

**Emerging and Reemerging Infectious Diseases,
Region of the Americas**

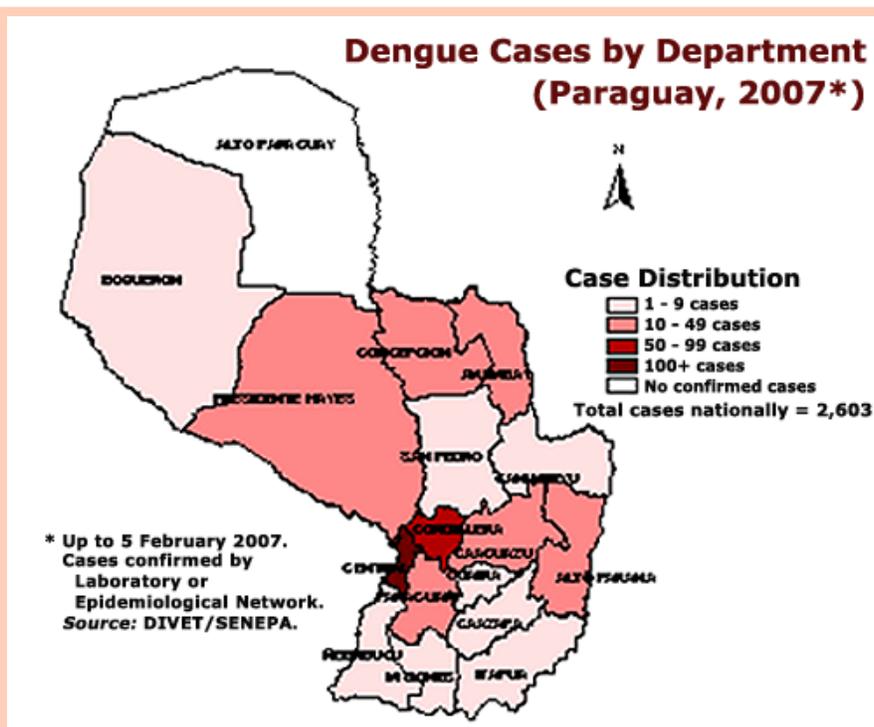
Vol. 4, No. 3 (9 February 2007)

Dengue Outbreak in Paraguay Concentrated in Asunción

Summary of the Current Situation in Paraguay: As of 8 February 2007, the epidemiological alert issued by the Ministry of Public Health and Social Welfare of Paraguay ([MSPBS](#)) has been in effect throughout the entire country, in view of cases of dengue and dengue hemorrhagic (DH). To date, there have been 3 fatal cases of DH.

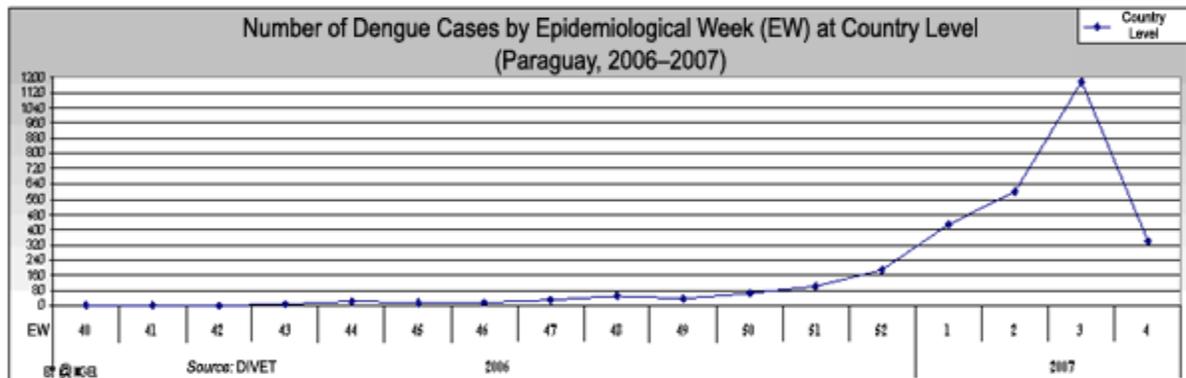
Up to 8 February 2007 (Epidemiological Week No. 6), official reports indicate

- 3,672 cases of dengue
- 22 cases of dengue hemorrhagic
- 3 deaths
- Case-fatality rate: 13.6%
- Departments affected: 90% in Asunción and Central department and 10% in the rest of the country



Prevention and Control Activities Underway: There is a need to sustain the activities promoted on the country's first official day to commemorate the fight against dengue: *Dengue Day* or "D-Day". The upsurge in current cases of dengue and dengue

hemorrhagic, along with other additional factors such as climate, which affects the density of the vector mosquitoes transmitting the disease, call for further intensifying integrated actions between the community and other institutions.



