

Emerging and Reemerging Infectious Diseases, Region of the Americas

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Dengue Outbreak in Brazil Concentrated in Mato Grosso do Sul

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Situation in Brazil

Summary: Up to Epidemiological Week (EW) 3, 20 January 2007, the following was reported:

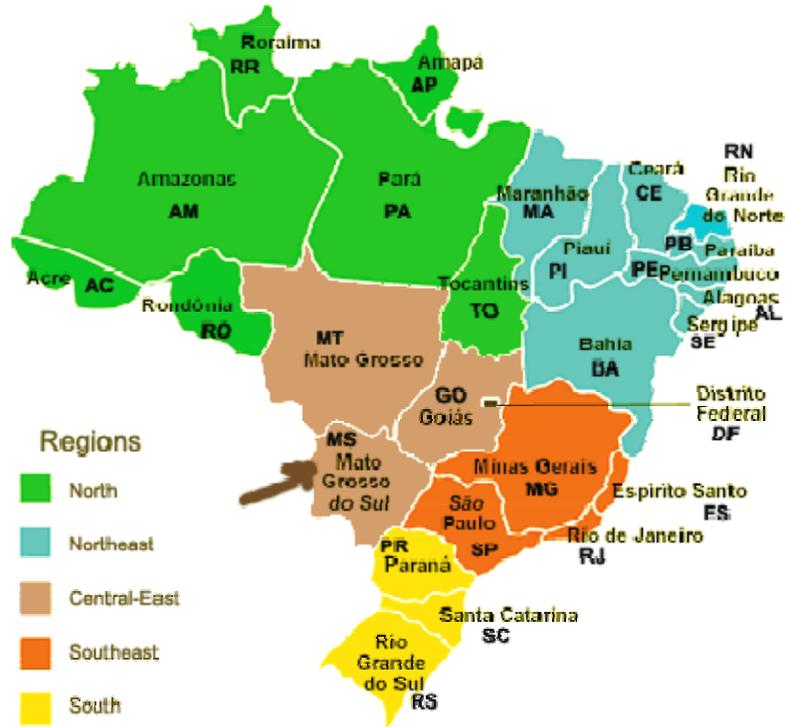
- 21,444 cases of dengue, which represents an increase of 20% when compared with the same period in 2006 (preliminary results, seeing that the states of Amazonas, Roraima and Rio Grande do Sul have not sent information)
- 11 cases of dengue hemorrhagic (DH)
- 3 deaths
- Affected states: 24 states have sent data for this period. The states with the greatest number of cases are as follows:
 - Mato Grosso do Sul: 15,335 cases (71%)
 - Rio de Janeiro: 1,284 cases (6%)
 - Minas Gerais: 748 cases (3%)
 - São Paulo: 699 cases (3%)
 - Tocantins: 455 cases (2%)
 - Rio Grande do Sul and Santa Catarina continue to report no native transmission of dengue



Historical Background: Dengue outbreaks occur mainly from January to May, due to climatic conditions favorable to the transmitting vector, *Aedes aegypti*, during that time of year. Since 1986, when the disease was re-introduced into the country, dengue cases have occurred every year, with various epidemic peaks occurring during this period.

- In the 1990s, including during non-epidemic years, the disease produced tens of thousands of cases every year. The last epidemic peak occurred in 2002,

- following the introduction of the DEN-3 virus, with reports of 794,000 cases, most of them from Rio de Janeiro.
- In the following years, the dispersion of DEN-3 throughout other Brazilian states perpetuated a surge in outbreaks and epidemics, although not reaching 2002 levels.
 - Last year, 306,180 cases were reported, with the regions most affected being the



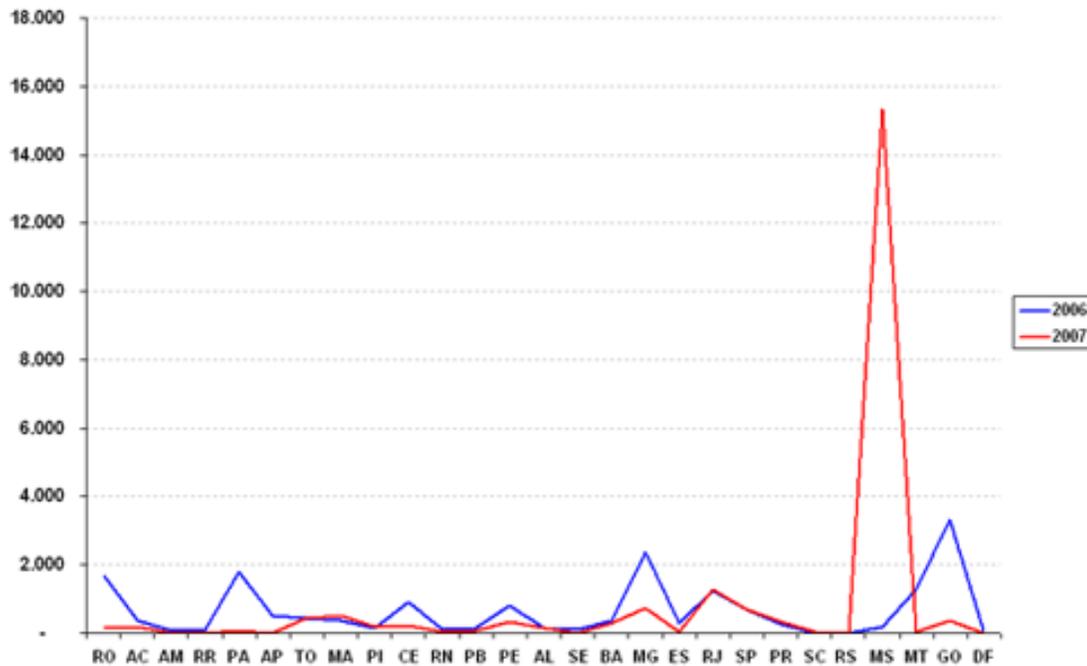
Southeast (with 121,197 cases) and the Northeast (91,760 cases).

