

NEW Directions

in Emergency Preparedness



Virus Update

Influenza Update

As summer comes to a close and school is starting, we are reminded of the need to vaccinate school age children for DPT and influenza. The season for influenza is upon us, and health centers are reminded to review their pandemic plans, including but not limited to Influenza Like Illness (ILI) Screening and Isolation protocols and Point of Distribution (POD) plans.

This year's seasonal influenza vaccine does not contain the H3N2v that has been transmitted by pigs to humans at local agricultural fairs and infected 296 people in 10 states thus far. The CDC has been studying the transmission patterns in three of those cases and has determined that the infections may be linked to human-to-human transmission. As of this writing, the CDC has not yet found definitive proof that the virus has mutated to accommodate such a capability.

The Minnesota Department of Health has reported three influenza infections of a different type -- this H1N2v with the pandemic M gene has also been linked to contact with pigs at the Minnesota State Fair. In all three cases, the infected individuals had spent prolonged periods of time with the pigs and two of the three had underlying health conditions, one of them requiring hospitalization. Like H3N2v, this is a zoonotic infection involving swine; swine influenza may be transmitted to humans under these conditions. This virus has also been sequenced, and the results indicate that the H1N2 virus is very similar to those viruses found in humans previously, with the exception of the addition of the M gene from H1N1.

Health providers are reminded to consider H3N2v and H2N1v in patients who present with ILI, specifically those patients who have a history of attending state and county fairs where they may have been in contact with swine. As reported in earlier editions, H3N2v seems to be more prevalent in children and remains dangerous to those patients with pre-existing conditions for exacerbated complications (pregnant women, immune depressed patients, etc.). State Department of Health veterinarians have been checking for sick pigs prior to their entrance to state and county fairs; however, there is always a possibility that a sick animal may slip through. Livestock auctions present opportunities for livestock to travel and attend more fairs in different counties or states.

Patients, and specifically those who are of age 65 or older, pregnant, and/or who suffer from asthma and other lung diseases, heart disease, weakened immune systems, and neurological or neurodevelopmental conditions, are advised to avoid these fairs, or at least their pig exhibitions and barns. A full list can be found on the CDC's influenza website by [clicking here](#). Both the H3N2v and the H2N1v are susceptible to both currently recommended antivirals Tamiflu and Relenza.

For more information on how the CHCANYS Emergency Management team can assist with the development or testing of your pandemic plans, please contact Mario Gonzalez at mgonzalez@chcanys.org.

West Nile Virus Update

Please [click here](#) to view a map of West Nile Virus (WNV) activity that has been published by the Centers for Disease Control (CDC) in Atlanta, GA. WNV infections, via both natural vector infections and viremic blood donors, have increased throughout the United States in recent months. State and local Departments of Health continue spraying programs and mosquito eradication programs to stem infection rates.

Although New York State experienced a relatively dry summer, recent weeks have seen a spike in rain activity, increasing the opportunity for mosquitoes to breed and multiply. Nationally, there has been an increase in WNV cases with up to 2,260 human cases being reported to the CDC through its ArboNET reporting site. Increased numbers of infected mosquitoes and sentinel animals have also been reported. The incidence of human neuroinvasive disease, which includes encephalitis, meningitis, and/or acute flaccid paralysis in New York State, is 0.01-.0.24 per 100,000 persons. (This statistic can be found on the Centers for Disease Control's National Human Neuroinvasive Disease Incidence Map, accessible by [clicking here](#)).

Clinicians are reminded that additional cases may present until the fall frost kills mosquito populations, which will slow or halt human transmission. While there is no human vaccine available, clinicians in rural areas should remind patients who work with livestock that there is an equine vaccine available for livestock. For humans, avoidance of mosquito bites continues to be the best preventative measure, and clinicians should remind their patients to clear and empty areas on their properties that may contribute to the breeding of mosquito populations.

Hantavirus Update

While relatively rare, Hantavirus, a virus carried by deer mice (*Peromyscus maniculatus*), has infected patients in New York State in the past. Presently, there is an outbreak of the disease among visitors to the Yosemite National Park in California. Two suspected cases are thought to have contracted the Hantavirus Pulmonary Syndrome (HPS) from a visit to the park in the summer of 2012. Park officials state that the mice, found to have infested the double walls of the rustic tent-like cabins in Yosemite, have exposed about 10,000 people to the disease, including about 2,500 that do not live in the continental United States. Park epidemiologists, along with European Public Health Officials, have released public health notices about the potential exposure. Park officials have shut down the cabins as a precaution; however, there have been no cases reported in New York as of the printing of this newsletter. Clinicians are reminded to document any history of travel to Yosemite with patients exhibiting ILI symptoms and consider testing those with an exposure history. Also, since the fall is usually a time for cleaning out storage areas and garages in homes and businesses, clinicians should pay attention to those patients with a history of this activity who present with ILI. The virus is carried on the dust particles on mouse nests, feces and urine. These particles can be inhaled by humans causing infection. Early symptoms of the disease include headache, fever, chills, muscle aches, shortness of breath, malaise, and coughing. People generally begin to feel better quickly after the onset of symptoms; however, after a couple of days, the patients usually begin to have difficulty breathing. The virus may incubate for up to 6 weeks after exposure. The virus kills approximately 36% of those who develop the pulmonary syndrome. Patients with HPS have been known to develop severe breathing difficulties leading to death. Physical exam may reveal ARDS, hypoxia, hypotension, and renal failure. However, early detection and intervention with timely supportive treatment increases survival rates dramatically. Testing should include the Hantavirus assay, CBC, metabolic panel, renal and liver function tests. Treatment has been limited to supportive therapy; however, the use of Ribavirin, the antiviral that has been historically used for the treatment of Hepatitis C, viral hemorrhagic disease, and SARS, for the treatment of patients in renal, pulmonary, or cardiac failure and has been found to increase survivability. Hantavirus Pulmonary Syndrome has never been known to be transmitted between humans. Please [click here](#) for more information regarding Hantavirus and the current outbreak.