Clinical criteria for case classification

Hantavirus pulmonary syndrome (HPS) is a febrile illness (i.e., temperature >101.0°F or >38.3°C) with a prodrome consisting of fever, chills, myalgia, headache, and gastrointestinal symptoms, followed by the abrupt onset of respiratory distress and hypotension.

Non-pulmonary syndrome (NPS) hantavirus infection is a febrile illness with non-specific viral symptoms including fever, chills, myalgia, headache, and gastrointestinal symptoms. Typical clinical laboratory findings include hemoconcentration, left shift in the white blood cell count, neutrophilic leukocytosis, thrombocytopenia, and circulating immunoblasts.

Clinical criteria for case classification

**HPS**

Both of the following:

- Illness characterized by acute onset of fever >101.0°F or >38.3°C
- **And** one or more of the following clinical features:
  - Bilateral diffuse interstitial edema,
  - Or clinical diagnosis of acute respiratory distress syndrome (ARDS),
  - Or radiographic evidence of noncardiogenic pulmonary edema,
  - Or an unexplained respiratory illness resulting in death,
  - Or health care record contains a diagnosis of hantavirus pulmonary syndrome,
  - Or death certificate lists hantavirus pulmonary syndrome as a cause of death or a significant condition contributing to death.

**NPS hantavirus infection**

Both of the following:

- Illness characterized by acute onset of fever >101.0°F or >38.3°C
- **And** the absence of all the following clinical features:
  - Bilateral diffuse interstitial edema,
  - And clinical diagnosis of ARDS,
  - And radiographic evidence of noncardiogenic pulmonary edema,
  - And an unexplained respiratory illness resulting in death.

Laboratory criteria for case classification

One or more of the following:

- Detection of hantavirus-specific (Sin Nombre virus [SNV]) IgM or rising titers of hantavirus-specific IgG,
- Or detection of hantavirus-specific (SNV) ribonucleic acid (RNA) in clinical specimens by polymerase chain reaction (PCR),
- Or detection of hantavirus antigen by immunohistochemistry (IHC) in lung biopsy or autopsy tissues.
**Epidemiological criteria for case classification**
Not applicable.

**Case classification**

**HPS**
*Confirmed:*
Illness clinically compatible with HPS in a person with laboratory evidence.

**NPS hantavirus infection**
*Confirmed:*
Illness clinically compatible with NPS hantavirus infection in a person with laboratory evidence.

**Criteria to distinguish a new case from previous reports**
Not applicable.

**Comments**
Because the clinical illness is nonspecific and ARDS is common, a screening case definition can be used to determine which patients to test. In general, a predisposing medical condition (e.g., chronic pulmonary disease, malignancy, trauma, burn, and surgery) is a more likely cause of ARDS than HPS, and patients who have these underlying conditions and ARDS need not be tested for hantavirus.

Commercial laboratories typically run a hantavirus enzyme immunoassay (EIA) screening test which lacks specificity and generates false positive results. Therefore, it is important to request results for the SNV-specific EIA which commercial labs routinely run on any specimen that first tests positive for hantavirus on the screening test. The SNV-specific EIA test is more specific and if positive, supports pursuing confirmatory testing at the Bureau of Public Health Laboratories (BPHL).

✉ **Any available specimens must be sent to BPHL for confirmatory testing. Requests for clinical specimens to be sent to the CDC for diagnostic testing must be cleared through the Bureau of Epidemiology and assigned a tracking number; specimens must be routed through BPHL. This condition has been identified as a potential bioterrorism agent by the CDC.**

[Return to Table of Contents]