

Malaria -- Continued

The distribution of *Plasmodium* species in the refugee cases in 1979 was *P. vivax*, 29 (71%); *P. falciparum*, 8 (20%); *P. malariae*, 2 (5%); mixed *P. falciparum* and *P. vivax*, 1 (2%), and species not determined, 1 (2%). In 1980 refugee cases, the distribution of *Plasmodium* species was *P. vivax*, 125 (83%); *P. falciparum*, 12 (8%); *P. malariae*, 6 (4%); mixed *P. falciparum* and *P. vivax*, 3 (2%) and species not determined, 5 (3%).

In 1979, patients had onset of malaria symptoms an average of 3 weeks after arriving in the United States, with a range of 2 days to 3 months; however, the date of onset for those with *P. falciparum* always occurred within the first 2 weeks.

In 1980, the onset of symptoms ranged from 0-47 weeks after arriving in the United States for *P. vivax*, 0-7 weeks for *P. falciparum*, and 5-10 weeks for *P. malariae*.

Reported by WL Williams, MD, MPH, TM, Charity Hospital of New Orleans; L McFarland, MD, MPH, CT Caraway, DVM, State Epidemiologist, Louisiana State Dept of Health and Human Resources; D Kim Tam, Sister B Lege, Catholic Charities; RR Roberto, MD, DTPH, RA Murray, MPH, the California State Dept of Health Services, in the California Morbidity Weekly Report, March 14, 1980; Parasitic Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: During the first quarter of 1980, an increased number of reported malaria cases has been noted in the United States. This increase has been primarily among Indo-chinese refugees, with the predominant species being *P. vivax*. The ethnic group most commonly affected is Vietnamese refugees who have been, before their arrival in the United States, in certain Indonesian camps where malaria is endemic. The frequency of clinical illness in Vietnamese from urban areas, once they have been exposed to malaria in Indonesia, reflects their lack of protective immunity to malaria. By contrast, most Laotian and Kampuchean refugees come from rural areas that are hyperendemic for malaria, and thus they are not as susceptible.

CDC is currently assessing the prevalence of malaria parasitemia among refugees. At the present time, there has been no reported transmission of malaria from Indochinese refugees through domestic mosquitoes to U.S. citizens. Suspected cases of introduced malaria should be promptly reported to the state health department and to the Parasitic Diseases Division, Bureau of Epidemiology, CDC.

Follow-up on Mount St. Helens

Mount St. Helens erupted for the third time on June 12-13. The National Institute for Occupational Safety and Health (NIOSH) has begun sampling the ash from this eruption so that its chemical and physical properties can be compared to previous ashfalls.

Meanwhile, surveillance reports from 21 Washington hospitals, all located in areas with ashfall, indicate an increase in emergency room (ER) visits and hospital admissions for pulmonary conditions,* primarily after the first (May 18) eruption in the most heavily affected areas. The survey included 11 eastern and 10 western Washington hospitals for the period May 11-June 7.

*These included pneumonia, asthma, bronchitis, chronic obstructive pulmonary disease, and emphysema; upper respiratory infections were excluded.

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In the eastern hospitals, located in areas affected by the eruption on May 18, admissions for pulmonary conditions increased abruptly in areas with moderate-to-severe ashfall (Table 1). The greatest increase (from 2 to 13 admissions) occurred in the week immediately following the eruption in Ritzville, the town that received the most ashfall. In Ellensburg and in 1 hospital in Yakima, the increase in admissions for pulmonary conditions persisted through the second and third weeks after the eruption. But in Ritzville, Moses Lake, and Othello, the number of pulmonary admissions returned to pre-eruption ranges by the third week after the eruption (June 1-7).

The eastern Washington hospitals experienced a concurrent increase in ER visits for pulmonary conditions after the May 18 eruption, again primarily during the week May 18-24. The most notable increases were in Ritzville (from 1 to 34 visits), Moses Lake (8 to 21),

TABLE 1. Weekly admissions for hospitals in eastern Washington, May 11-June 7, 1980

