

Outbreak Response Teams

- Alert => Rapid response
- PHO/WHO joint teams
 - Response run out of Banda Aceh
 - Investigations same day
 - Transport / access issues
 - Laboratory kit, rapid field tests
- Public Health laboratory
 - Re-equipped, re-staffed
 - Sample transport and receipt pre-arranged
 - Laboratory hotline for backup



Epidemic and Pandemic Alert and Response



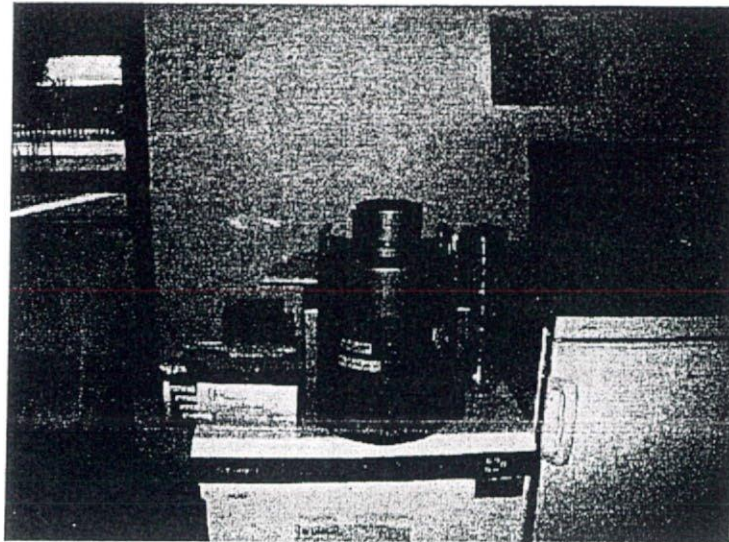
Laboratory Capacity

- Laboratory kit
 - Sampling material
 - Personal protective equipment
 - Transport media
- Rapid tests
 - Malaria
 - Cholera
 - Shigella (flexneri)
 - Hepatitis E
 - Dengue
- Available to all medical NGOs on request

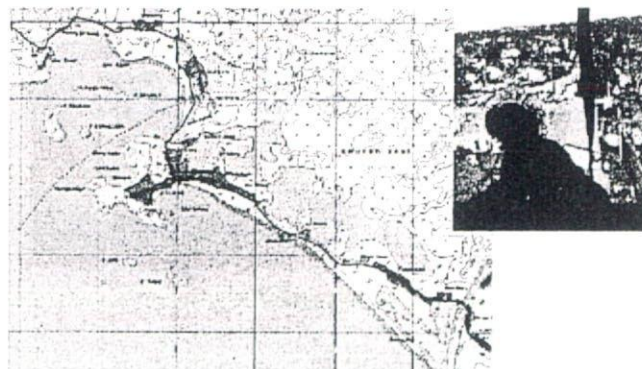


Epidemic and Pandemic Alert and Response





Importance of GIS for Outbreak Investigations

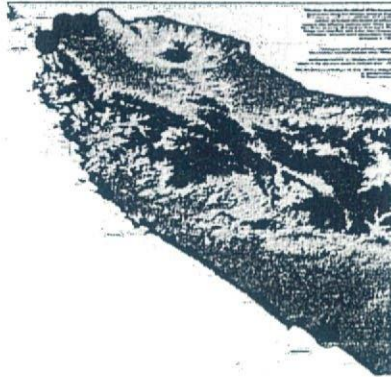


Epidemic and Pandemic Alert and Response



Laboratory Surveillance

- Weekly + Alert system
- Pathogens of public health importance
- Hotline
- Reporting laboratories
 - Banda Aceh (3)
 - Meulaboh (1)



Epidemic and Pandemic Alert and Response



Hospital Surveillance

- Inpatients
- Weekly + Alert system
- Banda Aceh referral hospitals
 - Pre-existing (3)
 - International aid (US, Germany, Russia, Australia, IFRC, etc.)
- Meulaboh hospitals
 - Pre-existing (1)
 - French aid hospital

