

# The Pump Handle



**"I had an interview with the Board of Guardians of St. James's parish, on the evening of Thursday, 7th September, and represented the above circumstances to them. In consequence of what I said, the handle of the pump was removed on the following day."**

John Snow, 1855

## July 2003 Topics

- Emerging Zoonoses
- Campylobacteriosis and Livestock
- Lessons From Rabies
- Online Disease Reporting



### **Emerging Zoonoses**

The outbreak of monkeypox in May 2003 was the most recent emerging disease to occur in the United States. Currently, public health officials are investigating 71 monkeypox cases in six states. No cases are suspected in North Dakota. In addition, there is no indication that any animals with monkeypox or exposed to monkeypox were brought into North Dakota.

Prior to monkeypox, other examples of emerging disease outbreaks include SARS in 2003, West Nile virus in 1999, new-variant Creutzfeldt-Jakob disease in 1995 and hantavirus in 1993. Many of the emerging diseases have involved zoonotic infectious agents; that is, pathogens that cause disease in animals that also are transmissible to humans. [Table 1](#) provides a list of many zoonotic infectious agents and the diseases they cause in animals and humans.

Important factors for emerging zoonoses are increased travel, importation of exotic animals and increased contact between animals and humans. The interest in owning exotic pets has exposed humans to monkeypox, a virus rarely known to have caused illness in humans other than in isolated clusters in Africa. Reptiles are a popular type of exotic pet in the United States and have introduced new strains of salmonella to their owners, a potentially life-threatening enteric illness, especially in young children. Reptile-associated salmonellosis has been documented in North Dakota.

Surveillance and control of an emergent zoonotic disease may be difficult due to the need for cooperation across a wide range of institutions and fields of study required to cover the ecological diversity. It is important to understand emerging zoonotic pathogens because the risk they represent is unknown and the risk for future episodes is unpredictable.

The State Board of Animal Health regulates the types of animals that are allowed into North Dakota. On June 11, 2003, the board prohibited the importation of Gambian giant pouched rats and prairie dogs into North Dakota and also prohibited the release of these animals from captivity.

If a major foreign animal disease outbreak or bioterrorism event occurred in North Dakota, the board has contracted a Reserve Veterinary Corps consisting of 21 veterinarians from around the state who have volunteered to act as field operators. More about the North Dakota Reserve Veterinary Corps is available at [www.agdepartment.com/2003%20press/other030110.htm](http://www.agdepartment.com/2003%20press/other030110.htm).



### **Campylobacteriosis and Livestock**

Reported cases of campylobacteriosis in North Dakota typically increase each year in early spring and peak during the summer. As of July 1, 2003, 38 cases have been reported to the North Dakota Department of Health (NDDoH), compared to 32 cases reported at this time last year. Approximately 45 percent of the cases reported thus far in 2003 have been related to exposure to farm animals, mainly cattle. The increase in cases beginning in early spring coincides with calving season and often is attributed to improper hand washing after contact with manure.

The causative agent, *Campylobacter spp.*, can be found in all regions of the world and is responsible for many diarrheal illnesses, such as traveler's diarrhea. The NDDoH recently investigated an outbreak of campylobacteriosis occurring among members of a high school band returning from a European tour. Often transmitted through cattle and poultry, campylobacter is the leading cause of enteric illness in North Dakota. Additional information about campylobacter infections is available at [www.cdc.gov/ncidod/dbmd/diseaseinfo/campylobacter\\_g.htm](http://www.cdc.gov/ncidod/dbmd/diseaseinfo/campylobacter_g.htm).



### **Lessons From Rabies**

The NDDoH receives numerous telephone calls about possible rabies exposures. A recent investigation involved a kitten on a farm where a graduation party was hosted in May 2003. The kitten became ill the day after the party. It was euthanized, sent to the Division of Microbiology for testing and confirmed to be positive for rabies. Thirty households were contacted by the NDDoH, including the family that hosted the party, to determine whether or not any individuals were exposed to the rabid kitten. Four individuals from the family that hosted the party and nine other guests were prescribed post-exposure prophylaxis.

