



*Texas Department of State Health Services
Zoonosis Control Branch
1100 West 49th Street
Austin, Texas 78756*

DSHS-Supplied Rabies Biologicals 2008 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 is denied access to the products because of their inability to pay.

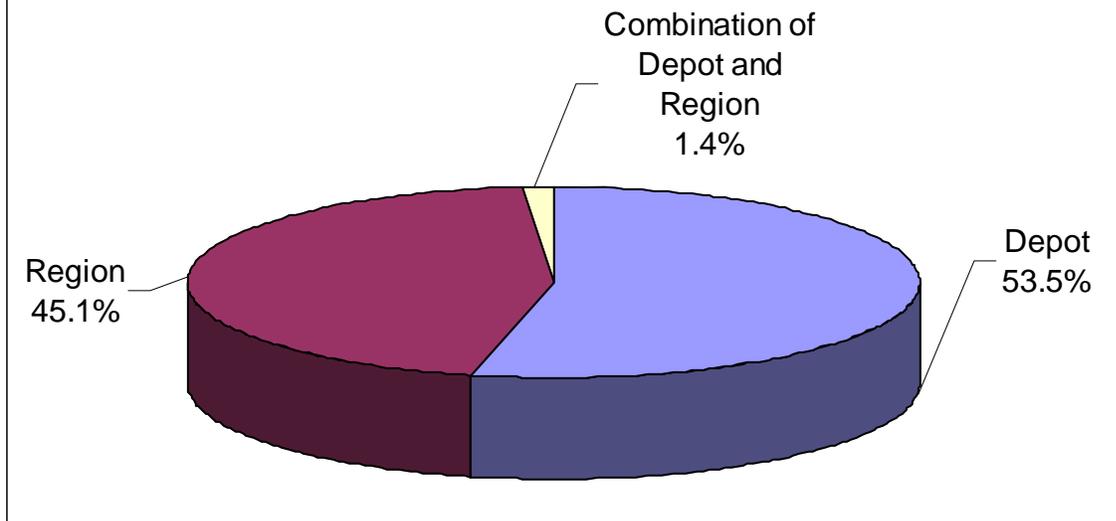
DSHS Health Service Region (HSR) offices may store and distribute the biologicals. In an effort to make the biologicals available to Texas residents throughout the state, some regional offices partner with local health departments and hospitals to serve as depots for storing and distributing biologicals. 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 partner 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 2008, rabies biologicals were distributed for postexposure prophylaxis (PEP) to 903 people, of whom 407 (45.1%) acquired the biologicals from regional DSHS offices, 483 (53.5%) from depots, and 13 (1.4%) from both a regional office and a depot (Figure 1). The total cost of the biologicals distributed from DSHS inventory was \$1,011,932 (\$410,940 for 463 vials (2 ml) of human rabies immune globulin and \$600,992 for 3,649 vials (1 ml) of vaccine).

Figure 1. Distribution Sites for Rabies Biologicals, 2008



Rabies biologicals were distributed to 901 (99.8%) Texas residents, 1 (0.1%) person residing in Minnesota, and 1 (0.1%) person residing in Virginia. Distribution of postexposure biologicals based on the HSR in which the patient resided is summarized in Figure 2.

