CENTER FOR DISEASE CONTROL

Morbidity and Mortality

Vol. 23, No. 47

WEEKLY REPORT

For Week Ending November 23, 1974

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE

DATE OF RELEASE: NOVEMBER 29, 1974 – ATLANTA, GEORGIA 30333

EPIDEMIOLOGIC NOTES AND REPORTS

PLASMODIUM OVALE MALARIA – Tennessee, Pennsylvania

Case 1

On August 14, 1974, a previously well 22-year-old female law student developed shaking chills, headache, and fever (102°F), persisting for 2 days. She was examined at a hospital emergency room and was treated symptomatically for a presumed viral infection. The fever abated but returned 2 days later with associated symptoms of marked fatigue, muscle aches, headache, and anorexia. With the persistence of chills and fever and the development of a non-productive cough, she was seen at the emergency room of the Vanderbilt University Hospital at 11:30 p.m. on August 26, 1974, and promptly admitted with a temperature of 103.4°F, pulse 130, and BP 90/60. The patient appeared acutely ill, but the physical examination was unremarkable. Her hematocrit was 32%.

Because the patient had traveled in Central Africa from June, 1972, to March, 1973, malaria was considered a diagnostic possibility. The medical student and intern examined peripheral blood smears, and trophozoites were found at approximately 4:00 a.m., 4 hours after admission. Therapy was begun promptly with chloroquine and primaquine. The malarial species was identified as *Plasmodium ovale* by the National

CONTENTS

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	WEEK ENDING		MEDIAN 1969-1973	CUMULATIVE, FIRST 47 WEEKS		
	November 23, 1974	November 24, 1973		1974	1973	MEDIAN 1969-1973
Aseptic meningitis	93	78	78	2,916	4,381	4,381
Brucellosis	2	1	2	164	166	173
Chickenpox	1,984	1,231	– – –	109,472	152,279	– – –
Diphtheria	11	7	6	220	174	173
Encephalitis:						
Primary: Arthropod-borne and unspecified	23	19	18	978	1,417	1,396
Post-Infectious	5	3	2	235	255	276
Hepatitis, Viral:						
Type B	243	147	130	8,991	7,313	7,313
Type A	816	1,056	1,051	37,937	46,741	49,541
Type unspecified	184			7,523		
Malaria	5	5	26	239	228	2,712
Measles (rubeola)	204	233	335	21,133	25,532	29,169
Meningococcal infections, total	26	19	30	1,234	1,233	2,024
Civilian	26	19	24	1,206	1,207	1,810
Military	–	–	1	28	26	212
Mumps	1,455	1,046	1,714	50,770	62,880	78,805
Pertussis	36	– – –	– – –	1,572	– – –	– – –
Rubella (German measles)	134	127	319	11,260	27,191	41,712
Tetanus	1	–	1	88	82	107
Tuberculosis, new active	590	482	– – –	27,527	28,153	– – –
Tularemia	2	1	3	132	149	141
Typhoid fever	7	6	9	389	608	342
Typhus, tick-borne (Rky. Mt. spotted fever)	6	1	3	749	622	445
Venereal Diseases:						
Gonorrhea	18,617	14,074	– – –	829,967	769,208	– – –
Syphilis, primary and secondary	493	412	– – –	22,712	22,484	– – –
Rabies in animals	50	31	48	2,668	3,082	3,082

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	2	Poliomyelitis, total:	5
Botulism:	16	Paralytic:	5
Congenital rubella syndrome:	45	Psittacosis: Calif. 1	151
Leprosy:	87	Rabies in man:	–
Leptospirosis: Calif. 1, Mass. 1	43	Trichinosis: Mass. 2, NYC 1, Utah 1, W.Va. 4	93
Plague:	6	Typhus, murine: Hawaii 1	24

MALARIA – Continued

Malaria Repository, Bureau of Laboratories, CDC. The patient made an uneventful recovery.

