

## Inform'ACTION n°30

APRIL 2009

### Regional Dengue Meeting



#### Background

Outbreaks of dengue serotype 4 (DEN-4) spread across several Pacific Island countries and territories (PICTs) in the second half of 2008, after previous outbreaks due to DEN-1. To help PICTs respond to this situation, a one-day meeting on dengue was held in Nadi on November 27, 2008, using the opportunity provided by the 2nd Pacific Avian and Pandemic Influenza Taskforce (PAPITaF) meeting.

#### Objectives

Most of the participants were human health representatives also involved in pandemic influenza preparedness. Thus, looking for synergies between pandemic influenza preparedness in PICTs and broader preparedness for epidemics in general, as exemplified by dengue, was an obvious theme for the meeting. Such preparedness includes capacity development in surveillance and response, social mobilisation, legal frameworks, multi-sectoral approaches and surge capacity.

Further objectives were to

- review current knowledge of the epidemiology and public health impact of dengue and vector-control measures, and identify possible knowledge gaps in dengue control that may need operational research specific to the Pacific Islands (e.g. the use of biological control methods);
- provide advocacy for effective dengue control, and share and discuss successful dengue control experiences and strategies that could be adapted elsewhere;
- identify training needs for vector control and clinical management, and examine how existing training programmes could help address them;
- discuss and clarify current procedures for laboratory confirmation, including serotyping, and update participants on the role and availability of dengue rapid diagnostic tests;



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- discuss aspects of the regional dengue strategy, in particular the private sector component, in the context of the Pacific Islands, and contribute to the preparation of a regional dengue vector surveillance and control project.

## Presentations

The meeting was organised in the framework of the Pacific Public Health Surveillance Network (PPHSN). Linking it to the 2nd PAPITaF meeting created an opportunity for most PICTs to be represented at the dengue meeting, sharing their experiences and learning from each other.

Several delegates presented the current dengue situation in their country, their surveillance strategies and containment and control activities. These individual presentations were complemented by an overview of the regional situation, country by country, largely based on recent PacNet messages and surveillance reports to PPHSN, and the global epidemiological picture. The latter was provided by Dr John Ehrenberg from the WHO Western Pacific Regional Office in Manila, who also outlined the new Asia-Pacific Dengue Strategy. A second speaker from WHO, Dr Kevin Palmer, gave an overview of classic and innovative vector surveillance and dengue control strategies, and spoke separately on approaches to estimating the economic impact of dengue outbreaks, particularly with regard to the tourism sector.

Laboratory experts from PICTs and from SPC presented currently recommended procedures for lab diagnosis of dengue. They also covered the role and availability of rapid tests, as well as referral options and shipping procedures for external lab confirmation, including serotyping.

## Group work

The participants worked in small groups on the following questions:

1. What are the current **gaps** in dengue prevention and control that need to be addressed through co-ordinated regional efforts, and which systems/methods/tools do we have to identify them?
2. What are the priorities for **training**?
3. What are the priorities for operational **research**?

## Gaps

The main gaps identified were:

- No surveillance of human cases in some PICTs
- Limited laboratory diagnostic capacity for dengue
- No good estimates of the burden of the disease
- No, or weak entomological surveillance

In PNG, Solomon Islands and Vanuatu, well-resourced systems for vector surveillance and control are in place, but these solely target the malaria vector (*Anopheles* spp.). With some adaptation, it should be possible to extend these systems to the dengue vector (*Aedes* spp.) as well.

## Training

Participants identified training of entomologists as a priority. But they also considered that health inspectors need further training, especially in vector identification, surveillance and control; clinicians need training in case detection and management; lab technicians need



training in diagnostic methods; and public health staff, in general, need training in health education and community mobilisation techniques.

## Research

Systematic studies on vector distribution were considered a research priority. But participants also suggested further research into the behaviour of - and control options for - less common species such as *Aedes polynesiensis*; patterns of resistance to insecticides; and the development of instruments to measure behavioural change in people and its impact on vector populations.