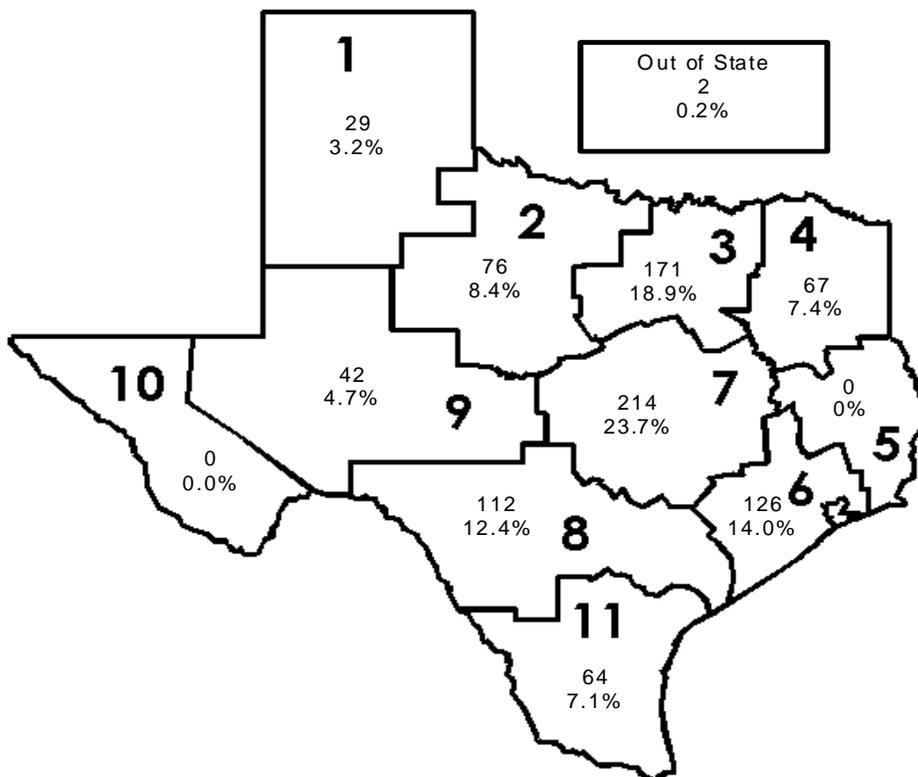


Figure 2. Number of People Receiving Postexposure Prophylaxis by Health Service Region of Patient Residence, 2008

Dogs and cats accounted for 482 (53.4%) of the reports of potential 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 343 (38.0%) of the exposures. Animals classified as low risk for rabies (e.g. rodents, rabbits, moles, and opossums) accounted for 6 (0.7%) exposures (Figure 3). Routes of exposures are shown in Figure 4.

| Species Associated with Exposure Resulting in PEP | Number | % |
|---|--------|-------|
| Dog | 317 | 35.1% |
| Bat | 242 | 26.8% |
| Cat | 165 | 18.3% |
| Raccoon | 61 | 6.8% |
| Skunk | 29 | 3.2% |
| Cattle | 21 | 2.3% |
| Horse | 21 | 2.3% |
| Goat | 9 | 1.0% |
| Unknown/Not Listed | 8 | 0.9% |
| Fox | 7 | 0.8% |
| Coyote | 4 | 0.4% |
| Javelina | 4 | 0.4% |
| Squirrel | 4 | 0.4% |
| Primate | 2 | 0.2% |
| Bear | 1 | 0.1% |
| Bobcat | 1 | 0.1% |
| Deer | 1 | 0.1% |
| Ferret | 1 | 0.1% |
| Lion | 1 | 0.1% |
| Opossum | 1 | 0.1% |
| Pig | 1 | 0.1% |
| Rat | 1 | 0.1% |
| Ringtail | 1 | 0.1% |
| TOTAL | 903 | 100% |