Key Programmatic Elements: The central focus in response to this outbreak is as follows:

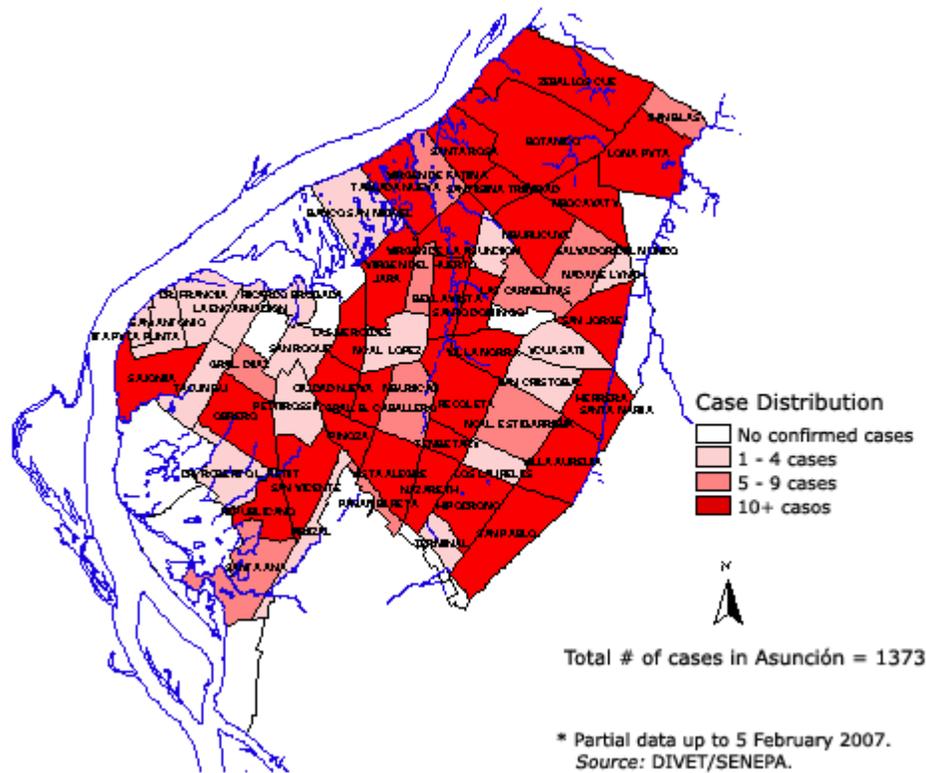
- The scheduling of environmental sanitation operations complemented by a communication strategy with emphasis on identified breeding sites.
- Environmental management complemented by chemical control in the identified high-risk areas, commencing Wednesday, 31 January 2007 and lasting for as long as the risk of transmission and disease spread persists.

The neighborhoods and municipalities have been stratified accordingly by very high, high, or medium priority.

- In the very-high-priority municipalities, the following activities are underway:
 - Broadcasts
 - Environmental management (intensified elimination of breeding sites in all dwellings).
 - Detection of cases with fever
 - Spraying door to door every 3 days using motorbike backpacks
 - Residual spraying every 5-7 days
 - Infestation index determination sampling pre- and post-intervention
- The country currently has 200-250 brigades (special personnel plus the armed forces), with an approximate total of 500 people, transportation media (pickup trucks, buses, trucks, dump trucks), fuel, maps of target areas, and forms for corresponding registries).
- **Results of the environmental-management operations:** The various activities that made up these operations started on 31 January 2007. A total of 33,433 houses were inspected in a total of 37 targeted neighborhoods, showing indices of infestation of between 1% and 15%.

Dengue Cases in Asunción, 2007*

(Confirmed by Laboratory or Epidemiological Network)



Establishment of the 'Situation Room': Due to current needs, local levels report three times a week to the Situation Room, to provide data on patient-care and community-level activities, in order to maintain up-to-date information on an ongoing basis. The Situation Room analyzes the trends and patterns of the epidemic at the country level. Thus, the operations of the different federal departments will be evaluated with feedback so as to redirect strategies should the entomological and epidemiological evidence obtained indicate.

Data reported to the Situation Room

- Timetable of activities by district and/or neighborhood

Once activities are completed, evaluate the following:

- Sanitation operations
 - Number of households inspected by municipality and/or neighborhood.
 - Tons of waste eliminated.
 - Infestation indices before and after the sanitation operation.
- Environmental-management operations
 - Number of households covered, by municipality and/or neighborhood.
 - Number of households that were closed.
 - Number of households that did not permit entry (or showed reluctance to do so).
 - Number of vacant lots.
 - Number of houses with breeding sites showing positive for *Aedes aegypti* (houses where larvae were found).

- Number of febrile patients found during the environmental-management operations, by municipality and/or neighborhood.
- Indices of infestation before and after the environmental-management operations.

Furthermore, the clinical consultations should report the number of patients with fever and the number of suspected and confirmed cases of dengue and dengue hemorrhagic fever.

The above-mentioned set of different strategies should achieve the following objective:

To reduce transmission in the shortest possible time and thus avoid a greater number of cases and deaths from DHF.

Source: Information obtained by the [PAHO Regional Program on Dengue](#) through the PAHO Country Office in Paraguay ([PAHO-Paraguay](#)), based on data from the central database [Centro de Cómputos DIVET](#) run by the Ministry of Public Health and Social Welfare (*Ministerio de Salud Pública y Bienestar Social* / [MSPBS](#)) of Paraguay.