CENTER FOR DISEASE CONTROL

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MORBIDITY AND MORTALITY WEEKLY REPORT

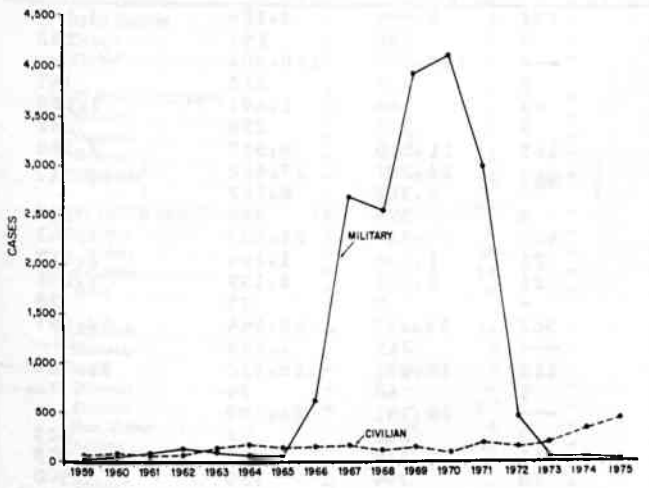
Surveillance Summary

Malaria — United States, 1975

Four hundred forty-seven cases of malaria with onset of illness in 1975 in the United States and Puerto Rico were reported to CDC in 1975. This represents a 38.4% increase over a similar period in 1974 when 323 cases were reported.

As in 1974, the increase in reported cases was due principally to increased malaria in civilians. Civilian cases increased from 302 in 1974 to 430 in 1975 and comprised 96% of all cases diagnosed in this country, compared with 93% in 1974. Cases of malaria among military personnel continued to decline, a trend first seen in 1971. The number of military cases fell from 21 in 1974 to 17 in 1975, comprising only 4% of all cases diagnosed in this country (Figure 1).

FIGURE 1. Military and civilian cases of Malaria, United States, 1959-1975



Of the 430 civilian cases which occurred in the United States, most were males in the 20 to 29-year age group (Table 1). United States citizens accounted for 45.8% of the imported civilian cases for which nationality was available. When purpose of travel in malarious areas was considered, tourists comprised the largest group among U.S. citizens. Among foreign visitors and immigrants, college students or teachers and persons with unknown occupations (represented mostly by refugees from Southeast Asia) were most common. In 2 instances, patients acquired their infections in the United States. In 1, *Plasmodium malariae* was induced by blood transfusion; in the other *P. vivax* infection was transmitted congenitally.

TABLE 1. Civilian Malaria cases by age and sex, United States, 1975

Age Group	Male	Female	Unknown	Total	Percent
0-9	24	24	2	50	11.6
10-19	35	19	1	55	12.8
20-29	114	59	4	177	41.2
30-39	46	24	0	70	16.3
40-49	27	5	0	32	7.4
50-59	21	3	0	24	5.6
60-69	5	4	0	9	2.1
70	1	2	0	3	0.7
Unknown	7	1	2	10	2.3
Total	280	141	9	430	100.0

The ratios of cases caused by the various *Plasmodium* species generally showed little change between 1974 and 1975. In 1975, however, *P. vivax* accounted for 61.3% of infections, an increase of 10.5% from 1974. The increase in the overall proportion reflected a statistically significant increase in reported cases from Vietnam and Cambodia (9 in 1974 to 64 in 1975, $p<0.001$), 63% of which were due to *P. vivax.* In addition to these infections, 109 (24.4%) of cases were caused by *P. falciparum* infection, 21 (4.7%) by *P. malariae*, 10 (2.2%) by *P. ovale,* and 4 (0.9%) by mixed infections.

U.S. patients contracted malaria in 1975 in at least 47 different countries. Areas of acquisition were identifiable for all but 1 case. Asia accounted for 41.6% of cases, Africa for 30.2%, Central America and the Caribbean for 15.7%, North America for 7.8%, Oceania for 2.5%, South America for 1.8%, and Europe for 0.2%. Of the 65 cases reported in 1975 from Vietnam or Cambodia, 3 (4.6%) occurred in U.S. military personnel and the same number in U.S. civilians. The remaining 59 cases were in foreign nationals, most of whom were transported into this country as refugees following political changes in both countries.

As in 1974, the largest number of cases from any single country were reported from India (80), comprising 17% of all reported cases in 1975. Other countries where exposure occurred in a large number of imported cases were Nigeria (35), Mexico (33), Pakistan (23), El Salvadore (24), and Nicaragua (20).

Malaria – Continued

A history of previous malaria while abroad was obtained in 142 of the 447 imported cases (31.8%). Patients with *P. falciparum* (22.9%) malaria appeared less likely to give a history of having had malaria previously than patients with either *P. vivax* (33.2%) or *P. malariae* (47.6%) infection.

The states with the largest number of reported malaria cases in 1975 were California (145), Pennsylvania (43), and New York (35). In California and Pennsylvania these totals represented large increases over those of the previous year, primarily because of the Vietnamese and Cambodian refugee camps in these states.

In 1975, as in 1974, the seasonal distribution of malaria cases showed a distinct pattern; a definite peak in cases (excluding cases with unknown date of onset) was apparent in the summer months. During the Vietnam conflict, this seasonality had been obscured by the year-round return of military personnel. In 1975, the influx of Southeast Asian refugees in the springtime coupled with a general increase in travel by Americans during the summer months probably accounted for the pattern.

