

# 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

## June 2013 Topics

- Rabid Pigs Identified in North Dakota
- Rabies Vaccine and Immune Globulin Availability Update
- West Nile Virus Update
- Tickborne Disease Update
- Department of Health Provides Update Regarding Shortages of Isoniazid and Tubersol®



### **Rabid Pigs Identified in North Dakota**

On April 27, 2013, 21 feeder pigs were purchased from a North Dakota farm. The litters of pigs were reported to have come from three different mothers. The 21 pigs were placed on a rural premise and housed in an outdoor pen. On June 15, 2013, the owners noticed pig A showing signs of illness including hind limb paralysis, twitching and vocalization (squealing). The same day, a second pig (pig B) showed signs of illness including ataxia, recumbency and vocalization. Pig A and B were euthanized by the owner. On June 16, a third pig (pig C) showed similar clinical illness similar to that of pig A and pig B. The owners contacted their veterinarian because they had suspicions of neurological illness in their pigs. The veterinarian euthanized pig C and submitted it to the North Dakota State University Veterinary Diagnostic Laboratory for toxicology, microbiology, histopathology and rabies testing. Pig C tested positive for rabies on June 20, 2013.

On June 20, 2013, the North Dakota Department of Health (NDDoH) was notified of the positive rabies report in a pig. North Dakota has not had a positive report of rabies in swine since 1992. The NDDoH, along with the Department of Agriculture Animal Health

Division, immediately initiated an investigation of possible human and animal contacts to the rabid pig.

Human exposure investigations identified six individuals who were on the premise and around the pigs during the period of potential viral shedding. Four of the six people interviewed had likely exposures to the pigs and were recommended to receive rabies post-exposure prophylaxis. One pet dog that was current on its rabies vaccinations received a booster. Other than the remaining 18 pigs, no other animals were known to be present on the premise.

On June 23, 2013, a fourth pig (pig D) became ill, was euthanized by the owner's veterinarian and submitted to the North Dakota Department of Health Division of Laboratory Services for rabies testing. Pig D tested positive for rabies on June 27. The same day, samples from pig C and Pig D were sent to the Centers for Disease Control and Prevention (CDC) Rabies Laboratory for rabies antigenic typing. Both specimens were identified as variants found in skunks in the North Central United States. Although this information indicates a skunk exposure, the mechanism of how these pigs were exposed to rabies remains unknown.

The remaining 17 pigs are currently being quarantined on the owner's premise. The NDDoH, North Dakota Department of Agriculture, and the CDC are working together to provide guidance and recommendations for the pig herd owners. As of July 12, 2013, no additional sick pigs have been reported. For more information about rabies, visit [www.ndhealth.gov/disease/Rabies/](http://www.ndhealth.gov/disease/Rabies/).



#### **Rabies Vaccine and Immune Globulin Availability Update**

Human rabies vaccine produced by the manufacturer Sanofi Pasteur (IMOVAX) is now available for both pre- and post-exposure prophylaxis. Since March 2013, IMOVAX was only available for post-exposure prophylaxis. Rabies vaccine produced by Novartis (RabAvert) is available for pre- and post-exposure prophylaxis through wholesale distributors. Supply of RabAvert through the vaccine manufacturer remains limited. Visit [www.cdc.gov/rabies/resources/news/2011-09-30.html](http://www.cdc.gov/rabies/resources/news/2011-09-30.html) for more information.

Human rabies immune globulin produced by the manufacturer Sanofi Pasteur (Imogam) is currently restricted. Special order instructions are available at [www.vaccineshoppe.com/assets/pdf/MKT26616\\_Imogam\\_Post\\_Exposure\\_Form.pdf](http://www.vaccineshoppe.com/assets/pdf/MKT26616_Imogam_Post_Exposure_Form.pdf). Immune globulin produced by the manufacturer Grifols (HyperRAB) is available with no restrictions.

Visit the Centers for Disease Control and Prevention and Food and Drug Administration websites for the most current information on vaccine and biologics availability.

- [www.cdc.gov/rabies/resources/availability.html](http://www.cdc.gov/rabies/resources/availability.html)
- [www.fda.gov/BiologicsBloodVaccines/SafetyAvailability/Shortages/default.htm](http://www.fda.gov/BiologicsBloodVaccines/SafetyAvailability/Shortages/default.htm)



### **West Nile Virus Update**

As of July 30, 2013, one West Nile virus (WNV) infection has been reported in the state of North Dakota. In addition, two birds and six mosquito pools have tested positive for WNV. The mosquito that transmits WNV, *Culex tarsalis*, typically reaches peak numbers the end of July or the beginning of August. Currently, state mosquito surveillance traps are indicating higher numbers of mosquito counts compared to this time last year and the number of *Culex tarsalis* counts has been increasing.

The peak of WNV transmission season is approaching and people should be watchful of the signs and symptoms of WNV illness. Symptoms range in severity from fever, rash and headaches to more severe neurological disease such as high fever, severe headache, neck stiffness, altered mental status and death. In 2012, 89 WNV cases were reported to the North Dakota Department of Health, with the peak of cases occurring in the last two weeks of August.

