

## ProMED and MBDS

**PRO/MBDS - an internet based early warning system a.k.a.  
“the informal sector”**

**Marjorie P. Pollack, MD**

**Associate Editor / Epidemiology & Surveillance  
Moderator/ ProMED-MBDS Liaison Editor**

**ProMED-mail**

**International Society for Infectious Diseases**

**<<http://www.promedmail.org>>**





The global electronic reporting system for outbreaks of emerging infectious diseases and toxins, open to all sources

<http://www.promedmail.org>

# About ProMED-mail

- Inaugurated on the Internet in August 1994
- Moderated e-mail listserve and website
- Free subscription
- 42,000+ subscribers in 172 countries
- All reports are screened by expert Moderators before posting
- Average of 7 reports per day
- Free of political constraints



INTERNATIONAL SOCIETY  
FOR INFECTIOUS DISEASES

## Navigation

### Home

[Subscribe/Unsubscribe](#)  
[Search Archives](#)  
[Announcements](#)  
[Recalls/Alerts](#)  
[Calendar of Events](#)  
[Maps of Outbreaks](#)  
[Submit Info](#)  
[FAQs](#)  
[Who's Who](#)  
[Awards](#)  
[Citing ProMED-mail](#)  
[Links](#)  
[Donations](#)  
[About ProMED-mail](#)

## Quick Archive Search

Archive Number



## Sponsored Links

**VCU**  
Internal Medicine  
Virginia Commonwealth University  
Medical College of Virginia Campus  
Chairman: Richard P. Wenzel



The global electronic reporting system for outbreaks of emerging infectious diseases & toxins, open to all sources.

ProMED-mail, the Program for Monitoring Emerging Diseases, is a program of the International Society for Infectious Diseases.

## \*\* Notice \*\*

Please note that there is a delay in posts being accessible on the server.

## Today on ProMED-mail

### November 04, 2007

No Reports yet today.

### November 03, 2007

[PRO/AH/EDR> Rift Valley fever - Sudan](#)

[PRO/AH> Rocky Mountain spotted fever, canine - USA: \(MO\)](#)

[PRO/AH> Foot & mouth disease, ovine - Cyprus \(03\): susp, RFI](#)

[PRO/AH> Contagious bovine pleuropneumonia - Uganda: susp, RFI](#)

[PRO/AH> Foot & mouth disease, bovine - UK \(England\) \(40\)](#)

[PRO/AH> Botulism, avian - USA: \(MI\), susp](#)

[PRO/AH> Foot & mouth disease, yak - China \(Qinghai\)](#)

[PRO/AH/EDR> Avian influenza \(166\): Bangladesh, Pakistan, Viet Nam](#)

[PRO/EDR> Skin disorder, sheep farmers - UK: RFI](#)

[PRO/AH/EDR> Avian influenza, human \(146\): Indonesia](#)

[PRO/AH> Rabies, canine - USA: \(Alaska\)](#)

[Postings from last 30 days...](#)

## Latest Information on Avian influenza

[03-NOV-2007 / Avian influenza, human \(146\): Indonesia](#)

[03-NOV-2007 / Avian influenza \(166\): Bangladesh, Pakistan, Viet Nam](#)

[31-OCT-2007 / Avian influenza, human \(145\): Indonesia, WHO](#)

[29-OCT-2007 / Avian influenza, human \(144\): Indonesia](#)

[27-OCT-2007 / Avian influenza \(165\): Europe \(FAO\), Viet Nam](#)

[More...](#)

## Latest Information on Anthrax

[30-OCT-2007 / Anthrax, human, livestock - Indonesia: \(E Nusa Tenggara\)](#)

[30-OCT-2007 / Anthrax, human, livestock, wildlife - Kenya: \(Samburu\)](#)

[28-OCT-2007 / Anthrax, human - UK \(02\): \(Scotland\)](#)

[21-OCT-2007 / Anthrax - Zimbabwe \(Mazowe\): RFI](#)

[04-OCT-2007 / Anthrax, bovine - Argentina \(Buenos Aires\)\(02\)](#)

[More...](#)

## Errata



Kuala Lumpur,  
Malaysia  
19-22 June '08  
[More Information](#)



