Proposed Web-based ASEAN-Net in Promoting Regional Infectious Disease Outbreak Recognition and Response Activities

U.S. NAVAL MEDICAL RESEARCH UNIT NO. 2 *
(U.S. NAMRU-2, Jakarta, Indonesia)

*WHO Collaborating Center for Emerging and Re-emerging Diseases*

In cooperation with
National Institute of Health Research and Development, Ministry of Health, Republic of Indonesia
BACKGROUND

- MOST EMERGING INFECTIOUS DISEASE ENTITIES INTRODUCE THEMSELVES IN EPIDEMIC FORM, INCLUDING:
  - New infectious disease agents.
  - Re-emergence of disease agents.
  - Changing epidemiology in epidemic disease occurrence.
  - Emerging anti-microbial drug resistance.
  - “Antigenic drift/shifts” resulting in increased virulence.
APPROACH

DEVELOPING REGIONAL OUTBREAK RECOGNITION AND RESPONSE CAPABILITIES.
RATIONAL

• NEW DISEASE ENTITIES TEND TO OVERWHELM “SUSCEPTIBLE POPULATIONS”:
  – Marginalized populations as to their immunological status.
    • Naïve (no previous exposure history).
    • Compromised (already weakened by background disease burden).
OUTBREAK RESPONSE STRATEGY

- Outbreak response training workshops.
- Develop laboratory diagnostic capabilities in identifying causative outbreak etiologies.
- Direct and indirect support of outbreak investigations.
- Develop Early Warning Outbreak Recognition System (EWORS).

Develop web-based ASEAN-Net in facilitating exchange of outbreak information between network partners.
Promoting Regional Outbreak Response Capabilities through Training Workshops

Outbreak Response Training Workshop, Vung Tau, Vietnam, 2001
Some highlights from the training sessions.
<table>
<thead>
<tr>
<th>Outbreak</th>
<th>Location</th>
<th>Investigation period</th>
</tr>
</thead>
<tbody>
<tr>
<td>17 diarrheal outbreaks</td>
<td>4 in Sumatra&lt;br&gt;5 in Jawa&lt;br&gt;2 in Kalimantan&lt;br&gt;2 in Nusa Tenggara&lt;br&gt;1 in Sulawesi&lt;br&gt;3 in Papua</td>
<td>Period of 1993 - 1999</td>
</tr>
<tr>
<td>“Pig” outbreak (influenza A)</td>
<td>Jayawijaya Regency, Papua</td>
<td>April 1997</td>
</tr>
<tr>
<td>Dengue Hemorrhagic Fever (DHF)</td>
<td>Palembang, South Sumatra</td>
<td>Mach, 1998</td>
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<tr>
<td>Hepatitis E</td>
<td>Bondowoso, East Java</td>
<td>April 1998</td>
</tr>
<tr>
<td>Outbreak</td>
<td>Location</td>
<td>Investigation Period</td>
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<tr>
<td>Anthrax</td>
<td>Manggarai Regency, East Nusa Tenggara</td>
<td>March 1999</td>
</tr>
<tr>
<td>Nipah virus</td>
<td>Indonesia (preemptive study in Medan, Batam, Pakan Baru).</td>
<td>April 1999</td>
</tr>
<tr>
<td>Hepatitis A</td>
<td>Metro, Lampung</td>
<td>August 2000</td>
</tr>
<tr>
<td>Dengue Hemorrhagic Fever</td>
<td>Merauke, Papua</td>
<td>April 2001</td>
</tr>
</tbody>
</table>
ASEAN-Net COMPATIBLE: EARLY WARNING OUTBREAK RECOGNITION SYSTEM (EWORS)

• EWORS conceived, designed, and first deployed for pilot implementation in Indonesia.
• EWORS represents first NAMRU-2/Indonesian MOH patent.
• 9 hospital sites included in the Indonesian network, 3 in Cambodia, and 5 in Vietnam.
• Over 500,000 case entries in first two years, and 10 instances of outbreak recognition.
• Expansion plans on-line for Indonesia, Laos, Vietnam, Thailand, and Cambodia.
CONSENSUS FOR REGIONAL WEB-BASED OUTBREAK INFORMATION NETWORK: ASEAN-Net

  - 130 participants representing 17 countries, including:
    - Minister of Health, Indonesia.
    - Secretary of State for Health, Cambodia.
    - Vice Minister of Health, Laos.
    - Vice Minister of Health (Rep), Vietnam.
    - WHO representatives from Geneva, New Delhi, and Jakarta.
    - CDC experts.
    - Regional U.S. and non-U.S. Military Medical personnel.
WHAT IS ASEAN-Net?