Rabies vaccines licensed for use in the United States are listed in Table 1. All are equally safe and efficacious.

**Table 1. Rabies Vaccines Licensed For Use in the United States.**

<b>Human Rabies Vaccine</b>	<b>Product Name</b>	<b>Manufacturer</b>
Human diploid cell vaccine <ul style="list-style-type: none"><li>• Intramuscular</li><li>• Intradermal</li></ul>	Imovax®Rabies Imovax®Rabies I.D.	Pasteur-Merieux Serum et Vaccins, Connaught Laboratories, Inc. (800) VACCINE (822.2463)
Rabies vaccine adsorbed	RVA	BioPort Corporation, (517) 355.8120
Purified chick embryo cell vaccine	RabAvert™	Chiron Corporation, (800) CHIRON8 (244.7668)
<b>Rabies Immune Globulin</b>	Imogam®Rabies-HT	Pasteur-Merieux Serum et Vaccins, Connaught Laboratories, Inc. (800) VACCINE (822.2463)
	BayRab™	Bayer Corporation (800)288.8370

**Source:** Centers for Disease Control and Prevention. Human rabies prevention – United States, 1999: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 1999;48(No. RR-1):1-23.

In all post-exposure prophylaxis regimens, except for people previously immunized, both vaccine and immune globulin products should be used concurrently. This treatment may cost as much as \$1,500 or more. The cost of rabies post-exposure prophylaxis is often a problem. Pasteur-Merieux (telephone: 800-VACCINE) and Chiron (telephone: 800-CHIRON8) offer patient-assistant programs for qualified people. Eligibility criteria include lack of insurance, a documented exposure and financial criteria (usually a percentage of the federal poverty guideline).

Unvaccinated animals exposed to a rabid animal should be euthanized immediately or placed under strict isolation for six months. Contact with wild animals should be avoided, especially those species that are historically known to be reservoirs of the rabies virus, such as skunks and raccoons. The NDDoH was contacted last month by an individual who had taken in a litter of raccoon kittens found in the wild. The kittens were tested at the Division of Microbiology and were negative for rabies.

This person was not only lucky, but also unknowingly breaking the law. Under section 36-01-08.4 of the North Dakota Century Code: “A person may not keep a skunk or raccoon in captivity.” This section enables the state veterinarian to confiscate any animal kept in violation of this law.



### **Online Disease Reporting**

Health care providers can now send disease report cards to the NDDoH via the internet at [www.health.state.nd.us/disease/DiseaseCard.htm](http://www.health.state.nd.us/disease/DiseaseCard.htm). The entry form that appears contains fields where information can be entered and drop-down lists to select appropriate information. Moving from field to field is conducted by pressing the “TAB” key. To submit the form when completed, press “ENTER.” Call Erin Fox at 1.701.328.3341 or Julie Goplin at 1.701.328.2375 if you have any questions about

the new system. The NDDoH still accepts alternative reporting methods such as paper report cards, fax, etc.

*Contributing authors of The Pump Handle include Julie Goplin, Tracy Miller, Kirby Kruger and Larry Shireley. For questions, suggestions or inquiries, or to be removed from the mailing list, please contact Julie Goplin of the Division of Disease Control at 701.238.2375 or by email at [jgoplin@state.nd.us](mailto:jgoplin@state.nd.us).*

*The pump handle picture in the title was obtained from the website <http://www.ph.ucla.edu/epi/snow.html>.*



**North Dakota Department of Health  
Division of Disease Control**

Terry Dwelle, MD, MPHTM, State Health Officer  
Craig Lambrecht, MD, MPH, Chief, Medical Services Section  
Larry A. Shireley, MS, MPH, Director, Disease Control