As in previous years, for cases in which the exact date of arrival and the date of onset were available clinical malaria developed within 30 days of arrival in the United States in 64.6% of persons with *P. falciparum* infection and in 31.8% of those with *P. vivax* infection. Within 6 months after returning to this country, 97% of patients with *P. falciparum* malaria and 76.9% of those with *P. vivax* malaria developed clinical symptoms. Only 14 patients (5.9%) with *P. vivax* malaria became ill more than 1 year after the last possible exposure to malaria abroad. The longest interval documented between entry into the United States and onset of clinical illness in 1975 was 4 years for 1 patient each with *P. vivax* and *P. malariae* malaria and 11 months for a patient with *P. falciparum* malaria.

Of the 447 cases reported in 1975, 12.8% of patients were initially treated in military hospitals, 0.2% in Veterans Administration hospitals, and 64.2% in civilian hospitals. The Armed Forces and Veterans Administration has made complete malaria reporting a major responsibility of its hospital staff. Reporting by civilian physicians, however, is largely a matter of individual initiative, even though malaria is a reportable disease in every state. Thus, the above percentages probably underestimate the extent to which civilian physicians encounter patients with malaria.

Table I. Summary—Cases of Specified Notifiable Diseases: United States

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

DISEASE	41st WEEK ENDING		MEDIAN 1971–1975	CUMULATIVE, FIRST 41 WEEKS		MEDIAN 1971–1975
	October 16, 1976	October 11, 1975		October 16, 1976	October 11, 1975	
Aseptic meningitis	102	182	182	2,444	3,104	3,144
Brucellosis	5	12	7	231	197	152
Chickenpox	661	595	---	149,074	118,804	---
Diphtheria	-	-	2	125	225	147
Encephalitis: Primary	31	141	33	886	1,691	1,180
Encephalitis: Post-Infectious	10	3	3	223	256	232
Hepatitis, Viral: Type B	227	219	165	11,510	9,083	7,168
Hepatitis, Viral: Type A	462	684	981	26,307	27,482	40,317
Hepatitis, Viral: Type unspecified	140	113		6,702	6,287	
Malaria	11	9	9	374	339	339
Measles (rubeola)	221	90	151	34,884	21,509	24,543
Meningococcal infections, total	15	21	21	1,236	1,164	1,117
Civilian	15	21	21	1,227	1,139	1,091
Military	-	-	-	9	25	28
Mumps	224	403	562	33,347	48,344	57,351
Pertussis	14	45	---	765	1,243	---
Rubella (German measles)	55	97	112	10,832	15,122	21,707
Tetanus	1	1	1	48	74	74
Tuberculosis	460	697	---	26,181	26,185	---
Tularemia	1	3	3	106	92	123
Typhoid fever	9	11	11	319	265	303
Typhus, tick-borne (Rky. Mt. spotted fever)	14	15	10	794	759	590
Venereal Diseases:						
Gonorrhea: Civilian	18,016	20,584	---	794,677	783,131	---
Gonorrhea: Military	322	559	---	23,330	23,454	---
Syphilis, primary and secondary: Civilian	396	524	---	18,898	20,120	---
Syphilis, primary and secondary: Military	6	28	---	272	291	---
Rabies in animals	67	48	55	2,345	1,987	2,794

Table II. Notifiable Diseases of Low Frequency: United States

	CUM.		CUM.
Anthrax:	2	Poliomyelitis, total:	8
Botulism: Wash. 1	25	Paralytic:	7
Congenital rubella syndrome:	19	Psittacosis: Calif. 1	58
Leprosy: Calif. 3	109	Rabies in man:	2
Leptospirosis:	39	Trichinosis:	75
Plague:	15	Typhus, murine: Texas 1	43

Table III
Cases of Specified Notifiable Diseases: United States
Weeks Ending October 16, 1976 and October 11, 1975 — 41st Week