A menu driven Web-site intended to facilitate the exchange of outbreak related information, allowing for borderless communications between responsible individuals and agencies.
MISSION

Facilitating regional cooperation to improve infectious disease outbreak detection and response capabilities.
ASEAN-Net is intended to provide for:

• Rapid dissemination of outbreak information within the region.

• A mechanism for passing important information on epidemic disease transmission without compromising national sensitivity (confidentiality) concerns.

• Directory assistance in identifying regional expertise, including laboratory diagnostic capabilities that can advance outbreak investigative activities.

• Directory assistance in introducing new, rapid diagnostic technology in identifying causative outbreak etiology.

• Directory assistance in making available training and educational opportunities within the region, to be taken advantage of by the region.
• In October 2001, Web-based ASEAN-Net concept was introduced in Hanoi, at the 1st SOMHD-ASEAN Meeting, by the Director General for Community Health Development, R.I. Ministry of Health.

• ASEAN formally approved adoption of ASEAN-Net.

• Plans proceeding for prototype adaptation, in the context of regional applications.
OUTBREAK INFORMATION:
- Laos
- Malaysia
- Singapore
- Vietnam
- Cambodia
- Indonesia
- Thailand
- Myanmar
- Philippines
- Brunei Darussalam

PARTICIPATING LABORATORY CENTERS OF DIAGNOSTIC EXCELLENCE:
- leptospirosis - Pasteur Inst.
- rickettsial - NIPH/NAMRU-2 Lab
- HFMD - National University of Sing.
- nipah virus - CDC Atlanta, GA
- typhoid - NAMRU-2, Jakarta

OUTBREAK TRAINING:
- Workshops
- Courses
- Degrees

Proposed Regional Webdriven ASEAN-Net Sponsored by
NAMRU-2 in collaboration with NIHRD, Indonesian MoH,
Jakarta, Indonesia
Acknowledgment of Participation: Cambodian Example

MINISTRY OF HEALTH
KINGDOM OF CAMBODIA
NATIONAL RELIGION KINGDOM

James R. Campbell, PhD, MPH
Director, NAMRU-2
Box 3, Unit 8132
FPO, AP 96520 USA
FAX: 62-21-424-4507
Phnom Penh, 09 January, 2001

Dear Dr. Campbell

Subject: Participation of Cambodia in Southeast Asian Infectious Disease Outbreak Surveillance Network (SEANET).

Referring to your facsimile dated 3 January 2001 concerning the creation of the above-mentioned website hosted by Singapore, I would like to express my highest appreciation for this new endeavor which aims at strengthening surveillance and timely response to outbreaks of infectious diseases in the region. The Ministry of Health of the Kingdom of Cambodia reiterates its fervent interest to be part of this network and is ready to provide any input we may have.

The Ministry of Health takes this opportunity to thank you and your organization and looks forward to collaborating in this initiative.

Yours sincerely,

[Signature]

Dr. MAM - BUNHENG
Acknowledgment of Participation: Lao Example

LAO PEOPLE’S DEMOCRATIC REPUBLIC
Peace, Independence, Democracy, Unity, Prosperity

Fax TRANSMISSION

TO: Dr. James R. Campbell,
Director,
US Naval Medical Research Unit No. 2 (NAMRU-2)
American Embassy Jakarta,
Unit 8132 NAMRU TWO
FPO, AP 96520 USA
Fax: 62-21-424-4507

From: Dr. Phengta Vongphrachanh
National Center for Laboratory and Epidemiology,
Ministry of Health
Km 3, Thadeua Rd, Vientiane, Lao P.D.R.
Tel: 856-21-312351
Fax: 856-21-350209

Date: January 10, 2001.