ProMED-Port,  
Português



ProMED-ESP,  
español



ProMED-RUS,  
Русский



Chinese Page



Japanese Page



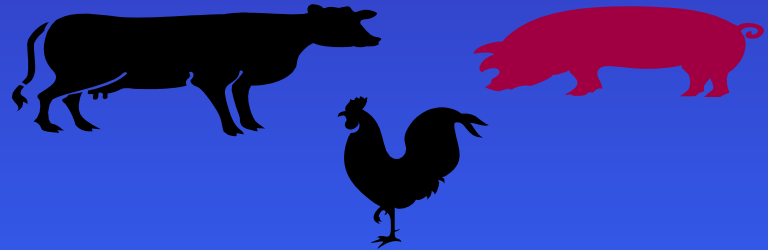
ProMED-MBDS,  
Mekong Basin

# Disease Focus

- Plant
  - food security



- Animal
  - veterinary
  - zoonotics



- Human
  - infectious
  - acute toxic

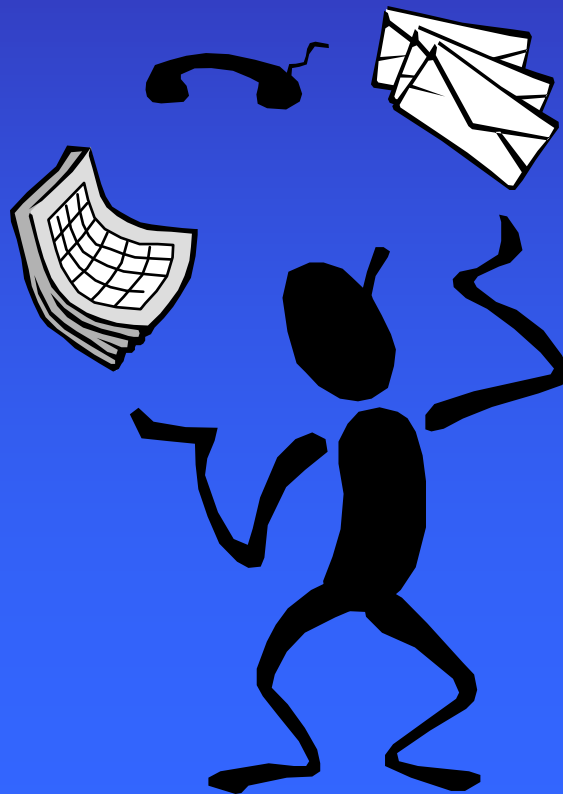


# Sources of information

- ◆ Official reports from National and International Public Health Authorities
- ◆ ProMED-mail subscribers
- ◆ Lay press reports -- “The media”

# The role of the media and unofficial groups in emerging disease surveillance

## Examples in recent times



# SARS

## Severe Acute Respiratory Syndrome



# **PNEUMONIA - CHINA (GUANGDONG): RFI**

\*\*\*\*\*

**Date: 10 Feb 2003**

**From: Stephen O. Cunnion, MD, PhD, MPH  
International Consultants in Health, Inc  
Member ASTM&H, ISTM**

**This morning I received this e-mail and then searched your archives and found nothing that pertained to it. Does anyone know anything about this problem?**

*"Have you heard of an epidemic in Guangzhou? An acquaintance of mine from a teacher's chat room lives there and reports that the hospitals there have been closed and people are dying."*

