



Infectious Disease Epidemiology Report



Animal Rabies, Maine – 2015

Background

Rabies is a viral disease of the central nervous system that is almost always fatal. It is carried by wildlife and occasionally by unvaccinated domestic animals. Rabies is primarily transmitted to humans and other animals through a bite. It can also be transmitted by a scratch or when the infected animal's saliva or neural tissue gets into a person's eyes, nose, mouth, or an open wound. Rabies can be prevented by vaccinating pets, livestock, and persons with high risk jobs (e.g. veterinarians); by avoiding exposures to wild animals; and by seeking medical care after an exposure. This report summarizes surveillance data on animal rabies for 2015.

Methods

Maine Center for Disease Control and Prevention (Maine CDC) monitors the incidence of animal rabies through mandatory reporting by animal and human health professionals. Maine's Health and Environmental Testing Laboratory (HETL) tests for rabies in animals that expose a human or domestic animal. Lab-confirmed animal rabies cases are investigated to determine the need for rabies control measures. When exposure to a rabid animal is reported, Maine CDC works with healthcare providers, game wardens, animal control officers, and veterinarians to recommend rabies control measures. Maine CDC monitors the administration of human rabies post-exposure prophylaxis (PEP).

United States Department of Agriculture Animal and Plant Health and Inspection Service (USDA APHIS) Wildlife Services performs enhanced surveillance for rabies in northern Maine in animals that did not expose a human or domestic animal. These animals are tested by USDA and positive specimens are confirmed by U.S. CDC. Both HETL and USDA data are included in this report.

Results

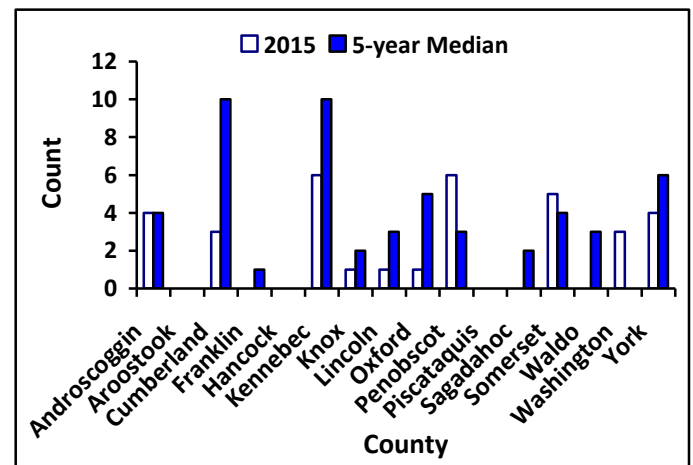
Among the 778 animals that were tested in 2015, 447 were tested at HETL and 331 were tested at USDA. Thirty-four (4.4%) animals, 28 from HETL and 6 from USDA, tested positive for rabies. Rabid animals identified this year included raccoons, skunks, foxes, and bats (Table 1).

Table 1: Animals tested for rabies at HETL and USDA - Maine, 2015

Species	Tested		Positive	
	#	#	#	%
Bat	192	9	9	4.7
Bobcat	3	0	0	0
Cat	97	0	0	0
Cow	4	0	0	0
Coyote	49	0	0	0
Deer	1	0	0	0
Dog	63	0	0	0
Fox	38	2	2	5.3
Goat	5	0	0	0
Horse	4	0	0	0
Mink	1	0	0	0
Muskrat	1	0	0	0
Opossum	1	0	0	0
Raccoon	202	15	15	7.4
Sheep	3	0	0	0
Skunk	101	8	8	7.9
Wolf hybrid	1	0	0	0
Woodchuck	12	0	0	0
Total	778	34	34	4.4

Ten counties reported rabid animals in 2015 (Figure 1). Aroostook, Franklin, Hancock, Piscataquis, Sagadahoc, and Waldo counties did not have any reports of rabies in 2015. The number of rabid animals in Penobscot, Somerset, and Washington counties exceeded their 5-year median number of cases.

