texas Department of State Health Services
Zoonosis Control Branch
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DSHS-Supplied Rabies Biologicals 2004 Surveillance Summary

Texas Health and Safety Code §826.025 allows the Texas Department of State Health Services (DSHS) to supply rabies biologicals (vaccine and immune globulin) for persons who have been exposed to rabid, or potentially rabid, animals. Although DSHS is supposed to be reimbursed for the cost of these biologicals, no one who has a valid exposure to rabies is denied access to the products based on their inability to pay.

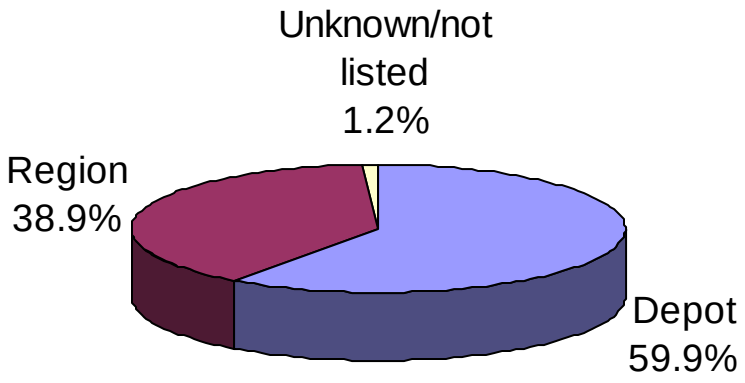
DSHS Health Service Region (HSR) offices may store and distribute the biologicals. In an effort to make the biologicals readily available to Texas residents throughout the state, regional offices may contract with local health departments and hospitals to serve as depots for storing and distributing biologicals. Surveillance data, including the demographic information on who received the biologicals and the reasons the biologicals were distributed, is maintained by DSHS (mandated by §97.123, Texas Administrative Code, "Provision of Anti-Rabies Biologicals").

Some private sources (such as hospitals and healthcare systems) directly provide rabies biologicals to patients and do not contract with DSHS. **These sources do not supply surveillance information to DSHS and are not included in this summary.** DSHS supplies most of the biologicals distributed in the state of Texas; therefore, the data presented in this report should reflect overall trends.

Postexposure Rabies Prophylaxis

During 2004, rabies biologicals were distributed for postexposure prophylaxis to 2052 people, of which 798 (38.9%) acquired the biologicals from regional DSHS offices and 1230 (59.9%) obtained the biologicals from depots. The distributing site was not listed in 24 (1.2%) reports (Figure 1).

Figure 1. Distribution Sites for Rabies Biologicals, 2004



Rabies biologicals were dispensed to 2018 (98.3%) Texas residents and 18 (0.9%) people residing in other states, including 1 each from Virginia, Illinois, New Mexico, and Ohio; 2 from California; and 12 from Arkansas. Biologicals were distributed to 16 (0.8%) people for whom no state of residence was listed. Distribution of postexposure biologicals based on the HSR in which the patient resided is summarized in Figure 2. HSR 5 has been combined with HSRs 4 and 6, so the numbers shown for these latter two regions include patients residing in HSR 5.