Table 1. Species Associated with Rabies PEP, 2008

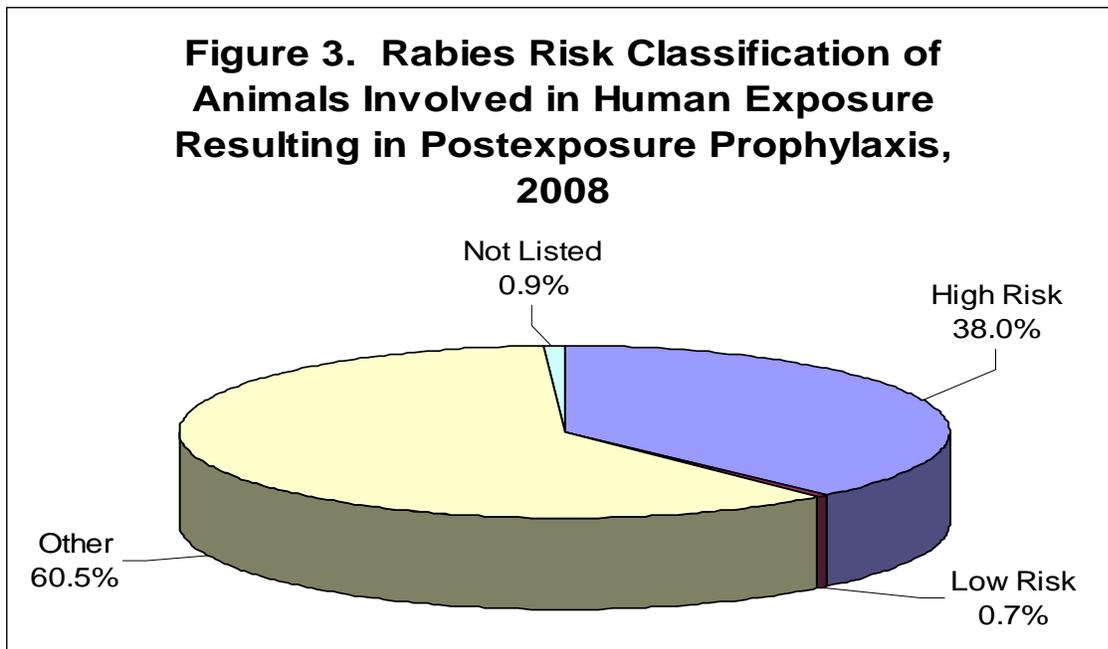
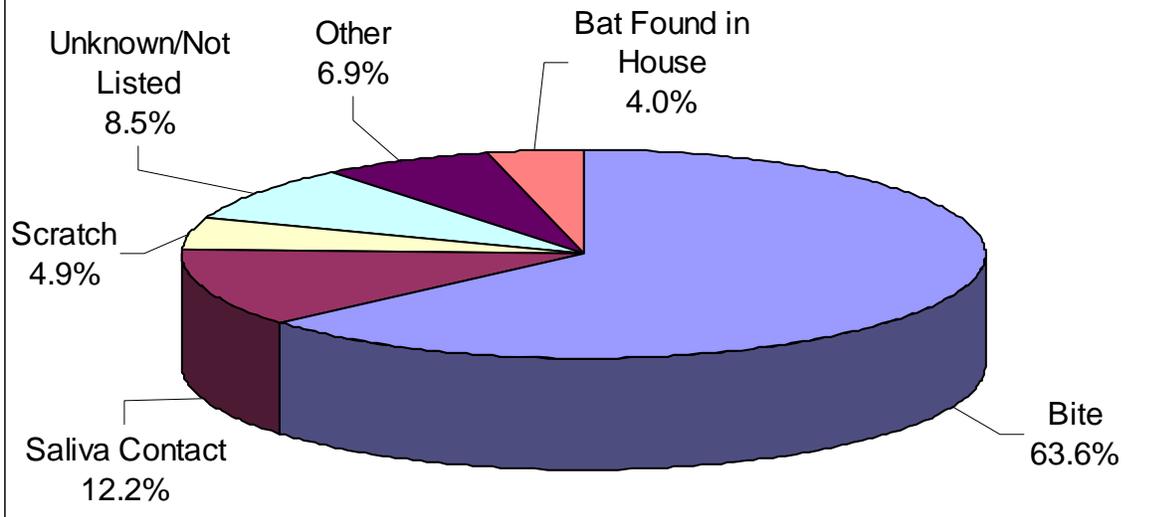
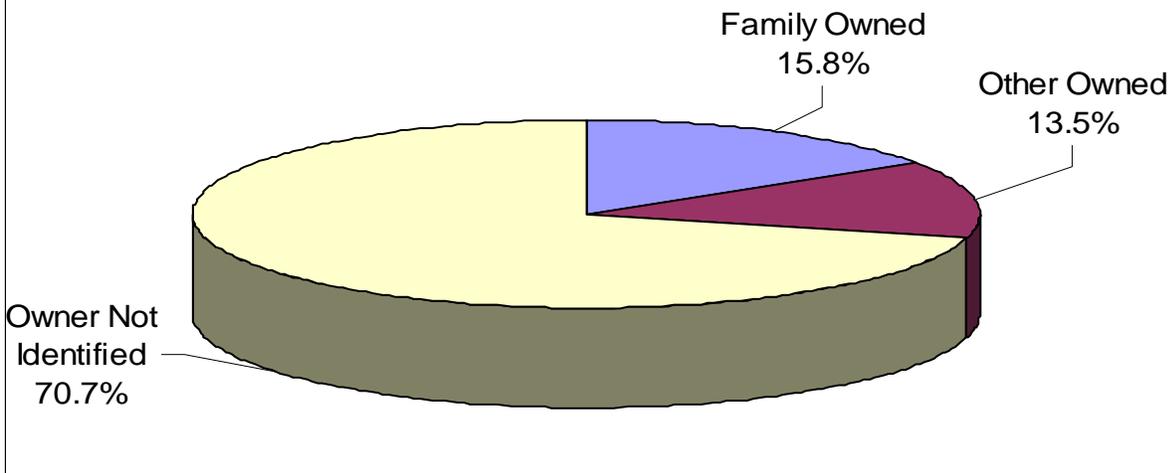