**Source: ProMED-mail archives 10 February 2003**



# SARS - Canada

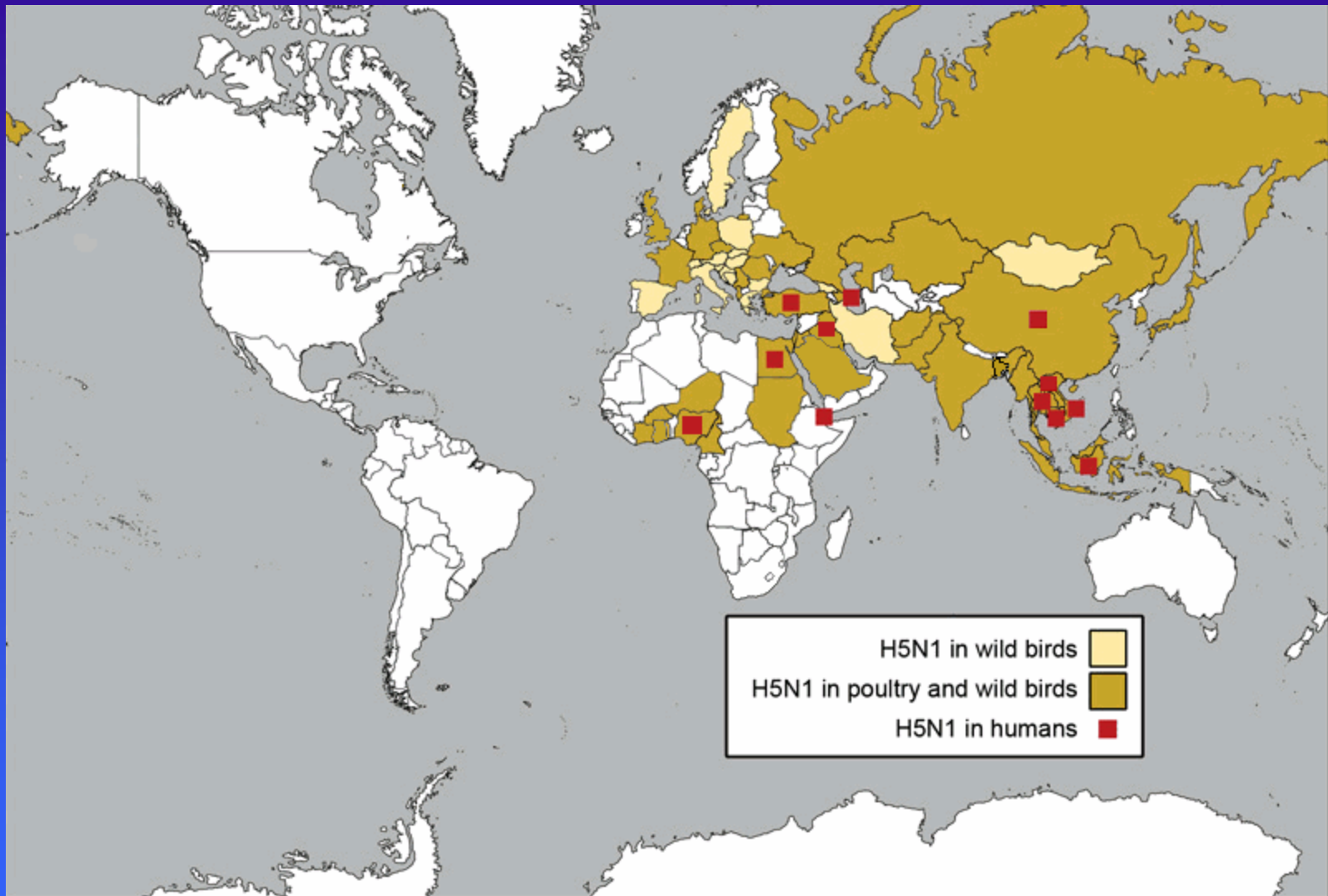
**Email received early 14 Mar 2003**

“We have an unidentified severe respiratory illness cluster in a family, one of whom was in Hong Kong 14 days ago. Can you update me on what the illness cluster in Hanoi is please?”

Allison McGeer, MD, FRCPC

# Sequence of events

- **10 Feb 2003** - Reports of atypical pneumonia in Guangdong China  
- *Source: ProMED subscriber, plus newswire report (Chinese)*
- **19 Feb 2003** - Reports of H5N1 (avian influenza) human cases in Hong Kong with history of travel from Fujian Province to Hong Kong - *Source: newswire*
- **11 Mar 2003** - Reports of undiagnosed respiratory illness in hospital in Hanoi VietNam - *Source: newswire*
- **14 Mar 2003** - Reports of atypical pneumonia in East Asia -- Hong Kong, VietNam, Singapore, China (Guangdong Province), Taiwan, and Ontario Canada - *Source: official, hospital staff, newswires*
- **15 Mar 2003** -- Reports of severe acute respiratory syndrome worldwide - *Source: WHO advisory/alert following Singaporean ill on flight from USA to Singapore with stop in Germany*



Map source: <http://www.pandemicflu.gov/> (as of 31 Oct 2007)

## AVIAN INFLUENZA - INDONESIA: RFI

\*\*\*\*\*

Date: 18 November 2003

From: ProMED-mail <promed@promedmail.org

ProMED-mail has received a report from a reliable source of rumors of the occurrence of an outbreak of avian influenza in domestic fowl in Indonesia (West Java and Sumatra). The accounts of the rumored outbreak emanate from 2 independent sources.

Further information from any informed person or organization in the area would be appreciated.

(Mod.CP)

Source: ProMED-mail archives 19 November 2003



# Avian Influenza

- **Indonesia**

- Unofficial source: ProMED-mail posting (*subscriber*)  
19 November 2003
- Official Report to OIE  
6 February 2004

# Avian Influenza

- **Thailand**

- Unofficial source: ProMED-mail posting (*Malaysian newswire*)

5 January 2004

- Ministry of Health starts human disease surveillance -- human cases confirmed

23 January 2004

- Official Report to OIE

23 January 2004

# Avian Influenza

- **VietNam**
  - Unofficial source: ProMED-mail posting (*newswire*)  
6 January 2004  
(outbreak ongoing since July 2003)
  - Official Report to OIE  
8 January 2004
  - Human cases confirmed  
11 February 2004  
(first cases occurred in October 2003)

# CHIKUNGUNYA - MAURITIUS AND REUNION ISLAND

\*\*\*\*\*

Date: Wed, May 18 2005 15:13:47 -0400 (EDT)

From: Mohammad Issack <missack@intnet.mu>

In Mauritius, since early April 2005, several people have been attending the hospital and health centres of the capital city, Port-Louis, with fever and arthralgia of hands and feet... a rash was also noted.