AREA REPORTING	ASEPTIC MENINGITIS	BRUCELLOSIS	CHICKENPOX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS, VIRAL			MALARIA	
						Primary: Arthropod-borne and Unspecified		Post Infectious	Type B	Type A	Type Unspecified		
	1976	1976	1976	1976	CUM. 1976	1976	1975	1976	1976	1976	1976	1976	CUM. 1976
UNITED STATES	102	5	661	-	125	31	141	10	227	462	140	11	374
NEW ENGLAND	3	-	44	-	-	-	-	-	2	11	12	1	17
Maine	-	-	1	-	-	-	-	-	-	4	-	-	-
New Hampshire*	-	-	7	-	-	-	-	-	-	5	-	-	-
Vermont	-	-	-	-	-	-	-	-	-	-	-	-	-
Massachusetts	-	-	20	-	-	-	-	-	-	-	12	1	10
Rhode Island	-	-	10	-	-	-	-	-	1	2	-	-	3
Connecticut	3	-	6	-	-	-	-	-	1	-	-	-	4
MIDDLE ATLANTIC	19	-	31	-	-	4	17	1	60	83	27	3	81
Upstate New York	6	-	1	-	-	-	5	-	10	15	9	3	19
New York City	7	-	29	-	-	-	-	-	14	24	-	-	35
New Jersey	6	-	NN	-	-	1	4	-	22	24	14	-	14
Pennsylvania	-	-	1	-	-	3	8	1	14	20	4	-	13
EAST NORTH CENTRAL	9	-	318	-	-	1	72	-	45	84	13	-	18
Ohio	-	-	23	-	-	1	33	-	7	18	-	-	7
Indiana*	1	-	34	-	-	-	22	-	1	5	7	-	-
Illinois	-	-	44	-	-	-	1	-	17	33	3	-	2
Michigan	8	-	140	-	-	-	11	-	18	28	3	-	7
Wisconsin*	-	-	77	-	-	-	5	-	2	-	-	-	2
WEST NORTH CENTRAL	-	2	91	-	4	8	12	-	18	26	7	-	24
Minnesota	-	-	-	-	-	2	-	-	4	4	-	-	4
Iowa	-	1	58	-	-	-	1	-	-	-	-	-	-
Missouri*	-	1	-	-	1	6	-	-	3	9	7	-	9
North Dakota	-	-	7	-	-	-	-	-	-	7	-	-	1
South Dakota	-	-	-	-	3	-	1	-	-	-	-	-	3
Nebraska	-	-	1	-	-	-	-	-	4	-	-	-	2
Kansas	-	-	25	-	-	-	10	-	7	6	-	-	5
SOUTH ATLANTIC	15	-	68	-	-	-	8	7	15	43	13	3	64
Delaware	-	-	-	-	-	-	1	-	2	1	1	-	-
Maryland	-	-	24	-	-	-	-	-	4	10	2	-	11
District of Columbia	-	-	-	-	-	-	3	-	1	-	-	-	9
Virginia*	-	-	2	-	-	-	1	-	3	16	6	1	9
West Virginia*	-	-	34	-	-	-	-	-	1	4	-	-	3
North Carolina	2	-	NN	-	-	-	-	-	1	3	-	-	6
South Carolina	-	-	2	-	-	-	-	-	3	1	4	-	1
Georgia	-	-	-	-	-	-	-	-	-	8	-	-	5
Florida*	13	-	6	-	-	-	3	7	-	-	-	2	20
EAST SOUTH CENTRAL	3	2	9	-	-	5	13	1	4	13	1	-	2
Kentucky	3	-	6	-	-	-	2	-	-	-	-	-	-
Tennessee	-	2	NN	-	-	5	6	1	1	9	1	-	-
Alabama	-	-	2	-	-	-	-	-	2	-	-	-	1
Mississippi*	-	-	1	-	-	-	5	-	1	4	-	-	1
WEST SOUTH CENTRAL	18	-	22	-	1	6	11	-	16	51	17	1	18
Arkansas	1	-	-	-	-	1	-	-	2	13	2	-	-
Louisiana	3	-	NN	-	-	1	6	-	6	9	9	-	1
Oklahoma	9	-	13	-	-	-	1	-	8	29	6	1	3
Texas	5	-	9	-	1	4	4	-	-	-	-	-	14
MOUNTAIN	4	-	34	-	4	-	1	-	8	25	2	-	15
Montana	-	-	5	-	-	-	-	-	1	4	2	-	-
Idaho	-	-	8	-	-	-	-	-	-	2	-	-	-
Wyoming	-	-	-	-	-	-	-	-	1	-	-	-	-
Colorado	4	-	17	-	3	-	1	-	6	7	-	-	9
New Mexico	-	-	4	-	1	-	-	-	-	4	-	-	1
Arizona	-	-	NN	-	-	-	-	-	-	4	-	-	4
Utah	-	-	-	-	-	-	-	-	-	-	-	-	-
Nevada*	-	-	-	-	-	-	-	-	-	4	-	-	1
PACIFIC	31	1	44	-	116	7	7	1	59	126	48	3	135
Washington	3	-	32	-	110	3	2	-	2	8	4	-	2
Oregon	-	-	-	-	-	1	1	-	4	8	3	-	5
California*	26	1	-	-	1	3	4	1	53	110	41	3	127
Alaska	2	-	10	-	4	-	-	-	-	-	-	-	-
Hawaii	-	-	2	-	1	-	-	-	-	-	-	-	1
Guam*	-	-	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico	-	-	19	-	1	-	-	-	-	24	-	-	1
Virgin Islands	-	-	-	-	-	-	-	-	-	-	-	-	-

NN: Not Notifiable

*Delayed reports: Asep. Meng: Miss. add 14; Bruc.: Mo. add 1; Chickenpox: N. Hamp. add 6, Calif. add 2; Enceph.: N. Hamp. add 1, Ind. add 15, Wisc. add 2, Miss. add 112; Hep. B: Mo. delete 1, Fla. add 57, Guam add 2; Hep. A: Mo. delete 1, W. Va. add 1, Fla. add 136, Nev. add 1, Guam add 2; Hep. unsp.: Va. delete 1, W. Va. delete 1, Fla. add 44, Guam add 1

Table III-Continued
Cases of Specified Notifiable Diseases: United States
Weeks Ending October 16, 1976 and October 11, 1975 — 41st Week