Epidemic and Pandemic Alert and Response



Indonesian & English forms

A. Inpatient WEEKLY Surveillance Reporting Form
Morbidity (Cases) and Mortality (Deaths)
BRING TO WHO OFFICE ON PUTI IN WHO BOX A1 LINDOCHA EVERY MONDAY

Asah Province: _____ District: _____ Sub district: _____
 Town/Village/Settlement/Camp: _____
 Hospital name: _____
 Site: ? Inpatient ? Emergency
 Supporting agency(ies): _____
 Name and telephone number of contact officer: _____

Week from Monday: _____ / 2005 to Sunday: _____ / 2005

Report the number of CASES	MORBIDITY (CASES)		MORTALITY (DEATHS)	
	14 years	15 years	14 years	15 years
A. TOTAL ADMISSIONS				
B. TOTAL DEATHS				
C. Hospital acquired cases				
D. Hospital acquired cases				
E. Health worker morbidity				
F. Health worker mortality				
G. Health worker morbidity				
H. Health worker mortality				
I. Health worker morbidity				
J. Health worker mortality				
K. Health worker morbidity				
L. Health worker mortality				
M. Health worker morbidity				
N. Health worker mortality				
O. Health worker morbidity				
P. Health worker mortality				

B. OUTBREAK ALERT
 Report any new (single) case of the following diseases, and should use the Surveillance Classification by severity or WHO or please to WHO 1714 1988 or WHO 1988 1988, with appropriate information on case, date and number of cases and deaths.

Cholera Typhoid Malaria Dengue fever Meningitis

Hospital weekly surveillance form

Form verification

- Completeness
- Follow-up
- Data entry

Date: 10/10/2005

Asah Province: _____ District: _____ Sub district: _____
 Town/Village/Settlement/Camp: _____
 Hospital name: _____
 Site: ? Inpatient ? Emergency
 Supporting agency(ies): _____
 Name and telephone number of contact officer: _____

Week from Monday: _____ / 2005 to Sunday: _____ / 2005

Report the number of CASES	MORBIDITY (CASES)		MORTALITY (DEATHS)	
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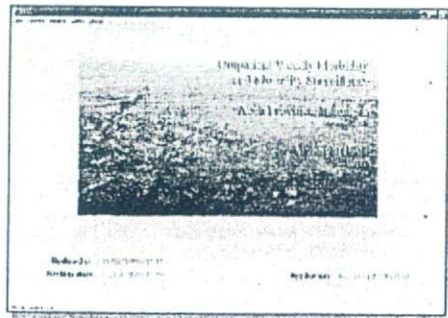
Data entry

- Simple and robust
- Definition of time and place units
- Data entry checks
- No calculated variables
- A form identification number

The screenshot shows a data entry interface for 'Epidata 3.10'. It features several input fields: 'SUBJECT', 'SURVEILLANCE NUMBER', 'DATE OF REPORT' (with a value of 07/02/2003), and 'Agency code'. Below these is a table with columns for 'Cases' and 'Deaths', each subdivided into five time periods: 'D-4', 'D-3', 'D-2', 'D-1', and 'D+'. The table rows list various symptoms and signs such as 'Fever', 'Cough', 'Sore throat', 'Headache', 'Diarrhoea', 'Vomiting', 'Rash', 'Reddened face', 'Swollen lymph nodes', 'Swollen glands', 'Joint pain', 'Muscle pain', 'Stiff neck', 'Reddened eyes', 'Reddened mouth', 'Reddened throat', 'Reddened skin', 'Reddened lips', 'Reddened tongue', 'Reddened soles', 'Reddened palms', 'Reddened feet', 'Reddened hands', 'Reddened fingers', 'Reddened toes', 'Reddened nails', 'Reddened hair', 'Reddened skin', 'Reddened lips', 'Reddened tongue', 'Reddened soles', 'Reddened palms', 'Reddened feet', 'Reddened hands', 'Reddened fingers', 'Reddened toes', 'Reddened nails', 'Reddened hair'. The interface also includes a 'DATE' field and a 'SUBJECT' field.

