

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 2011 Topics

- Rocky Mountain Spotted Fever – Two Cases Reported to the NDDoH
- Healthcare-Associated Infections Website-NEW!
- Meaningful Use
- West Nile Virus Update



Rocky Mountain Spotted Fever – Two Cases Reported to the NDDoH

Rocky Mountain spotted fever (RMSF) is a disease caused by the bacteria *Rickettsia rickettsii* and is transmitted to humans from the bite of an infected tick. The primary tick vector responsible for transmitting RMSF in North Dakota is the American dog tick (*Dermacentor variabilis*).

Two confirmed cases of RMSF were reported to the North Dakota Department of Health (NDDoH) in July 2011. Since 2000, there have been four RMSF cases reported – these most recent cases bring the total to six. Both patients presented to their respective health-care providers with history of fever, rash and fatigue. Subsequent disease progression varied from patient to patient; however, both patients required hospitalization for illness and later recovered. The time from symptom onset to receipt of confirmatory laboratory results was three weeks for one case and over four weeks for the other RMSF case.

Early symptoms of RMSF are usually non-specific and frequently begin as sudden onset of fever, headache, fatigue and rash. Symptoms can vary greatly from patient to patient and 10 percent of cases never develop a rash. Rash onset occurs two to four days following onset of fever and may not appear until later in the course of illness. Early diagnosis of RMSF cases can be challenging because of the variance in symptoms, non-

specific presentation at illness onset and detectable antibodies often are not present during the first 7 to 10 days of illness¹.

The Centers for Disease Control and Prevention recommends that providers use their clinical judgment to diagnose and treat suspected RMSF cases. Clinical signs and symptoms, exposure to tick-infested areas, history of tick bites, and travel history are important pieces of information to have when making early RMSF diagnosis. Doxycycline is used to treat RMSF and is most effective at preventing fatal outcomes if initiated within the first five days of symptom onset. Therefore, the treatment of suspected cases of RMSF should begin before confirmatory laboratory results are received.

For more information about RMSF, visit the NDDoH website at www.ndhealth.gov/disease/tickborne.

1-Diagnosis and Management of Tickborne Rickettsial Diseases: Rocky Mountain Spotted Fever, Ehrlichioses, and Anaplasmosis – United States. MMWR 2006;55:1,9,16.



Healthcare-Associated Infections Website-NEW!

The Healthcare-Associated Infections (HAIs) webpage has been added to the North Dakota Department of Health, Division of Disease Control website and is located at www.ndhealth.gov/disease/hai/.

The page will navigate you to, archived and upcoming trainings, as well as frequently requested website links. Additionally, this site contains information about current guidelines for infection prevention of HAIs in various health-care settings. You also will find our Healthcare-Associated Infections Prevention and Resource Manual, in addition to educational brochures on *C. difficile*, Methicillin-resistant *Staphylococcus aureus* (MRSA) and vancomycin resistant enterococci (VRE) for long-term care facilities. Coming soon will be fact sheets for various HAIs.

The reportable conditions list and contact information for HAIs also are posted. This site is frequently updated, so visit it often to see what's new with HAI prevention nationally and in North Dakota.



Meaningful Use

The American Reinvestment & Recovery Act (ARRA) was enacted on February 17, 2009. ARRA includes many measures to modernize our nation's infrastructure, one of which is the "Health Information Technology for Economic and Clinical Health (HITECH) Act." The HITECH Act supports the concept of Electronic Health Records (EHR).

“Meaningful Use” simply means providers need to show they’re using a certified EHR technology in specific ways that can be measured in quality and quantity. Please see the following (CMS), www.cms.gov/EHRIncentivePrograms/30_Meaningful_Use.asp.

The North Dakota Department of Health (NDDoH) - Division of Disease Control has the capability to receive electronic messages to help facilities meet the state public health

aspects of Meaningful Use. The Meaningful Use menu objectives that could be met with this electronic messaging include:

- Provide electronic submission of reportable laboratory results to the state public health agency for hospitals only.
- Provide electronic syndromic surveillance data to the state public health agency for eligible professionals and hospitals.
- Submit electronic data to immunization registries for eligible professionals and hospitals.