REPORTING AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1976	CUMULATIVE		1976	CUMULATIVE		1976	CUM. 1976	1976	1976	CUM. 1976	CUM. 1976
		1976	1975		1976	1975						
UNITED STATES	221	34,884	21,505	15	1,236	1,164	224	33,347	14	55	10,832	48
NEW ENGLAND	14	410	316	2	54	65	9	1,336	-	3	290	1
Maine	-	8	15	-	1	6	-	118	-	1	9	-
New Hampshire	-	9	22	1	5	3	-	26	-	-	11	-
Vermont	10	59	49	-	3	-	-	28	-	-	4	-
Massachusetts*	-	36	111	-	14	24	-	160	-	1	139	1
Rhode Island	-	15	3	-	6	3	1	455	-	-	5	-
Connecticut	4	283	116	1	25	29	8	549	-	1	122	-
MIDDLE ATLANTIC	24	7,043	1,798	3	181	117	40	3,127	5	2	2,296	6
Upstate New York	7	2,947	597	2	67	36	2	395	3	-	606	4
New York City	7	467	151	1	47	30	36	1,655	2	2	148	1
New Jersey	-	604	467	-	25	19	1	522	-	-	1,340	-
Pennsylvania	10	3,025	583	-	42	32	1	555	-	-	202	1
EAST NORTH CENTRAL	68	14,842	6,405	2	157	165	87	13,667	-	22	4,031	3
Ohio	-	573	106	-	64	47	9	1,945	-	4	296	2
Indiana	38	3,373	407	-	8	9	8	1,482	-	12	761	-
Illinois	7	1,620	1,827	1	20	21	9	1,787	-	3	1,173	-
Michigan	7	5,860	3,016	1	54	67	22	4,878	-	3	1,383	1
Wisconsin	16	3,416	1,049	-	11	21	39	3,575	-	-	418	-
WEST NORTH CENTRAL	12	1,164	4,995	-	72	72	17	3,396	1	5	405	6
Minnesota	-	424	182	-	12	16	-	547	-	2	29	1
Iowa	1	36	593	-	9	6	9	1,240	-	-	84	-
Missouri*	3	27	269	-	29	36	-	342	1	-	43	2
North Dakota	-	3	1,053	-	3	-	-	123	-	-	3	1
South Dakota	-	4	356	-	1	1	-	9	-	-	20	1
Nebraska	-	55	395	-	5	2	-	102	-	-	3	-
Kansas	8	615	2,147	-	13	11	8	1,033	-	3	223	1
SOUTH ATLANTIC	2	2,164	350	2	231	242	17	2,562	3	6	1,302	8
Delaware	-	130	35	-	8	7	-	64	-	-	34	-
Maryland	-	715	48	-	20	28	1	691	-	-	3	3
District of Columbia	-	13	1	-	2	5	-	105	-	1	46	-
Virginia	1	769	37	-	29	20	-	202	-	-	235	1
West Virginia	1	192	162	-	7	5	7	773	-	4	313	-
North Carolina	-	17	2	2	46	45	2	379	3	1	19	-
South Carolina	-	4	-	-	36	35	-	45	-	-	590	-
Georgia	-	2	40	-	23	14	-	-	-	-	2	-
Florida	-	322	25	-	60	83	7	303	-	-	60	4
EAST SOUTH CENTRAL	43	887	300	1	117	166	6	2,804	1	2	369	7
Kentucky	-	752	92	-	23	71	1	961	-	2	168	2
Tennessee	43	118	178	-	48	51	1	1,502	1	-	189	4
Alabama	-	-	5	-	32	30	3	282	-	-	1	1
Mississippi	-	17	25	1	14	14	1	59	-	-	11	-
WEST SOUTH CENTRAL	7	732	346	2	194	180	17	2,397	4	3	535	10
Arkansas*	-	-	-	-	11	10	-	80	-	-	190	-
Louisiana	2	216	1	1	38	33	1	23	2	-	87	2
Oklahoma	-	293	142	-	21	11	10	690	1	-	71	-
Texas	5	223	203	1	124	126	6	1,604	1	3	187	8
MOUNTAIN	27	5,103	1,411	2	44	36	1	1,130	-	2	482	1
Montana	27	231	50	1	5	7	-	22	-	-	235	-
Idaho	-	2,020	12	-	6	5	1	444	-	-	18	-
Wyoming	-	4	2	-	-	-	-	1	-	-	2	-
Colorado	-	307	1,158	1	12	9	-	226	-	-	23	-
New Mexico	-	15	13	-	4	4	-	127	-	-	31	-
Arizona	-	226	80	-	10	3	-	-	-	-	-	1
Utah	-	2,235	69	-	5	7	-	194	-	2	154	-
Nevada	-	65	27	-	2	1	-	116	-	-	19	-
PACIFIC	24	2,539	5,588	1	186	121	30	2,928	-	10	1,122	6
Washington	-	343	290	-	31	17	1	867	-	3	174	1
Oregon	1	169	197	-	17	6	6	374	-	-	135	1
California	23	2,020	5,037	1	116	91	22	1,628	-	7	792	4
Alaska	-	4	-	-	19	6	1	25	-	-	1	-
Hawaii	-	3	64	-	3	1	-	34	-	-	20	-
Guam*	-	13	31	-	1	2	-	15	-	-	5	-
Puerto Rico	11	432	655	-	3	1	17	741	-	-	9	5
Virgin Islands	-	14	8	1	1	-	2	31	-	-	8	1

*Delayed Reports: Malaria: Ark. add 1; Measles: Guam add 1; Men. Inf.: Mo. add 1; Mumps: Guam add 1; Pertussis: Mass. delete 1, Mo. add 4

Table III-Continued
Cases of Specified Notifiable Diseases: United States
Weeks Ending October 16, 1976 and October 11, 1975 — 41st Week