Location	Cumulative ashfall (Inches)	Admissions	May 11-17	May 18-24*	May 25-31	June 1-7
Ritzville	2-3	Total	6	25	10	8
		Pulmonary	2	13	1	1
		Other	4	12	9	7
Moses Lake	2-3	Total	67	41	45	50
		Pulmonary	3	5	7	1
		Other	64	36	38	49
Othello	1½-1½	Total	36	38	32	35
		Pulmonary	9	17	4	6
		Other	27	21	28	29
Yakima - 1	1/2-3/4	Total	195	177	177	207
		Pulmonary	8	19	12	13
		Other	187	158	165	194
Yakima - 2	1/2-3/4	Total	288	237	248	273
		Pulmonary	7	14	7	8
		Other	281	223	241	265
Pullman	3/4	Total	42	58	38	NA†
		Pulmonary	2	1	4	NA
		Other	40	57	34	NA
Soap Lake	1/2	Total	9	2	6	6
		Pulmonary	0	0	1	1
		Other	9	2	5	5
Ellensburg	1/2	Total	21	36	21	36
		Pulmonary	1	5	4	5
		Other	20	31	17	31
Ephrata	3/8-1/2	Total	24	12	24	21
		Pulmonary	3	1	5	0
		Other	21	11	19	21
Spokane - 1	1/4-1/2	Total	316	266	301	NA
		Pulmonary	NA	NA	NA	NA
		Other	NA	NA	NA	NA
Spokane - 2	1/4-1/2	Total	594	468	573	NA
		Pulmonary	NA	NA	NA	NA
		Other	NA	NA	NA	NA

*The first volcanic eruption with ashfall was on May 18.

†NA = not yet available.

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Othello (10 to 21), Yakima (36 to 89 at 1 hospital, 13 to 61 at the other), and at 1 Spokane hospital (15 to 55).

The 10 western Washington hospitals included in the surveillance system were located in areas affected by the May 25 eruption: Centralia (ashfall, 1 inch); Chehalis (1/2-3/4 inch); Longview (2 hospitals; 1/4 inch); Aberdeen (2 hospitals, 1/8-1/4 inch); McCleary (1/8 inch); Shelton (1/8 inch); and Vancouver (2 hospitals, 1/8 inch). Unlike the eastern hospitals, these hospitals experienced no significant increase in admissions for pulmonary conditions, although Centralia, which had the heaviest ashfall, had a substantial increase in ER visits (from 11 and 17 to 44).

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Editorial Note: A number of factors may account for the differences in morbidity between the eastern and western hospitals, including the quantity and composition of the ash and the amount of rain after the eruption.

TABLE I. Summary -- cases of specified notifiable diseases, United States

[Cumulative totals include revised and delayed reports through previous weeks.]

DISEASE	24th WEEK ENDING		MEDIAN 1975-1979	CUMULATIVE, FIRST 24 WEEKS		
	June 14, 1980	June 16, 1979		June 14, 1980	June 16, 1979	MEDIAN 1975-1979
Aseptic meningitis	99	121	65	1,458	1,289	960
Brucellosis	2	3	3	76	47	87
Chickenpox	5,792	4,687	4,170	139,655	157,700	138,833
Diphtheria	-	-	1	2	4	48
Encephalitis: Primary (arthropod-borne & unspec.)	13	15	15	271	238	289
Post-infectious	6	6	7	88	116	116
Hepatitis, Viral: Type B	409	296	296	7,611	6,399	6,842
Type A	584	527	607	12,110	13,386	14,674
Type unspecified	330	163	184	5,419	4,576	3,969
Malaria	43	14	11	761	246	193
Measles (rubeola)	515	483	1,120	10,743	9,973	19,755
Meningococcal infections: Total	54	63	36	1,463	1,508	1,003
Civilian	54	63	36	1,457	1,493	998
Military	-	-	-	6	15	15
Mumps	185	387	493	6,222	9,458	13,781
Pertussis	31	15	29	492	549	549
Rubella (German measles)	107	360	360	2,700	9,212	13,436
Tetanus	1	2	2	23	26	26
Tuberculosis	605	620	629	12,325	12,509	13,805
Tularemia	8	13	4	52	78	53
Typhoid fever	4	8	8	157	199	152
Typhus fever, tick-borne (Rky. Mt. spotted)	56	37	41	256	239	237
Veneral diseases:						
Gonorrhoea: Civilian	19,846	18,342	19,451	432,431	434,391	433,130
Military	370	448	448	12,295	12,551	12,551
Syphilis, primary & secondary: Civilian	562	431	431	11,956	11,008	11,008
Military	2	2	3	144	138	140
Rabies in animals	123	89	64	3,042	2,196	1,353

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1980		CUM. 1980
Anthrax	-	Poliomyelitis: Total	5
Botulism	20	Paralytic	3
Cholera	8	Psittacosis (Ariz. 2, Calif. 1)	36
Congenital rubella syndrome	38	Rabies in man	-
Leprosy (Md. 1, Fla. 1, Calif. 2)	80	Trichinosis (Maine 1, La. 15)	63
Leptospirosis (Okla. 1)	24	Typhus fever, flea borne (endemic, murine) (Tex. 3)	23
Plague (N. Mex. 1)	2		

All delayed reports and corrections will be included in the following week's cumulative totals.

Influenza – Continued

Pertinent gross autopsy findings included severe edema of the aryepiglottic folds and hemorrhage with focal ulceration of the tracheal mucosa. Microscopically, there was severe lymphocytic inflammation in the false vocal cords and tracheal mucosa. All of these areas showed mucosal ulceration and hemorrhage. No viral inclusions were seen. The epiglottis was normal, and no pneumonia or pneumonitis was found. Specimens for virus culture were taken from the trachea and lungs.

