Epidemiological Alert Hantavirus Pulmonary Syndrome in the Americas Region

19 December 2025

Given the increase in cases of hantavirus infection reported during 2025 in endemic countries of the Americas Region, particularly in the Southern Cone, and considering the increase in lethality observed in some of these countries, the Pan American Health Organization / World Health Organization (PAHO/WHO) reminds Member States of the need to maintain and strengthen epidemiological surveillance of this disease, ensure timely diagnosis and proper management of cases, as well as promote intersectoral actions aimed at reducing the associated environmental and occupational risk.

Summary of the situation

In 2025 and as of epidemiological week (EW) 47, eight countries in the Americas Region, mainly in the Southern Cone,[1] have reported confirmed cases of hantavirus pulmonary syndrome (HPS), with an aggregated total of 229 cases and 59 deaths, corresponding to a regional case fatality rate of 25.7%. The countries that have reported cases during 2025 are: Argentina, Brazil, Bolivia (the Plurinational State of), Chile, Panama, Paraguay, the United States of America, and Uruguay (**Figure 1**) *(1 - 8)*.

Compared to historical averages, two countries reported significant increases in incidence, particularly Bolivia and Paraguay, the latter associated with an outbreak with occupational exposure, reaching values that double or exceed those reported in recent years. For their part, Argentina and Brazil was observed an increase in lethality (**Figure 2**), with values higher than those observed in their recent averages. It should be noted that Argentina continues to be the country that reports the highest number of cases of hantavirus in the Region *(1 - 8)*.

Although the transmission of hantavirus in the Americas is predominantly zoonotic, linked to contact with reservoir rodents and their excreta, the Region has a history where human-to-human transmission is suggested, mainly associated with the Andes virus, endemic in the Southern Cone. These events, described in previous outbreaks in Argentina (1996 and 2018) and Chile (1997, 2004, and 2014), have occurred in contexts of close and prolonged exposure, usually in home settings or during the prodromal period of the index case *(9-12)*.

[1] Southern Cone: Argentina, Chile, Uruguay and Paraguay.