The patient had traveled principally in Nigeria, Kenya, and Tanzania, where she took 2 different pills of unknown type weekly. She had had no febrile illness while abroad.

Case 2

On August 16, 1974, a 15-year-old female boarding-school student was admitted to the hospital of the Medical College of Pennsylvania with a 6-day history of shaking chills, fever, nausea, and headache, occurring at 48-hour intervals. She had been treated symptomatically with aspirin. Physical examination was unremarkable except for a temperature of 104.5°F rectally. A blood smear demonstrating *Plasmodium ovale* was also confirmed at CDC. She was treated with chloroquine and primaquine and recovered uneventfully.

The patient had spent 2 years in Africa, 1971 in Uganda and 1972 in Kenya. While in Africa and for several weeks after returning to the United States, she took chloroquine weekly but no primaquine. One and a half years prior to hospitalization she had traveled to Mexico for 1 week. There was no history of intravenous drug usage or blood transfusion.

(Reported by James M. Hinson, Jr., Medical Student, William M. Grosh, M.D., Intern, Roy O. Elam, M.D., Assistant Resident, W. Anderson Spickard, M.D., and William Schaffner, M.D., Department of Medicine, Vanderbilt University School of Medicine, Nashville, Tennessee; Robert H. Hutcheson, Jr., M.D., State Epidemiologist, Tennessee Department of Public Health; Ralph Knight, Ph.D., Associate Professor of Pathology and Medicine and Assistant Professor of Microbiology, Jaime Carrizosa, M.D., Fellow in Infectious Diseases, Mathew Levison, M.D., Associate Professor of Medicine, and Donald Kaye, M.D., Professor and Chairman, Department of Medicine, Medical College of Pennsylvania, Philadelphia; Robert G. Sharrar, M.D., Chief, Communicable Disease Section, Philadelphia Department of Public Health, A.C. LaBoccetta, M.D., M.P.H., Director, Chester County Health Department, and W.D. Schrack, Jr., M.D., Director, Division of Communicable Diseases and State Epidemiologist, Pennsylvania Department of Health; the National Malaria Repository, Bureau of Laboratories, and the Parasitology Branch, Parasitic Diseases and Veterinary Public Health Division, CDC.)

Editorial Note

Patients with *Plasmodium ovale* malaria are infrequently seen in the United States. Between 1964 and 1973, 6.6% of the 1,372 civilian malaria cases, or 91 individuals, were reported to CDC with *P. ovale* malaria. *P. ovale* is endemic to tropical Africa but rarely found elsewhere. Foci have been found in the Philippines and New Guinea. In Africa, the prevalence is highest in the west equatorial region, where as many as 10% of children may exhibit *P. ovale* parasitemia (*1*). The reason for the limited geographic range of *P. ovale* endemnicity is not known although factors which may be responsible include climate, distribution of particular anopheline vectors, concurrent distribution of simian *Plasmodium* species, and population variability (*2*).

Between 1966 and 1973, 93% of individuals with *P. ovale* malaria reported to CDC had onset of symptoms within 1 year after entry into the United States. However, prolonged incubation intervals have been reported in Europeans who have taken suppressive chemoprophylaxis while in Africa (*1*). The cases reported above appear to demonstrate this prolonged incubation interval.

References

1. World Health Organization: Parasitology of Malaria (WHO Techn Rep No. 433). Geneva, 1969, p 1-70

2. Lysenko AJA, Belijaev AE: An analysis of the geographical distribution of *Plasmodium ovale*. Bull WHO 40:383-394, 1969

CLOSTRIDIUM PERFRINGENS FOODBORNE ILLNESS – Wisconsin

On April 23, 1974, 72 persons attended a bowling banquet at a supper club in Appleton, Wisconsin. Of 37 persons contacted, 30 had eaten tenderloin tips and become ill with diarrhea and stomach cramps; the other 7 did not eat tenderloin tips and did not become ill ($p<.0000001$). The incubation period was 6 to 16 hours with a mean of 10 hours and the illness in the majority of the cases lasted approximately 20 hours.

