

Surveillance, early warning, alert and response: Communicable and vector-borne diseases

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**WHO Conference on
THE HEALTH ASPECTS OF THE TSUNAMI DISASTER IN ASIA
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Lessons learned

- Rapid assessment on surveillance system.
- Epidemiological surge capacity
- Epidemic prone diseases
- Active surveillance
- Interventions to prevent epidemic prone diseases
- Sharing of surveillance information for alert
- Further action



Rapid Epidemiological Assessment after disaster

Deaths -→ Identification

Injured -→ Rescue

Affected population → Prevent disease /dead /disability

1. Number and demographic of displaced persons

2. Where are they ?

3. Accessibility to

- Clean water
- Safe Food
- Cloth
- Safe shelter
- Sanitation
- Primary medical care

4. Epidemic prone disease and response capacity



I. Rapid assessment of surveillance system

Factors effected regular surveillance system

- Damaged to hospitals or health centers +
- Loss of health personnel +
- Communication means breakdown +
- Local staff was mobilized to other emergency relieve activities + → +++



Surveillance

Surveillance function

- Reporting of epidemic prone disease
- Analysis of data
- Detection and verification of abnormal events
- Dissemination of information for action

“ Human capacity ”



II. Epidemic prone diseases

Under active surveillance in Tsunami affected area

<u>Syndromes</u>	<u>Diseases (19 →23)</u>
Diarrheal	Ac. Diarrhea, Cholera, Dysentery, Food poisoning
Respiratory	Influenza, Pneumonia (include aspirated), Measles
Febrile	Malaria, Dengue, Typhoid, Pyrexia of unknown origin
Neurological	Meningococcal, Encephalitis
Jaundice	Hepatitis
Injuries	Wound , electrical
Others	Conjunctivitis, fever with rash, Unknown dead.....



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Daily summary of diseases under surveillance .

สรุปรายงานประจำวันของผู้นิเฝ้าระวังโรค

ประจำวันที่.....สถานที่.....

๑. จำนวนผู้ป่วยที่มารับการวินิจฉัย

กลุ่มโรค	โรค	เด็ก(<15 ปี)				ผู้ใหญ่				รวม	
		โรค		สงสัย		โรค		สงสัย		ป่วย	ตาย
		รวม	สงสัย	รวม	สงสัย	รวม	สงสัย				
Diarrheal diseases	1.Acute Diarrhea										
	2.Cholera										
	3.Dysentery										
	4.Food poisoning										
Respiratory diseases	5. Flu										
	6. Pneumonia										
	7. Measles										
Fever	8. Typhoid fever /Salmonellosis										
	9. Malaria										
	10.DHF										
	11. Pyrexia of Unknown Origin										
Neurological disease	12. Meningococcal meningitis										
Jaundice	13.Hepatitis										
Other	14. Viral conjunctivitis										
	15.ตาอักเสบ										
	16. Injury(บาดแผล)										
	17.Wound infection										
	18. Unknown death										
	19.โรคอื่นๆที่ไม่ระบุ										

Population under active surveillance

1. Displaced population in affected area
2. Non-displaced population in affected district
3. Volunteers from other provinces



III . Epidemiological surge capacity

- Post SARS and Avian Influenza
Surveillance and Rapid Response Team (SRRT)
- Mobilize regional and central Team (*members*)
to 6 provinces
 - Epidemiologist
 - Disease control staff
 - Vector control staff
 - Laboratory
- Phasing
 - Acute (1- 4 weeks)
 - Recovery (4th – 6th)
 - Development (after 6 th week)



**World Health
Organization**

IV. Active surveillance activities

- Daily visit and review patient diagnosis in
 - 22 hospitals and health centers
 - 4 private hospitals
 - 14 temporary camps
 - 2 forensic identification centers
- verify and investigate abnormal events
- daily meeting and summary report



V. Interventions

Food and water-borne

- Bottle water
- Inspect cooking centers
- Fly control

Vector-borne

- Insecticide spraying
- bed net



Vaccine preventable

- **Measles** for children under six years in 14 temporary camps.
- **DPT** for special island group (Morgan village)