To reduce the risk of getting WNV, avoid mosquito bites by using EPA-registered insect repellent, avoid outdoor activities during early morning and evening hours (the peak biting time for many mosquitoes), and wear long sleeves and pants when outdoors. You can also reduce mosquitoes near your home by draining standing water where mosquitoes lay their eggs. By having well-fitting screens on windows and doors, you can keep mosquitoes from entering your home.

Nationwide, there have been a total of 14 human infections reported to the Centers for Disease Control and Prevention as of July 9, 2013. A map showing the distribution of human, avian, animal and mosquito infection by state can be viewed at [diseasemaps.usgs.gov/index.html](http://diseasemaps.usgs.gov/index.html). Minnesota and South Dakota have reported mosquito pools testing positive for West Nile virus. South Dakota reported their first WNV case on July 2, 2013.

West Nile virus activity is updated Wednesday mornings each week on the North Dakota Department of Health website at [www.ndhealth.gov/wnv](http://www.ndhealth.gov/wnv).



### **Tickborne Disease Update**

A case of *Ehrlichia muris*-like (EML) was reported to the North Dakota Department of Health (NDDoH) in June 2013. *Ehrlichia muris*-like is a species of *Ehrlichia*, a disease that is transmitted to humans by the bite of an infected tick. This is a fairly new species of Ehrlichia and was first identified in four individuals (three from Wisconsin and one from Minnesota) in 2009. Since then, additional cases have been identified in individuals living in or that have traveled to Wisconsin or Minnesota. The case reported to the NDDoH had travel history to Minnesota where the case had reported tick exposures. The EML organism has been detected in some deer ticks (*Ixodes scapularis*) that have been collected and tested in Minnesota and Wisconsin, both endemic states for this type of tick. Symptoms of Ehrlichiosis include fever, headache, fatigue and muscle aches that usually develop 1 to 2 weeks after being bitten by an infected tick.

Lyme disease is another tickborne disease that is transmitted by deer ticks. Two cases of Lyme disease have been reported to the NDDoH as of July 11, 2013, both with travel history to Minnesota or Wisconsin. Common symptoms of Lyme disease include a red,

expanding rash called erythema migrans and fatigue, chills, fever, headache and muscle and joint pain that develop 3 to 30 days after a tick bite.

The NDDoH has also received a report of a Rocky Mountain Spotted Fever (RMSF) case. RMSF is transmitted to humans by the bite of an infected American dog tick (*Dermacentor variabilis*). Typical symptoms include fever, headache, abdominal pain, vomiting and muscle pain that develop 2 to 14 days after a tick bite.

Deer ticks are commonly found in Minnesota and Wisconsin, but have also been found in eastern counties in North Dakota. North Dakota residents that report no travel history to Minnesota, Wisconsin or other states commonly inhabited by deer ticks have been diagnosed with Lyme disease and other diseases transmitted by the deer tick, including anaplasmosis, ehrlichiosis and babesiosis. The American dog tick is found throughout North Dakota and can transmit Tularemia as well as RMSF. Tickborne diseases can result in severe illness and possibly death if left untreated. It is important to see a health-care provider if you develop symptoms and have had a recent tick bite.

For more information on tickborne diseases, please visit [www.ndhealth.gov/disease/Tickborne](http://www.ndhealth.gov/disease/Tickborne).



### **Department of Health Provides Update Regarding Shortages of Isoniazid® and Tubersol®**

#### **Isoniazid**

The North Dakota Department of Health wants health-care providers to be aware that Isoniazid (INH) has been removed from the FDA's Shortage and Supply Drug list as of May 30, 2013. The FDA reports that there is no supply issue anticipated from the manufacturers: Teva, Sandoz or VersaPharm. The North Dakota Department of Health has a supply of INH available for distribution and is recommending the reimplementation of treatment for those individuals identified as Latent Tuberculosis Infected (LTBI).

#### **Tubersol®**

The nationwide shortage of Tubersol is ongoing. According to the FDA, the 10-test vials and 50-test vials of Tuberculin Purified Protein Derivative Tubersol® are available to be ordered on [VaccineShoppe.com](http://VaccineShoppe.com)® or by contacting Sanofi Pasteur directly at 1.800.VACCINE (1.800.822.2463).

Tuberculin, Purified Protein Derivative Tubersol® 10-test vials and 50-test vials will also be available soon through wholesalers and distributors as their inventories are replenished.

*Contributing authors of The Pump Handle include Michelle Feist, Alicia Lepp, Dee Pritschet, Tracy Miller and Kirby Kruger. For questions, suggestions or inquiries, or to be removed from the mailing list, please contact Sarah Weninger of the Division of Disease Control, at 701.328.2366 or by e-mail at [sweninger@nd.gov](mailto:sweninger@nd.gov).*

*The pump handle picture in the title was obtained from the website [www.ph.ucla.edu/epi/snow.html](http://www.ph.ucla.edu/epi/snow.html).*



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