Public Health Consequences of Banning or Restricting Trapping in Nevada Regarding Rabies

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Executive Summary

- Rabies in terrestrial mammals is currently absent in Nevada
- Historically, Nevada had one of the worst rabies epidemics in history
- Aggressive control of predators by trapping and hunting stopped the rabies epidemic
- Currently, three western states have terrestrial rabies problems—all 3 restrict trapping by leghold traps and/or on public land. These states had 136 cases of rabies in 2016.
- Five western states allow trapping with liberal regulations. These five states only had 4 cases of terrestrial rabies in 2016.

Rabies is a disease that has generally faded from the national consciousness as aggressive control programs have reduced its prevalence in much of the United States. Nevada has only had bat rabies in wild animals (1) in the recent past due to preventive population control of wild animals through trapping and hunting, and immunizations of domestic animals. If preventive population control is removed as a wildlife management tool, the people of Nevada will be placed at risk of a rabies epidemic.
Rabies is a severe zoonotic encephalitis (brain infection transmitted from animals to humans). Early clinical signs and symptoms of rabies—including headache, fever, chills, cough or sore throat, anorexia, nausea, vomiting, and malaise—are non-specific and easily mistaken for more common conditions. The disease progresses rapidly (within 1-2 weeks) to central and peripheral neurologic manifestations including altered mental status (e.g., hyperactivity and agitation), irritation at the site where the virus was introduced, hydrophobia (foaming at the mouth like in “Old Yeller”), excessive salivation, and difficulty swallowing due to laryngeal spasms. Ultimately, autonomic instability (severe high blood pressure and pulse), coma, and death occur, due mainly to cardiac or respiratory failure. There is no treatment for rabies and reports of patients surviving are exceedingly rare. If a person is exposed to the virus, prompt post-exposure prophylaxis (PEP) by administration of rabies immune globulin and vaccine can prevent progression to clinical rabies.

Nevada has a long history battling rabies. (2,3) Rabies was initially introduced into Nevada from California in the early 1900’s. It quickly reached epidemic proportions and hundreds of Nevadans were attacked and either given the PEP for rabies or died—quite a feat in a time when the population was only 81,875. Reports of rabid packs of coyotes attacking towns and ranches were not uncommon. Untold numbers of livestock were infected and killed. This led to aggressive wildlife control programs by the government and private trappers and hunters. Dr. E.M. Records reports that by 1932, predator control resulted in stopping the epidemic of rabies in Nevada. Eventually, through preventive population control, terrestrial rabies was eliminated from Nevada. Preventive population reduction is much more effective
than emergency population reduction because population density is reduced and there is less animal to animal spread of the rabies virus. (4)

Variants of rabies virus are present in certain groups of certain mammalian species (primarily fox, skunk and bats), but all rabies viruses can infect any mammal, including livestock, pets and humans. In Nevada, bat variant rabies viruses exist throughout the state, but terrestrial rabies (rabies in walking mammals) is eradicated. Likewise, Utah has bat rabies, but no terrestrial rabies. In California, Arizona, and Colorado, the skunk or fox variant is found endemically (all the time). Arizona continues to have periodic problems with terrestrial rabies, and, in fact, in January 2017, a rabid bobcat attacked 5 people in the resort area of Sedona. (5) Domestic animals (dogs, cats, and livestock) can be infected with these rabies variants through contact with rabid wildlife.

There is one primary difference between states where rabies lurks, waiting to infect humans and livestock—the outlaw of the foothold trap for use on public land. Both Nevada and Utah permit trapping using traditional methods while California, Arizona and Colorado ignored public health experts and banned the foothold trap either entirely or on public land only. This has allowed rabies to spread more easily through higher populations of wild animals. Figure 1 shows 2016 numbers of non-bat, non-domestic animal infections in the southwestern US.
Thus, in summary, banning the use of leghold traps, banning trapping on public land, and allowing disturbance of private property will put the people of Nevada and their pets/livestock at risk of rabies. Wildlife and human population expansion will enable transmission of the disease in wildlife populations and put wildlife in contact with domestic animals and people. I urge you to not let us go back to 1910 when people feared for their lives due the rabies epidemic—continue to allow management of wildlife populations by trapping state-wide with leghold traps.
References

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14. Oregon Health Authority.

Dr. Crawford is a 10-year resident of Nevada. He practices and teaches Family Medicine in the US Air Force. This voluntary testimony was prepared in his role as a private citizen using private resources and does not reflect the official position of the US Air Force, the Department of Defense or the Federal Government. It reflects only his concern for the people of Nevada.