VI. Outbreaks and interesting events detected

Food and water-borne (affected area)

- food poisoning (7 events in volunteer)

Vector borne (non affected village)

- Dengue (1 province)
- Malaria (2 events)

Vaccine preventable diseases (affected area)

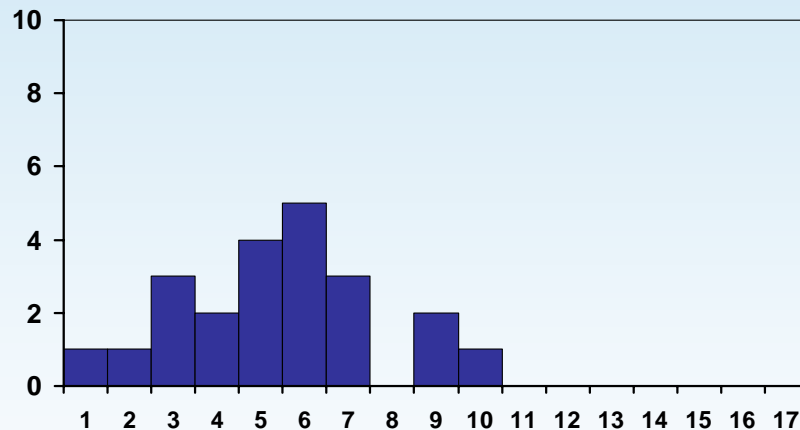
- Mumps in one temporary camp



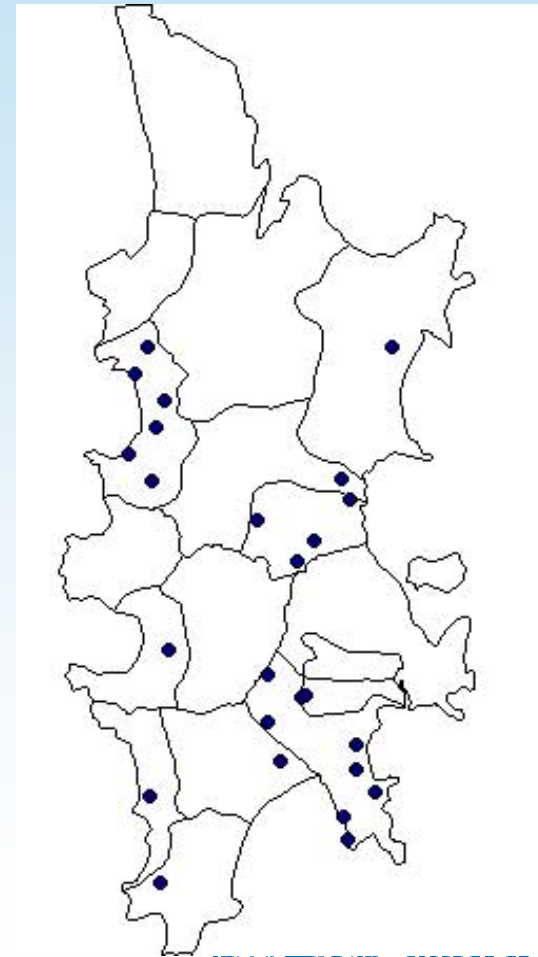
DHF cases from Phuket Province

27 Dec 2004 – 11 Jan 2005

cases



Onset in January



VII . Information sharing and alert

Local

- Provincial disaster operating room
- Tsunami operating center in Phuket

National

- Ministry operating center in Bangkok
- Media

International

- Daily update to WHO and CDC
- Correction of travelling advice.



VII. Further plan

- Surveillance as one function of mobile medical team
- Strengthen local ,regional, and central SRRT
 - core member
 - cross-province activities
 - co-ordination
- Standard operating procedure



A friend in need – A friend indeed

- Provincial Health Office of 6 Tsunami affected area
- SRRT members from the southern provinces
- Regional Disease Control Centers
- Department of Medical Science
- Police department, Army

- WHO staff in Thailand, SEARO
- US CDC staff in Thailand
- International organization
- All government around the world

