

5

PUBLIC HEALTH ROLE IN RABIES INVESTIGATION

The Health and Emergency Medical Services Committee recommends the adoption of the recommendation contained in the following report, April 1, 2008, from the Commissioner of Community and Health Services:

1. RECOMMENDATION

It is recommended that:

1. The Regional Clerk circulate this report to local municipalities for their information.

2. PURPOSE

This report provides Council with an overview of the Public Health Branch's role in the investigation of a recent rabies issue.

3. BACKGROUND

Surveillance, education, and investigation are mandated public health activities to prevent the occurrence of rabies in humans

Rabies is a disease that, if left untreated, is usually fatal for humans and animals. The rabies virus is spread through the saliva of a rabid animal through a bite or scratch, or if the saliva comes into contact with the moist tissues of the mouth, nose or eyes.

Rabies control is a mandated public health program provided by the Health Protection Division of the Public Health Branch. It encompasses the following activities:

- Surveillance of rabies in wild animal populations that have come into contact with humans, with bat rabies being of particular concern for the past seven years.
- Education of the public to promote pet vaccination, reporting of animal bites and bite prevention. Inspectors also help promote and work at low-cost rabies clinics offered by municipalities.
- Investigation of all animal bites and scratches with human involvement. This includes isolating and quarantining cats and dogs for a ten day period. (If the animal is alive after the ten day period, the rabies virus cannot have been transmitted during the bite or scratch). Inspectors also issue tickets if a cat or dog's vaccinations are not up to date, dispense rabies post-exposure vaccine to physicians upon request, and deliver animal specimens with human involvement to the Canadian Food Inspection Agency for testing when testing is required.

In 2007, Public Health staff investigated 925 animal bite exposures. Of these, 129 required rabies post-exposure prophylaxis, as a precaution. In 2007, one rabid bat was reported in York Region.

A recent rabies event in Toronto was the largest rabies incident that the rabies team has been involved with

On January 23, 2008, the York Region Public Health Branch became part of a multi-jurisdiction investigation into potential human exposure to rabies from dogs purchased from a booth at a flea market in the City of Toronto. One puppy purchased at the flea market on January 13, 2008 tested positive for rabies after being surrendered to the Toronto Humane Society by its new owner. As Toronto Public Health investigated the background of the one rabid animal, it soon became apparent that there was a potential public health emergency at hand, given the number of people and animals that may have been exposed to the puppy.

The rabid pup was sold by a puppy broker who collected litters of puppies from dog owners and resold them at the flea market. This is a legal though unregulated practice. The investigation also found that a second puppy sold at the flea market died and was cremated by the new owner, though it could not be established if the puppy died of rabies. Ultimately, it was determined that at least 27 puppies known to have been recently sold by the broker may have had contact with the rabid puppy and were themselves potentially rabid. Anyone who touched, played with or purchased one of these puppies may also have been infected with the virus. Of the puppies identified as potentially rabid, four were purchased by York Region residents.

4. ANALYSIS AND OPTIONS

4.1 MULTI-AGENCY RESPONSE TO RABIES EVENT

Response required collaboration between federal, provincial, and municipal groups

Those involved in the multi-agency and multi-health unit response to this potential emergency included:

- The Ministry of Health and Long-Term Care, responsible for oversight of the *Health Protection and Promotion Act*, provincial rabies surveillance and provincial vaccine supply.
- The Ministry of Natural Resources, responsible for rabies control in undomesticated and wild animals.
- The Canadian Food Inspection Agency, responsible for monitoring and preventing rabies transmission between animals, and for rabies testing.
- The Public Health Agency of Canada, responsible for national vaccine supply.

Five health units were also directly involved in the rabies investigation: Toronto, Perth, Grey Bruce, Peel, and York Region.

Response involved locating puppies and following up on human contacts to discuss need for rabies vaccine

There were two main tasks: one, all the potentially rabid puppies had to be found and safely quarantined, to start, and, two, any person who had come into physical contact with the puppies from January 3, 2008 to January 21, 2008 had to be found and, if appropriate, placed on rabies post-exposure prophylaxis, as a precaution. Of great concern was the fact that there were potentially many hundreds of people exposed to the virus, including the flea market visitors and vendors who often picked up and played with the puppies, the purchasers, and their friends and families. These numbers included York Region residents.