REPORTING AREA	TUBERCULOSIS		TULAREMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (RMSF)		VENEREAL DISEASES (Civilian Cases Only)						RABIES IN ANIMALS
								GONORRHEA			SYPHILIS (Pri. & Sec.)			
	1976	CUM. 1976	CUM. 1976	1976	CUM. 1976	1976	CUM. 1976	1976	CUMULATIVE 1976	CUMULATIVE 1975	1976	CUMULATIVE 1976	CUMULATIVE 1975	CUM. 1976
UNITED STATES	460	26,181	106	9	319	14	794	18,016	794,677	783,131	396	18,898	20,120	2,345
NEW ENGLAND	8	926	1	1	24	–	7	504	22,482	21,456	12	636	729	68
Maine	–	64	–	–	–	–	–	48	1,880	1,682	–	18	21	33
New Hampshire	3	39	–	–	2	–	–	10	654	579	–	9	14	1
Vermont	–	26	–	–	–	–	–	12	543	538	–	9	7	–
Massachusetts	4	549	1	1	15	–	4	216	10,694	9,897	12	463	484	22
Rhode Island	1	67	–	–	–	–	2	60	1,537	1,732	–	17	16	5
Connecticut	–	181	–	–	7	–	1	158	7,174	7,028	–	120	187	7
MIDDLE ATLANTIC	63	4,889	3	4	59	4	58	2,040	92,013	91,482	70	3,136	3,651	65
Upstate New York	19	757	2	–	9	–	23	251	14,841	16,251	11	195	340	14
New York City	31	1,992	1	4	32	–	5	1,008	40,936	38,672	41	1,954	2,103	–
New Jersey	13	967	–	–	11	1	13	189	14,340	13,200	11	469	585	31
Pennsylvania	–	1,173	–	–	7	3	17	592	21,896	23,359	7	518	623	20
EAST NORTH CENTRAL	75	3,707	1	2	32	1	19	3,020	126,567	128,462	64	1,668	1,619	151
Ohio*	9	704	–	1	12	–	14	852	31,318	35,725	13	400	391	31
Indiana	3	417	–	–	–	–	–	111	12,710	11,548	1	92	128	21
Illinois	39	1,298	1	–	9	–	–	1,126	43,786	44,422	41	905	762	22
Michigan*	18	1,084	–	1	9	1	5	664	26,923	24,442	6	186	275	7
Wisconsin	6	204	–	–	2	–	–	267	11,830	12,325	3	85	63	70
WEST NORTH CENTRAL	17	950	27	1	20	–	25	792	41,447	39,268	7	347	481	545
Minnesota	–	166	3	1	10	–	–	97	7,293	7,849	–	75	93	139
Iowa	2	89	1	–	1	–	3	127	5,236	5,670	–	36	25	110
Missouri*	10	471	19	–	5	–	12	348	16,749	14,273	4	145	228	54
North Dakota	–	26	–	–	–	–	–	9	635	612	–	–	5	111
South Dakota	4	43	1	–	1	–	3	32	1,211	1,512	–	4	5	55
Nebraska	1	43	–	–	2	–	–	28	3,487	3,517	3	29	16	15
Kansas	–	112	3	–	1	–	7	151	6,836	5,835	–	58	109	61
SOUTH ATLANTIC	106	5,562	7	–	41	8	396	4,415	192,706	192,207	114	5,488	6,283	372
Delaware	1	61	–	–	–	–	1	51	2,679	2,753	–	54	70	17
Maryland	19	782	1	–	4	–	21	561	25,546	23,289	2	437	448	11
District of Columbia	3	243	–	–	–	–	–	164	11,013	11,090	11	472	550	–
Virginia	13	839	2	–	4	2	97	360	20,126	18,934	13	549	494	55
West Virginia	1	217	–	–	5	–	8	68	2,439	2,436	–	20	51	14
North Carolina*	26	1,030	3	–	2	3	169	626	28,293	27,442	18	1,004	788	14
South Carolina	4	409	–	–	4	–	49	399	18,123	18,268	2	297	452	5
Georgia*	17	685	1	–	3	3	49	1,046	37,690	35,906	22	634	840	181
Florida	22	1,296	–	–	19	–	2	1,140	46,797	52,089	46	2,021	2,590	75
EAST SOUTH CENTRAL	39	2,241	14	–	14	1	152	1,763	70,799	66,291	10	747	905	109
Kentucky*	17	475	1	–	6	–	34	354	9,340	8,805	1	103	135	52
Tennessee	2	711	13	–	7	1	88	595	28,311	26,110	2	256	347	36
Alabama	19	662	–	–	1	–	13	514	19,731	18,320	2	155	205	21
Mississippi*	1	393	–	–	–	–	17	300	13,417	13,056	5	233	218	–
WEST SOUTH CENTRAL	62	3,119	38	–	13	–	128	1,558	100,043	96,471	55	2,264	1,757	518
Arkansas*	4	373	21	–	4	–	19	360	9,421	10,246	3	83	53	122
Louisiana	10	517	2	–	2	–	–	168	14,776	17,347	12	470	399	6
Oklahoma	11	310	7	–	1	–	92	211	9,797	9,306	1	81	71	128
Texas	37	1,919	8	–	6	–	17	819	66,049	59,572	39	1,630	1,234	262
MOUNTAIN	6	731	4	–	20	–	4	767	30,805	31,547	5	622	453	180
Montana*	–	41	2	–	2	–	1	40	1,643	1,656	–	8	4	76
Idaho	2	20	–	–	1	–	1	58	1,713	1,578	2	31	11	–
Wyoming	–	17	1	–	–	–	–	29	635	734	–	8	10	1
Colorado	2	122	–	–	5	–	1	228	8,209	8,481	–	122	74	52
New Mexico	2	141	–	–	2	–	1	66	5,920	5,487	–	229	122	3
Arizona	–	323	–	–	9	–	–	175	8,978	8,402	3	179	171	29
Utah	–	36	1	–	1	–	–	99	1,735	1,972	–	19	14	19
Nevada	–	31	–	–	–	–	–	72	1,972	3,237	–	26	47	–
PACIFIC	84	4,056	11	1	96	–	5	3,157	117,815	115,947	59	3,990	4,242	337
Washington	–	323	2	–	5	–	3	179	9,937	10,561	–	112	152	7
Oregon	3	153	1	–	–	–	–	171	8,312	8,810	2	92	111	11
California	64	2,997	8	–	88	–	2	2,668	93,532	91,856	54	3,683	3,930	278
Alaska*	–	78	–	–	–	–	–	85	3,373	2,806	–	19	6	41
Hawaii	17	505	–	1	3	–	–	54	2,661	1,914	3	84	43	–
Guam*	–	34	–	–	1	–	–	–	235	331	–	2	16	–
Puerto Rico	7	328	–	–	1	–	–	32	2,170	2,371	16	482	574	38
Virgin Islands	–	5	–	–	–	–	–	7	203	166	–	48	29	–

*Delayed reports: TB: Ohio delete 2, Mich. delete 1, Mo. delete 1, N. Car. delete 2; Ark. delete 1, Guam add 1; Tularemia: Ark. add 2; RMSF: Mo. add 1; GC: Guam add 9; Syphilis: Miss. add 1, Alaska add 2; An. Rabies: Ga. add 2, Ky. add 1, Mont. add 8

