

F. CURRENT DENGUE SITUATION

Introduction

1. Dengue, an endemic disease with epidemic cycles, continues to be a significant public health problem in the Region. Its persistence is associated with the presence of social determinants, or macrodeterminants, such as population growth, migration, uncontrolled or unplanned urbanization, poverty belts in cities, and the lack of basic services such as water supply and liquid and solid waste disposal.
2. This report presents an update on the situation of this disease and progress in the activities promoted by the Member States for its prevention and control.

Background

3. During the 27th Pan American Sanitary Conference in 2007, the countries recognized the problems posed by increasingly frequent dengue outbreaks and the complexity of the epidemiological situation for its prevention and control. Considering dengue to be a problem that goes beyond the health sector, the Conference set a course for the identification of public policies to control the macrodeterminants of its transmission and to strengthen national integrated management strategies for the prevention and control of dengue (IMS-dengue).

Situation analysis

4. The dengue epidemiological situation in the Americas continues to be highly complex, with all four serotypes of the disease in circulation and conditions that are very propitious for their transmission. The number of reported cases peaked in 2010 at 1.6 million, 50,235 of them severe, and 1,185 deaths. In 2011, morbidity declined by 39% and the number of deaths by 40%, with 1,044,279 cases and 719 deaths. It appears that this trend will continue in 2012. There was also a 39.1% reduction in the percentage of severe cases in 2011 with respect to the preceding four years, which may be related to the application of the new case management guidelines that recommend timely care of warning signs indicating severity at the primary care level.
5. Currently, 22 countries and territories of the Americas have prepared a national IMS-dengue. In addition, four subregional IMS-dengue have been prepared (Andean subregion, Southern Cone, Central America, and the English-speaking Caribbean).
6. The IMS-dengue evaluation process began in Mexico in 2008. Since then, 16 countries and territories have been evaluated. The Dengue International Task Force (GTI-dengue for its Spanish acronym) and the national technical groups carried out all of the evaluations jointly. Since 2003, GTI-dengue has provided technical support during

outbreaks and epidemics and has strengthened the capacity of technical personnel in the countries. Today, the Group promotes the use of new tools such as the Larval Index Rapid Assay of *Aedes aegypti*, (known as LIRAA, by its Portuguese acronym), Geographic Information Systems (GIS), new diagnostic tests, and the new dengue classification.

7. During the 2009-2010 biennium, important outbreaks were reported in Argentina, Colombia, Brazil, Bolivia, Guadeloupe, Honduras, Martinique, Paraguay, Puerto Rico, Dominican Republic, and Venezuela. The response to the problem has been tangibly more comprehensive with the participation of municipalities, the private sector, the community, and the media, in addition to the health sector. The outbreaks in Santa Cruz de la Sierra in Bolivia, the Chaco in Argentina, and Honduras are examples of this.

8. The Dengue Laboratory Network of the Americas (RELDA) was consolidated, comprising the national reference laboratories and the four PAHO/WHO collaborating centers for dengue. The quality control process and the use of molecular diagnostic techniques were strengthened.

9. Training continues to be provided to the countries on the Communication for Behavioral Impact methodology (COMBI) for dengue and on risk communication. In 2011, a publication systematizing this process was prepared and distributed to all the countries.

10. IMS-dengue is influencing the development of public policy, laws, and ordinances to improve the environment and tackle the macrodeterminants that cause dengue. Greater extrasectoral impetus is needed, however, and the social determinants of transmission must be addressed in order to ensure the sustainability of current efforts.

11. Dissemination of the new guides on dengue prepared by PAHO/WHO began in 2010, with their translation, publication, and distribution. Experts from the Region adapted the patient care component during 2011 and training covered all the countries of South America, Central America, and the Spanish-speaking Caribbean.

12. In terms of combating the vector, inappropriate insecticide use compromises the durability of the main active ingredients currently in use and evidences the growing resistance of *Aedes aegypti* to insecticides. At the same time, few countries in the Region are conducting research on susceptibility and resistance. For this reason, PAHO/WHO is working on a regional project to monitor insecticide resistance in collaboration with the Latin American Network for Vector Control (RELCOV) and with the support of the four reference centers.

13. Several vaccines against dengue are currently in the clinical development phases and it is possible that at least one safe and effective vaccine will be available in the near

future (5 to 10 years). The more advanced of these, a live attenuated vaccine against the four serotypes, is currently in phase III clinical trials, the results of which should be available in 2013. There is an incentive for Member States and PAHO/WHO to prepare for the timely and evidence-based introduction of the vaccine against dengue, which will be one more tool for dengue control within an integrated approach. Significantly, ProVac¹ has signaled its intention to include the dengue vaccine in its future activities.

14. Cooperation from the Spanish and Canadian governments played a critical role in the progress made in the last two biennia. The Meso-America Project for dengue will be a source of support for the countries of that subregion in the coming years.

15. Major challenges remain for dengue prevention and control in the Region. Countries still face serious problems in addressing social determinants, compounded by other external factors such as climate change that benefit the life cycle of the mosquito transmitter.

Proposal

16. This progress report presents the accomplishments and work of the Pan American Sanitary Bureau for the prevention and control of dengue in the Region. It proposes to continue to support the integrated management response, strengthen national capabilities, and step up efforts by the Member States to implement public policies that influence the social determinants or macrodeterminants related to the disease.

¹ The ProVac initiative was created by PAHO/WHO's Immunization Project to strengthen national capacity to make evidence-based decisions on new vaccines introduction. It is made up of high-level scientific institutions and organizations.