*Chikungunya virus was suspected based on the clinical presentation, the self-limiting course, and the recent report on ProMED-mail of a Chikungunya virus disease epidemic in the Comoros Islands.*

# CHIKUNGUNYA - MAURITIUS AND REUNION ISLAND

\*\*\*\*\*

(continued)

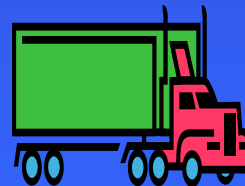
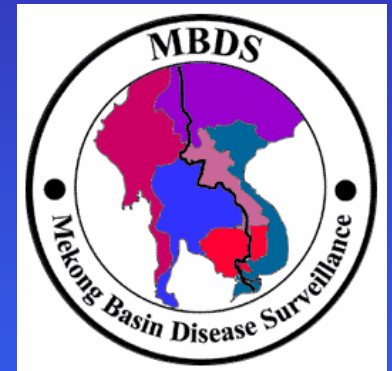
The diagnosis has been confirmed on blood samples sent to Erasmus University in Rotterdam and Marseilles-Armies Laboratory in France.

The outbreak started in an area of the capital where there is a hostel often used by visitors from the Comoros Islands.

*On the French Indian Ocean Island of Reunion (230 km from Mauritius), according to newspaper articles, the 1st cases of Chikungunya virus disease were reported at the beginning of last week, but since then the number of cases has increased rapidly.*

# LESSONS LEARNED FROM OUTBREAK EXPERIENCES

We live in a global village

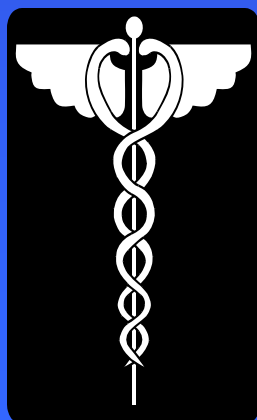


# LESSONS LEARNED FROM OUTBREAK EXPERIENCES

No single institution has the complete capacity to address all needs and cover all bases with respect to disease surveillance



WHO



Ministries of Health



# LESSONS LEARNED

**Early alerts important and valuable -- prevent rumors, speculations**



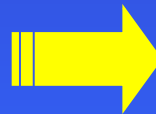
# LESSONS LEARNED

**Informal sector reports can lead to formal sector investigations with earlier identification of emerging infectious disease occurrences.**



# LESSONS LEARNED FROM OUTBREAK EXPERIENCES

Early reports can alert “astute clinicians” elsewhere to look for possible new problems



# PRO/MBDS

Email to:

[<promed-mbds@promedmail.org>](mailto:promed-mbds@promedmail.org)



# Experiences with PRO/MBDS Phase I

- ▶ Launched “informally” 28 January 2004
- ▶ 22 subscribers
- ▶ Closed non-moderated discussion group
- ▶ As of 31 Dec 2007 - 236 messages posted



# Experiences with PRO/MBDS Phase I

## Topics posted:

### Human diseases

- Avian influenza (27)
  - Parainfluenza (9)
  - Tsunami-related (7)
  - Undiagnosed illness (8)
  - Meningococcal disease (4)
  - Influenza-like illness (1)
  - Polio (5)
  - Influenza vaccine (1)
  - Measles (1)
  - Rubella (2)
  - Nam Dihn virus (arbovirus) (1)
  - Malaria (2)
  - Hepatitis A (1)
- Gastrointestinal (14):
    - Vibrio parahemolyticus (3)
    - Cholera (2)
    - Dysentery (1)
    - Diarrhea (3)
    - Food poisoning (5)
  - Nipah virus (2)
  - Hand, foot & mouth (4)
  - Leptospirosis (3)
  - Adenovirus (4)
  - Dengue (8)
  - Conjunctivitis (5)



# Experiences with PRO/MBDS Phase I

## Topics posted (con't):

### Animal diseases

- Avian influenza (111)
- Undiagnosed poultry deaths (10)
- Avian cholera (2)
- Undiagnosed bovine die-off (1)
- Unknown/undiagnosed illness - pigs (1)
- Foot & mouth disease (1)

### Disease Surveillance issues (2)

### Tropical veterinary medicine conference (1)

### Food & waterborne parasitic zoonoses conference (1)

### SARS preparedness (1)

### Miscellaneous (6)



# Evolution of Phase I to Phase II

Expanding subscribership

Changing to open source

Expanding sources of information

- “outside the box” of MOH only, includes non-MOH sources of information
- can provide informal information earlier
- increase coverage of animal and zoonotic diseases

# Experiences with PRO/MBDS Phase II

Launched 16 February 2007



Open source, moderated electronic discussion group



# PRO/MBDS Phase II

- PRO/MBDS webpage
- PRO/MBDS archive of postings available on website
- Can subscribe/unsubscribe via ProMED website <<http://www.promedmail.org>>



INTERNATIONAL SOCIETY  
FOR INFECTIOUS DISEASES

## Navigation

### Home

[Subscribe/Unsubscribe](#)  
[Search Archives](#)  
[Announcements](#)  
[Recalls/Alerts](#)  
[Calendar of Events](#)  
[Maps of Outbreaks](#)  
[Submit Info](#)  
[FAQs](#)  
[Who's Who](#)  
[Awards](#)  
[Citing ProMED-mail](#)  
[Links](#)  
[Donations](#)  
[About ProMED-mail](#)

## Quick Archive Search

Archive Number



## Sponsored Links

**VCU**  
Internal Medicine  
Virginia Commonwealth University  
Medical College of Virginia Campus  
Chairman: Richard P. Wenzel



The global electronic reporting system for outbreaks of emerging infectious diseases & toxins, open to all sources.

