

DHF SITUATION AND DHF ACTIVITIES IN THE SOUTH-EAST ASIA REGION, 1989-1990

by

Dr Sujarti Jatanasen, Regional Adviser, Communicable Diseases, and Dr J. Akiyama, Regional Entomologist, WHO Regional Office for South-East Asia, New Delhi

DHF SITUATION

High Endemic Areas

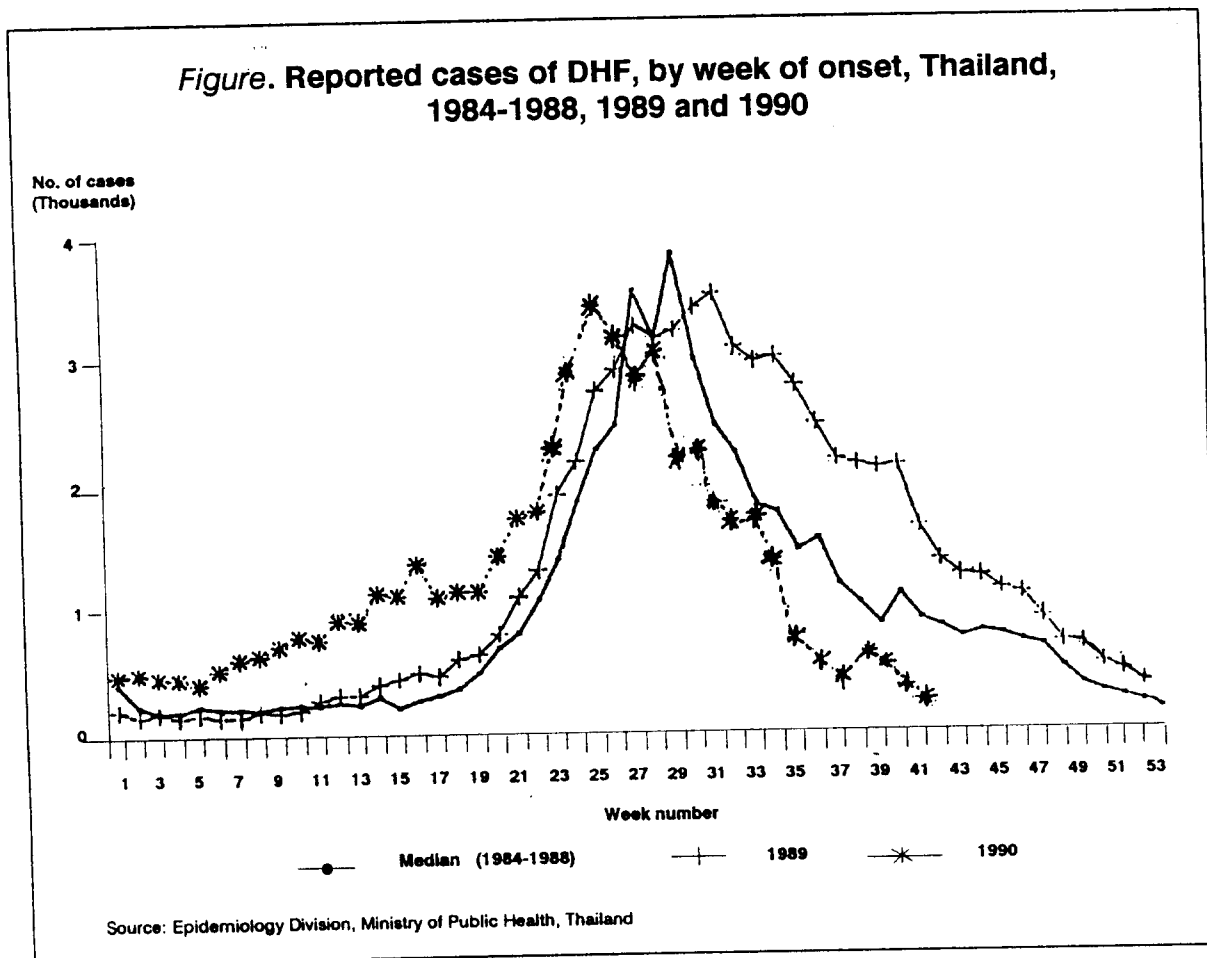
Thailand

The highest number of DHF cases in Thailand was reported in 1987. The number of cases reported in 1988 was comparatively lower than that reported in 1986 (see Table 1).