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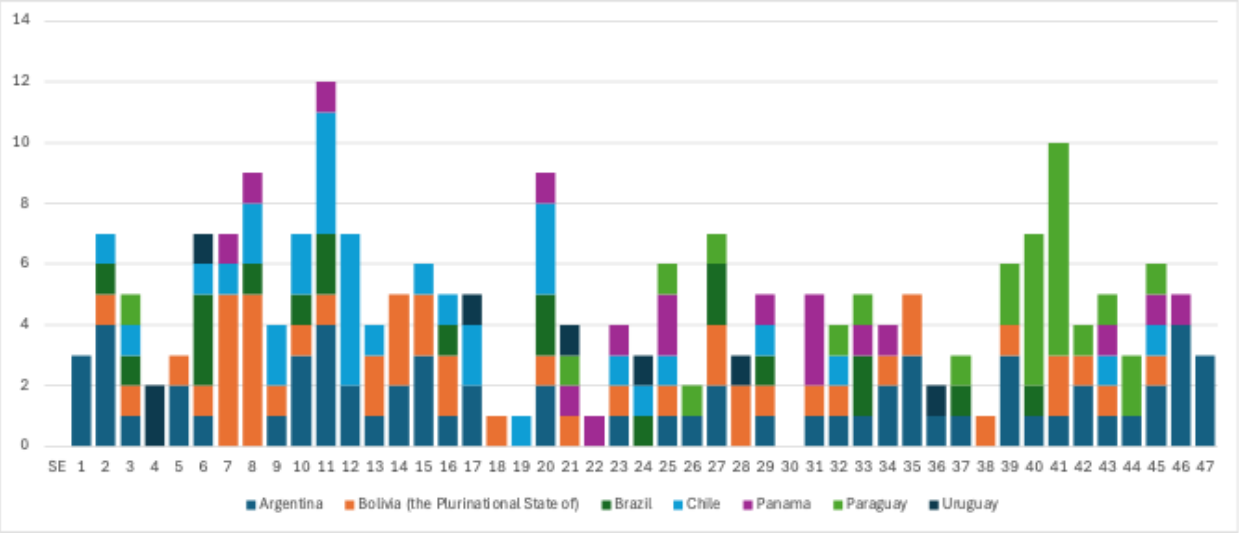
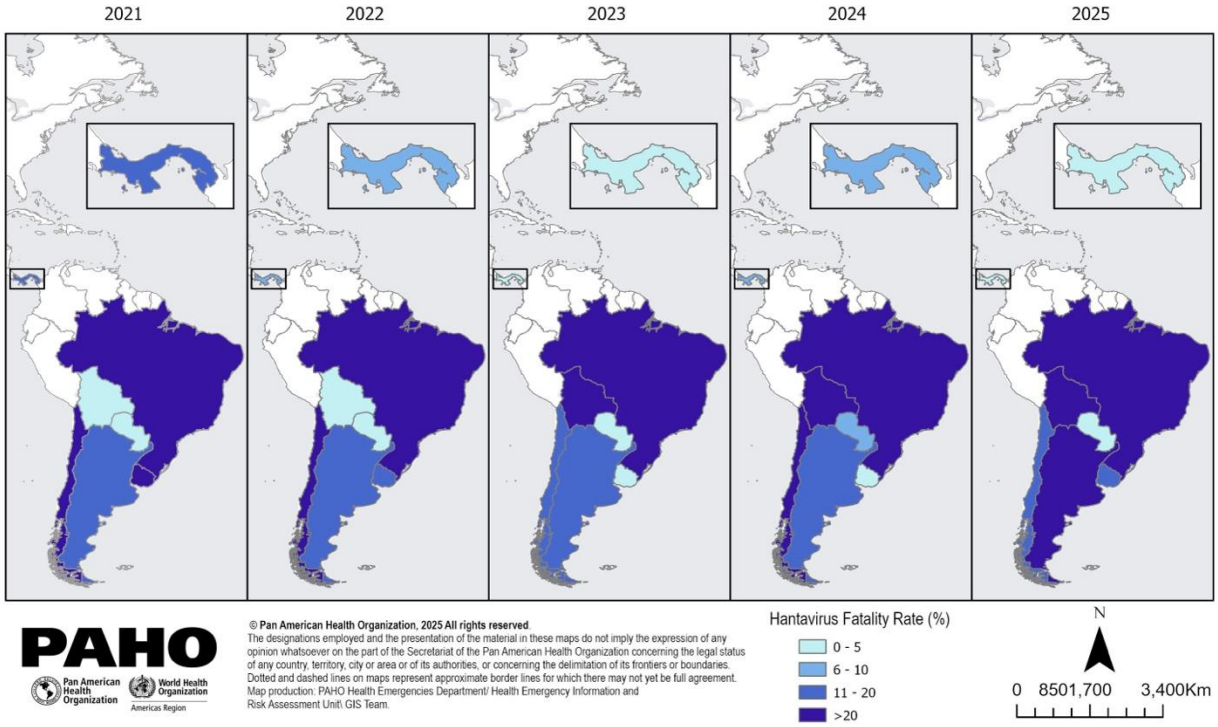
Figure 1. Cases of hantavirus pulmonary syndrome reported in the Americas Region, during 2025 (as of EW 47).



Source: Adapted from data provided by the respective countries *(1-6, 8)*.

Figure 2. Deaths and fatality rate due to hantavirus pulmonary syndrome reported in Argentina, Brazil, Bolivia (the Plurinational State of), Chile, Panama, Paraguay, and Uruguay, between 2021 and 2025 (as of EW 47)



Source: Adapted from data provided by the respective countries *(1-6, 8)*.

Summary of the situation in Central America and the Southern Cone countries

Below is a summary of the situation in the seven countries of the Americas Region, listed in alphabetical order, that reported cases during 2025.

