

MNWR

MORBIDITY AND MORTALITY WEEKLY REPORT

Epidemiologic Notes and Reports

- 215 Laboratory-Acquired Endemic Typhus — Maryland
- 216 Follow-up on Legionnaires' Disease — Bloomington, Indiana
- International Notes
- 221 Follow-up on Chemoprophylaxis of Malaria
- 221 Quarantine Measures
- 222 Poliomyelitis — Netherlands

Epidemiologic Notes and Reports

Laboratory-Acquired Endemic Typhus — Maryland

Three cases of serologically confirmed typhus fever occurred in personnel assigned to the Rickettsial Division of the Naval Medical Research Institute, Bethesda, Maryland, during the period March 12-21, 1978. An epidemiologic investigation to identify the source of infection revealed that all 3 cases resulted from breaks in prescribed technique, 2 of which were unrecognized at the time they occurred.

Patient 1: A 32-year-old female reported ill on March 15 after 3 days of headache, neck pain, fever of 37.5-39.4 C (99-103 F), recurrent chills, and chest discomfort. Sixteen days before, she had harvested *Rickettsia typhi* from infected eggs. She had used a mask only intermittently during the purification process, several steps of which involved the risk of aerosol generation. She was treated with tetracycline (TCN) and became afebrile within 48 hours. Her antibody titers for *R. typhi*, as determined by the microagglutination technique (1), were 1:64 on March 15 and > 1:512 12 days later. Proteus OX 19 agglutinins rose from an undetectable level to 1:640 on the same samples.

Patient 2: A 29-year-old male laboratory technician reported ill on March 16 with an oral temperature of 39 C (102 F) and a 2-day history of headache and nausea, which had progressed to fever and sweats. On March 3, he had accidentally stuck his finger with a needle used to inject steroids into mice infected with *R. typhi*. He had not obtained medical advice until March 15, however, 2 days after onset of symptoms. He was treated with TCN and became asymptomatic within 48 hours. His antibody titers on March 16 and March 29 were 1:32 and >1:512, respectively, by microagglutination using *R. typhi* antigen, and 0 and 1:1280 for Proteus OX 19.

Patient 3: On March 9, a 30-year-old female laboratory technician assisted in conducting metabolic studies, performed in open vessels, of whole *R. typhi* organisms. During the 6-hour experiment, she wore her gown, mask, and gloves only when she was directly over the vessels. Although much of the experiment was conducted in a biologic safety cabinet, the vessels had been removed and placed on an open bench top for a period during the experiment. She presented sick on March 22 with a 2-day history of fever and malaise. Physical examination

showed a temperature of 37.4 C (99.4 F) and pharyngeal injection. She was treated symptomatically when no history of exposure was obtained. She did not improve and returned on March 26 with fever of 38.3-40 C (101-104 F), chills, and frontal headache. Examination showed a scanty macular rash on her back, and she was hospitalized and treated with TCN. She became afebrile within 72 hours. Her disease was confirmed serologically with titers to *R. typhi* antigens rising from 1:16 on March 27 to 1:256 by April 4, as determined by microagglutination. Proteus OX 19 agglutination titers rose from 0 on March 27 to 1:640 on April 2.

All people working in the Rickettsial Division were bled, and antibody titers for *R. typhi*, *R. prowazeki*, and *R. tsutsugamushi* were performed on the serum samples. Nineteen individuals, including the 3 cases, had no pre-existing antibody to these rickettsiae. These cases represented an attack rate of *R. typhi* infection among susceptibles of 15.8%. Excluding 4 individuals who worked solely with formalin-killed organisms, the attack rate among exposed susceptibles was 3/15 or 20%. Corrective measures taken included the re-emphasis of all routine laboratory procedures and re-education of the technical staff in proper techniques for handling such organisms.

Reported by J Bellanca, MD, MPH, P Iannin, MD, B Hamory, MD, WF Miner, MD, MPH, J Salaki, MD, M Stek Jr, MS, MD, DTMH, National Naval Medical Center, Bethesda, Md; Office of Biosafety, Office of the Center Director, and Viral Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: These cases resulted from unrelated exposures in which the routine safety precautions and reporting systems for laboratory accidents were not followed. As Class 3 agents (2), all rickettsiae should be handled in special containment laboratories, which routinely use proper microbiologic techniques and biologic safety cabinets. Moreover, all laboratory accidents involving these organisms should be promptly reported, and individuals involved should be evaluated by a physician. Under no circumstances should self-evaluation and self-treatment bypass these more formal mechanisms.

Unfortunately, laboratory-associated infections with organisms of the rickettsial groups are not uncommon (3-5). Since adequate immunoprophylaxis for *R. typhi* and *R. rickettsiae* is not now available, prevention of

Typhus — Continued

laboratory-associated infection rests on scrupulous care in handling and containing these organisms.

References

1. Fisel P, Ormsbee RA, Silberman R, Peacock M, Spielman SH: A microagglutination technique for detection and measurement of rickettsial antibodies. *Acta Virol* 13:60-66, 1969

2. Classification of Etiologic Agents on the Basis of Hazard. U.S. Department of Health, Education, and Welfare, 1975
3. Pike RM: Laboratory-associated infections: Summary and analysis of 3,921 cases. *Health Lab Sci* 13:105-114, 1976
4. Oster CN, Burke DS, Kenyon RH, et al: Laboratory-acquired Rocky Mountain spotted fever: The hazard of aerosol transmission. *N Engl J Med* 297:859-863, 1977
5. *MMWR* 26:84, 1977

Follow-up on Legionnaires' Disease — Bloomington, Indiana

Thirteen cases of Legionnaires' disease with dates of onset from May 3, 1977, through May 18, 1978, have been confirmed in persons who visited Bloomington, Indiana, within 2 weeks prior to onset of illness. Twelve of the 13 cases had stayed overnight at the Indiana Memorial Union (IMU), a hotel on the campus of Indiana University.

