

IN THIS ISSUE: TWO CASES OF HANTAVIRUS IN WASHOE COUNTY – WHAT TO KNOW

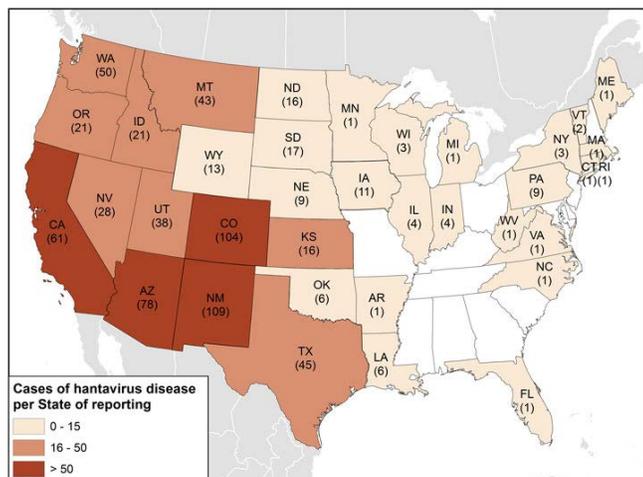
Two Cases of Hantavirus in Washoe County – What To Know

Two confirmed cases of Hantavirus Pulmonary Syndrome (HPS) were reported to the Washoe County Health District (WCHD) in August of 2019. These are the first cases of hantavirus reported in Washoe County since 2017. This Epi News will provide background information on hantavirus, its occurrence in Washoe County, prevention, and recommendations for clinicians.

Background ^{1,2}

Hantavirus Pulmonary Syndrome (HPS) is a rare respiratory disease that can cause illness in humans. The Sin Nombre Virus (SNV) is the hantavirus that causes most cases of HPS in the United States. Nearly all cases (96%) have occurred in states west of the Mississippi River. The disease is spread by breathing in or touching viral particles after exposure to infected rodents, most commonly deer mice. This typically occurs when working or recreating in areas where mouse droppings, urine, or saliva may have collected or when cleaning up rodent droppings or nesting material. Hikers and campers may be at higher risk if they are in areas that are common for heavy rodent infestation such as old cabins and barns.

Figure 1. Cumulative Case Count through January 2017 per State Based on Data Collected by the Nationally Notifiable Disease Surveillance System (NNDSS).²





Prevention⁴

The best prevention methods are to eliminate or reduce your exposure to rodents and to take appropriate precautions when cleaning in areas with mouse activity. For example:

- Do not sweep or vacuum an area with rodent urine, droppings, or nesting material.
- A solution of 1 part bleach to 10 parts water should be used when cleaning urine and/or droppings. Let it set for 5 minutes before cleaning the area.
- Wear rubber, latex, or vinyl gloves when cleaning up urine, droppings, or nesting materials. Also wear respiratory protection.
- Identify areas where mice are getting in and set traps.
- Identify and plug openings that may allow rodents entry.

For additional information on how to safely clean up after rodents, visit <https://www.cdc.gov/rodents/cleaning/>.

If you have been around rodents and have symptoms of fever, deep muscle aches, and severe shortness of breath, see your doctor immediately. Be sure to tell your doctor that you have been around rodents—this will alert your physician to look closely for any rodent-carried disease, such as HPS.¹

Recommendations for Clinicians

- **Hantavirus is a reportable condition in Nevada.** If you suspect a patient has HPS, contact your local health department right away. If you are a provider in Washoe County, call WCHD at 775-328-2447 or fax to 775-328-3764.
- Diagnosing HPS in an individual who has only been infected a few days is difficult, because early

symptoms such as fever, muscle aches, and fatigue are easily confused with influenza. However, if the individual is experiencing fever and fatigue and has a history of potential rodent exposure, together with shortness of breath, this would be strongly suggestive of HPS.¹

- **Test options** for hantavirus include:⁵
 - *Serology:* Acute- and convalescent-phase sera should reflect a four-fold rise in IgG antibody titer OR the presence of IgM in acute-phase sera. (Note: an acute-phase serum sent as an initial diagnostic specimen may not yet have IgG.)
 - *Polymerase Chain Reaction (PCR)*
 - *Immunohistochemistry (IHC)*
- Laboratory testing should be performed or confirmed at a reference laboratory:
 - The Nevada State Public Health Laboratory (NSPHL) can provide serology and PCR testing for hantavirus. Should you have any questions regarding specimen collection, storage, or transportation, please call NSPHL at 775-688-1335.

References

1. Centers for Disease Control and Prevention. "Hantavirus Pulmonary Syndrome." Accessed 22 Aug 2019. <https://www.cdc.gov/hantavirus/hps/index.html>.
2. Centers for Disease Control and Prevention. "Hantavirus Disease, by State of Reporting." Accessed 22 Aug 2019. <https://www.cdc.gov/hantavirus/surveillance/reporting-state.html>.
3. Centers for Disease Control and Prevention. "Rodents in the United States that Carry Hantavirus." Accessed 22 Aug 2019. <https://www.cdc.gov/hantavirus/rodents/index.html>.
4. Centers for Disease Control and Prevention. "Cleaning Up After Rodents." Accessed 22 Aug 2019. <https://www.cdc.gov/rodents/cleaning/index.html>.
5. Centers for Disease Control and Prevention. "HPS Technical/Clinical Information: Diagnostics." Accessed 22 Aug 2019. <https://www.cdc.gov/hantavirus/technical/hps/diagnostics.html>.