In **Argentina**, between EW 1 and EW 47 of 2025, 66 cases of hantavirus pulmonary syndrome have been confirmed. According to the place of exposure, the cases are distributed in the following Regions: 64% (n= 42) of the cases were concentrated in the Central Region, followed by the northwest with 21% (n= 14), the south with 11% (n= 7) and the northeast with 5% (n= 3). Among the cases with available epidemiological information, the main reported antecedents include contact with rodents, their urine or excreta (55%), residence in rural housing (35%), excursion to rural or wild areas (32%) and cleaning of homes, basements, attics, or sheds (6%). Of the cases with available information (n= 57), the most frequent symptoms reported were: fever (95%), myalgia (75%), headache (61%), nausea (40%), dyspnea (39%), vomiting (39%), cough (35%), and diarrhea (30%). A total of 21 deaths were reported with a lethality of 32%, a figure that exceeds the average of the last four years (15.4%) *(1)*.

In **Brazil**, between EW 1 and EW 47 of 2025, 20 cases of hantavirus pulmonary syndrome have been confirmed. According to the state associated with the place of exposure, the cases are distributed in the following States: Maranhão (n= 1), Minas Gerais (n= 5), Mato Grosso (n= 2), Pará (n= 1), Rio Grande do Sul (n= 3), and Santa Catarina (n= 6); in two cases the exposure status was not identified. Of the total cases for 2025, 55% were exposed with cleaning activities, 55% with logging and 45% with contact with rodents, with exposures in rural areas predominating (85%). The symptoms reported during 2025 include fever (90%), myalgia (70%), headache (65%), abdominal pain (35%), nausea and vomiting (35%) and diarrhea (25%). These clinical patterns and their seasonality remain consistent with those observed in the last 5 years. To date, 11 deaths have been reported, with a lethality rate of 55%, which exceeds the average of the last four years (30.2%) *(2)*.

In **Bolivia**, between EW 1 and EW 46 of 2025, 48 cases of hantavirus pulmonary syndrome have been confirmed, distributed according to the place of exposure in the following Departments: in La Paz (n= 27), Tarija (n= 15), Beni (n= 3), and Santa Cruz (n= 3). This total of cases doubles the average reported in 2023 and 2024 (on average 23 cases). Most cases reported exposures in rural areas (93%). Of the 43 cases with available clinical information, the most common symptoms include fever (93%), headache (84%), arthralgias (72%), myalgia/muscle pain (65%), dyspnea (60%), tachypnea (49%), back pain (49%), nausea and vomiting (44%), and respiratory failure (44%). As of EW 46, 11 deaths have been reported with a lethality rate of 22.9%, a figure that exceeds the average of the last four years (15.9%) *(3)*.

In **Chile**, between EW 1 and EW 45 of 2025, 35 cases of hantavirus pulmonary syndrome have been confirmed, distributed according to the place of exposure in the following regions: Los Ríos (n= 7), Ñuble (n= 5), O'Higgins (n= 4), Araucanía (n= 4), Maule (n= 3), Biobío (n= 3), Los Lagos (n= 3), Aysén (n= 3), Metropolitana (n= 1), and two cases under investigation (n= 2). Most cases present exposure in rural areas (88.6%), entry to enclosed areas (25.7%) or participation in agricultural or forestry activities (17.1%). The predominant symptoms include myalgia (94%), headache (85%), fever (74%) and gastrointestinal symptoms (68%). To date, seven deaths have been reported with a lethality rate of 20% during 2025, a value lower than the average of the last five years (23.4%) *(4)*.

In **Panama**, between EW 1 and EW 47 of 2025, 18 cases of hantavirus pulmonary syndrome have been confirmed. Cases are distributed according to place of exposure in the following Departments: Los Santos (n= 15), Herrera (n= 2), and Coclé (n= 1). Most exposures were rural (95%) or peri-urban (5%), The most reported symptoms include fever (100%), myalgia (85%), headache (89%), cough (70%), abdominal pain (38%), nausea (52%), vomiting (46%), and diarrhea (26%). No deaths were reported in 2025 *(5)*.

In **Paraguay**, between EW 1 and EW 47 of 2025, 27 cases of hantavirus pulmonary syndrome have been confirmed, distributed according to place of exposure in the following departments: Boquerón (n= 26) and Presidente Hayes (n= 1). The total number of cases reported in 2025 exceeds the average number of cases of the last four years (18 cases per year). More than half of the cases reported in 2025 correspond to an outbreak associated with road activities in Mariscal Estigarribia (n= 15). According to available information, for 2025, the most frequent symptoms include headache (93%), fever (85%), myalgia (74%), nausea and vomiting (41%), and abdominal pain (7%). All cases are related to rural exposures. Six deaths are reported in 2025, with a fatality rate of 22.2%, higher than the average of the last four years (12.3%) *(6)*.