To determine if there is increased risk of exposure to the Legionnaires' disease bacterium at the IMU, a serologic survey was conducted among employees of the IMU and 4 other area hotels. When adjustment was made for duration of employment of IMU employees and controls, there was no significant difference in the frequency of elevated antibody titers ($\geq 1:128$) to the Legionnaires' disease bacterium between the 2 groups. There were, however,

inadequate numbers in the control population for a valid comparison to be made with IMU employees who had worked more than 10 years. Risk of exposure to the Legionnaires' disease bacterium at the IMU is being studied further by comparing rates of illness in guests at the IMU with rates in control guests for the first week in May.

Environmental samples (from soil, water, and other materials) have been taken in and around the IMU; attempts to isolate the Legionnaires' disease bacterium from these samples are underway.

Reported by T Bonus, J Mohatt, Indiana University; RD Telle, MD, State Epidemiologist, Indiana State Board of Health; and Bacterial Diseases Div, Bur of Epidemiology, CDC.

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

(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	25th WEEK ENDING			CUMULATIVE, FIRST 25 WEEKS		
	June 24, 1978	June 25, 1977†	MEDIAN 1973-1977††	June 24, 1978	June 25, 1977†	MEDIAN 1973-1977††
Aseptic meningitis	93	100	71	1,085	1,060	985
Brucellosis	4	8	7	67	95	93
Chickenpox	3,060	4,353	3,246	112,583	150,946	136,539
Diphtheria	—	3	3	36	51	112
Encephalitis	Primary	13	19	282	308	377
	Post-Infectious	3	5	93	102	146
Hepatitis, Viral	Type B	285	308	7,035	7,888	5,327
	Type A	605	539	13,654	15,213	17,105
	Type unspecified	178	156	4,234	4,253	—
Malaria	22	17	6	266	210	137
Measles (rubeola)	889	1,275	723	19,679	48,008	21,939
Meningococcal infections, total	35	14	24	1,351	1,017	822
Civilian	35	13	24	1,336	1,011	803
Military	—	1	—	15	6	17
Mumps	403	476	1,107	11,496	14,257	39,542
Pertussis	20	19	—	839	419	—
Rubella (German measles)	750	473	290	13,213	16,749	13,726
Tetanus	—	3	1	32	29	29
Tuberculosis	677	695	664	14,207	14,500	15,318
Tularemia	3	4	4	37	57	57
Typhoid fever	8	6	6	201	164	160
Typhus, tick-borne (Rky. Mt. spotted fever)	58	50	39	287	387	255
Venereal Diseases:						
Gonorrhea	17,431	20,254	19,498	443,360	451,180	451,180
Civilian	513	495	390	11,554	12,844	13,853
Military	—	—	—	—	—	—
Syphilis, primary and secondary	425	395	449	9,935	9,875	11,949
Civilian	5	5	6	145	145	167
Military	—	—	—	—	—	—
Rabies in animals	68	58	58	1,469	1,411	1,411

Table II. Notifiable Diseases of Low Frequency: United States

	CUM.		CUM.
Anthrax	4	Poliomyelitis, total:	—
Botulism	50	Paralytic:*	—
Congenital rubella syndrome: Calif. 1	15	Psittacosis: Tex. 1	52
Leptosy: Calif. 3	62	Rabies in man:	—
Leptospirosis:	22	Trichinosis: NYC 2	25
Plague:	2	Typhus, murine:	15

† Delayed reports received for calendar year 1977 are used to update last year's weekly and cumulative totals.

†† Medians for Gonorrhea and Syphilis are based on data for 1975-1977. *Delayed report: Polio, para: Ariz. —1 (1977)

Table III
Cases of Specified Notifiable Diseases: United States
Weeks Ending June 24, 1978 and June 25, 1977 - 25th Week