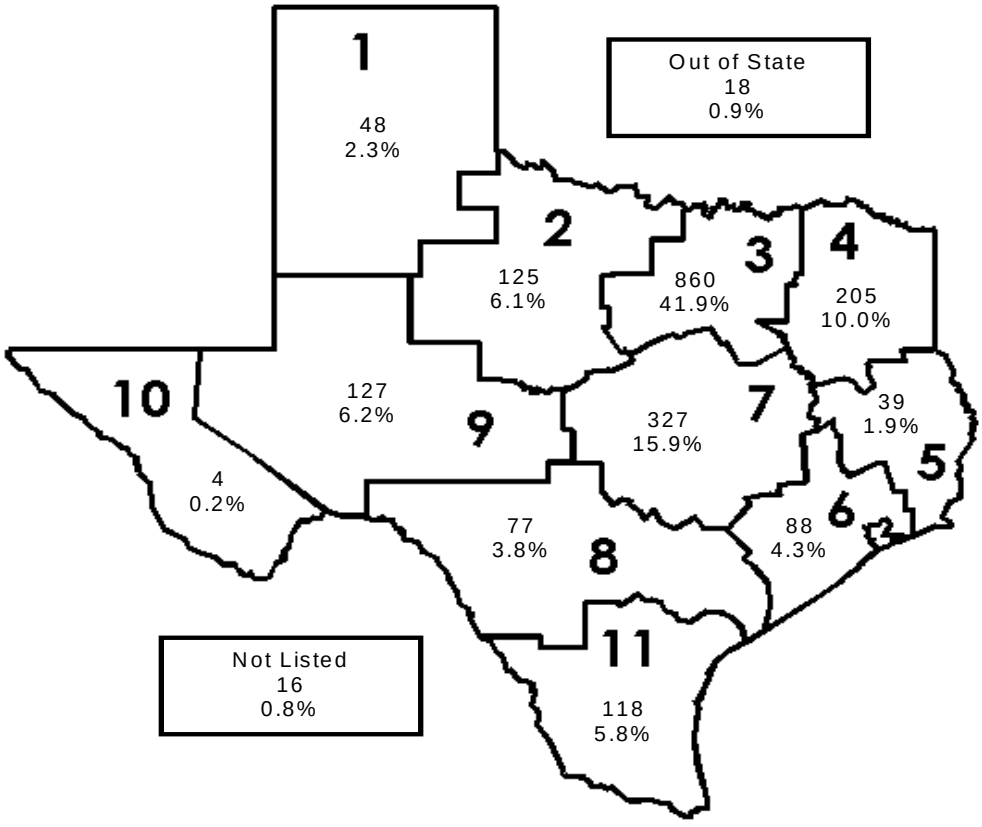


Figure 2. Number of People Receiving Postexposure Prophylaxis, by Health Service Region of Patient Residence, 2004

Dogs and cats accounted for 792 (38.6%) of the reports of rabies exposures resulting in postexposure prophylaxis (PEP) (Table 1). Animals designated as being of high risk for transmitting rabies (bats, coyotes, foxes, raccoons, and skunks) accounted for 327 (15.9%) of the exposures. Animals classified as low risk for rabies (including rodents, rabbits, and opossums) accounted for 16 (0.8%) exposures (Figure 4). A rabies-positive sheep at a petting zoo resulted in 664 persons receiving postexposure prophylaxis. Exposure to rabid sheep not associated with the petting zoo resulted in 2 additional persons receiving postexposure prophylaxis. Contact with a rabies-positive human organ donor and, subsequently, multiple human organ recipients resulted in 105 persons receiving postexposure prophylaxis. Routes of exposures are shown in Figure 3.

Species Associated with Exposure Resulting in PEP Treatment	No. of PEP Treatments	%
Sheep	666	32.5%
Dog	457	22.3%
Cat	335	16.3%
Bat	208	10.1%
Human	105	5.1%
Raccoon	76	3.7%
Unknown	57	2.8%
Horse	50	2.4%
Skunk	36	1.8%
Cattle	20	1.0%
Bobcat	9	0.4%
Rat	8	0.4%
Goat	7	0.3%
Fox	5	0.2%
Squirrel	4	0.2%
Coyote	2	0.1%
Ferret	2	0.1%
Donkey	1	0.05%
Mouse	1	0.05%
Opossum	1	0.05%
Prairie Dog	1	0.05%
Rabbit	1	0.05%
Total	2052	100%

Table 1. Species Associated with Rabies PEP Treatments, 2004

Figure 3. Primary Route of Exposure for Persons Receiving Postexposure Prophylaxis, 2004