Figure 4. Primary Route of Exposure for Persons Receiving Postexposure Prophylaxis, 2008



Of the 482 exposure incidents that involved dogs and cats, 76 (15.8%) were owned by the patient's family, 65 (13.5%) were owned by someone other than the patient's family, and 341 (70.7%) were listed as either a stray or had no ownership information identified (Figure 5). The vaccination status of 373 (77.4%) of the dogs and cats was either reported as unknown or not reported. The vaccination status of 109 (22.6%) of the dogs and cats was reported, with 97 (89.0% of those with vaccination status reported) being not currently vaccinated against rabies and 12 (11.0% of those with vaccination status reported) being currently vaccinated.

Figure 5. Ownership of Dogs and Cats Involved in Potential Rabies Exposure to Humans, 2008



The average age of those receiving PEP was 32.6 years (median, 29 years), with 437 (48.4%) being male and 466 (51.6%) being female.

The database did not contain any rabies vaccination history for those persons receiving rabies biologicals.

The primary anatomic sites of exposure are listed in Table 2.

The animal causing the exposure was tested for rabies in a public health laboratory in 215 (23.8%) cases; the animal was not available for testing in 653 (72.3%) cases; the testing status was not listed in 22 (2.4%) cases; and the animal was quarantined in lieu of testing in 13 (1.4%) cases. Biologicals were distributed to 13 people (1.4% of persons receiving PEP) while the dog or cat causing the exposure was being quarantined for rabies observation. Biologicals were distributed to 20 people (2.2% of persons receiving PEP) while laboratory results were pending. Biologicals were distributed to 2 persons (0.2% of persons receiving PEP) for which a negative rabies test on the animal was ultimately received (Table 3). In one case, the patient was started on PEP at a hospital ER without prior consultation with public health and without first making an effort to find the exposing animal, which was ultimately located and tested. In the other case, the exposing dog was neurologically symptomatic in a highly rabies endemic area, which constituted a high risk exposure scenario, so the patient was started on PEP prior to the completion of rabies testing on the animal.

| Anatomic Location of Exposure | Number of People |
|-------------------------------|------------------|
| Hand | 345 |
| Leg | 146 |
| Unknown/Not Listed | 131 |
| Arm | 89 |
| Multiple Anatomic Sites | 70 |
| Head/Neck | 69 |
| Foot | 38 |
| Torso | 15 |

Table 2. Primary Anatomic Location of Rabies Exposures, 2008

| Laboratory Testing Status | Number | % | |
|---------------------------------|--|--------|-----------------------|
| Animal Not Tested (Quarantined) | 13 | 1.4% | |
| Animal Not Tested (Unavailable) | 653 | 72.3% | |
| Testing Status Not Listed | 22 | 2.4% | |
| Tested | 215 | 23.8% | |
| | Test Result | Number | % of Tested Specimens |
| | Positive | 157 | 73.0% |
| | Results pending at the time the PEP biologicals were distributed | 20 | 9.3% |
| | Sample Destroyed | 0 | 0.0% |
| | Negative | 2 | 0.9% |
| | Inconclusive | 14 | 6.5% |
| | Sample Decomposed | 18 | 8.4% |
| | Sample Unsatisfactory | 1 | 0.5% |
| Result Not Listed | 3 | 1.4% | |

Table 3. Rabies Testing Status and Test Results from Animals That Caused People to Receive Postexposure Prophylaxis, 2008