ProMED-mail, the Program for Monitoring Emerging Diseases, is a program of the International Society for Infectious Diseases.

## \*\* Notice \*\*

Please note that there is a delay in posts being accessible on the server.

## Today on ProMED-mail

### November 04, 2007

No Reports yet today.

### November 03, 2007

[PRO/AH/EDR> Rift Valley fever - Sudan](#)

[PRO/AH> Rocky Mountain spotted fever, canine - USA: \(MO\)](#)

[PRO/AH> Foot & mouth disease, ovine - Cyprus \(03\): susp, RFI](#)

[PRO/AH> Contagious bovine pleuropneumonia - Uganda: susp, RFI](#)

[PRO/AH> Foot & mouth disease, bovine - UK \(England\) \(40\)](#)

[PRO/AH> Botulism, avian - USA: \(MI\), susp](#)

[PRO/AH> Foot & mouth disease, yak - China \(Qinghai\)](#)

[PRO/AH/EDR> Avian influenza \(166\): Bangladesh, Pakistan, Viet Nam](#)

[PRO/EDR> Skin disorder, sheep farmers - UK: RFI](#)

[PRO/AH/EDR> Avian influenza, human \(146\): Indonesia](#)

[PRO/AH> Rabies, canine - USA: \(Alaska\)](#)

[Postings from last 30 days...](#)

## Latest Information on Avian influenza

[03-NOV-2007 / Avian influenza, human \(146\): Indonesia](#)

[03-NOV-2007 / Avian influenza \(166\): Bangladesh, Pakistan, Viet Nam](#)

[31-OCT-2007 / Avian influenza, human \(145\): Indonesia, WHO](#)

[29-OCT-2007 / Avian influenza, human \(144\): Indonesia](#)

[27-OCT-2007 / Avian influenza \(165\): Europe \(FAO\), Viet Nam](#)

[More...](#)

## Latest Information on Anthrax

[30-OCT-2007 / Anthrax, human, livestock - Indonesia: \(E Nusa Tenggara\)](#)

[30-OCT-2007 / Anthrax, human, livestock, wildlife - Kenya: \(Samburu\)](#)

[28-OCT-2007 / Anthrax, human - UK \(02\): \(Scotland\)](#)

[21-OCT-2007 / Anthrax - Zimbabwe \(Mazowe\): RFI](#)

[04-OCT-2007 / Anthrax, bovine - Argentina \(Buenos Aires\)\(02\)](#)

[More...](#)

## Errata



Kuala Lumpur,  
Malaysia  
19-22 June '08  
[More Information](#)



ProMED-Port,  
Português



ProMED-ESP,  
español



ProMED-RUS,  
Русский



Chinese Page



Japanese Page



ProMED-MBDS,  
Mekong Basin

# PRO/MBDS link at <<http://www.promedmail.org>>



INTERNATIONAL SOCIETY  
FOR INFECTIOUS DISEASES

Navigation (MBDS)

[Home](#)

[ProMED-MBDS Home](#)

[Search](#)

[Subscribe/Unsubscribe](#)

[MBDS Project](#)

[about ISID](#) | [membership](#) | [programs](#) | [publications](#) | [resources](#) | [13th ICID](#) | [site map](#)



## Recent ProMED-MBDS Postings

[01-NOV-2007 / PRO/MBDS> Porcine reproductive & respiratory syndrome - Viet Nam \(11\): Hanoi](#)

[01-NOV-2007 / PRO/MBDS> Diarrheal illness - Viet Nam \(02\): cholera confirmed, RFI](#)

[31-OCT-2007 / PRO/MBDS> Avian influenza - MBDS region \(49\): Viet Nam, FAO](#)

[31-OCT-2007 / PRO/MBDS> Food poisoning - Viet Nam \(Nam Dinh\): RFI](#)

[31-OCT-2007 / PRO/MBDS> Diarrheal illness - Viet Nam: north, shrimp paste susp, RFI](#)

[Postings from last 30 days...](#)

## ProMED-MBDS: Mekong Basin Disease Surveillance Group

ProMED-MBDS is a special service of ProMED-mail for the Mekong Basin Disease Surveillance (MBDS) group of countries. These countries include The Kingdom of Cambodia, Yunnan province of People's Republic of China, Lao PDR, The Union of Myanmar, The Socialist Republic of Vietnam, and the Kingdom of Thailand. The MBDS initiative was established with the support of the World Health Organization (WHO) and the Rockefeller Foundation. It has subsequently received support from other groups such as the Global Health and Security Initiative of the Nuclear Threat Initiative (NTI), the United States Centers for Disease Control and Prevention (CDC), and the RAND Corporation. ProMED-MBDS is a result of a collaboration between the International Society for Infectious Diseases' Program for Monitoring Emerging Diseases (ProMED-mail) and the Mekong Basin Disease Surveillance Group initiated with the support of the Rockefeller Foundation.