In **Uruguay**, between EW 1 and EW 46 of 2025, eight cases of hantavirus pulmonary syndrome have been confirmed, distributed according to place of exposure in the following departments: Montevideo (n=1), Canelones (n=2), Lavalleja (n=1), Río Negro (n=1), Rocha (n=1) and Soriano (n=2). Exposures have been reported in rural (n=1), urban (n=3) and peri-urban (n=4) environments. According to the information available, for 2025, the most frequent symptoms continue to be fever (100%), myalgia (87.5%), headache (62.5%), gastrointestinal symptoms (12.5%). One death has been reported, with a lethality rate of 12.3%, lower than the average of the last four years (13.7%) *(8)*.

Summary of the Situation in North America

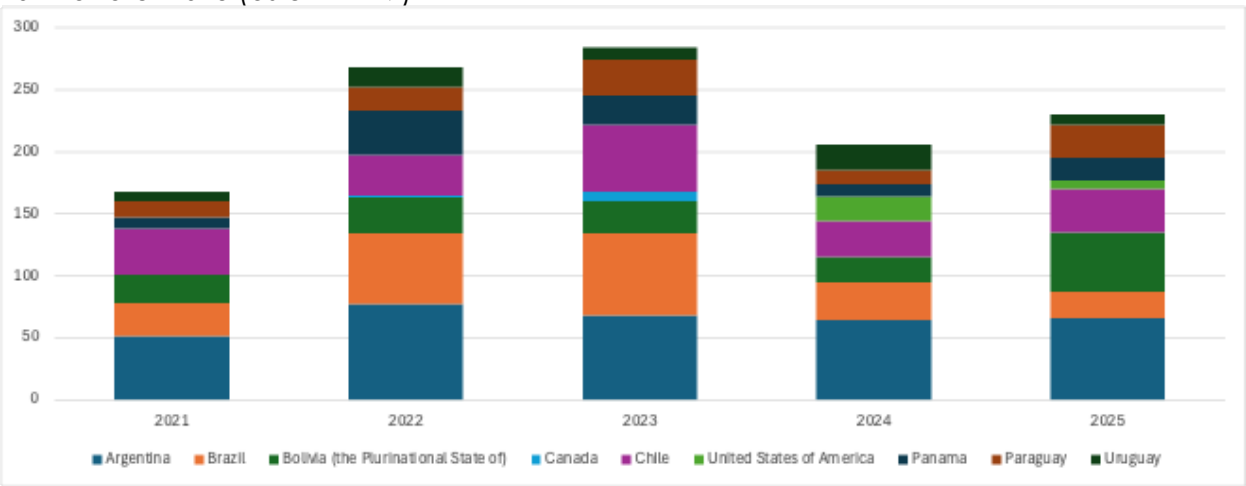
In order to provide a broader regional epidemiological context, summary information for the United States of America and Canada is presented below. While these countries have not reported regular notifications of hantavirus pulmonary syndrome in the last five years, the most recent available data are included to provide context and facilitate the interpretation of trends observed in North America.

In **Canada**, according to the Canadian Notifiable Disease Surveillance System, between 2021 and 2023, 10 confirmed cases of hantavirus pulmonary syndrome were reported, distributed in 2021 (n= 0), 2022 (n= 2) and 2023 (n= 8). No variations in the geographical distribution or epidemiological behavior of hantavirus pulmonary syndrome were identified in the country *(13)*. The data for 2024 and 2025 have not yet been published.