## Networking

PICTs are also looking for better access to external entomological expertise. This could be facilitated by building a regional network, e.g. with universities in Australia, and through organising secondments of external entomologists to countries, with PICT specialists in turn visiting external universities. Other options suggested were establishing the infrastructure and procedures for obtaining remote advice, e.g. by using stereo microscopes equipped with digital cameras, and sharing photos via the internet.

## World Café



A special technique called World Café (see box below) was used for a group work and brainstorming session in the afternoon. Five questions were chosen to explore different aspects of public-private partnerships in dengue prevention and control:

1. How can the private sector contribute to initiating or strengthening **community-based activities** for the elimination of dengue vector breeding sites?
2. Of the various dengue prevention and control activities, which ones are better done by the **public** sector and which by the **private** sector? Why?
3. The **tourism** sector is usually identified as the most important business sector in relation to dengue prevention and control. Which **other sectors/businesses** may also have a strong interest? Why? If in specific countries, where?
4. It seems that significant stakeholders in the tourism sector don't want to be publicly associated with dengue prevention and control because they think it's **bad publicity**. Are their concerns justified? How can this perception/situation be changed?
5. When relying on the private sector for dengue prevention and control, are there issues of **equity**? If yes, what can be done to reduce these inequalities?

Summaries of the responses to each of these questions can be found on the PPHSN website at <http://www.spc.int/phs/PPHSN/Meetings/Regional-dengue-meeting.htm>.

### **What's the World Café?**

The World Café is an innovative and simple methodology for hosting group discussions. Views and ideas are built on and further developed as groups move from one discussion space to the next and people move between groups. Through this process of 'cross-pollination', the World Café draws on the collective intelligence of participants in a short period of time.



## Principles

- **Set the context:** You must have a clear idea of the What and Why of the café.
- **Create a hospitable space where everyone feels free to offer their best ideas:** Choose a warm, inviting environment (e.g. comfortable chairs around tables, with different food and refreshments offered at each table).
- **Find and brief facilitators for each discussion space (or table).**
- **Find questions that are relevant to the real-life concerns of the participants** (in consultation with the facilitators): Questions must be simple and clear, thought-provoking and generate energy.
- **Encourage all participants to contribute to the conversation.**
- **Connect diverse perspectives:** The facilitator at each table summarises the conversation of the previous round for the newcomers, ensuring that important points are available for consideration in the upcoming round.
- **Listen together and notice patterns.**
- **Share collective discoveries.**

For more information, contact Christelle Lepers at [christelle@spc.int](mailto:christelle@spc.int).

## Conclusion

The dengue meeting did not aim to endorse pre-formulated recommendations. However, a number of key points emerged that were widely agreed on:

- Dengue outbreaks present a health threat and disease burden that PICTs need to take seriously.
- The DEN-4 serotype has not circulated in the Pacific Island region in the last 20 years. This makes populations particularly vulnerable to the current regional epidemic.
- Environmental factors such as climate (temperature, wind and rainfall/humidity patterns), urbanisation and lifestyle (e.g. waste creation and disposal) have a major impact on dengue incidence. Their role needs to be well understood and trends need to be monitored, in order to better respond to changes (e.g. climate change) or mitigate them where possible (e.g. better waste management).
- It is in the interest of all PICTs to inform each other early on and continuously about outbreaks as they develop. Detailed epidemiological information should be exchanged to enable PICTs to mutually benefit from experiences with response and control strategies.
- SPC, WHO and countries should use standardised case definitions, based on established WHO case definitions.
- Lab testing methods should be validated, evaluated and standardised across the region.



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- Options for bulk purchase, stockpiling and rapid procurement of reagents and test kits should be explored, so that countries have cheaper, quicker and more reliable access to quality products.

Public-private partnerships are an interesting long-term approach to strengthening dengue prevention and control. However, there are few strong private partners available in the Pacific Island region, and the public health sector lacks experience in engaging them. Thus public-private partnerships are not a 'quick fix' for resource and capacity gaps in the public sector.

### **Dr Justus Benzler**

Communicable Disease Surveillance Specialist

SPC