Data Presentation

- Executive information system
- Daily alert update
- Epidemiological bulletin



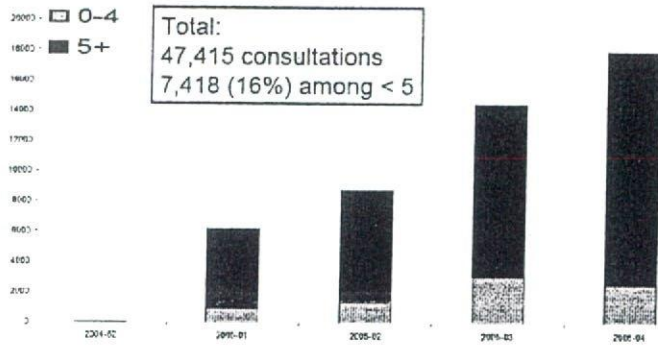
Surveillance Reporters

-ACEH BARAT DAYA DHO	INDO DISASTER MED RESC C	MERCY MALAYSIA	TEAM ALBANIA
-ACEH BARAT DHO	INDONESIAN NATIONAL ARMY	MEXICAN GOVERNMENT	TDH ITALY
-ACEH BESAR DHO	INT COMMITTEE OF THE RC	NORTH WEST MED TEAM	WALH ACEH
-ACEH UTARA DHO	INTERNATIONAL MED. CORPS	NORTHWEAST MEDICAL	BARAT
-ANZAC FIELD HOSPITAL	INTL COMMITTEE RED CROSS	ACT	YAKKUM
-ASSOC OF MED DR OF ASIA	INT FED RED CROSS	OBOR BERKAT INDO	EMERGENCY
-BIDDOKES POLDA ACEH	ISLAMIC FOUNDF OF TORONTO	A.BARAT	UNIT
-CARE INTERNATIONAL	IRC NAGAN RAYA	OPEN HAND	YAYASAN
-CHINA MEDICAL TEAM	IRC/CARDI	OUTP AND MOBILE CLINIC	SOSIAL KREASI
-CATHOLIC RELIEF SERVICE	JESUIT REFUGEE SERVICE	PAN ECO SWISS MED TEAM	ZAINDEL ABIDIN
-CHINA INTS & RESCUE TEAM	JAPAN RESCUE TEAM	PANECO/YEC MEDICAL	GNRL HSPTL
-DANISH EMERG MOB HOSP	KOREAN EMERGENCY ASSOC	TEAM	
-EGV BERLIN OFFSHORE	LHOKSEUMAWA DHO	PERDHAKI	
-ESTONIAN MEDICAL TEAM	MALAYSIA RED CR SOCIETY	PKBI	
-FOOD FOR THE HUNGRY INTL	MALTESER GERMANY	INDONESIAN RED CROSS	
-GERAKAN IBU PEDULI ACEH	MEDECINS DU MONDE FRANCE	SOC	
-GLOBAL CARE BANDA ACEH	MEDICOS DEL MUNDO SPAIN	PHILIPPINES MED TEAM	
-GERMANY ARMED FORCES	MERC.C INDONESIA	PORTUGUESE HOSPITAL	
-GJAF JAPAN LAMARA CLINIC	MERCY RELIEF SINGAPORE	PROJECT CONCERN	
-GLOBAL RELIEF	MERCY RELIEF SINGAPORE OP	INTERNATI	
-HOLLAND HORIZON	MERLIN	PROVINCIAL HEALTH	
-HUMANITARIAN FIRST	MITRA PEDULI	OFFICE	
-INT OFFICE OF MIGRATION	MSF BELGIUM	PUB HEALTH KUTA BARO	
-INDO PLANNED PARENTHOOD	MSF FRANCE	PAN ECO SWISS MED TEAM	
	MSF HOLLAND	SPANISH COOPERATION	
		SAVE THE CHILDREN	
		SHEEP	

