

Hantavirus Pulmonary Syndrome (HPS)

Colorado Surveillance Report 2015 Final

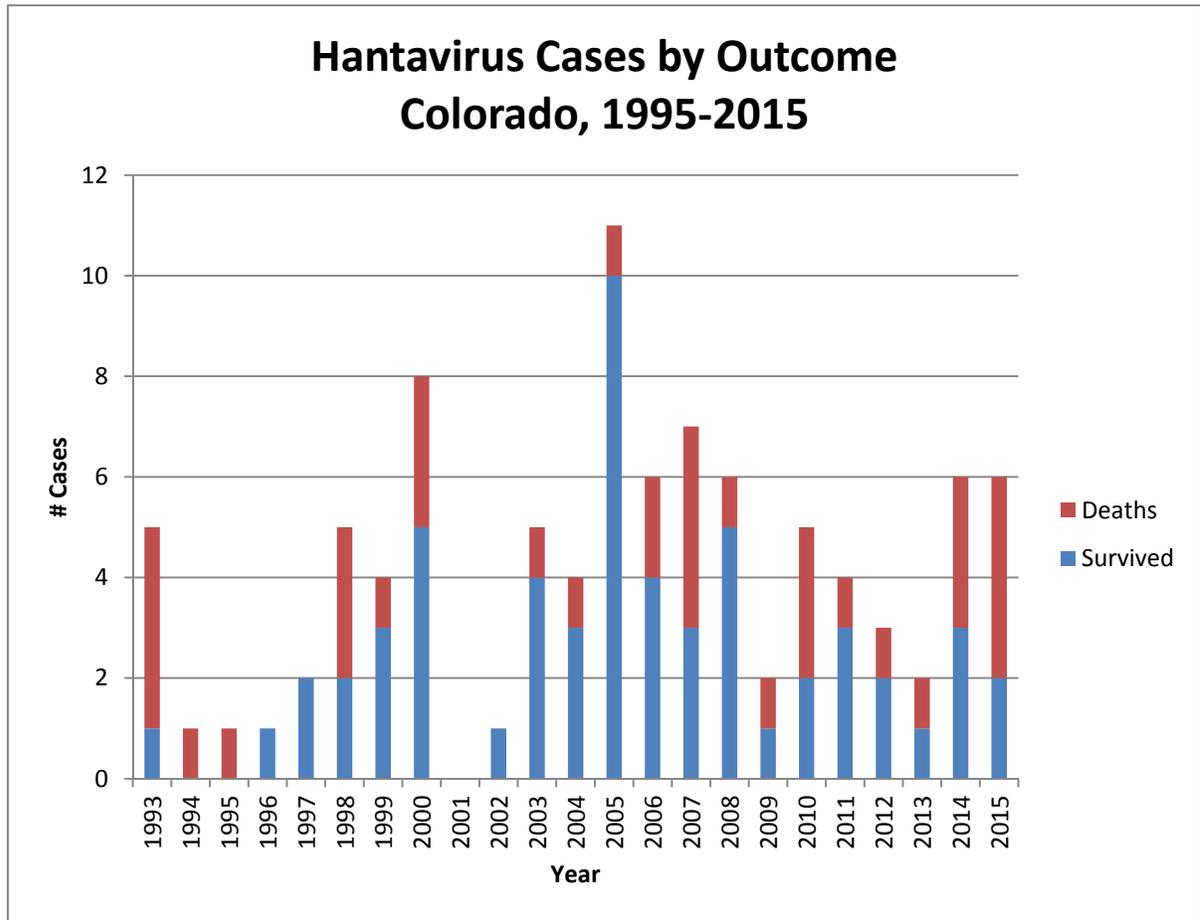
Hantavirus Pulmonary Syndrome (HPS) is a disease caused by Sin Nombre Virus (SNV) that was discovered in 1993 after an outbreak of an unexplained pulmonary illness occurred in the southwestern United States, in an area shared by Arizona, New Mexico, Colorado and Utah known as "The Four Corners". Sin Nombre Virus is one of several Hantaviruses circulating in the US.

The deer mouse (*Peromyscus Maniculatus*) is the main host but tests also show that several other types of rodents are infected, although in lesser numbers. To date, no cases of HPS have been reported in the United States in which the virus was transmitted person-to-person.

Hantavirus cases occur year-round, but most people are exposed during the spring and summer months. Hantavirus symptoms begin one to six weeks (average 2 weeks) after exposure to infected rodents or their excreta (urine, droppings, or saliva) and often associated with occupational, domestic or recreational activities. Although not all patients will give a history of rodent exposure, reports of increases in mouse populations or exposure to mice infested buildings are common among Hantavirus patients. Patients experience fever, chills and severe pain in the legs and back, persisting for 1 to 7 days before progression to the cardiopulmonary phase. Approximately 50% of patients also experience nausea, vomiting and diarrhea.

The number of confirmed cases of Hantavirus Pulmonary Syndrome (HPS) in Colorado for the 2015 season remains at six from the following 6 counties: Chaffee, Custer, Garfield, La Plata, Phillips, and Weld. All six cases were in men with no underlying health conditions and four (67%) of the cases were fatal. Since 1993, 95 cases of Hantavirus have been identified in Colorado. Of these, 38 (40%) have been fatal (figure 1).

Figure 1



Since the deer mouse often lives near people in rural and semi-rural areas—in barns and outbuildings, woodpiles, and inside people's homes—it is no surprise that nearly all rural areas of Colorado have reported human cases (table 1, image 1).

Table 1

County*	Cases
Adams	4
Alamosa	6
Arapahoe	3
Boulder	2
Chaffee	2
Conejos	1
Costilla	2
Custer	4
Delta	4
Denver	1
Dolores	1
Douglas	1
Eagle	4
El Paso	1
Elbert	1
Fremont	2
Garfield	5
Grand	1
Gunnison	3
Heurffano	1
Jefferson	2
Kiowa	1
La Plata	7
Larimer	2
Mesa	2
Mineral	1
Moffat	1
Montezuma	2
Park	3
Phillips	1
Prowers	1
Rio Blanco	3
Rio Grande	2
Routt	2
Saguache	5
Teller	1
Weld	10
Total	95

*Indicates county of residence. County where exposure occurred may be different.

Rodent control in and around the structure and/or home remains the primary strategy for preventing Hantavirus infection. All cases of Hantavirus infection are reported to the CDPHE.

Given the rapidity of onset of shock and respiratory failure, early recognition of Hantavirus Pulmonary Syndrome is critical in reducing mortality. For consultation on suspected cases of HPS, the Colorado Department of Public Health and Environment (CDPHE) can be contacted at **303-692-2700** (regular business hours) or **303-370-9395** (after hours, weekends and holidays). The Virology Laboratory at can be reached at **303-692-3485**.

Additional information on Hantavirus and Colorado surveillance data is available at <https://www.colorado.gov/pacific/cdphe/hantavirus>
The Centers for Disease Control and Prevention (CDC) also maintains a comprehensive educational website at <http://www.cdc.gov/hantavirus/>