ProMED-mail is an Internet-based reporting system dedicated to rapid global dissemination of information on outbreaks of infectious diseases and acute exposures to toxins that affect human health, including those in animals and in plants grown for food or animal feed. Electronic communications enable ProMED-mail to provide up-to-date and reliable news about threats to human, animal, and food plant health around the world, seven days a week.

By providing early warning of outbreaks of emerging and re-emerging diseases, public health precautions at all levels can be taken in a timely manner to prevent epidemic transmission and to save lives.

ProMED-mail is open to all sources and free of political constraints. Sources of information include media reports, official reports, online summaries, local observers, and others. Reports are often contributed by ProMED-mail subscribers. A team of expert human, plant, and animal disease moderators screen, review, and investigate reports before posting to the network. Reports are distributed by email to direct subscribers and posted immediately on the ProMED-mail web site. ProMED-mail currently reaches 40,000 subscribers in more than 150 countries.

The objective of this initiative between ISID and the MBDS group is to facilitate access to information on the part of physicians, veterinarians and other public health workers in the MBDS region. Communication between the lists of ProMED-mail and ProMED-MBDS will permit the reporting of important outbreaks that are occurring in the region and allowing for an early notification of outbreaks within the region.

Subscription to ProMED-MBDS is free of charge (click on the subscribe link on the left).

# PHASE II PRO/MBDS

- ▶ Started with 22 original Phase I subscribers
- ▶ As of 5 Nov 2007 - 242 subscribers
- ▶ As of 5 Nov 2007 - 226 postings

# PHASE II PRO/MBDS

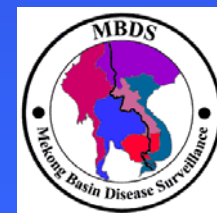
- Invitation letters to subscribe
  - MBDS Executive Board
  - MBDS Country Coordinators
  - MBDS Border project staff
  - Non-MOH participants
    - Mahidol University Tropical Medicine graduate network (in all countries of MBDS coverage)
    - Ministry of Agriculture in MBDS countries (animal diseases)
  - Interested international collaborators

# Experiences with PRO/MBDS Phase II

## Topics posted:

### Human diseases:

- Avian influenza (27)
  - Dengue (37)
  - Hand, foot & mouth (11)
  - HIV/AIDS (5)
  - Hepatitis B (1)
  - Polio (4)
  - Japanese encephalitis (2)
  - Measles (1)
  - Rabies (3)
  - Mass poisoning (1)
  - Rubella (1)
  - Malaria (6)
  - Vaccine associated events (4)
  - Tuberculosis (2)
- Gastrointestinal (22):**
    - Cholera (6)
    - Diarrhea (1)
    - Food poisoning (8)
    - Foodborne (2)
    - Norovirus (1)
    - Sapovirus (1)
    - Shigellosis (3)
  - Leptospirosis (1)
  - Leishmaniasis (1)
  - Blood transfusion assoc (1)
  - Streptococcus suis (5)
  - Varicella (2)

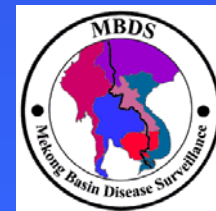


# Experiences with PRO/MBDS Phase II

## Topics posted:

### Human diseases

- Dengue (37)
- Avian influenza (27)
- Gastrointestinal (22)
  - Food poisoning (8)
  - Cholera (7)
  - Shigellosis (3)
  - Foodborne (2)
  - Diarrhea (1)
  - Norovirus (1)
  - Sapovirus (1)



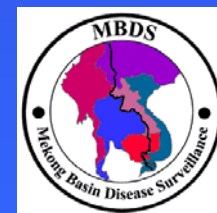
# Experiences with PRO/MBDS Phase II

## Topics posted (page 2):

### Human diseases

#### –Vaccine preventable disease related (18)

- Polio (4)
- Vaccine associated adverse events (4)
- Rabies (3)
- Japanese encephalitis (2)
- Varicella (2)
- Measles (1)
- Rubella (1)
- Hepatitis B (1)