AREA REPORTING	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS, VIRAL			MALARIA	
						Primary: Arthropod- borne and Unspecified		Post In- fectious	Type B	Type A	Type Unspecified		
						1978	1977†	1978	1978	1978	1978		
UNITED STATES	93	4	3,060	-	36	13	19	3	285	605	178	22	266
NEW ENGLAND	5	1	434	-	-	-	-	-	5	20	8	1	10
Maine	-	-	17	-	-	-	-	-	-	-	-	-	1
New Hampshire*	1	-	60	-	-	-	-	-	1	1	-	-	1
Vermont	-	1	2	-	-	-	-	-	-	7	-	-	-
Massachusetts	3	-	182	-	-	-	-	-	1	6	8	1	2
Rhode Island	1	-	77	-	-	-	-	-	2	1	-	-	-
Connecticut	-	-	96	-	-	-	-	-	1	5	-	-	6
MIDDLE ATLANTIC	4	-	372	-	1	-	5	-	41	52	32	4	56
Upstate New York	1	-	252	-	-	-	2	-	12	27	13	-	9
New York City	3	-	120	-	1	-	-	-	5	9	5	1	23
New Jersey	-	-	NN	-	-	-	3	-	24	16	14	3	12
Pennsylvania	NA	NA	NA	NA	-	NA	-	-	NA	NA	NA	NA	12
EAST NORTH CENTRAL	5	-	1,543	-	-	1	3	-	27	61	11	1	13
Ohio	1	-	96	-	-	-	1	-	4	9	-	-	-
Indiana	NA	NA	NA	NA	-	NA	1	-	NA	NA	NA	NA	3
Illinois	-	-	459	-	-	-	-	-	8	25	2	-	3
Michigan	4	-	768	-	-	1	1	-	12	24	8	1	6
Wisconsin*	-	-	220	-	-	-	-	-	3	3	1	-	1
WEST NORTH CENTRAL	-	-	42	-	1	1	1	1	27	34	6	1	13
Minnesota	-	-	1	-	-	-	-	-	8	19	-	-	3
Iowa*	-	-	24	-	-	-	-	-	2	4	2	-	-
Missouri*	-	-	2	-	1	1	1	-	11	3	2	-	5
North Dakota	-	-	-	-	-	-	-	-	-	-	-	-	-
South Dakota	-	-	4	-	-	-	-	-	-	-	-	-	-
Nebraska	-	-	10	-	-	-	-	-	1	-	-	-	3
Kansas	-	-	1	-	-	-	-	1	5	8	2	1	2
SOUTH ATLANTIC	23	-	311	-	-	1	4	1	48	85	18	1	49
Delaware*	-	-	4	-	-	-	-	-	4	1	-	-	1
Maryland	-	-	54	-	-	-	-	-	13	7	2	-	9
District of Columbia	-	-	-	-	-	-	-	-	-	-	-	-	-
Virginia*	4	-	39	-	-	-	2	-	3	3	2	-	14
West Virginia*	-	-	139	-	-	-	-	-	3	3	1	-	1
North Carolina	8	-	NN	-	-	1	1	-	3	9	4	-	1
South Carolina	-	-	-	-	-	-	1	-	2	2	-	-	3
Georgia	-	-	3	-	-	-	-	-	6	18	-	-	6
Florida	11	-	72	-	-	-	-	1	14	42	9	1	14
EAST SOUTH CENTRAL	4	-	22	-	-	2	2	1	8	13	1	-	3
Kentucky	-	-	4	-	-	-	-	-	-	1	-	-	1
Tennessee	4	-	NN	-	-	-	-	-	8	6	-	-	1
Alabama	-	-	17	-	-	-	2	1	-	1	1	-	1
Mississippi	-	-	1	-	-	2	-	-	-	5	-	-	-
WEST SOUTH CENTRAL	28	3	164	-	1	4	2	-	21	119	26	3	15
Arkansas	-	-	-	-	1	-	-	-	1	2	7	-	-
Louisiana	11	-	NN	-	-	-	-	-	8	47	3	-	3
Oklahoma	3	1	-	-	-	1	1	-	2	11	2	-	-
Texas	14	2	164	-	-	3	1	-	10	59	14	3	12
MOUNTAIN	-	-	98	-	3	-	-	-	9	50	24	-	4
Montana	-	-	9	-	-	-	-	-	-	1	-	-	-
Idaho	-	-	1	-	-	-	-	-	-	-	-	-	-
Wyoming	-	-	4	-	-	-	-	-	-	3	-	-	-
Colorado	-	-	82	-	2	-	-	-	2	6	10	-	1
New Mexico	-	-	-	-	-	-	-	-	1	12	1	-	1
Arizona*	-	-	NN	-	-	-	-	-	5	17	11	-	1
Utah	-	-	1	-	-	-	-	-	-	10	1	-	-
Nevada	-	-	1	-	1	-	-	-	1	1	1	-	1
PACIFIC	24	-	74	-	30	4	2	-	99	171	52	11	103
Washington	3	-	39	-	27	-	-	-	-	11	4	-	3
Oregon	2	-	2	-	-	-	-	-	9	23	3	-	3
California*	16	-	-	-	-	4	1	-	88	132	45	9	80
Alaska	1	-	27	-	3	-	1	-	1	5	-	-	2
Hawaii	2	-	6	-	-	-	-	-	1	-	-	2	15
Guam*	NA	NA	NA	NA	-	NA	-	-	NA	NA	NA	NA	-
Puerto Rico	-	-	11	-	-	-	-	-	2	2	-	-	4
Virgin Islands	-	-	-	-	-	-	-	-	-	-	-	-	1

NN: Not notifiable

NA: Not available

†Delayed reports received for 1977 are not shown below but are used to update last year's weekly and cumulative totals.

*The following delayed reports will be reflected in next week's cumulative totals: Chickenpox: Wis. +24, Iowa +5, W. Va. +115, Calif. +60, Guam +15; Enceph.: Del. -1; Hep B: Wis +1, Mo. -1, Del. -3; Hep A: N.H. -1, Mo. -1, Va. -1, W. Va. +3, Guam +2; Hep unsp: Ariz. -1, Guam +2

Table III-Continued
Cases of Specified Notifiable Diseases: United States
Weeks Ending June 24, 1978 and June 25, 1977 - 25th Week