In York Region, any resident who owned a puppy, who may have had contact with a puppy or who was recommended to seek medical attention for possible exposure to rabies came under the jurisdiction of York Region Public Health. Public Health staff were involved in the following activities:

- The four potentially rabid pups that were purchased by York Region residents were located and temporarily placed in quarantine.
- Public Health staff followed up on 117 possible human contacts, working with residents directly and, if appropriate, recommending that they see their doctor for medical assessment. Public Health staff also collaborated with Toronto and Peel Public Health at a specially operated vaccine clinic, held close to the flea market location through the first weekend of the event. As of February 4, 2008, when the investigation was winding down, 72 York Region residents had been placed on post-exposure prophylaxis. (In comparison: Toronto: 154 and Peel: 83).
- Vaccine was delivered to doctors by Public Health Inspectors.
- An aggressive media campaign led by Toronto Public Health helped reach residents who may have been exposed, with the instruction to call Health Connection to discuss the need for rabies vaccine. A total of 93 rabies-specific calls were received by York Region Health Connection.
- Public Health staff kept a thorough database of all possible human contacts and outcomes, as well as a detailed database on the puppies. These were submitted to the Ministry of Health and Long-Term Care.
- An inventory of rabies vaccine supply was kept to ensure that there was not a vaccine shortage, given the number of people involved. This was closely monitored

by the Ministry of Health and Long-Term Care and the Public Health Agency of Canada.

4.2 OUTCOMES OF RABIES EVENT

All potentially rabid pups sold to residents in five different health units were located. It would take up to six months for infected puppies to exhibit symptoms of rabies. The Canadian Food Inspection Agency discussed options of quarantine for six months or euthanasia with the owners of exposed puppies. With the owners' cooperation, 14 of these puppies were euthanized and sent for testing. Of the puppies tested, only the original puppy tested positive for rabies, with no human infections. The puppies that were not euthanized have been placed on strict Canadian Food Inspection Agency-regulated quarantine, until determined rabies free.

As a result of this incident several new initiatives are taking place

A debriefing session with all agencies involved in this incident is expected to take place this spring. Issues to be discussed include a review of the regulations on animal health and the sale of animals.

The Health Protection Division is now working to strengthen its rabies prevention program. New initiatives include:

- A letter to all pet stores and flea markets in York Region informing them of their duty to ensure that mothers of puppies and kittens being sold have up-to-date rabies vaccinations and that individuals purchasing animals be made aware of the mothers' vaccination status.
- An article in Doc Talks, a York Region Community and Health Services publication for primary care physicians, with information about rabies and guidelines on when and how to administer post-exposure vaccine.
- A letter to York Region veterinarians reminding them of the Ministry of Health and Long-Term Care recommendation that they have pre-exposure rabies vaccine to protect themselves when working with animals.
- Strengthened partnerships with the Ontario Society for the Prevention of Cruelty to Animals, Kennel Inn (an animal shelter in the Town of Aurora), and York Regional Police.
- A comprehensive community campaign for rabies awareness month (May).

5. FINANCIAL IMPLICATIONS

Costs associated with the rabies program, a mandatory public health program, are cost-shared and have been included in the proposed 2008 Public Health Business Plan and Budget.

6. LOCAL MUNICIPAL IMPACT

York Region Public Health's role in the recent multi-jurisdictional rabies investigation was to protect the health of York Region residents. The Public Health Branch will continue to evaluate and strengthen its rabies prevention program to ensure that York Region residents and physicians are educated appropriately.

7. CONCLUSION

Rabies can be fatal for humans and animals if untreated. The Health Protection Division, which conducts rabies investigations as well as rabies surveillance and education, was recently involved in a large multi-jurisdictional and multi-agency event involving rabies-exposed puppies sold at a flea market in an area bordering York Region. Several new educational initiatives are being developed following the incident. It is important that the Health Protection branch continue to work collaboratively with other jurisdictions and agencies and continue their work on rabies investigations, education and surveillance.

For more information on this report, please contact Dr. Karim Kurji, Medical Officer of Health and Director of Public Health Programs at Ext. 4012.

The Senior Management Group has reviewed this report.