Table IV
Deaths in 121 United States Cities
Week Ending October 16, 1976 – 41st Week

REPORTING AREA	ALL CAUSES					Pneumonia and Influenza
	ALL AGES	65 Years and Over	45-64 Years	25-44 Years	Under 1 Year	ALL AGES
NEW ENGLAND	707	434	189	33	25	38
Boston, Mass.	194	110	54	11	11	9
Bridgeport, Conn.	61	37	15	4	1	5
Cambridge, Mass.	19	12	5	2	-	4
Fall River, Mass.	24	17	5	2	-	1
Hartford, Conn.	77	43	27	3	2	1
Lowell, Mass.	24	18	3	2	-	1
Lynn, Mass.	19	13	6	-	-	-
New Bedford, Mass.	22	15	7	-	-	-
New Haven, Conn.	46	26	14	2	3	1
Providence, R.I.	57	31	14	4	3	8
Somerville, Mass.	4	2	2	-	-	-
Springfield, Mass.	41	30	10	-	-	2
Waterbury, Conn.	36	26	8	-	1	-
Worcester, Mass.	83	54	19	3	4	6
MIDDLE ATLANTIC	2,748	1,721	692	159	95	107
Albany, N. Y.	60	35	13	2	8	-
Allentown, Pa.	32	27	5	-	-	3
Buffalo, N. Y.	108	62	32	8	4	4
Camden, N. J.	32	20	7	3	1	1
Elizabeth, N. J.	30	23	5	1	-	-
Erie, Pa.	37	27	7	1	-	5
Jersey City, N. J.	58	42	6	3	4	5
Newark, N. J.	67	31	21	3	9	1
New York City, N. Y.	1,481	931	377	85	37	50
Paterson, N. J.	26	21	-	4	1	-
Philadelphia, Pa.	298	177	80	16	18	14
Pittsburgh, Pa.	159	92	49	11	4	10
Reading, Pa.	31	22	8	-	1	1
Rochester, N. Y.	118	70	30	11	5	9
Schenectady, N. Y.	20	16	4	-	-	-
Scranton, Pa.	27	23	2	1	1	1
Syracuse, N. Y.	82	50	20	7	1	2
Trenton, N. J.	35	21	12	1	1	1
Utica, N. Y.	22	13	8	1	-	-
Yonkers, N. Y.	25	18	6	1	-	-
EAST NORTH CENTRAL	2,222	1,310	616	137	87	44
Akron, Ohio	46	26	16	1	1	-
Canton, Ohio	44	26	14	1	3	1
Chicago, Ill.	541	303	145	49	24	10
Cincinnati, Ohio	141	84	33	10	6	1
Cleveland, Ohio	153	84	54	7	5	4
Columbus, Ohio	130	70	40	11	5	2
Dayton, Ohio	103	64	22	11	4	3
Detroit, Mich.	311	181	89	22	9	7
Evansville, Ind.	41	29	7	1	2	2
Fort Wayne, Ind.	53	37	12	1	3	3
Gary, Ind.*	24	12	7	2	1	1
Grand Rapids, Mich.	64	42	16	2	-	2
Indianapolis, Ind.	143	83	42	5	8	2
Madison, Wis.	32	19	9	-	1	-
Milwaukee, Wis.	128	86	35	5	1	1
Peoria, Ill.	35	25	4	2	4	-
Rockford, Ill.	43	28	11	1	2	2
South Bend, Ind.	28	13	13	1	-	2
Toledo, Ohio	92	57	25	1	5	1
Youngstown, Ohio	70	41	22	4	3	-
WEST NORTH CENTRAL	701	436	165	47	27	29
Des Moines, Iowa	34	22	9	1	-	-
Duluth, Minn.	16	6	6	1	1	1
Kansas City, Kans.	27	13	6	4	-	3
Kansas City, Mo.	128	75	34	9	6	5
Lincoln, Nebr.	46	29	12	1	2	5
Minneapolis, Minn.	94	62	22	4	5	7
Omaha, Nebr.	58	37	12	4	3	1
St. Louis, Mo.	179	112	43	12	8	3
St. Paul, Minn.	75	52	10	8	1	1
Wichita, Kans.	44	28	11	3	1	3
SOUTH ATLANTIC	1,126	646	314	86	47	33
Atlanta, Ga.	165	95	47	13	6	3
Baltimore, Md.	209	121	56	16	12	6
Charlotte, N. C.	52	30	10	6	3	-
Jacksonville, Fla.	59	32	14	7	2	2
Miami, Fla.	114	68	35	5	3	4
Norfolk, Va.	42	20	18	1	3	-
Richmond, Va.	73	40	27	2	1	4
Savannah, Ga.	36	23	11	1	-	4
St. Petersburg, Fla.	68	51	11	4	2	3
Tampa, Fla.	74	44	17	8	3	4
Washington, D. C.	177	89	47	22	11	2
Wilmington, Del.	57	33	21	1	1	1
EAST SOUTH CENTRAL	609	361	150	41	35	26
Birmingham, Ala.	99	52	25	5	11	1
Chattanooga, Tenn.	74	44	19	7	2	4
Knoxville, Tenn.	41	28	12	1	-	1
Louisville, Ky.	99	63	21	5	9	7
Memphis, Tenn.	123	71	30	10	6	2
Mobile, Ala.	43	30	8	2	2	1
Montgomery, Ala.	43	21	11	5	5	3
Nashville, Tenn.	87	52	24	6	-	7
WEST SOUTH CENTRAL	1,128	598	308	99	62	35
Austin, Tex.	33	20	7	4	1	-
Baton Rouge, La.	54	24	19	4	4	7
Corpus Christi, Tex.	31	21	7	1	1	-
Dallas, Tex.	142	76	28	12	18	2
El Paso, Tex.	34	14	14	-	2	1
Fort Worth, Tex.	79	39	19	6	8	1
Houston, Tex.	228	107	72	28	9	5
Little Rock, Ark.	71	40	15	7	4	4
New Orleans, La.	153	78	51	14	3	-
San Antonio, Tex.	155	84	39	17	7	7
Shreveport, La.	66	36	23	3	3	2
Tulsa, Okla.	82	59	14	3	2	6
MOUNTAIN	466	281	106	34	24	13
Albuquerque, N. Mex.	47	29	9	4	-	7
Colorado Springs, Colo.	26	13	7	6	-	1
Denver, Colo.	101	62	25	4	6	3
Las Vegas, Nev.	15	11	2	1	-	1
Ogden, Utah	25	15	5	2	-	-
Phoenix, Ariz.	106	65	21	6	10	-
Pueblo, Colo.	24	14	7	3	-	-
Salt Lake City, Utah	50	28	12	2	6	1
Tucson, Ariz.	72	44	18	6	2	-
PACIFIC	1,396	891	324	98	35	42
Berkeley, Calif.	13	7	6	-	-	-
Fresno, Calif.	43	19	12	4	2	-
Glendale, Calif.	16	8	6	-	1	-
Honolulu, Hawaii	60	32	19	5	2	3
Long Beach, Calif.	99	67	19	7	5	3
Los Angeles, Calif.	387	248	87	32	7	15
Oakland, Calif.	60	38	16	4	1	4
Pasadena, Calif.	35	27	6	1	-	1
Portland, Oreg.	112	71	28	11	-	-
Sacramento, Calif.	50	32	9	3	3	3
San Diego, Calif.	115	72	28	4	6	2
San Francisco, Calif.	146	86	39	13	2	2
San Jose, Calif.	49	34	9	5	-	-
Seattle, Wash.	125	86	25	5	3	2
Spokane, Wash.	50	39	6	2	3	6
Tacoma, Wash.	36	25	9	2	-	1
TOTAL	11,103	6,678	2,864	734	437	367
Expected Number	11,672	6,938	3,085	781	405	370

