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Cases of Hantavirus in Central Brazil in the Federal District and Goiás State

Between May and the second week of August 2004, 17 cases of Hantavirus Cardio-Pulmonary Syndrome were reported in people living in the Federal District (Brasília, *Distrito Federal* / DF). Nine deaths have taken place, with a case-fatality rate of 53% (see Table 1 below).

Four additional cases of the disease were confirmed in residents in the State of Goiás, with two deaths (50%) (see Table 2 below). This is the first report of hantavirus in this region of the country.

Table 1: Distribution of Cases by Place of Residence and Outcome, DF

Place of Residence in the DF	Deaths	Total Cases
São Sebastião	4	10
Paranoá	1	2
Guará	1	1
Ceilândia	1	1
Sobradinho	1	1
Recanto das Emas	--	1
Brasília	1	1
Total	***9***	***17***

Source: Ministry of Health, Brazil, 10 August 2004.

Table 2: Distribution of Cases by Place of Residence and Outcome, Goiás State

Place of Residence in Goiás	Deaths	Total Cases
Cristalina	1	2
São Antônio do Descoberto	1	1
Valparaíso	--	1
Total	***2***	***4***
Source: Ministry of Health, Brazil, 10 August 2004.		

In the municipality of São Sebastião, there is evidence that transmission occurred in its rural area, where wild infected rodents were found. For the residents of the other municipalities, including Brasilia, the place of transmission is still being established. The difficulty of this determination lies in the disease's long incubation periods of up to 60 days, forcing a search of all places where the individuals could have been exposed to wild rodents during this period.

The first detected cases occurred in the second half of May (on the 23rd); however, retrospective investigations indicated the occurrence of cases since the month of April in the two federal units (states).

All the municipalities with confirmed cases belong to a typically closed biome (with low vegetation and shrubs), that has abundant presence of Brachiaria grasses. The presence of the species *Bolomys lasiurus* was identified, and samples obtained from these rodents yielded positive serology for hantavirus. This evidence, together with hantavirus isolation from these animals in outbreaks in other Brazilian states with similar biome characteristics, suggests that this is the reservoir involved with the outbreak.

During the week of 9 August, control measures have been intensified, with recommendations regarding preventive measures for the population, training of health professionals to improve patient care, mobilization of fire departments to carry out educational campaigns in rural areas, and the preparation of an Emergency Plan for the control of hantavirus.

One of the main hypotheses for the occurrence of this outbreak was the intensity and the length of the rainy season (from November to March), leading to abundance of food for the wild rodents that its reproduction. This, together with the intense urban expansion and occupation of the periurban area of the Federal District by weekend houses, provide a greater probability of contact of the wild rodents with human beings.

Source: Ministry of Health, Brazil, 10 August 2004.