TABLE 1. DHF cases, deaths and case-fatality rates (CFR) in Indonesia, Myanmar and Thailand, 1985-1990

Year	Indonesia			Myanmar			Thailand		
	No. of cases	No. of deaths	CFR (%)	No. of cases	No. of deaths	CFR (%)	No. of cases	No. of deaths	CFR (%)
1985	13 588	460	3.39	2 666	134	5.03	80 076	452	0.68
1986	16 421	600	3.65	2 192	111	5.06	27 837	236	0.84
1987	22 765	1 039	4.56	7 292	222	3.04	174 285	1 007	0.58
1988	47 573	1 527	3.2	1 181	65	5.50	26 926	188	0.54
1989	10 362	464	4.50	899	52	5.78	69 204	480	0.40
1990 ^a	13 043	458	3.51	5 200	178	3.42	102 312	360	0.35

^aProvisional data (up to November 1990)



In 1989, the number of cases reported increased nearly three times that of 1988 - from 26 926 to 69 204 - but was less than the cases reported in 1987 (174 285). The monthly comparison of DHF cases in 1988 and 1989 shows that the highest cases occurred in July 1989 whereas in July 1988 only 4 679 cases were reported.

After the peak in July 1989, the monthly number of cases reported in the following months were higher than the weekly median number of cases of the previous five years. It was an alarming sign of the big outbreak in 1990.

In the first half of 1990, the number of cases reported was higher than the median weekly number of cases of the previous five years. But, fortunately, because of timely efforts, the number of cases decreased. The number of cases reported in 1990 (up to November) was 102 312, with 360 deaths - less than the number of cases reported in 1987 (see Figure).

Myanmar

The highest number of DHF cases in Myanmar - 7 292 cases and 222 deaths was reported in 1987 - compared with the highest number of cases reported in Thailand in the same year. The DHF cases reported in 1988 - 1 181 cases with 68 deaths - decreased, and further decreased in 1989 - 899 cases with 52 deaths (see Table 1).

In 1990, the number of cases reported showed an upward trend - four times that of 1988. However, these figures are still less than the figures reported in 1987. Of these cases, 3 188 cases with 100 deaths were reported from Yangon alone. Of the number of cases reported (1 512) in July 1990 in the whole country, 844 cases occurred in Yangon. The second highest number of cases reported was 733 with 43 deaths in Bago division. The highest number of cases (345 cases and 25 deaths) was also reported in July 1990. Mon state is ranked third as regards (403 cases and 20 deaths). Other states/divisions reported less than 200 cases (Table 2).

Indonesia

The most recent outbreak in Indonesia was in 1988, the number of cases reported was 47 573, with 1 527 deaths. The number of reported cases in 1989 was 10 362 with 464 deaths (Table 1).

The monthly incidence of DHF and deaths, by province, for 1990 is given in Table 3.

It is observed that Thailand, Myanmar, Laos and Vietnam experienced the highest number of DHF cases in 1987 whereas the numbers of cases reported in all the four countries were less in 1988-1989.

There were reports of DHF outbreaks in the refugee camps on the Thai/Cambodia border in 1990.

Silent Areas

India

The latest epidemic was reported in Madras during the year 1989-1990. No details about the number of cases and deaths or the number of serious syndromes are available as yet.

Sri Lanka

Before 1989 the incidence of DHF in Colombo never exceeded 10 cases per year but in 1989 the number increased to 203 suspected cases with 20 deaths. Of these, 87 were serologically confirmed with HI test. The quarterly trend of suspected/sero-confirmed cases were 26(8), 23(5), 55(28) and 99(46). This trend continued till August 1990. 941 cases with 55 deaths were reported; 307 cases were confirmed by serology HI test.

Maldives

Since the outbreak of severe dengue fever in April-May 1988 in Malè, no report of severe cases has been received.

ACTIVITIES ON DHF

The eighth Peer Review meeting on development of dengue vaccine was held in Bangkok on 29 and 30 September 1990.

TABLE 2. Monthly incidence of DHF reported cases (C) and deaths (D) in Myanmar, by state/division, 1990

State/Division	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		Total			
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D		
Chin State	
Kachin State	2	0	2	1	1	0	...	...	...	...	...	...	...	...	...	5	1	
Kayah State	
Kayin State	18	1	107	1	34	1	23	0	3	0	...	...	...	...	...	...	...	185	3	
Mon State	10	0	114	3	262	8	163	5	15	0	59	4	...	...	...	...	...	603	20	
Rakhine State	
Shan State	1	0	...	...	...	...	...	...	...	...	...	18	0	5	0	24	0	
Ayeyarwady Division	41	1	29	1	3	0	...	...	...	...	...	...	...	...	...	73	2	
Bago Division	6	2	123	6	365	23	123	4	107	7	3	1	6	0	...	...	...	733	43	
Magwe Division	1	0	2	0	...	...	...	...	...	...	...	...	...	...	...	3	0	
Mandalay Division	6	2	21	2	24	0	110	0	1	0	30	0	5	0	197	4		
Sagaing Division	22	0	7	0	14	0	2	0	...	...	...	...	...	...	...	45	0	
Tanintharyi Division	4	0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	144	5	
Yangon Division	43	1	24	2	41	2	41	2	55	3	292	14	753	11	844	28	552	20	324	12	152	3	88	4	20	0	3188	100
Total	43	1	24	2	45	2	45	2	65	3	445	21	1341	29	1512	63	764	24	629	25	158	4	144	4	30	0	5200	178

