

## **Biosecurity In Action**

### **Hantavirus often overlooked as potential threat**

A recent human death in west-central Saskatchewan is a tragic reminder of the potential threat hantavirus continues to present in western Canada.

The first outbreak of the highly fatal Hantavirus Pulmonary Syndrome (HPS) was observed in 1993 in the Four Corners region of the southwestern United States encompassing the borders of New Mexico, Arizona, Colorado, and Utah. The etiologic agent was subsequently identified as Sin Nombre virus, an RNA virus belonging to the genus *Hantavirus*. The deer mouse, a small rodent common to the prairies serves as the major viral reservoir.

Humans are most often exposed to the virus by breathing in air particles contaminated by deer mouse saliva, urine or feces containing infectious hantaviruses. This can occur, for example, after sweeping or vacuuming infected areas.

After the first case of HPS in Manitoba in 2001, deer mouse seroprevalance studies in western Canada indicated up to 15 percent of deer mice may carry the virus. Since 1994, 21 cases of HPS have been reported in Saskatchewan, including 4 in 2003 and one each in 2008 and 2010. Since 1989, there have been 31 cases of hantavirus cases reported in Alberta, and nine deaths. In May 2005, a cluster of four hantavirus pulmonary syndrome (HPS) cases was confirmed in Alberta. The cluster was unusual given that three cases were from a single family from a home heavily infested with deer mice and involved a 7-year-old child. This was the first family cluster ever reported in Canada and includes one of the youngest cases of HPS reported in North America. A woman died in that outbreak.

People should be reminded to take precautions when cleaning up rodent infested barns, homes or other buildings. Although hantavirus infection is rare, it is a potentially fatal illness. Typical symptoms are flu-like and include fever, headache, nausea, vomiting, muscle aches, diarrhea, abdominal pain and shortness of breath. These symptoms can occur any time between three days to six weeks after exposure. Infection without symptoms is rare. HPS can progress rapidly into serious respiratory conditions.

Hantaviruses are rarely, if ever, spread from person to person or transmitted from pets and livestock. However, cats and dogs may bring infected deer mice into contact with humans.

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