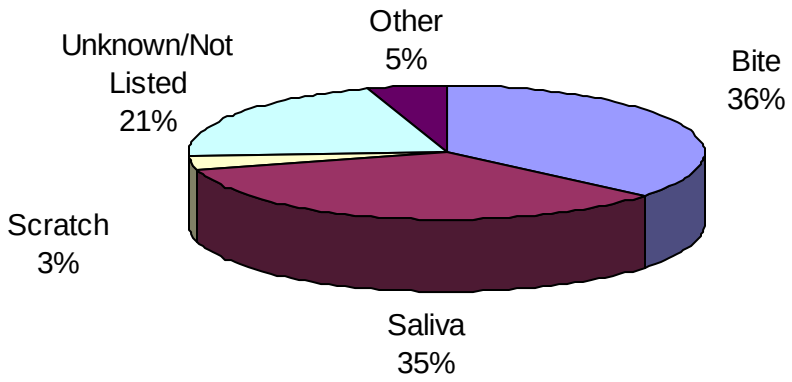
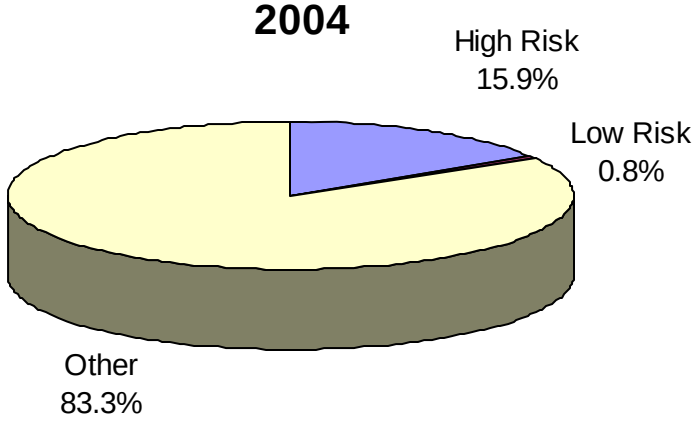
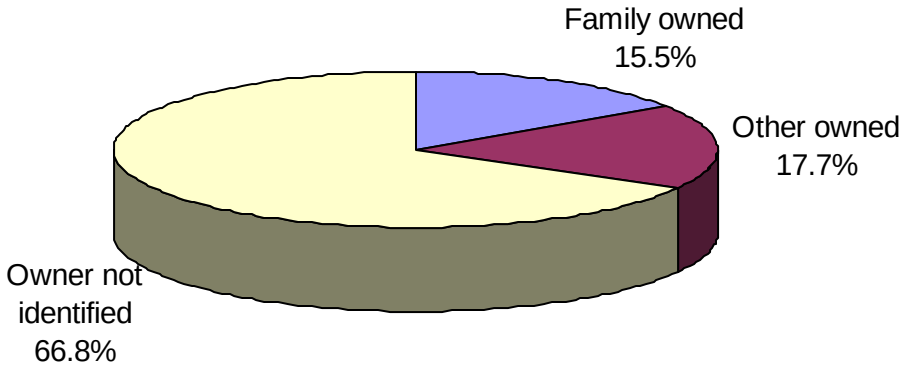


Figure 4. Rabies Risk Classification of Animals Involved in Human Exposure Resulting in Postexposure Prophylaxis, 2004



Of the 792 exposure incidents that involved dogs and cats, 123 (15.5%) were owned by the patient's family, 140 (17.7%) were owned by someone other than the patient's family, and 529 (66.8%) had no owner identified (Figure 5). The vaccination status of 572 (72.2%) of the dogs and cats was unknown or not reported. Of the 220 dogs and cats whose rabies vaccination status was reported, 205 (93.2%) were not currently vaccinated against rabies and 15 (6.8%) were currently vaccinated.

Figure 5. Ownership of Dogs and Cats Involved in Potential Rabies Exposure to Humans, 2004



The average age of the persons receiving postexposure prophylaxis was 26.6 years (median, 22 years). Reports contained definitive history of the rabies vaccination status for only 93 (4.5%) persons receiving postexposure prophylaxis. Of those, 57 (2.8% of persons receiving PEP) had previously been immunized against rabies while 36 (1.8% of persons receiving PEP) had not been previously immunized. The reports did not contain information on whether or not the person had been previously immunized in the remaining 1959 cases (95.4% of persons receiving PEP). The primary anatomic sites of exposure are listed in Table 2.

Anatomic Location of Exposure	Number of People
Hand	735
Unknown/not listed	510
Other	210
Head	196
Arm	183
Leg	175
Foot	24
Torso	19

Table 2. Primary Anatomic Location of Rabies Exposures, 2004

In 9 cases (0.4% of persons receiving PEP), biologicals were distributed while the dog or cat was quarantined for rabies observation. Biologicals were dispensed to 9 people (0.4% of persons receiving PEP) despite a negative rabies test on the animal (Table 3).

Laboratory Test Result	Number	%
Positive	1051	51.2%
Unknown/Not tested	944	46%
Destroyed	18	0.9%
Decomposed	14	0.7%
Pending (at time of dispensing biologicals)	9	0.4%
Negative	9	0.4%
Inconclusive	7	0.3%
Total	2052	100.0%

Table 3. Rabies Test Results from Animals That Caused People to Receive Postexposure Prophylaxis, 2004