Biweekly feedback meetings



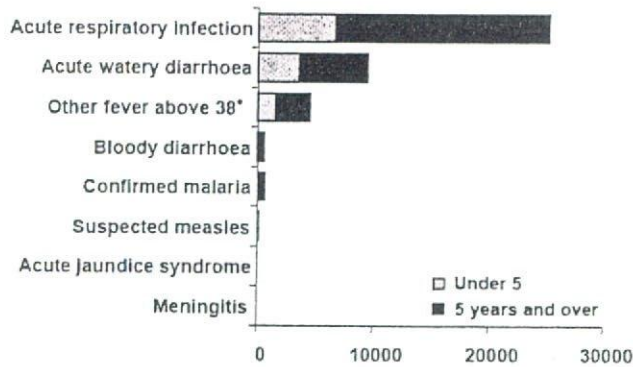
Total Consultations by Week
Weeks 2005 1-4



Epidemic and Pandemic Alert and Response



Distribution of Consultations by Diagnosis
Weeks 2004-52 - 2005-12

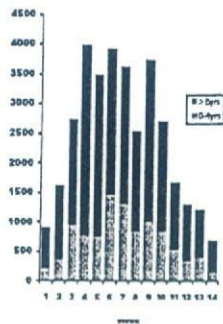


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Acute Respiratory Infections

Weeks 2004-52 to 2005-14



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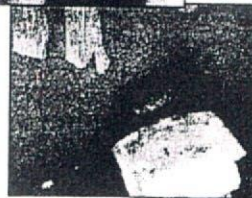
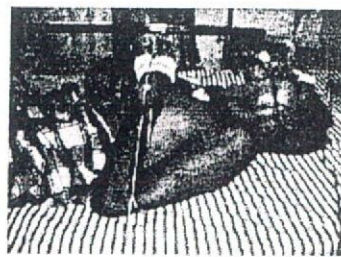
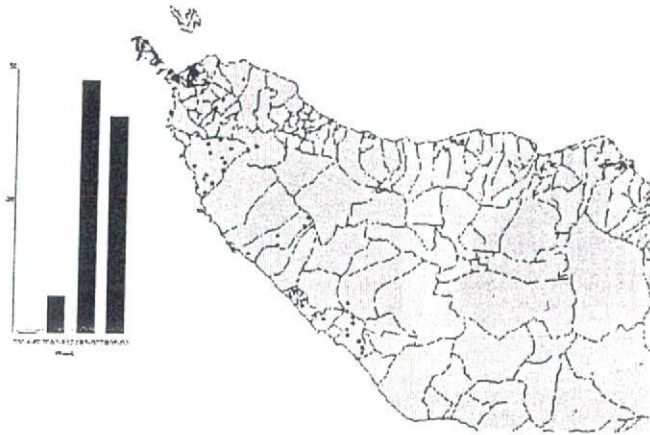


Bloody Diarrhoea

Weeks 2004-52 to 2005-03

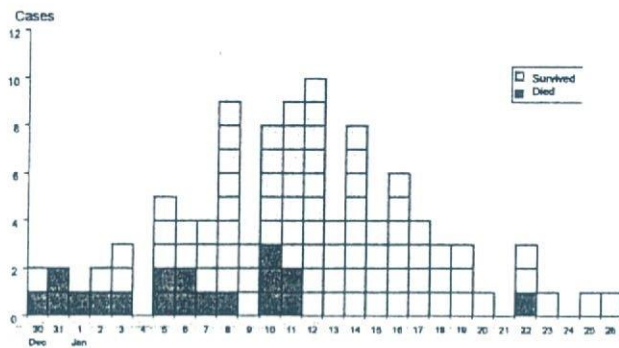


Confirmed Malaria Weeks 2004-52 to 2005-03



Tetanus Cases (n=106) by Date of Admission

26 December 2004 - 26 January 2005



Epidemic and Pandemic Alert and Response



Prevention and Control of Tetanus

- Protection of relief workers
- Disinfection of wounds
- Immunoglobulin supply
- Case management (ventilators)