*Estimate based on average percent of divisional total

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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.

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Current Trends

Influenza — Worldwide

Worldwide: No reports of influenza outbreaks have been received. The death of a 32-year-old man with viral pneumonia due to influenza B was reported from Scotland.

Reported by Communicable Diseases Scotland 76(37):v, 1976.

United States: The outbreak of influenza which started in Guam in mid-September has involved all age groups and segments of the population. Thirty-four isolates of an A/Victoria/75-like virus have been recovered. There have been no reports of other outbreaks in the Pacific region.

On October 11, 1976, the Allegheny County Pennsylvania Health Department reported closing its influenza immunization program when 3 elderly persons died after having been immunized with bivalent influenza vaccine within 1 hour at the same clinic. On that day, 1,242 persons received vaccine at the clinic. A random telephone survey of 130 of these persons revealed no serious reactions. A survey of area hospitals showed no vaccine-associated admissions. No irregularities in the clinic's practice or handling of vaccine were identified. Of 77,000 doses of this vaccine lot administered in 65 Pennsylvania counties, a total of 4 temporally associated deaths (illness or death within 48 hours of immunization) were identified for a death rate of 5/100,000. The expected death rate per day in Pennsylvania for all causes for citizens ≥65 years is 17/100,000 (*1*).

The 3 patients in Allegheny County ranged in age from 71 to 74, and each had a history of previous cardiovascular disease. One developed classic pulmonary edema at the clinic and died in an emergency room 1 hour later. The remaining 2 died at home of myocardial infarction. No evidence of anaphylaxis was found.

As of October 18, a total of 41 deaths in individuals with onset of illness within 48 hours of an influenza immunization have been reported to CDC. As of October 13, over 2½ million persons have been immunized. Thirteen lots of vaccine from all 4 manufacturers were administered to the 41 individuals, who ranged in age from 34 to 96 (mean age: 70.9). Chronic illness was present in all 41 individuals. Immediate cause of death was myocardial infarction in more than half. To date no deaths have been causally related to influenza immunization. The number reported is less than one-fourth the number anticipated to be coincidentally associated on a statistical basis.

Reported by FB Clack, MD, E Streiff, RN, MPH, Allegheny County Dept of Health; WE Parkin, DVM, Acting State Epidemiologist, Pennsylvania State Dept of Health; National Influenza Immunization Program, CDC.

Reference

1. State of Pennsylvania: Natality and Mortality Statistics. Harrisburg, 1973

International Notes

Poliomyelitis — Germany

In Freiburg, southwest Germany, in autumn 1975, poliovirus type 1, identified as wild-type virus by marker differentiation, was recovered from 5 children with typical symptoms of poliomyelitis (Table 2). Poliovirus with the same characteristics was isolated from 6 healthy members of 4 of the 5 families concerned. This is the first indigenous outbreak to have occurred in the Federal Republic of Germany since 1968.

TABLE 2. Outbreak of poliomyelitis in Freiburg, Federal Republic of Germany, 1975

Patient	Age	Symptoms	Date of Onset	Date of Confirmation of Virus Isolate
1	9 months	Facial paralysis	Sept. 9	Nov. 5
2	8 years	Pharyngeal paralysis	Sept. 19	Nov. 5
3	7 years	Meningitis	Oct. 13	Nov. 12
4	12 years	Paralysis of legs	Oct. 28	Nov. 18
5	15 months	Paralysis of legs	Oct. 29	Nov. 20

It was possible to show direct or indirect contact between members of all of these families in 1 area of the city. None of the patients and few of their relatives, all from a lower socioeconomic group, had been vaccinated against poliomyelitis.