Dear Dr. Campbell,

Since I have been directly responsible on epidemiology, as well as on surveillance, I was endorsed by Dr. Sibhat your letter on SEANET (Southeast Asian Infectious Disease outbreak Surveillance Network). In this regard, we are willing to participate in this SEANET. By participating in this SEANET, We hoped that, we could up-to-date our knowledge on disease occurrence in this region as well as in the world. This would also improve the effectiveness of the disease prevention and control in our country, in this region and in the whole world as well.

I am sending you here along with is a filled brief questionnaire on the surveillance network of Lao P.D.R. for your information.

Sincerely yours,

Director of NCLE

Dr. Phengta Vongphrachanh

QUESTIONNAIRE

Your Name: Dr. Phengta Vongphrachanh
Phone: 856-21-312351
Address: National Center for Laboratory and Epidemiology, MoH
Km 3, Thadeua Rd, Vientiane.

Email: Phengta@hotmail.com
FAX: 856-21-350209

A surveillance network is defined as a linked system for the purpose of reporting and sharing infectious disease incidence data. The system must be linked by either fax, phone, internet or some other reliable and timely means of reporting.

1. Does your country have any such system(s) currently in place? YES ☐ NO ☐

If yes, please list the name of the network, and indicate whether or not this is a Sub-national, National or Regional network. If regional, which other countries participate? Both national and regional, with 6 Mekong basin countries (Lao P.D.R, Vietnam, Cambodia, Yunnna Province of China, Thailand and Myanmar) and countries in the Western Pacific Region through WHO network.

SEANET is an acronym for our envisioned regional, South East Asian infectious disease Outbreak Surveillance Network. The concept is for a secure internet-based website to serve as a vehicle for real-time information sharing on surveillance for outbreaks of infectious disease.

2. Would your country consider participating in SEANET? YES ☐ NO ☐

If so, what are the obstacles that must be overcome to gain your country’s participation?

Please return this questionnaire as soon as possible by mail or FAX to:

James R. Campbell, PhD, MPH
U. S. NAMRU-2, Director
Box 3, Unit 8132
FPO, AP 96520 USA
FAX: 62-21-424-4507
FUNDING SPONSOR & WEBSITE DEVELOPER

NAMRU-2, Jakarta, Indonesia

Domain: www.asean-net.org (under construction)
• TAKING ADVANTAGE OF:

NAMRU-2’s extensive network of collaborative institutional research ties.
Names of Collaborating Institutions

LAOS
1. Central for National Laboratory and Epidemiology.
2. National Tourism Authority of Lao PDR.
3. Champassak Provincial Health Department.
4. Military Institute of Hygiene and Epidemiology.
5. Luang Prabang Provincial Health.

MALAYSIA
1. Regional Veterinary Laboratory, Dept of Veterinary Services.
2. Army Field Command Head Quarters.

VIETNAM
2. National Institute of Hygiene and Epidemiology, Hanoi.
3. Hematology Center, Bech May Hospital, Hanoi.
4. National Institute for Clinical Research in Tropical Medicine, Bech May Hospital, Hanoi.
5. Pasteur Institute, HCMC.
6. Cho Quan Hospital, HCMC.
7. Pediatric Hospital, HCMC.
8. An Giang Province Health Authority.
9. Vietnamese Red Cross Society

CAMBODIA
1. Ministry of Health
2. National Institute of Public Health
5. USAID

BRUNEI
1. Regional Veterinary Laboratory Dept of Veterinary Services.
2. Dept. of Health Services, Ministry of Health.
Names of Collaborating Institutions

(continued)

INDONESIA

2. US Naval Medical Research Unit No.2 (US NAMRU-2).
3. National Institute of Health Research and Development, MoHSW.
4. Directorate General of Center of Communicable Disease Prevention and Environmental Health, MoHSW.
5. Provincial Health Authorities.
6. District Health Authorities.
7. Provincial Hospitals.

THAILAND

1. CDC- Ministry of Public Health.
2. Division of Epidemiology, Ministry of Health.
3. Armed Forces Research Institute of Medical Sciences (AFRIMS).

PHILIPPINES

1. Department of Health
2. Dept. of Parasitology, College of Public Health, Univ. of the Philippines.
3. Dept. of Parasitology and Medical Entomology.
4. Senate of the Philippines.
5. Armed Forces Medical Center.
6. National Center for Infectious Disease, Dept. of Health.