REPORTING AREA	MEASLES (Rubella)			MENINGOCOCCAL INFECTIONS TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1978	CUMULATIVE		1978	CUMULATIVE		1978	CUM. 1978	1978	1978	CUM. 1978	CUM. 1978
		1977 †	1977 †		1977 †	1977 †						
UNITED STATES	889	19,679	48,008	35	1,351	1,017	403	11,496	20	750	13,213	32
NEW ENGLAND	19	1,884	2,350	1	63	43	10	676	2	15	659	-
Maine	5	1,291	160	-	6	3	-	475	-	1	143	-
New Hampshire*	1	39	506	-	6	3	-	9	-	1	97	-
Vermont	-	24	290	-	2	4	-	5	-	-	27	-
Massachusetts*	12	206	593	-	15	14	7	78	2	4	177	-
Rhode Island	-	7	58	1	14	-	-	23	-	3	40	-
Connecticut	1	317	743	-	20	19	3	86	-	6	175	-
MIDDLE ATLANTIC	83	1,731	7,097	2	222	131	37	480	6	64	2,558	1
Upstate New York	75	1,174	2,902	-	75	31	20	173	5	23	461	-
New York City	6	196	489	2	55	31	9	115	1	3	67	-
New Jersey	2	63	180	-	39	29	8	102	-	38	1,500	-
Pennsylvania	NA	298	3,526	-	53	40	NA	90	NA	NA	530	1
EAST NORTH CENTRAL	578	8,638	9,550	2	109	110	239	4,438	-	564	6,165	1
Ohio*	37	437	941	1	26	35	20	603	-	187	1,202	-
Indiana	NA	149	4,185	-	22	7	NA	237	NA	NA	497	1
Illinois	-	514	1,324	-	6	29	152	1,577	-	30	341	-
Michigan*	497	6,148	846	1	44	27	40	1,206	-	304	2,721	-
Wisconsin	44	1,390	2,254	-	11	12	27	815	-	43	1,404	-
WEST NORTH CENTRAL	4	342	9,291	4	50	51	7	1,853	-	6	549	4
Minnesota	4	34	2,584	2	10	19	-	15	-	4	84	-
Iowa*	-	49	4,211	-	5	7	1	114	-	-	43	-
Missouri*	-	7	1,010	1	23	14	2	1,129	-	1	84	-
North Dakota	-	180	21	-	3	1	2	11	-	-	73	-
South Dakota	-	-	66	-	2	4	-	6	-	-	105	-
Nebraska*	-	4	192	-	-	1	1	18	-	-	34	-
Kansas	-	68	1,207	1	7	5	1	560	-	1	126	4
SOUTH ATLANTIC	47	4,098	4,026	4	350	234	30	605	3	20	906	4
Delaware	-	5	22	-	12	17	2	42	-	-	34	-
Maryland	1	29	343	-	15	15	2	55	-	1	4	1
District of Columbia	-	-	14	-	1	-	-	1	-	-	1	-
Virginia	16	2,378	2,349	-	42	18	18	110	-	-	220	-
West Virginia*	14	948	199	1	7	8	2	146	-	13	308	-
North Carolina	4	92	50	-	69	54	1	50	3	1	167	-
South Carolina	5	188	144	-	22	22	1	15	-	-	24	-
Georgia	2	14	718	1	42	35	3	59	-	-	1	-
Florida	5	444	187	2	140	65	1	127	-	5	147	3
EAST SOUTH CENTRAL	113	1,275	1,807	2	111	113	31	967	-	31	413	1
Kentucky	4	103	1,065	1	20	19	1	175	-	1	107	1
Tennessee	42	887	639	-	28	28	2	423	-	19	150	-
Alabama	7	89	76	-	34	45	24	315	-	1	16	-
Mississippi	60	200	27	1	29	21	4	54	-	10	140	-
WEST SOUTH CENTRAL	35	883	1,958	16	213	181	32	1,525	6	35	824	12
Arkansas	5	15	29	-	16	9	4	572	1	-	57	1
Louisiana	6	311	74	14	87	65	1	54	1	12	461	1
Oklahoma	-	12	52	-	16	10	-	4	1	1	11	2
Texas*	24	545	1,803	2	94	97	27	895	3	22	295	8
MOUNTAIN	-	204	2,384	-	30	27	-	322	-	-	167	1
Montana	-	102	1,127	-	1	2	-	135	-	-	13	-
Idaho	-	1	158	-	2	4	-	20	-	-	2	-
Wyoming	-	-	13	-	-	1	-	-	-	-	-	-
Colorado	-	26	476	-	2	1	-	65	-	-	41	-
New Mexico	-	-	251	-	7	7	-	15	-	-	3	-
Arizona	-	17	262	-	11	10	-	8	-	-	76	-
Utah	-	44	6	-	4	1	-	75	-	-	23	1
Nevada	-	14	91	-	3	1	-	4	-	-	9	-
PACIFIC	10	620	9,545	4	203	127	17	630	3	15	972	8
Washington	-	61	502	-	34	14	1	163	-	-	90	-
Oregon	-	138	313	-	12	17	1	68	-	2	78	-
California	10	418	8,637	4	148	72	15	369	3	13	801	8
Alaska	-	-	59	-	5	22	-	6	-	-	2	-
Hawaii	-	3	34	-	4	2	-	24	-	-	1	-
Guam*	NA	24	4	-	-	-	NA	18	NA	NA	-	-
Puerto Rico*	2	152	781	-	7	-	39	901	1	-	12	4
Virgin Islands	-	6	10	-	1	-	-	1	-	-	1	-

NA: Not available

† Delayed reports received for 1977 are not shown below but are used to update last year's weekly and cumulative totals.

* The following delayed reports will be reflected in next week's cumulative totals: Measles: N.H. +5, Ohio -1, Mich. +22, Wis. -51, Nebr. +1, W. Va. +13, P.R. +5; Mumps: N.H. +2, Mass. -1, Iowa +3, W. Va. +2, Guam +1, P.R. +4; Pertussis: Mass. -1; Rubella: Mass. -1, Mich. -22, Wis. +5, Mo. +4, W. Va. +3, Tex. -1, Guam +1.