More information can be located at www.ndhealth.gov/disease under the Meaningful Use banner.

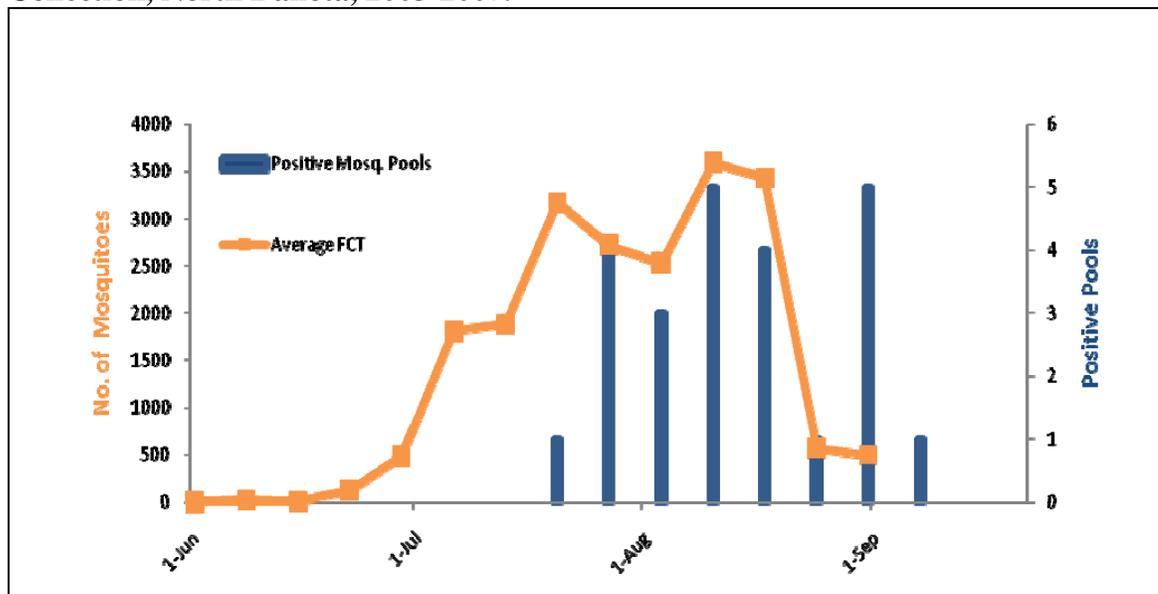


West Nile Virus Update

As of August 2, 2011, one human West Nile virus (WNV) infection has been reported to the state health department. The case was not hospitalized and was classified as West Nile fever. Three dogs also have tested positive for WNV. There have been no WNV cases reported in birds or horses this year.

Culex tarsalis is the mosquito that transmits WNV. These mosquitoes typically reach their peak numbers at the end of July or the beginning of August. Traditionally, as the female *Culex tarsalis* numbers increase the numbers of mosquito pools testing positive for WNV increase as well (**Figure 1**). Mosquito surveillance traps are demonstrating an increase in the female *Culex tarsalis* counts across the state. Increases in the number of *Culex tarsalis* mosquitoes, as well as WNV-positive mosquito pools, pose a higher risk for human WNV infection.

Figure 1. Positive Mosquito Pools and Number of Female *Culex Tarsalis* by Week of Collection, North Dakota, 2003-2007.



Nationwide, a total of 27 human infections have been reported to the Centers for Disease Control and Prevention as of August 2, 2011. For nationwide WNV data, visit www.cdc.gov/ncidod/dvbid/westnile/index.htm.

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

Contributing authors of The Pump Handle include, Michelle Feist, Faye Salzer, Mike Benz, Alicia Lepp, Julie Wagendorf, 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.

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



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