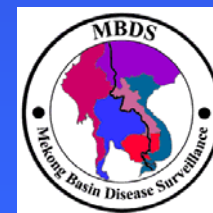


# Experiences with PRO/MBDS Phase II

## Topics posted (page 3):

### Human diseases

- Hand, foot & mouth disease (11)
- Malaria (6)
- HIV/AIDS (5)
- Streptococcus suis (5)
- Tuberculosis (2)
- Leptospirosis (1)
- Leishmaniasis (1)
- Blood transfusion assoc (1)
- Mass poisoning (1)



# Experiences with PRO/MBDS Phase I

## Topics posted (page 4):

### Animal diseases

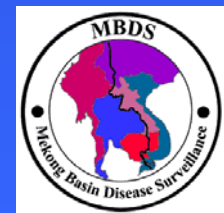
- Avian influenza (52)
- Porcine reprod. & resp. syndrome (13)
- Foot & mouth disease (7)
- Equine herpesvirus (1)
- Leishmaniasis (1)
- Undiagnosed poultry die-off (1)
- Shrimp die-off (1)
- Undiagnosed porcine deaths (1)
- Rabies (1)



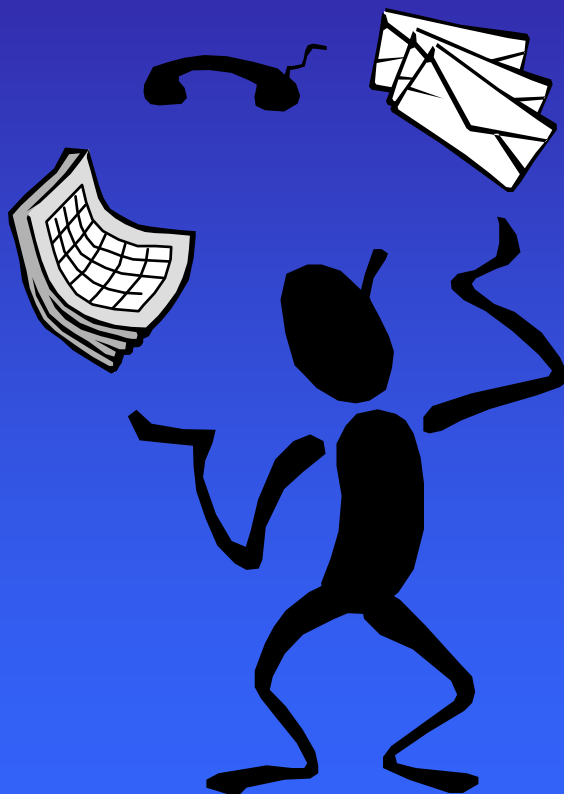
# Experiences with PRO/MBDS Phase I

## Topics posted (page 5):

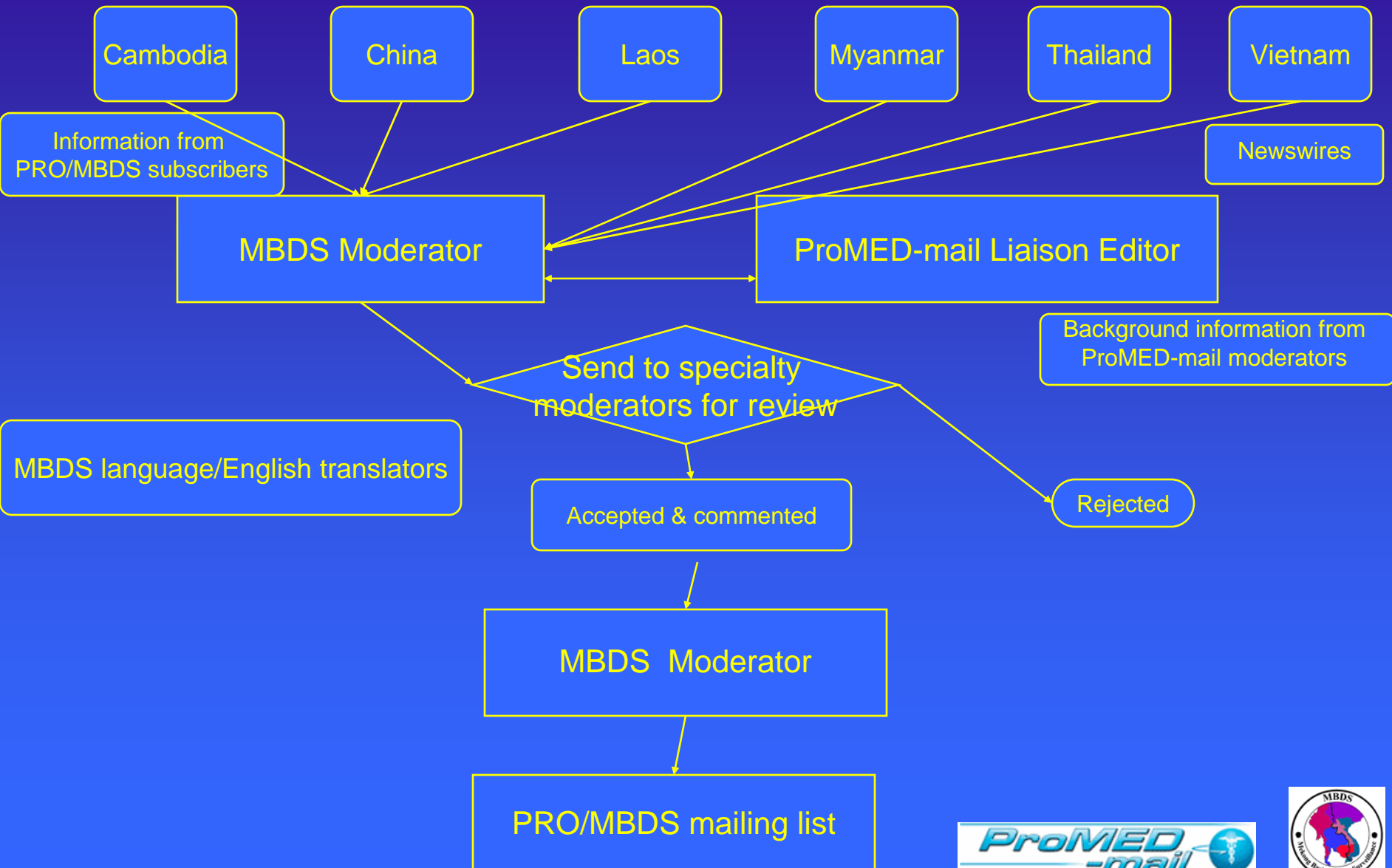
- Fake pharmaceuticals (3)
- Ministry collaborations (1)
- Avian influenza phylogeography (1)
- Blue-green algae (1)
- Pandemic preparedness (2)
- Miscellaneous (2)