Table III-Continued
Cases of Specified Notifiable Diseases: United States
Weeks Ending June 24, 1978 and June 25, 1977 - 25th Week

REPORTING AREA	TUBERCULOSIS		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (RMSF)		VENEREAL DISEASES (Civilian Cases Only)						RABIES IN ANIMALS	
	1978	CUM. 1978	CUM. 1978	1978	CUM. 1978	1978	CUM. 1978	1978	GONORRHEA		SYPHILIS (Pri. & Sec.)		CUM. 1978		
									1978	CUMULATIVE		1978		CUMULATIVE	
										1978	1977 †			1978	1977 †
UNITED STATES	677	14,207	37	8	201	58	287	17,431	443,360	451,180	425	9,935	9,875	1,469	
NEW ENGLAND	24	468	-	-	36	1	7	527	11,672	11,759	2	296	411	57	
Maine	7	32	-	-	-	-	-	28	872	859	-	8	10	52	
New Hampshire	-	8	-	-	5	-	-	29	531	465	-	4	3	-	
Vermont*	3	21	-	-	1	-	-	13	287	299	-	3	5	-	
Massachusetts	5	269	-	-	21	1	2	247	5,142	5,038	2	186	296	3	
Rhode Island	-	31	-	-	4	-	1	35	837	966	-	11	6	-	
Connecticut	9	107	-	-	5	-	4	175	4,003	4,132	-	84	91	2	
MIDDLE ATLANTIC	103	2,450	2	-	20	2	11	1,213	48,126	46,001	56	1,352	1,398	35	
Upstate New York	22	363	1	-	7	2	8	215	7,961	7,414	12	102	128	29	
New York City	42	904	1	-	9	-	-	891	19,160	18,776	37	964	881	-	
New Jersey	39	629	-	-	2	-	1	107	8,779	7,691	7	147	180	4	
Pennsylvania	NA	554	-	NA	2	NA	2	NA	12,226	12,120	NA	139	209	2	
EAST NORTH CENTRAL ..	109	2,146	-	-	8	-	2	2,420	64,765	69,668	22	1,049	1,053	65	
Ohio*	28	411	-	-	2	-	-	680	16,772	18,147	-	207	263	6	
Indiana	NA	248	-	NA	-	NA	-	NA	6,464	6,121	NA	55	75	4	
Illinois	53	815	-	-	1	-	2	722	20,071	23,126	15	649	554	16	
Michigan	24	574	-	-	5	-	-	801	15,433	15,837	6	135	112	3	
Wisconsin	4	98	-	-	-	-	-	217	6,025	6,437	1	33	49	36	
WEST NORTH CENTRAL ..	11	489	9	-	11	3	10	1,113	22,486	23,393	13	237	229	320	
Minnesota*	3	97	-	-	5	-	-	204	3,959	4,120	1	100	71	106	
Iowa	-	54	-	-	2	-	-	69	2,509	2,834	5	30	19	65	
Missouri*	3	211	8	-	2	1	5	573	9,487	9,860	5	62	79	41	
North Dakota	-	20	-	-	-	-	1	11	418	431	-	2	2	49	
South Dakota	2	41	-	-	-	-	-	29	823	632	-	1	2	40	
Nebraska	-	9	-	-	-	-	-	29	1,622	2,068	-	7	22	2	
Kansas	3	57	1	-	2	2	4	198	3,668	3,448	2	35	34	17	
SOUTH ATLANTIC	179	3,050	3	2	26	31	167	3,864	104,810	110,663	108	2,660	2,846	187	
Delaware*	-	24	-	-	1	1	5	88	1,527	1,501	1	5	16	1	
Maryland	15	479	3	-	1	6	41	557	13,897	14,103	10	208	195	-	
District of Columbia ..	11	165	-	-	1	-	-	321	7,235	7,334	10	215	299	-	
Virginia	23	330	-	-	6	7	39	421	10,070	11,494	6	234	280	4	
West Virginia*	2	102	-	-	1	2	6	51	1,539	1,612	-	8	1	1	
North Carolina*	7	451	-	-	2	8	44	950	15,092	16,362	17	242	416	4	
South Carolina*	27	276	-	1	2	4	16	416	10,643	10,324	4	129	122	40	
Georgia	34	420	-	-	2	3	16	NA	17,113	21,500	23	649	543	127	
Florida*	60	803	-	1	10	-	-	1,060	27,694	26,433	42	970	974	10	
EAST SOUTH CENTRAL ..	51	1,367	4	1	2	16	50	1,240	38,629	40,514	22	499	350	76	
Kentucky	25	299	1	-	1	1	9	199	4,682	5,432	5	63	39	44	
Tennessee	15	428	3	1	1	10	36	378	13,958	16,417	6	179	112	15	
Alabama	11	331	-	-	-	3	3	295	11,338	11,229	6	76	60	17	
Mississippi	-	309	-	-	-	2	2	368	8,651	7,436	5	181	139	-	
WEST SOUTH CENTRAL ..	82	1,623	15	2	22	5	36	3,001	62,853	57,746	80	1,533	1,302	501	
Arkansas*	13	184	11	1	1	-	8	72	4,662	4,531	4	41	30	75	
Louisiana	8	281	1	-	1	-	-	606	10,443	8,489	16	312	288	11	
Oklahoma	10	173	3	-	2	4	20	260	5,819	5,351	1	43	37	115	
Texas	51	985	-	1	18	1	8	2,063	41,929	39,375	59	1,137	947	300	
MOUNTAIN	23	416	2	-	12	-	3	1,039	16,486	18,200	6	189	203	25	
Montana	1	30	-	-	-	-	2	75	998	870	-	7	2	2	
Idaho	4	18	2	-	5	-	-	32	614	855	1	5	4	-	
Wyoming	-	10	-	-	-	-	-	11	366	443	-	4	2	-	
Colorado	-	32	-	-	2	-	-	212	4,652	4,700	-	55	62	-	
New Mexico	1	69	-	-	1	-	-	115	2,372	2,677	4	53	40	9	
Arizona	14	200	-	-	2	-	-	421	4,128	5,318	-	37	83	12	
Utah	-	22	-	-	1	-	-	50	928	1,013	-	9	4	2	
Nevada	3	35	-	-	1	-	1	123	2,428	2,324	1	19	6	-	
PACIFIC	95	2,198	2	3	64	-	1	3,014	73,533	73,236	116	2,120	2,083	203	
Washington	NA	82	-	-	5	-	-	261	5,573	5,514	NA	80	100	-	
Oregon	1	86	-	-	1	-	-	210	5,152	5,077	1	72	63	1	
California	86	1,704	2	3	53	-	1	2,375	59,055	58,656	113	1,940	1,887	196	
Alaska	-	35	-	-	-	-	-	116	2,345	2,401	-	7	13	6	
Hawaii	8	291	-	-	5	-	-	52	1,408	1,588	2	21	20	-	
Guam*	NA	32	-	NA	-	NA	-	NA	94	110	NA	-	1	-	
Puerto Rico	12	212	-	-	1	-	-	19	1,156	1,532	7	219	275	13	
Virgin Islands	-	3	-	-	2	-	-	1	104	96	-	8	3	-	

