

Overview of the First Regional Dengue Symposium

Rio de Janeiro, Brazil, 3-4 November 2015

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First Regional Dengue Symposium

- On 3-4 November 2015, the First Regional Dengue Symposium was held in Rio de Janeiro, Brazil.
- 120 scientists, physicians and policy makers from 16 countries participated.
- Participants represented the healthcare sector, private sector, vaccine producers, insecticide industries, and included epidemiologists and communication experts.



Background

- A vaccine against dengue is widely anticipated to be a crucial control measure.
- However, questions remain about how a vaccine will contribute to an overall prevention & control strategy.
- Trade-offs between approaches must be carefully weighed, as tipping the scales too much in one direction could lead to disease resurgence.



Background

- Decisions about vaccine introduction as well as vector control approaches will rely on scientific evidence.
- Prevention and control of dengue will also rest on:
 - Raising awareness
 - Communicating evidence
 - Gaining and maintaining public confidence
 - Generating political will and partnerships



Presentations

- Thirty presentations covered a host of issues, including:
 - Dengue disease burden & economic costs
 - Health communications
 - Vector control strategies
 - Prospective vaccines & vaccine introduction
 - Integrated vaccine & vector control strategies

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Presentation Highlights

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Dengue in Latin America & the Caribbean

- In the Americas, the number of reported cases of dengue rose from **1.54 million** between 1980 and 1989, to **8.98 million** between 2010 and 2015.
- Brazil, Mexico, Colombia, and Venezuela have the highest number of cases reported, with all other countries combined representing 20-30% of the regional burden.
- In the past 5-10 years, dengue has spread to a number of countries, including Paraguay, Peru, and Argentina, which had an outbreak of 38,000 cases in one year.



Economic Burden of Dengue

- The aggregate cost of dengue, including prevention, was US\$1,233 billion in Brazil and US\$413 million in Mexico in 2013.
- Another study in Brazil estimated that direct and indirect costs combined rose from US\$370.8 million in 2009 to US\$1,227 billion in 2013.



Integrated Management Strategy for Dengue Prevention & Control

- Between 2001-2013, PAHO passed a series of resolutions to guide the fight against dengue.
- This led to the Integrated Management Strategy for Dengue Prevention and Control (EGI-Dengue).
- 32 countries in the region have adopted the strategy, and an international technical task force assists with its technical implementation.



Strengthening Laboratory Diagnostics

- Symposium participants heard how RELDA, the Dengue Laboratory Network of the Americas, has grown since its official launch in 2009.
- Today, RELDA includes 30 countries.

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Epidemiological Surveillance

- Improvements in surveillance have enabled more countries to systematically collect and disseminate data on dengue.
- Epidemiological newsletters are now published in 20 countries, and mechanisms are in place to issue alerts.
- Improved reporting will provide crucial data for understanding both the burden of disease and for guiding vaccine introduction and monitoring.



Epidemiological Surveillance

- Mexico, El Salvador, Costa Rica, Panama, Colombia, Peru, Brazil & Argentina are participating in a pilot surveillance project that will focus on:
 - Standardized use of dengue case definitions, in conformity with WHO's 2009 classifications;
 - Use of both national and sentinel surveillance; and
 - Reporting of environmental and insect indicators, as well as disease and pathogen indicators.



Integrated Vector Management

- Presentations on vector biology and behavior; challenges to Integrated Vector Management; and developments in vector control tools were shared.
- Perspectives on the relationship between vaccination and vector control in preventing dengue and other viral diseases spread by *Aedes aegypti* were highlighted.
- Innovative vector control approaches were presented. (*Wolbachia*; transgenic mosquitoes; new pesticide development; and advances in the use of spraying equipment).



Participants also heard about:

- Status of six dengue vaccine candidates. Including:
 - safety, efficacy, potential time of availability, projected dose schedules, and age of vaccination.
- Patient care to lower mortality.
- Role of communications in diverse circumstances.
- The communications challenges that would accompany introduction of dengue vaccine.



Participants also heard about:

- Issues of modeling vaccine impact prior to introduction and assessing actual impact after introduction.
- The process for WHO recommendations and the practical considerations for dengue vaccine introductions.



Dengue Vaccine Introduction

- We have entered the start of a transition period where evidence becomes even more important as vaccines become available.
- Countries will be challenged with setting priorities, and deciding whether to introduce an available vaccine, or to wait for other candidates.

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Conclusion

- The progress and challenges in dengue prevention and control were reviewed from nearly every angle.
- Deliberations increased anticipation for vaccines now in development and one recently licensed. It also highlighted areas in need of ongoing attention.
- Chief among these are the need to balance vaccination and vector control, and communication challenges that will be associated with vaccine introduction.



Thank You