# Information flow -- PRO/MBDS



# PHASE II PRO/MBDS INFORMATION FLOW



# PRO/MBDS Phase II Plans

- Recruitment of “specialty” moderators (3)
  - **Veterinary Health Specialist**
  - **Infectious Disease Specialist**
  - **Epidemiology Specialist**
- Translators for MBDS language ↔ English
- Collaboration with GPHIN  
(Global Public Health Information Network)

# PRO/MBDS Phase II Plans

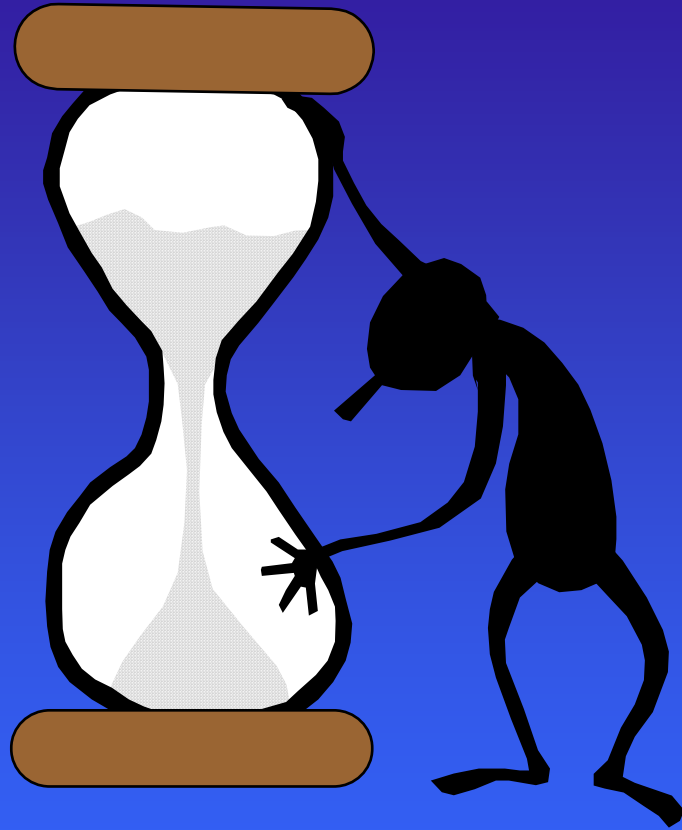
## GPHIN Collaboration

- Development of machine translations for each of the MBDS languages to English
- Scanning of MBDS countries' local press for reports on outbreaks and other unusual health events
- Screening of identified news reports by PRO/MBDS moderators
- Posting of events of interest to the region on PRO/MBDS with moderator commentaries



# Questions

- ▶ Is there a value to the informal sector reports?
- ▶ Is the official sector uncomfortable when there are reports of possible outbreaks covered by the informal sector?
- ▶ What are the barriers that block the official sector from reporting through or responding to “requests for information” from an informal network?



*Thank you*

