PacNet: An Early Warning System to Prevent and Control Outbreaks of Infectious Diseases in the Pacific Islands

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Nowadays, communicable diseases travel fast and easily between islands, countries and around the world...

Information must travel faster and resources be ready!
PacNet is the early warning system of the Pacific Public Health Surveillance Network (PPHSN) since 1997...

It allows rapid overall communication within the network.
What is PPHSN?

- Created in 1996 by Pacific Island Countries and Territories, SPC & WHO & partner agencies, PPHSN is a voluntary network of countries/territories and institutions/organisations.

- Dedicated to strengthening public health surveillance & response.

- Current focus on communicable diseases: epidemic ones first.

- PPHSN Goal is to improve public health surveillance and response in the Pacific Islands, in a sustainable way.
PPHSN Institutional Framework

- Training institutions
- Networks & Associations
- Laboratories
- Core members: 22 Ministries of Health
- International agencies
- Aid donors, Projects
### Operational steps

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11th Pacific Science Inter-Congress, 02–06 March 2009, Tahiti, French Polynesia
• Early warning system for epidemics threats (communicable diseases)

• Raise awareness and preparedness at national & regional levels
“Over-information kills information”
> Not the case with PacNet

The number of messages posted to the list varies according to the epidemic context in the region (average of 20 messages/month)

> Not related to the changes in the number of subscribers that has steadily increased
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Effectiveness during SARS

- Information dissemination was done promptly and efficiently through PacNet during the SARS outbreak in 2003.
  > PPHSN members received WHO global alert within 24 hours
  > Regular updates were posted rapidly
  > Quick dissemination of guidelines
  > PPHSN members reactions, questions and contributions followed very quickly (rapid access to resource and expertise)
Network of health professionals mainly from the Pacific region (and beyond)

Almost 90% of its members are within the rim of the great Pacific basin > an essential requirement for an effectiveness recognized on several occasions
636 members as of 31 January 2009

> Gives access to wide resources, including technical expertise (epidemiologists, biologists, microbiologists, clinicians and other health specialists)
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E-mail subscribers by resource institution as at 31 January 2009

- Laboratories: 5%
- WHO: 8%
- SPC: 4%
- CDC: 6%
- Others: 14%
- Training Institutions: 7%
- SPC member countries: 56%

N=636
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• Simplicity and accessibility > Key elements for effective communication
e.g. shown to be more reliable during a warning simulation than a web-based system

• Email (and fax) listserver (timely and cheap communication)

• Easy to use, members just send an email to pacnet@lyris.spc.int (using plain text, avoiding attachments)

• Archives of PacNet messages are accessible through PPHSN website since 1997 (good reference to find information on epidemics that occurred in the region)

• All health professionals from/interested in the Pacific Island region can subscribe

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[Message content]

******** English Version Starts ********

DENGUE FEVER SURVEILLANCE IN FRENCH POLYNESIA

Monthly Epidemiological Update - Situation as at Week 48 - 20 September 2008

The situation currently remains stable with 359 positive cases recorded by laboratories since the beginning of 2008, including 0 new cases for the month of September. DEN 1 is still the only serotype being isolated. There is no increasing trends in sentinel sites and main hospital.

There is on-going high-level transmission of DEN 4 in the Pacific region. At the current time, Fiji is most affected with 1000 reported cases to date. It should be recalled that French Polynesia has not had an outbreak of DEN 4 since the 1980s.

You are asked, then, to remain vigilant and request laboratory confirmation (if possible before D6 of the disease) for any patient with a suspected case of dengue fever who has travelled outside of French Polynesia during the two weeks preceding the appearance of symptoms (request form attached herewith).

Distribution of cases of dengue fever by island

Distribution of positive* cases of dengue fever by island

Windward Island group
- Tahiti: 119 [8]
- Moorea: 8 [1]

Leeward Island group
- Bora Bora: 7 [0]
- Huahine: 0 [0]
- Mo'orea: 0 [0]
- Raiatea: 17 [0]
- Tahaa: 3 [0]
- Marquesas Islands
- Nukuhiva: 0 [0]
- Ua Pou: 0 [0]

Austral Islands
- Hiva Oa: 0 [0]
- Fatu Hiva: 0 [0]
- Taiohae: 0 [0]

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• Another list called “PacNet-restricted” was launched in 2000

• Meant to complement PacNet

• **Higher degree of confidentiality:** allows not-yet verified information on outbreaks to be circulated as early as possible amongst the Pacific Island Departments or Ministries of Health (includes mainly countries’ response teams, WHO and SPC)