... Data not available

TABLE 3. Monthly incidence of dengue haemorrhagic fever and deaths, by province, Indonesia, 1990

Province	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		Total				
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D			
DI Aceh	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	1	
Sumatera Utara	3	0	1	1	5	3	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	4	
Sumatera Barat	1	0	0	0	2	0	0	7	0	10	0	9	1	2	0	20	0	15	0	0	0	0	0	0	0	0	66	1	
Riau	19	0	25	0	27	1	13	1	0	0	4	4	1	6	1	25	2	0	0	0	0	0	0	0	0	0	119	6	
Jambi	2	0	2	0	1	0	1	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	1	
Sumatera Selatan	32	2	11	0	13	0	14	1	30	3	7	1	3	0	2	0	0	0	0	0	0	0	0	0	0	0	112	7	
Bengkulu and Lampung	5	1	4	2	1	1	0	0	0	0	8	0	3	1	4	0	2	1	0	0	0	0	0	0	0	0	27	6	
DKI Jakarta	162	4	228	3	324	3	411	6	604	10	580	7	865	7	804	10	761	7	771	12	437	4	0	0	0	0	6191	76	
Jawa Barat	68	2	82	4	114	8	136	10	182	6	226	7	268	19	248	8	258	10	309	14	239	16	8	0	0	0	2138	104	
Jawa Tengah	274	11	162	5	129	5	112	2	182	4	166	4	147	20	119	4	0	0	0	0	0	0	0	0	0	0	1291	55	
DI Yogyakarta	11	2	10	0	14	1	19	1	21	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	5	
Jawa Timur	390	10	278	17	233	6	311	13	300	8	203	13	12	0	0	0	0	0	0	0	0	0	0	0	0	0	1727	67	
Kalimantan Barat	17	1	18	3	47	6	38	7	50	7	58	15	57	8	77	7	113	5	236	7	0	0	0	0	0	0	711	66	
Kalimantan Tengah	9	0	3	0	1	1	2	0	4	0	6	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	35	1	
Kalimantan Selatan	40	1	23	0	4	1	4	1	2	1	3	1	8	0	53	6	35	4	22	2	13	1	0	0	0	0	207	18	
Kalimantan Timur	29	2	25	5	57	4	26	3	11	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148	18	
Sulawesi Utara	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	3	1	
Sulawesi Tengah	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sulawesi Selatan	5	2	11	2	9	2	14	1	16	1	16	2	27	0	13	0	0	0	0	0	0	0	0	0	0	0	0	111	10
Sulawesi Tenggara	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bali	0	0	3	0	1	0	8	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	
Nusa Tenggara Barat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Nusa Tenggara Timur	2	1	7	4	11	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	5	
Maluku	0	0	1	1	2	2	0	0	2	0	5	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	12	6	
Irian Jaya
Timor Timur	0	...	0	...	0	...	0	...	0	...	0	...	0	...	0	...	0	...	0	...	0	...	0	...	0	...	0	0	
Total	1073	40	895	47	995	44	1119	46	1429	46	1292	54	1406	57	1371	38	1184	27	1338	35	689	21	8	0	0	0	13043	458	

... Data not available

The results of the clinical trial of trivalent vaccine D1, D2 and D4 in adult volunteers show that this vaccine is safe and the immunological response encouraging. So far, 159 adult volunteers have received one or more doses of this vaccine. The vaccine has not shown any disabling or untoward effects on the volunteers who were administered the vaccine; rather it has helped in neutralizing antibody for a period of years. The Peer group recommended the testing of clinical trial of trivalent vaccine in children. It is hoped that D3 vaccine would be available within a year. The study on genetic stability of vaccine virus isolation from D1 vaccine recipient, seed virus and parental virus showed satisfactory results. The biological growth characterization of each virus remained constant on passage in mosquitoes.

An international symposium on DF and DHF, organized by Mahidol University, was held from 1 to 3 October 1990 following the Peer Review meeting. Altogether, about 72 papers were presented, and discussions in the plenary sessions and small groups on epidemiology, virology, clinical manifestation, laboratory diagnosis, pathogenesis and vaccine development, prevention and control held. More than 200 scientists from all regions, mostly from SEAR, WPR and AMR, attended this symposium.

A Technical Advisory Committee meeting was organized by WHO headquarters, SEARO, WPRO and AMRO in Bangkok from 4 to 6 October 1990. Thirty members, including the WHO secretariat, participated in this meeting to update scientific knowledge being gained in various aspects of DHF, with special reference to the progress of vaccine development, laboratory diagnosis and clinical manifestation, vector situation and control. After a round-table discussion on each subject, specific recommendations for WHO were formulated. Based on the deliberations of the meeting it was decided to develop new guidelines for DHF diagnosis treatment and control.

The detailed report and guidelines are under preparation by WHO headquarters.