	<h2 style="text-align: center;">Safe Work Guideline</h2> <h3 style="text-align: center;">Hantavirus</h3>		
<b>Prepared By:</b> Don Doherty	<b>Effective Date:</b> January 2010	<b>Revised By:</b> Don Doherty	<b>Date:</b> March 2020

### What is Hantavirus?

Hantavirus is an infection caused by a virus found in some rodents. The principal carrier in Alberta is the deer mouse but all rodents should be treated as potential carriers. A study in Alberta concluded that only 6 percent of trapped mice carried Hantavirus. Deer mice have a white underbelly; regular field mice and voles do not. Field mice have droppings that are smooth and pellet shaped, about the size of rice grains. Deer mice have bigger droppings that are brown and rough and look like un-ground peppercorns. Deer mice have been trapped in Edmonton homes and buildings. However, they are more common in rural areas, or near river valleys and ravines. This is not a new disease. It may be showing up more now simply because we have better diagnosis, and so can differentiate it from other viruses. Spring and fall are the worst seasons for the disease.

### How is Hantavirus transmitted?

Hantavirus is not transmitted from person to person, only from deer mice to humans.

The virus is found in the droppings, urine, or saliva of the mouse and can spread to humans when particles of the infected saliva, urine or droppings are inhaled. Inhalation may occur through direct contact with the rodent, or from breathing airborne dust particles that are generated when rodent droppings or urine are disturbed. The virus can also be spread if an infected rodent bites you or if infected materials contact broken skin or the membrane of the eyes.

### What are the symptoms of Hantavirus?

Hantavirus is rarely transmitted to humans but when it is it can cause severe illness including death. Symptoms of the disease may occur 1-5 weeks after having an exposure. Early symptoms include fatigue, fever, and muscle aches (especially the large muscles, hips, back, thighs, shoulders). Some people will also experience, headaches, dizziness, chills, vomiting and abdominal pain. Later symptoms may include coughing and trouble breathing. If you experience any of these symptoms see your doctor as soon as possible and make sure the doctor is aware of any possible exposure you may have had to rodents or their droppings.

### How can it be prevented?

There are no vaccines against Hantavirus. The only protection is to keep your home or workplace as free of deer mice as possible, and to safely clean up any mouse droppings or urine that you see. Regular inspections for rodents should be conducted to determine if active rodent control is necessary. Make sure your building is rodent proof by closing openings where rodents can gain entry. Ensure proper sanitation and elimination of food sources by storage in rodent proof containers.

### How can I clean up safely if I see a dead mouse or droppings?

If the area is heavily infested with mice or droppings, you may be better off getting a professional exterminator to clean it up. For small infestations, this task can be safely handled by custodial or maintenance staff that is trained in proper cleaning procedures. Since Hantavirus is generally breathed in, clean up must be performed in a way that limits the amount of airborne dust.

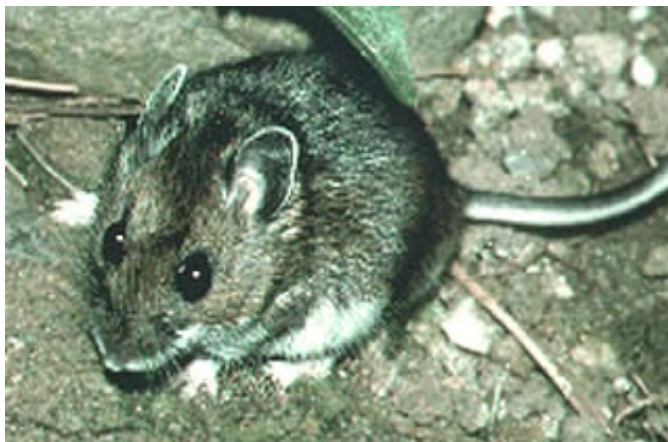
### General Clean up Procedure:

1. Clear all unnecessary persons from the area.
2. If possible ventilate the area by opening windows and doors.
3. Put on disposable rubber or plastic gloves and protective eyewear before starting clean up.
4. Wear a NIOSH approved respirator with a high efficiency P-100 filter (Note: Most custodial staff has been issued ½ mask respirators equipped with these filters). If the area is heavily infested, workers should also wear disposable coveralls, rubber boots or disposable shoe covers.
5. **Do not** stir up dust by sweeping up or vacuuming up dry droppings, urine or nesting materials. *Note:* A high efficiency vacuum equipped with a HEPA filter is would be acceptable in hard to reach areas. *Note:* Facilities Maintenance can be contacted to assist with clean up if a HEPA vacuum is required.
6. To kill the virus lightly wet down the droppings or dead mouse with a solution of bleach or other low level disinfectant. Use three tablespoons of commercial bleach per one gallon (four liters) of water. This should be mixed fresh daily because the quality of the bleach solution deteriorates after 24 hours.
7. Clean up the contaminated materials with a damp towel. Put the droppings and towels in double plastic bags, label the bag contents, seal the bag and place in the outdoor garbage bin (out of reach of children)

8. Dispose of any food or liquid that mice have come into contact with. If you encounter a dead mouse wet the mouse down with the disinfectant solution. Wearing rubber gloves, put your hand inside a plastic bag, pick up the mouse, then turn the bag inside out so that the mouse is inside the bag and you haven't touched it.
9. Wipe or mop the surfaces and any equipment used with a solution of the disinfectant.
10. Prior to removing your eye, hand and respiratory protection, remove coveralls (preferably outdoors) and disposable booties and place in a double plastic bag.
11. Wet wipe outer surface of the eyewear, respirator and footwear with a disposable towel
12. Rinse gloves in the disinfectant solution and place along with other disposable items in the double plastic bag.
13. Wash your hands and any exposed skin areas well after the clean up.

### How do I clean carpets, clothing, upholstery or hard surfaces?

You can either get carpets cleaned through the district service or use your own carpet cleaning machine. Remove droppings and contaminated materials following similar procedures as above but do not use the bleach solution. Wet the area first with hot water; remove the mouse or droppings, then shampoo (do not use bleach on carpets or upholstery). Make sure you use a commercial rug shampoo to which you have added a household disinfectant such as Lysol. It should not stain the carpet or upholstery. For small spot cleaning, spray the area with a disinfectant solution (not bleach), and wipe the droppings as above. Use the disinfectant (e.g., Lysol) on hardwood floors, and the bleach solution on linoleum floors, counters and appliances. Take bedding or clothing outside and either gently roll the droppings off or pick them off with rubber gloves: do not shake them off! Then wash them as regular laundry and dry them in a dryer or hang them outside in the bright sunlight.



A typical deer mouse is six inches long to the tip of its tail. It is yellowish brown to grayish white on top, has a white belly and feet, large ears, and a furry tail that is white on the underside.