In the **United States**, between EW 1 and EW 52 of 2024, 20 cases of hantavirus cardiopulmonary syndrome (HPS) were confirmed, with eight deaths (case fatality rate of 40%). Cases were distributed in the following States: Arizona (n= 12), Colorado (n= 5), Washington (n= 2), and Oklahoma (n= 1). The most reported symptoms in 2024 included fever (50%), elevated hematocrit (30%), elevated creatinine (40%), and thrombocytopenia (100%). For 2025, provisionally between EW 1 and EW 47, seven confirmed cases and two deaths (case fatality rate 29%) have been reported in the following States: Arizona (n= 3), Colorado (n= 1), Nevada (n= 1), Washington (n= 1), and Wisconsin (n= 1). In the cases of 2025, the most

frequent clinical presentation has been fever (71%), elevated hematocrit (57%), elevated creatinine (57%), and thrombocytopenia (100%). The information is preliminary, given that the annual reconciliation of national data for 2024 and 2025 will be completed in 2026, so the figures are subject to change, and there is no data available from 2021 to 2023. *(7)*.

Figure 3. Cases of hantavirus pulmonary syndrome reported in the Americas Region, during 2021 and of 2025 (as of EW 47)



*Note: No data is available for Canada for the year 2024 and 2025 and for the United States of America for the year 2021, 2022, and 2023.
Source: Adapted from data provided by the respective countries *(1-8, 13)*.

Recommendations

PAHO/WHO then reminds Member States of the main recommendations for surveillance, diagnosis, clinical management, and risk communication:

Outbreak surveillance and investigation

Surveillance of hantavirus pulmonary syndrome (HPS) should be part of the country's comprehensive surveillance system and cover clinical, laboratory, and environmental aspects. It should also be taken into account as part of the differential diagnosis in the context of surveillance and detection of unusual respiratory infection. The identification of an unusually high number of cases in an area where the circulation of hantavirus is known requires investigating the causes and at the same time offers the opportunity to expand knowledge about the virus *(14)*.

The identification of a single case in an area where no cases of hantavirus had previously been reported requires a comprehensive epidemiological assessment, a detailed analysis of risk factors and individual exposures, as well as an ecological and environmental assessment in order to guide prevention and control strategies *(14)*.

Criteria for laboratory diagnosis *(14):*

- Detection of viral genetic material by reverse transcriptase polymerase chain reaction (RT-PCR), or
- Presence of hantavirus-specific IgM antibodies, or a four-fold or greater increase in IgG antibody titers, or
- Detection of viral antigen by immunohistochemistry in fatal cases.

For laboratory diagnosis and sample handling, all biosafety conditions must be considered, including containment levels (depending on the test) and appropriate use of personal protective equipment (PPE) *(14)*.

Case Management

Early identification and timely medical care improve clinical prognosis. For the clinical suspicion of hantavirus pulmonary syndrome, the clinician must resort to the combination of three factors: epidemiological data that guide him towards the possible exposure of the patient, the manifestations of fever and myalgia, and thrombocytopenia. The first laboratory data to be altered is the platelet count, and if a low or decreasing count is observed, hospitalization for observation is indicated *(14)*.

Care during the early stages of the disease should include antipyretics and analgesics, as needed.

Effective clinical management depends on careful administration of intravenous solutions, hemodynamic surveillance, and ventilatory support. Therefore, given the rapid progression of hantavirus pulmonary syndrome, clinical treatment management should focus on patient hemodynamic control, fluid management, and ventilatory support. Severe cases should be immediately transferred to the intensive care unit *(14)*.

Specific treatment: Provide intensive respiratory support; carefully avoid overhydration, which could exacerbate pulmonary edema. Cardiotonic and vasopressor drugs, administered in the incipient phase and under close monitoring, help prevent shock. Hypoxia should be strictly avoided, particularly if the patient is planned to be transferred *(14)*.

Prevention and control

Health education measures should aim to increase the identification and timely treatment of the disease, and to prevent cases by reducing contact between people and rodents. Health education measures should be aimed at both health personnel and the general population. It is recommended to implement comprehensive environmental management, with the aim of reducing the population of rodents. These measures must be adapted to the local reality *(14)*.

Prevention measures should also cover occupational risks and those related to ecotourism. Almost all classic tourist activities carry little or no risk of exposure of travelers to rodents or their excreta. However, people who engage in outdoor activities, such as campers or hikers, should take precautions to reduce the chance of exposure to potentially infectious materials. In this sense, it is important that the authorities inform the people who will carry out these activities about the risks and prevention measures *(14)*.

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