NA: Not available

† Delayed reports received for 1977 are not shown below but are used to update last year's weekly and cumulative totals.

* The following delayed reports will be reflected in next week's cumulative totals: TB: Vt. -1, Mo. -1, N.C. -2, S.C. -2, Fla. -1, Guam +1; Tularemia: Ark. -2; T. fever: Ohio +1, Minn. -1; RMSF: Mo. +1, Del. -1; GC: W. Va. +55, Guam +3; An. rabies: W. Va. +1, Fla. +1.

Table IV
Deaths in 121 United States Cities*
Week Ending June 24, 1978 - 25th Week

REPORTING AREA	ALL CAUSES					Pneumonia and Influenza ALL AGES	REPORTING AREA	ALL CAUSES					Pneumonia and Influenza ALL AGES
	ALL AGES	65 Years and Over	45-64 Years	25-44 Years	Under 1 Year			ALL AGES	65 Years and Over	45-64 Years	25-44 Years	Under 1 Year	
NEW ENGLAND	627	386	177	28	20	27	SOUTH ATLANTIC ...	1,231	735	327	90	38	63
Boston, Mass.	213	124	57	12	13	11	Atlanta, Ga.	115	69	33	8	3	3
Bridgeport, Conn.	27	19	7	1	-	2	Baltimore, Md.	301	172	81	28	11	6
Cambridge, Mass.	19	16	3	-	-	-	Charlotte, N. C.	63	39	10	8	4	5
Fall River, Mass.	20	15	2	1	1	-	Jacksonville, Fla.	77	48	17	4	1	9
Hartford, Conn.	43	18	21	2	1	1	Miami, Fla.	121	72	37	4	2	4
Lowell, Mass.	30	20	10	-	-	1	Norfolk, Va.	75	48	16	7	3	5
Lynn, Mass.	23	19	4	-	-	-	Richmond, Va.	74	35	31	6	-	8
New Bedford, Mass.	21	16	5	-	-	1	Savannah, Ga.	34	22	9	2	1	5
New Haven, Conn.	48	23	17	5	1	2	St. Petersburg, Fla.	93	73	15	3	-	4
Providence, R.I.	62	36	22	1	3	3	Tampa, Fla.	74	47	17	3	4	8
Somerville, Mass.	4	2	2	-	-	-	Washington, D. C.	155	86	43	16	7	6
Springfield, Mass.	35	21	9	3	-	3	Wilmington, Del.	49	24	18	1	2	-
Waterbury, Conn.	29	18	7	1	-	2							
Worcester, Mass.	53	39	11	2	1	1	EAST SOUTH CENTRAL	659	347	204	34	33	21
MIDDLE ATLANTIC ...	2,318	1,486	560	155	56	105	Birmingham, Ala.	92	50	30	4	3	1
Albany, N. Y.	60	39	10	7	3	-	Chattanooga, Tenn.	48	21	16	2	4	4
Allentown, Pa.	22	10	6	6	-	2	Knoxville, Tenn.	51	28	18	3	1	-
Buffalo, N. Y.	99	67	23	5	4	5	Louisville, Ky.	92	59	23	2	5	1
Camden, N. J.	56	40	13	2	-	2	Memphis, Tenn.	148	70	49	8	10	3
Elizabeth, N. J.	19	14	4	-	-	2	Mobile, Ala.	70	40	17	2	5	3
Erie, Pa.	24	18	2	1	2	2	Montgomery, Ala.	39	13	20	4	1	2
Jersey City, N. J.	50	30	11	6	2	1	Nashville, Tenn.	119	66	31	9	4	7
Newark, N. J.	54	28	19	1	3	4							
† New York City, N. Y. ...	1,166	758	268	87	23	45	WEST SOUTH CENTRAL	1,148	662	292	80	52	29
Paterson, N. J.	48	29	13	3	1	2	Austin, Tex.	52	37	7	4	2	6
Philadelphia, Pa.	309	182	87	19	10	17	Baton Rouge, La.	34	22	7	4	-	-
Pittsburgh, Pa.	83	45	31	2	2	6	Corpus Christi, Tex.	37	25	8	-	2	1
Reading, Pa.	36	24	9	-	1	2	Dallas, Tex.	153	86	36	17	6	2
Rochester, N. Y.	103	67	29	5	1	10	El Paso, Tex.	51	29	11	4	3	3
Schenectady, N. Y.	18	13	4	1	-	-	Fort Worth, Tex.	81	48	21	7	3	-
Scranton, Pa.	24	18	4	1	-	-	Houston, Tex.	289	135	99	21	18	3
Syracuse, N. Y.	67	45	17	4	1	1	Little Rock, Ark.	55	32	16	3	3	5
Trenton, N. J.	27	19	7	1	-	2	New Orleans, La.	152	93	33	7	8	-
Utica, N. Y.	28	22	1	2	2	-	San Antonio, Tex.	133	92	24	7	2	3