Situation in Mato Grosso do Sul

Summary: At present, reports show an increase of dengue cases in the state of Mato Grosso do Sul in such areas as the municipality of Campo Grande. Up to 5 February 2007 (Epidemiological Week 6), reports are as follows:

- 15,335 suspected cases of dengue
- 3 cases of dengue hemorrhagic
- 2 deaths
- Case-fatality rate: 66.6%
- Affected municipalities:
Município de Campo Grande (with 70.5% of all cases), Aquidauana, Cojín, Dorados, and Anastasio

Distribution of Reported Dengue Cases in Brazil, by State, 2006 and 2007



In 2007, according to the State Health Department, so far 11,085 cases of dengue have been reported so far, 70.5% (7,818) of them concentrated in the municipality of Campo Grande and the rest dispersed throughout 38 municipalities in the interior, especially in Aquidauana (1,167 cases), Cojín (572 cases), Dorados (275 cases), and Anastasio (244 cases).

- Three cases of dengue hemorrhagic were confirmed, one of them being in Campo Grande with a favorable outcome, and two that resulted in deaths, one in Aquidauana and one in Laguna Carapã.
- Comparing the first two weeks of January 2007 with the same period in 2006, Mato Grosso do Sul registered a **notable increase** in dengue cases.

Prevention and Control Activities to Fight Dengue

During **2006**, the Ministry of Health developed activities in Mato Grosso do Sul to provide support to the State and Municipal Departments of Health in their dengue prevention and control activities, for example,

- Assigning monthly allotments destined for the municipalities.
- Hiring endemic control agents to tend to the affected municipalities.
- Hiring a consultant to act in conjunction with the State Department of Health to support the implementation and follow-up of the National Dengue Control Program (*Programa Nacional de Controle da Dengue / PNCD*) in the priority municipalities.
- Conducting a quick survey on the infestation index of *Aedes aegypti* (*El Levantamiento Rápido del Índice de Infestación de Aedes aegypti / LIRAA*) in four municipalities. The indices presented by the municipalities of Corumbá and Campo Grande show a situation of alert; and the municipalities of Dorados and Punta Pondrá, a satisfactory one. LIRAA allows the municipal government to have at its disposal information on vector infestation status for dengue for each

- neighborhood, allowing for focused, intensified actions in time to prevent outbreaks from happening in the summer.
- Allotting funds to train 77 instructors, 82 field supervisors, and 40 technicians in social mobilization.
 - Providing vehicles to put the publicity campaign for communication and mobilization on wheels, for celebrating *National Day to Mobilize against Dengue* in the state.
 - Since the start of structured activities in the National Dengue Control Program (PNCD) in 2002, the Ministry has been providing equipment and vehicles.

In **2007**, a considerable upsurge in dengue cases has been reported in the state of Mato Grosso do Sul, in areas such as the city of Campo Grande. Given this epidemiological situation, the Secretary of Health Surveillance (*Secretaria de Vigilância em Saúde / SVS*) has taken the following measures:

- Additional allotments of insecticide to intensify vector-control activities aimed at adult mosquitoes.
- Visit by the Coordinator General of the National Dengue Control Program to the city of Campo Grande on 16 January 2007, in conjunction with the State Department of Health, the Ministry of Health (*Ministério da Saúde / MS*), and the Municipal Secretary of Health (SMS) of Campo Grande to evaluate the activities being developed.
- Program reinforcement with vehicle-mounted insecticide-spraying equipment.
- Consulting and follow-up services by a technical specialist from the Ministry of Health on vector-control activities that are being developed by the city of Campo Grande.
- Consulting and follow-up services by two technical specialists from the Ministry of Health on epidemiological surveillance activities being developing by the Secretary of Health Status.
- Sending follow-up cards and communication and mobilization brochures to dengue patients.
- Sending paracetemole tablets and salt envelopes for oral rehydration.
- Participation by the Ministry of Health and the Secretary of Health Surveillance in the meeting of the Intersectoral Bipartite Commission of Mato Grosso do Sul on 1 February, to evaluate activities aimed at intensifying dengue control measures now being developed in the state.

The Ministry of Health is monitoring the municipalities that present the greatest risk of dengue outbreaks, to ensure early detection of any signs of intensification of transmission and to provide support to the states and municipalities in their activities aimed at target areas.

Source: Information obtained by the [PAHO Regional Program on Dengue](#), via the PAHO Country Office in Brazil ([OPAS](#)), based on information obtained by the National Dengue Control Program of the Ministry of Health of Brazil (*Programa Nacional de Controle da Dengue / PNCD do Ministério da Saúde / MS*) and from the Departments of Health of the various Brazilian states.