In connection with the first case, hospital and outpatient data for the area where the infant lived, available only for military personnel, showed no appreciable changes in visits for respiratory disease from August 1 through October 31, 1979. Similarly, a review of admission data for the outpatient clinic and the hospital serving the area where the 13-year-old boy had lived revealed no evidence of increased respiratory disease activity.

Reported by JC Gaydos, MD, C Tin Oo, MD, SD Parks, MD, LA Andron, PhD, BA Hill, RN, MPH, DR Swanson, MD, RW Tezak, MD, JW Cutting, MD, U.S. Army 7th Medical Command, Europe; Immunization Div, Bur of State Services, CDC.

Editorial Note: Since the reappearance of the H1N1 subtype of influenza in the United States in early 1978, infections caused by H1N1 strains have not appeared to be associated with significant mortality. One possible reason for this may be that infections have occurred primarily in children and young adults—groups that are considered to be at lower risk of serious complications from influenza. However, the fatal case reported here illustrates that the potential exists for this subtype to cause serious illness among the pediatric age groups. In addition to the occurrence of Reye syndrome associated with H1N1 infections in the United States (1), cases of pneumonia and death associated with influenza A (H1N1) infections were reported in England during the 1978-79 influenza season (2,3).

References

1. MMWR 1979;28:39-40, 45.
2. Schaap GJ, DeJong JC, Van den Berg C, et al. Death from influenza A (H1N1). Lancet 1979;1:208.
3. Hoskins TW. Severity of influenza. Lancet 1979;1:381-2.

Erratum, Vol. 29, No. 22

p263 In the table to the article "Follow-up on Mount St. Helens," the second number under Idaho should be 609, not 690, as written.

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The editor welcomes accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Send reports to: Center for Disease Control, Attn: Editor, Morbidity and Mortality Weekly Report, Atlanta, Georgia 30333.

Send mailing list additions, deletions, and address changes to: Center for Disease Control, Attn: Distribution Services, GSO, 1-SB-36, Atlanta, Georgia 30333. When requesting changes be sure to give your former address, including zip code and mailing list code number, or send an old address label.

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Epidemiologic Notes and Reports

Imported Malaria — Louisiana, California

The city of New Orleans and the state of California have recently reported cases of malaria in Indochinese refugees.

Louisiana: In the period November 1, 1979-June 11, 1980, 36 (3.6%) Indochinese refugees (out of a total of 1,001 who had arrived in the New Orleans metropolitan area during that period) were diagnosed as having malaria.* All but 1 were admitted to Charity Hospital of New Orleans. The diagnosis of *Plasmodium vivax* malaria was subsequently confirmed in 35, and *P. falciparum*, in 1.

The group included 21 males and 15 females, ranging in age from 2-55 years, with a median of 8 years. A range of 5-98 days (median, 35 days) had passed between their arrival into the United States and presentation at the hospital.

The patients were encamped at various refugee camps in Indonesia; however 25 (69%) had spent some time at Sulgai Walang, a camp on Bintan Island, and 8 (22%) on a nearby island, Galang. All patients denied having malaria before they left Vietnam; most patients became ill while in Indonesia. Some received treatment in Indonesia, but the type and duration of therapy are not known.

Family members of malaria patients are being asked to come to special clinics for screening and/or chloroquine and primaquine treatment if they have a history of fever. Information is also being disseminated to members of the Vietnamese community, urging them to seek medical attention if they have symptoms consistent with malaria. State and parish health authorities and other appropriate agencies are coordinating mosquito-surveillance and control procedures in the areas housing these patients.

The Indonesian Government has closed Bintan Island as a refugee holding center.

California: From January 1-June 7, 1980, California reported 251 cases of malaria, compared to 93 in the same period last year. Most of this year's increase is attributed to Indochinese refugees, who have accounted for 151 (60%) of the cases. Of these, 117 (77%) were Vietnamese, 12 (8%) were Kampuchean, 2 (1%) were Laotian, and 20 (13%) were of other nationalities. Travel histories were not available for all 151 patients; however, 86 (57%) had a history of staying in Indonesian camps.

In 1979, Indochinese refugees accounted for 41 (13%) of the 318 malaria cases reported in California. Almost two-thirds of these cases were in Vietnamese; the remainder were in Kampucheans and Laotians. Patients ranged in age from 5 to 64 years, with a median age of 20 years. The male/female ratio was 4:1; most patients resided in major urban coastal areas of California.

*By contrast, no malaria cases were reported among the thousands of Vietnamese refugees who immigrated to the New Orleans area in 1975-76.