Yonkers, N. Y.	25	18	2	2	1	4	Shreveport, La.	39	26	8	3	2	3
							Tulsa, Okla.	72	37	22	3	3	3
EAST NORTH CENTRAL	2,215	1,316	602	136	81	52	MOUNTAIN	511	312	119	35	23	23
Akron, Ohio	59	32	16	3	5	2	Albuquerque, N. Mex.	63	40	14	3	3	8
Canton, Ohio	45	31	10	2	1	2	Colorado Springs, Colo.	25	15	5	2	2	2
Chicago, Ill.	507	288	145	40	18	15	Denver, Colo.	122	71	32	10	5	2
Cincinnati, Ohio	182	117	43	8	8	4	Las Vegas, Nev.	49	31	12	1	4	7
Cleveland, Ohio	178	98	58	10	5	3	Ogden, Utah	14	12	1	-	1	-
Columbus, Ohio	88	55	20	5	4	2	Phoenix, Ariz.	94	53	20	12	5	1
Dayton, Ohio	96	54	29	5	4	3	Pueblo, Colo.	20	10	6	3	-	2
Detroit, Mich.	285	179	71	18	8	3	Salt Lake City, Utah ...	45	23	14	1	3	1
Evansville, Ind.	60	39	13	6	1	2	Tucson, Ariz.	79	57	15	3	-	-
Fort Wayne, Ind.	57	34	16	2	2	1							
Gary, Ind.	14	4	6	3	-	1	PACIFIC	1,538	922	384	111	65	36
Grand Rapids, Mich.	57	28	22	4	2	4	Berkeley, Calif.	16	9	3	3	1	-
Indianapolis, Ind.	140	71	39	11	7	1	Fresno, Calif.	66	44	18	-	-	2
Madison, Wis.	35	18	10	1	3	4	Glendale, Calif.	18	14	4	-	-	-
Milwaukee, Wis.	104	68	27	5	2	4	Honolulu, Hawaii	58	36	14	4	3	1
Peoria, Ill.	53	32	15	1	5	3	Long Beach, Calif.	88	48	31	4	2	3
Rockford, Ill.	36	25	5	5	1	2	Los Angeles, Calif.	450	275	110	29	20	13
South Bend, Ind.	41	27	11	-	2	2	Oakland, Calif.	73	45	19	5	1	-
Toledo, Ohio	113	73	30	4	2	-	Pasadena, Calif.	24	19	3	1	1	-
Youngstown, Ohio	65	43	16	3	1	-	Portland, Oreg.	126	72	34	8	10	-
							Sacramento, Calif.	57	31	18	4	1	1
WEST NORTH CENTRAL	719	451	160	41	30	11	San Diego, Calif.	125	65	29	14	8	6
Des Moines, Iowa ...	46	30	12	3	-	3	San Francisco, Calif. ...	165	102	39	13	7	-
Duluth, Minn.	26	17	6	1	-	-	San Jose, Calif.	59	37	11	9	-	1
Kansas City, Kans.	35	19	10	2	1	2	Seattle, Wash.	140	84	33	13	5	6
Kansas City, Mo.	128	74	27	11	6	1	Spokane, Wash.	44	25	8	2	5	2
Lincoln, Nebr.	23	18	3	2	-	1	Tacoma, Wash.	29	16	10	2	1	1
Minneapolis, Minn.	89	60	13	5	6	-							
Omaha, Nebr.	89	54	27	2	3	1	TOTAL	10,966	6,617	2,825	710	398	367
St. Louis, Mo.	159	98	34	9	8	1	Expected Number	10,869	6,497	2,812	700	418	346
St. Paul, Minn.	56	40	9	3	2	-							
Wichita, Kans.	68	41	19	3	4	2							

*By place of occurrence and week of filing certificate. Excludes fetal deaths.

† Data not available. Figures are estimates based on average percent of regional total.

The Morbidity and Mortality Weekly Report, circulation 78,000, is published by the Center for Disease Control, Atlanta, Georgia. The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

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.

International Notes

Follow-up on Chemoprophylaxis of Malaria

The following table updates the status of the distribution of chloroquine-resistant *Plasmodium falciparum* malaria in certain countries. It also delineates those areas in the Syrian Arab Republic that are known to have no risk of malaria. This information, which is based on data published by the World Health Organization (1), updates information

appearing in the MMWR Supplement on malaria (2).

