



Infectious Disease Epidemiology Report



Animal Rabies, Maine – 2013

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 2013.

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 Health and Environmental Testing Laboratory (HETL) performs rabies testing on animals that expose a human or domestic animal. Lab-confirmed animal rabies cases are investigated to learn about the animal's vaccination history, health status prior to euthanasia, circumstances of any human or animal exposures, and to determine the need for rabies control measures. When an 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.

United States Department of Agriculture Animal and Plant Health and Inspection Service (USDA APHIS) Wildlife Services performs supplemental surveillance for animal rabies in northern and eastern Maine among 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 576 animals that were tested in 2013, 51 (8.8%) tested positive for rabies. Rabid animals identified this year were raccoons, skunks, foxes, and bats (Table 1).

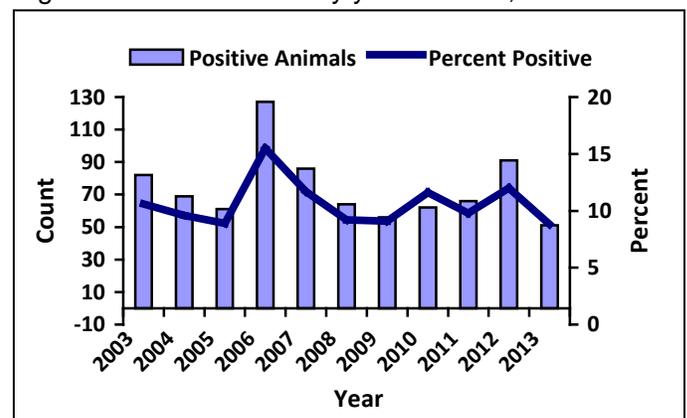
Table 1: Animals tested for rabies - Maine, 2013

Species	Tested		Positive	
	#	%	#	%
Bat	145		7	4.8
Beaver	3		0	0
Cat	125		0	0
Cow	7		0	0
Coyote	3		0	0
Deer	1		0	0
Dog	65		0	0
Donkey	1		0	0
Fox	10		4	40.0
Goat	8		0	0
Horse	7		0	0
Moose	1		0	0
Muskrat	6		0	0
Opossum	3		0	0
Pig	1		0	0
Porcupine	2		0	0
Raccoon	93		20	21.5
Sheep	2		0	0
Shrew	1		0	0
Skunk	82		20	24.4
Squirrel	1		0	0
Weasel	1		0	0
Wolf hybrid	1		0	0
Woodchuck	7		0	0
Total	576		51	8.8

*Includes 96 animals tested by USDA, of which one was positive at USDA but not yet confirmed by U.S. CDC.

Unlike last year, when four cats and one dog tested positive for rabies, there were no rabid domestic animals in 2013. The number of animals tested in 2013 declined by 24%, and the number of rabid animals declined by 44%. This is most likely due to the cyclical nature of rabies. Last year also started with a very mild winter that allowed animals to remain active during winter months (Figure 1).

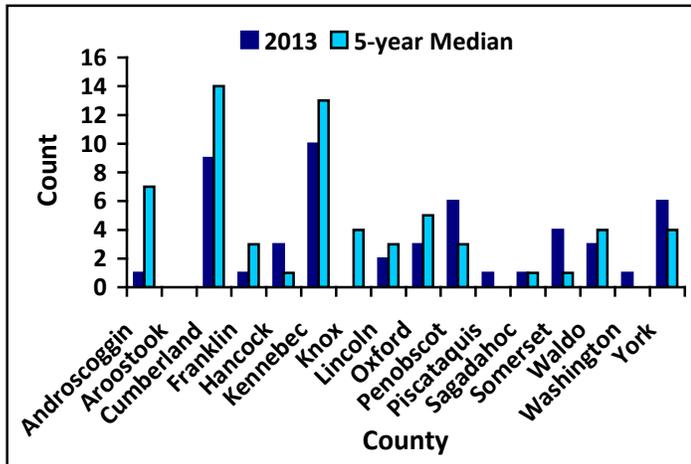
Figure 1: Rabid animals by year - Maine, 2003-2013



Animal Rabies – Maine, 2013

Fourteen counties reported rabid animals with human or domestic animal exposures in 2013 (Figure 2).

Figure 2: Rabid animals by county – Maine, 2013



Aroostook and Knox counties were the only counties without any reports. Despite the overall decline in animal rabies in 2013, Hancock, Penobscot, Piscataquis, Somerset, Washington, and York counties surpassed their five year medians. Washington County had its first rabid animal (a skunk) reported in six years. This was identified as Mid-Atlantic Raccoon variant and cross border notification was made to New Brunswick.

Rabies Post-Exposure Prophylaxis (PEP)

In 2013, Maine CDC recommended rabies PEP for 81 persons. This is 38% fewer than in 2012. Twelve (15%) of these recommendations were due to an exposure to a confirmed rabid animal. The remaining 69 (85%) 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 (35%) 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. Maine CDC provided 1048 rabies consultations in 2013 (13% fewer than in 2012). Many (13%) of these consultations occurred after regular business hours. The majority of rabies consults in 2013 were with members of the public

and animal health partners (Veterinarians, Animal Control Officers, and Game Wardens).

Discussion

Animal rabies is endemic in Maine. 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. 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.

Despite the decline in animal rabies cases in 2013, the risk of animal and human rabies remains. The number of rabid animals statewide may not be representative of the true incidence of animal rabies in Maine.

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