Summary Surveillance

- As of end of March 2005
 - 185 000 consultations reported
 - Investigated alerts: bloody diarrhoea (11), acute watery diarrhoea (1), dengue (5), typhoid (3), jaundice (11), malaria (4), encephalitis (1), scrub typhus (1), measles (24)
 - Clustered cases: tetanus, dengue, bloody diarrhoea, typhoid, scrub typhus, hepatitis A & E
 - Outbreak: measles

Epidemic and Pandemic Alert and Response



Epidemic Preparedness

- Stockpiling
 - Drugs
 - Personal protective equipment (PPE)
- Sampling kits for investigation of alerts
- Standard treatment protocols
- Cholera Treatment Centre (CTC) site and potential partners for response identified
- Public health laboratory capacity

Epidemic and Pandemic Alert and Response



Epidemic Preparedness: Stockpiling

	Max. AR	Max. # cases	Drug	Total quantities needed	Stocks available as of 27/1
Malaria	30% PF	300,000	ACT	300,000 doses	Metric: 150,000 on site, 100,000 on order; MSF: enough for their facilities; MDM: small amount*
Cholera	2%	20,000	ORS	200,000 sachets	1 million
	20% severe	4,000	Ringer lactate	24,000 litres	6000 litres
			Doxycycline	12,000 tablets	50,000
Shigellosis	5%	50,000	Ciprofloxacin	300,000 tablets	1300
Measles	4%	40,000	Amoxicillin	800,000 capsules	400,000
			Vitamin A	120,000 capsules	135,000
Meningitis	500/100,000	5000	oral chloramphenicol/ceftriaxone	10,000 ampoules	10,000 ceftriaxone
			meningo vaccine	1.5 to 6 million doses	

* 300,000 tablets ordered by WHO Jakarta

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Standard Treatment Protocols

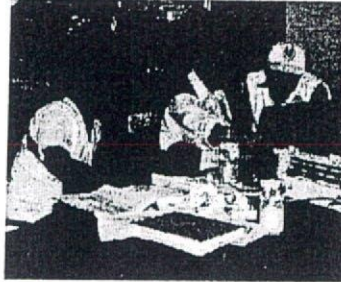
- Malaria (Artesunate + Amodiaquine)
- Dengue (MOH, based on SEARO document)
- ARI, measles (MOH / WHO IMCI, 2nd line treatment: amoxicillin)
- Acute watery diarrhea (MOH / WHO IMCI)
- Cholera (WHO guideline)
- Shigella (WHO guideline being reviewed - ciprofloxacin)
- Tetanus (MOH directive)

Epidemic and Pandemic Alert and Response



Consolidation Phase

- Joint PHO/MOH/WHO surveillance office
- Integration of alert system into routine surveillance system
 - Reporting mechanism
 - Data management
 - Investigation
 - Case definitions
 - Standard treatment guidelines
- Training of local epidemiologists in districts
- Material support to PH authorities (computers, printers, mopeds, etc)



Epidemic and Pandemic Alert and Response



Lessons learned (1)

- Link with all actors in field
 - Importance of credibility and trust
 - Determining early who does what, and where
 - Taking every opportunity to communicate
- Be flexible
 - No situation will resemble another
 - Impossible to standardise a priori, but be prepared
 - Tool box for surveillance and response
- Missing denominators
- Tetanus surveillance in such context

Epidemic and Pandemic Alert and Response



Lessons learned (2)

- Natural disasters = no scaling up
 - Logistics support +++ from day 1
 - Strong coordination presence from day 1
 - Strong technical presence from day 1
 - Scale down as necessary

**スリランカ津波災害緊急医療支援
 中での疫学調査活動**
 Epidemiological survey during the medical relief
 activity towards the Tsunami disaster in