Since 1968, all wild-type polioviruses isolated in the country either from sporadic cases or from healthy individuals could be shown to have been imported from countries in which the disease was still prevalent. None of the persons involved in the outbreak reported here, however, had recently traveled abroad. Nevertheless, there were 20 sporadic cases of paralytic and nonparalytic poliomyelitis in children of foreign workers during 1975. In addition, a serologic survey of children 1-9 years old in Freiburg showed antibody levels to all 3 types of poliomyelitis to be only 58% (Table 3). It is possible, then, that a series of inapparent infections which originated abroad could have preceded the outbreak.

TABLE 3. Immunity against poliomyelitis as determined by serum neutralization in 248 children in Freiburg, Federal Republic of Germany, summer-autumn, 1975

Age	Number of Children Tested	% Immune to Poliovirus			
		Type 1	Type 2	Type 3	Type 1-3
1	42	48	64	48	33
2	44	70	84	80	59
3	32	78	91	75	69
4	29	86	86	79	66
5	21	71	90	86	67
6	37	76	89	89	65
7	28	64	86	75	50
8	34	68	91	88	59
9	17	71	94	88	65
Total	284	69	85	77	58

Immediately after laboratory confirmation of the first 2 cases of the outbreak, an oral poliomyelitis vaccination campaign was started, and no further cases were reported. There was a delay in the initiation of virologic investigation at the beginning of this outbreak (Table 2), and, consequently, the control action was retarded. Being aware of the possibility of outbreaks of poliomyelitis whenever the immunity level is not completely satisfactory can avert delay in the implementation of vaccination programs.

Reported by Nationales Referenzcentrum für Enteroviren, Freiburg i/Br., Federal Republic of Germany, in the Weekly Epidemiologic Record 51(29): 230, 1976.

International Notes

Salmonella Wassenaar — Canada

A 6-week-old baby girl from Surrey, British Columbia, became ill on May 20, 1975, with vomiting and diarrhea and was admitted to a hospital for intravenous therapy. She received no antibiotics and recovered in 10 days. Stool culture yielded a *Salmonella* serotype, subsequently identified as *Salmonella wassenaar* — the first isolate of this organism from a human source in British Columbia.

No other members of the family were ill, and *Salmonella* organisms were not isolated from their stools. The infant's family used to keep pet turtles and now has an iguana, imported from Mexico by a local pet store. A culture of feces from the iguana yielded *S. wassenaar.*

Editorial Note: Pet turtles are a well recognized source of human salmonellosis, and *S. wassenaar* often has been isolated from turtles. On December 20, 1974, legislation was passed under the Animal Contagious Diseases Act to prevent importation of turtles into Canada from the United States without a permit from the Minister. In mid-1975, the United States imposed a ban on interstate shipments of pet turtles with shells measuring less than 4 inches across.

This British Columbian report indicates that other reptiles may also be a source of human salmonellosis. The infant probably acquired infection by direct contact with other members of the family who had handled the iguana.

Reported by EJ Bowmer, MD, Provincial Laboratories, Vancouver; AK Hutchinson, MD, and WB Meekison, MD, Boundary Health Unit, Surrey, British Columbia, and F White, MD, Bur of Epidemiology, Laboratory Centre for Disease Control, Ottawa, in Canada Diseases Weekly Report 2(35):139-140, 1976.

Foodborne *Salmonella* Infections Contracted on Aircraft

An outbreak of foodborne disease caused by *Salmonella brandenburg* occurred on a number of scheduled flights from Paris April 6-11, 1976. A total of 290 cases were reported; of these, the majority (232) were passengers.

The first reports of the outbreak came from air crew on 1 of the affected flights on its return to France April 9. Systematic questioning of crews pinpointed the flights affected, the composition of the menus concerned, and the approximate number of cases.

Bacteriologic examination of the persons affected led to the isolation of *S. brandenburg.* This organism was isolated from the following foods: stuffed bass, stuffed fillet of sole, dory, lobster mayonnaise, and stewed beef. *Salmonella* organisms were also isolated from trout in aspic, sweetbreads, and fresh petits fours; although their serotype was not specified, it seems probable that it was *S. brandenburg.* Evidence clearly indicated that contamination had taken place when the food was being prepared and that it was restricted to cold dishes.

The 200 employees of the catering establishment supplying the airline were cultured. One *Salmonella (S.brandenburg)* carrier was detected; he was a staff member responsible for preparing cold dishes. Following a meal at a restaurant on April 4, he had developed gastrointestinal symptoms.

Beginning April 9, several control measures were taken. The delivery to the aircraft of food likely to be contaminated was discontinued, and stocks of food ready for consumption that were likely to be contaminated were immediately destroyed. The preparation of all stuffed dishes was also halted, and the premises where the food had been prepared was throughly disinfected. The infected food handler was removed from work.

Reported by the World Health Organization in the Weekly Epidemiologic Record 51(33):265-266, 1976.

Editorial Note: Eight common-source foodborne outbreaks of gastrointestinal illness occurring among airline passengers have been reported to CDC since 1970. *Staphylococcus aureus* (in 6 cases), *Clostridium perfringens* (1), and *Salmonella thompson*, (1), have been implicated in these outbreaks. Outbreaks of *Salmonella* food poisoning are most often the result of inadequate food handling practices during preparation and storage. *Salmonella* organisms often contaminate raw poultry, poultry products, and red meats. Cross contamination between these raw foods and finished foods (foods that are already cooked or are normally served uncooked), inadequate cooking, and improper holding temperatures of finished foods are the deficient food handling practices of most concern.

Reported by Enteric Diseases Br, Bacterial Diseases Div, Bur of Epidemiology, CDC.

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