References

1. World Health Organization: Weekly Epidemiological Record 52:341-347, 1977
2. MMWR 27(10 Suppl): 82-90, 1978

TABLE 1. Information on malaria risk by country

Country	Risk	Areas without risk	Risk exists during (months)	Risk exists below given altitude (meters)	Risk in urban areas	Areas with known chloroquine-resistant <i>P. falciparum</i>
AMERICAS						
Colombia	Yes	Bogota and vicinity	All	1,500	No	All malarious areas except along west coast
French Guiana	Yes	Cayenne City	All	All	Yes	Isolated areas
Guyana	Yes	Coastal Areas from Georgetown to New Amsterdam; Essequibo River Delta and Islands	All	All	No	Areas bordering Brazil
Venezuela	Yes	Coastal area between Caracas and Maracaibo	All	600	No	All malarious areas
ASIA						
Democratic Kampuchea (Cambodia)	Yes	?	All	All	Yes	Whole country
Laos	Yes	Vientiane City and vicinity	All	All	Yes	Vientiane Province
Syrian Arab Republic	Yes	Damascus, Deir-ez-zor, Hama, Al Hasakah, Homs, Latakia, Sweida, Tartus, D.	May-Oct	600	No	None
Viet Nam, Socialist Republic of	Yes	None	Mar-Nov	1,000	No	Widespread
OCEANIA						
Papua New Guinea	Yes	None	All	2,000	Yes	Border area with West Irian (Indonesia)

Quarantine Measures

The following changes should be made in the *Supplement*—*Health Information for International Travel*, MMWR, Vol. 26, August 1977:

LIBERIA

Smallpox — Change code to II. Insert: A Certificate is required ALSO from travelers who within the preceding 14 days have been in a country any part of which is infected. A Certificate is

required ALSO from travelers arriving from: Africa: Ethiopia, Kenya, Somalia

SAINT HELENA

Smallpox — Delete all information. Insert code II. Insert: A Certificate is required ALSO of travelers who within the preceding 14 days have been in a country any part of which is infected.

Poliomyelitis — Netherlands

In the period from April 15-June 26, 1978, 38 virologically confirmed and 22 suspected cases of poliomyelitis have been reported among unvaccinated individuals from 5 of the Netherlands' 11 provinces. The outbreak is due to type 1 poliovirus.

The 60 reported cases include 45 with paralysis and 15 with aseptic meningitis. There have been no deaths. Sixty-eight percent of the patients, who range in age from 3 weeks to 41 years, are less than 15 years old.

The index patient, a 14-year-old girl whose date of onset of poliomyelitis was April 15, is a member of a community that does not accept vaccination because of religious beliefs. This group, comprising several different sects whose total population is approximately 100,000-150,000, resides in small farming villages in South Holland, Zeeland, Utrecht, Gelderland, and Overijssel—the 5 affected provinces. All 60 cases have been in members of these religious sects.

The index patient attends a school whose population of approximately 1,200 is drawn primarily from members of these religious sects. Ten percent of the students, who come from 100 villages in Utrecht and Gelderland, are believed to have been adequately vaccinated.

Since the outbreak was recognized, the Dutch government has been offering monovalent oral poliovirus vaccine type 1 to individuals under 27 years of age who have never been vaccinated and who are living in the affected areas; however, acceptance rates in these individuals have been low. In addition, the government has been encouraging vaccination with the inactivated poliomyelitis vaccine (IPV) in an effort to ensure immunity in the entire Dutch popu-

lation under the age of 27. Studies throughout the Netherlands have shown that in recent years approximately 95% of infants in the country have received at least 3 doses of IPV by 1 year of age.

Reported by H Bijkerk, MD, Head of Division of Infectious Disease, Office of the Chief Medical Officer of Health, The Netherlands; the World Health Organization; Viral Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: In the 6-year period 1972-1977, there were 5 cases of poliomyelitis reported in the Netherlands. The most recent outbreak, in Staphorst in 1971, was in an isolated village involving a population of individuals who also refused to accept vaccination on the basis of religious beliefs (1). Since 1971, the Netherlands has monitored poliovirus isolations; poliovirus has been isolated only sporadically, usually among recent travelers and immigrants.

The Netherlands uses exclusively IPV. Oral poliovirus vaccine is used only to control outbreaks.

In spite of the apparently very small risk of acquiring poliomyelitis in the Netherlands, the polio immunity of travelers to the Netherlands should be evaluated and those with inadequate protection should complete their primary vaccination. In addition, anyone who has completed the primary trivalent oral poliovirus vaccine (TOPV) series in the past and who plans to travel extensively in the affected areas in the Netherlands should be given a single additional booster dose of TOPV.

Reference

1. Bijkerk H: An outbreak of poliomyelitis in the municipality of Staphorst. XVIII Symposium European Assn Against Poliomyelitis. Helsinki, 1971, p 27

Beginning with the next issue, the MMWR will increase to 12 pages each week but be reduced in size to 6-1/8 inches by 8-1/2 inches. This redesign has been necessary because of new U.S. Postal Service regulations that substantially increase mail rates for publications over a certain size.

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE / CENTER FOR DISEASE CONTROL
ATLANTA, GEORGIA 30333

Director, Center for Disease Control, William H. Foege, M.D.
Director, Bureau of Epidemiology, Philip S. Brachman, M.D.
Editor, Michael B. Gregg, M.D.
Managing Editor, Anne D. Mather, M.A.
Chief, MMWR Statistical Activity, Dennis J. Bregman, M.S.

OFFICIAL BUSINESS FIRST CLASS

Redistribution using indicia is illegal.



POSTAGE AND FEES PAID
U.S. DEPARTMENT OF HEW
HEW 396