Sri Lanka



(特活) 災害人道医療支援会
 NPO Humanitarian Medical Assistance (HuMA)
 島田 靖 Yasushi Shimada (FETP-J 4th)



**HuMA Medical Relief Mission
 to the Tsunami in Sri Lanka**

• Terms of activities Jan 13th to 26th Feb 2005

• Area of activities
 Democratic Socialist Republic of Sri Lanka
 Ampara District, Kalmunai area

• Objectives
 ① To provide medical service to the affected area
 ② To contribute public health in the affected area

• International Staff: 6 doctors, 4 Nurses

• Local Staff: 4 Coordinator, Interpreters



The damage in Sri Lanka



- No. of
- No. of injured: 23,059
- No. of missing: 4,115

(As of 21 Feb. 2005. Source: WHO)

**District
 Area**

Population: 29,000



JDR-MT to NWMT・HuMA

• Handed over from JDR-MT
 (Japan Disaster Relief Team Medical Team)

- transition stage of clinical needs
- recovery of local medical facilities
- reorganization of shelters



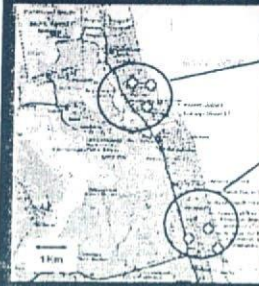
Our Activities



- To provide Field Clinic
- Observational study in the affected area, shelters and local medical facilities
- Training for wound care technician in hospital
- Epidemiological survey about health status after Tsunami
- Donation of mosquito nets and ECG



Field Clinic



Maruthamunai Area

- Al Hembra School # 2
- Maccamady Road # 2
- Maccamadya Camp # 1

Sainthamaruthu Area

- Al Hial School # 4
- Agra Ser Center # 2
- Boundary Road # 5



Medical needs in the sub-acute phase



Care for infected wound

WRI

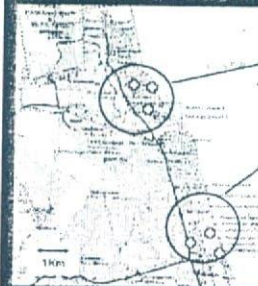


skin complaint

skin



Field Clinic



Maruthamunai Area

- Al Hembra School # 2
- Maccamady Road # 2
- Maccamadya Camp # 1

Sainthamaruthu Area

- Al Hial School # 4
- Agra Ser Center # 2
- Boundary Road # 5



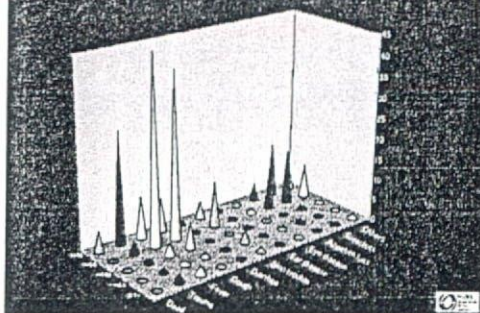
Results

- 52 house holds, 249 people
 - Male:131, Female: 118
 - Age: Median 27
- Severe damage of houses were observed till 300~600m far from coast
- The affected people whose house damaged only partially could back own house till 2 weeks after Tsunami

Health complains by each term after Tsunami

	12/26	12/27	1/16	1/24	2/7	total
Dead	5	0	0	0	0	5
Trauma	27	3	3	1	2	36
Fever	10	45	9	3	2	69
Cough	9	40	6	1	0	56
Diarrhea	0	10	0	0	0	10
Skin trouble	4	31	10	3	1	49
Ear disease	0	0	0	0	0	0
Eye disease	0	1	0	0	0	1
Appetite loss	4	4	0	1	0	9
Sleepless	23	31	30	0	0	84
Others	6	46	0	0	1	53

Health complains by each term after Tsunami



Number of persons complained any symptoms by the distance from Beach Road