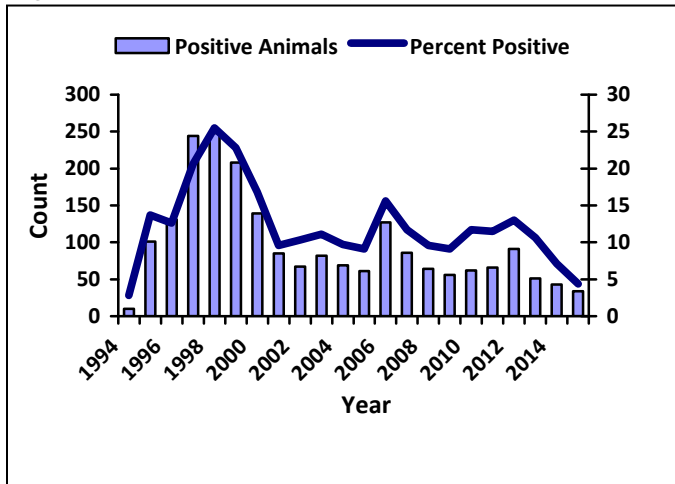
Figure 1: Rabid animals by county - Maine, 2015



Animal Rabies – Maine, 2015

Figure 2 shows the trend in animal rabies cases since the Eastern raccoon rabies strain entered Maine in 1994.

Figure 2: Rabid animals by year - Maine, 1994-2015



Rabies Post-Exposure Prophylaxis (PEP)

In 2015, Maine CDC recommended rabies PEP for 76 persons. Six (8%) of these recommendations were due to an exposure to a confirmed rabid animal. The remaining 70 (92%) were due to an animal exposure in which the animal was not available for confinement and observation or testing, and rabies could not be ruled out. Many (47%) of the animals that were not available were bats.

Rabies Consultations

Maine CDC routinely gets requests for information and consultations related to rabies. Maine CDC is contacted most frequently about rabies between May and September. In August 2015, rabies consults made up the majority (60%) of calls. Maine CDC provided approximately 1,087 rabies consultations in 2015, both during and after regular business hours. The majority of rabies consults in 2015 were with members of the public, healthcare providers, and animal health partners such as Veterinarians, Animal Control Officers, and Game Wardens.

Discussion

Animal rabies is endemic in Maine. Wild animals accounted for all the reported rabies animals in Maine in 2015. Nationally, 92% of rabid animals consisted of wildlife (2013 data). Despite the

statewide decline in animal rabies cases in 2015, rabies cases continue to increase in Washington County. This area has historically low rabies incidence. Across the border, New Brunswick has seen an increase in the number of rabies cases, too. USDA APHIS Wildlife Services in Maine and corresponding officials in New Brunswick are working on a collaborative rabies management plan, which involves enhanced surveillance and Oral Rabies Vaccine distribution.

Increasing public knowledge about the risks of rabies associated with wild animals, including bats, and stray or unknown domestic animals, is important to prevent future exposures. Bats are the most common source of human rabies in the United States. Recognition, prompt assessment, and management of potential rabies exposures are all important aspects of human and domestic animal rabies prevention in Maine.

Exposures of concern include:

- Bite (e.g., penetration of skin by teeth);
- Saliva contact with mucous membranes or exposed tissues (eyes, nose, mouth, or open wound);
- Physical contact with a bat where a bite cannot be ruled out; and
- A bat discovered in a room with a person who is unable to determine if physical contact may have occurred.

Epidemiologists are available to assess animal exposures and provide guidance on the need for rabies PEP. Rabies PEP is recommended to prevent human rabies after an exposure if the animal tests positive for rabies or is unavailable for confinement and observation or testing. It is preferable to delay rabies PEP administration until the outcome of confinement or testing is known.

Human and animal rabies is reportable immediately by telephone to the Maine CDC's 24-hour disease reporting and consultation line at 1-800-821-5821. Rabies PEP is reportable to Maine CDC within 48 hours of administration.

For more information:

- www.mainepublichealth.gov/rabies
- www.cdc.gov/rabies