Stools from 3 ill persons were cultured; 1.7×10^7 *Clostridium perfringens* organisms per gram were isolated from 1 of the stool specimens. None of the original meat served at the banquet could be obtained for culture, but other tenderloin tips from the restaurant that were prepared at about the same time and in the same manner contained 5.1×10^6 *C. perfringens* organisms per gram. Both *C. perfringens* isolates were of an untypable serotype.

The tenderloin tips had been prepared 3 days before the banquet and were allegedly stored promptly in a walk-in refrigerator; about 6 hours before being served they were taken from the refrigerator and placed directly onto a steam table without prior heating.

(Reported by Peter LeMere, R.S., M.P.H., Health Commissioner, William Moldenhauer, R.S., and Roger Rusch, R.S., Environmental Sanitarians, Appleton Health Department, Appleton, Wisconsin; H. Grant Skinner, M.D., State Epidemiologist, Wisconsin State Division of Health; T. Jorgenson, E. Koepp and D. Thompson, Microbiologists, C. Field, Ph.D., Chief, Bacteriology Section, S.L. Inhorn, M.D., Director, Wisconsin State Laboratory of Hygiene.)

Editorial Note

Clostridium perfringens is found in the fecal flora of most people (*1*) but the normal level is only $10^{2.4}$ per gram of feces (*2*). Although the tenderloin tips served at the banquet could not be cultured, the clinical presentation of the cases and the isolations of high counts of *C. perfringens* both from beef prepared in the same manner and from a stool of an ill person indicate that *C. perfringens* probably was responsible for this outbreak. The optimal temperature range for the growth of *C. perfringens* is 109.4° to 116.6°F (*3*), and opportunity for growth could have occurred while the meat was cooling after cooking and during the prolonged warming period on the steam table, which was designed to keep food hot but not to warm cold foods.

Only 9 *C. perfringens* foodborne outbreaks were reported to CDC in 1973, representing 10.7% of the reported foodborne outbreaks of known bacterial etiology (*4*). Undoubtedly many *C. perfringens* outbreaks are missed because anaerobic cultures of food and patients are not performed.

(Continued on page 407)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES FOR WEEKS ENDING NOVEMBER 23, 1974 AND NOVEMBER 24, 1973 (47th WEEK)

AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	CHICKENPOX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS, VIRAL			MALARIA	
						Primary: Arthropod-borne and Unspecified		Post Infectious	Type B	Type A	Type Unspecified		
	1974	1974	1974	1974	Cum. 1974	1974	1973	1974	1974	1974	1974	1974	Cum. 1974
UNITED STATES	93	2	1,984	11	220	23	19	5	243	816	184	5	239
NEW ENGLAND	–	–	164	–	–	–	–	–	5	29	14	–	9
Maine *	–	–	2	–	–	–	–	–	1	1	4	–	–
New Hampshire *	–	–	4	–	–	–	–	–	–	1	–	–	1
Vermont	–	–	–	–	–	–	–	–	–	3	–	–	–
Massachusetts	–	–	84	–	–	–	–	–	2	10	10	–	2
Rhode Island	–	–	7	–	–	–	–	–	1	3	–	–	3
Connecticut	–	–	67	–	–	–	–	–	1	11	–	–	3
MIDDLE ATLANTIC	7	–	133	–	1	2	2	–	53	105	28	2	47
Upstate New York	2	–	26	–	–	2	1	–	7	42	3	1	17
New York City	1	–	105	–	–	–	–	–	6	18	–	1	17
New Jersey	2	–	NN	–	–	–	–	–	34	24	23	–	7
Pennsylvania *	2	–	2	–	1	–	1	–	6	21	2	–	6
EAST NORTH CENTRAL	10	–	858	–	2	4	7	1	41	114	22	–	19
Ohio *	3	–	84	–	1	3	2	1	5	18	–	–	6
Indiana	2	–	68	–	–	–	–	–	1	12	–	–	–
Illinois	2	–	–	–	1	–	2	–	16	25	16	–	2
Michigan	1	–	385	–	–	1	3	–	11	45	6	–	10
Wisconsin *	2	–	321	–	–	–	–	–	8	14	–	–	1
WEST NORTH CENTRAL	18	2	269	–	–	1	7	–	21	55	13	–	7
Minnesota	3	–	4	–	–	–	–	–	13	29	–	–	2
Iowa	1	1	182	–	–	–	6	–	1	11	–	–	3
Missouri *	13	1	5	–	–	–	1	–	5	2	11	–	1
North Dakota	–	–	12	–	–	–	–	–	–	2	–	–	–
South Dakota	–	–	–	–	–	–	–	–	–	–	–	–	1
Nebraska	–	–	–	–	–	–	–	–	1	1	2	–	–
Kansas	1	–	66	–	–	1	–	–	1	10	–	–	–
SOUTH ATLANTIC	18	–	126	–	1	4	–	–	20	153	20	–	35
Delaware	–	–	4	–	–	–	–	–	–	3	1	–	1
Maryland	–	–	2	–	–	1	–	–	2	8	4	–	6
District of Columbia	–	–	–	–	–	–	–	–	–	–	–	–	5
Virginia *	–	–	18	–	–	1	–	–	4	18	4	–	7
West Virginia	–	–	99	–	–	–	–	–	–	1	–	–	2
North Carolina	3	–	NN	–	1	–	–	–	7	35	1	–	4
South Carolina	1	–	3	–	–	–	–	–	2	6	3	–	1
Georgia	–	–	–	–	–	–	–	–	–	30	–	–	1
Florida	14	–	–	–	–	2	–	–	5	52	7	–	8
EAST SOUTH CENTRAL	4	–	32	–	–	4	–	–	13	75	3	–	9
Kentucky	1	–	26	–	–	–	–	–	2	33	2	–	5
Tennessee	1	–	NN	–	–	2	–	–	7	32	1	–	1
Alabama *	2	–	1	–	–	–	–	–	–	5	–	–	–
Mississippi	–	–	5	–	–	2	–	–	4	5	–	–	3
WEST SOUTH CENTRAL	9	–	234	–	9	2	–	1	20	103	22	–	17
Arkansas *	–	–	17	–	–	–	–	–	2	11	3	–	1
Louisiana *	2	–	NN	–	–	2	–	–	3	8	10	–	1
Oklahoma *	–	–	17	–	–	–	–	1	–	20	6	–	6
Texas	7	–	200	–	9	–	–	–	15	64	3	–	9
MOUNTAIN	3	–	60	1	35	1	–	–	10	52	23	–	12
Montana *	–	–	1	–	–	1	–	–	2	4	1	–	–
Idaho	–	–	–	–	–	–	–	–	–	–	1	–	–
Wyoming	–	–	–	–	–	–	–	–	–	–	–	–	–
Colorado	–	–	31	–	3	–	–	–	2	8	12	–	5
New Mexico	3	–	21	–	13	–	–	–	–	13	–	–	3
Arizona	–	–	–	1	19	–	–	–	6	18	6	–	2
Utah	–	–	7	–	–	–	–	–	–	5	3	–	1
Nevada	–	–	–	–	–	–	–	–	–	4	–	–	1
PACIFIC	24	–	108	10	172	5	3	3	60	130	39	3	84
Washington	4	–	72	10	161	1	–	–	6	14	15	–	–
Oregon	–	–	1	–	–	1	–	–	4	13	3	–	2
California *	20	–	–	–	7	3	3	3	43	99	21	3	78
Alaska	–	–	17	–	4	–	–	–	–	1	–	–	–
Hawaii	–	–	18	–	–	–	–	–	7	3	–	–	4
Guam *	–	–	–	–	–	–	–	–	–	–	–	–	2
Puerto Rico	–	–	4	–	1	–	–	–	1	–	9	–	1
Virgin Islands	–	–	4	–	–	–	–	–	–	–	–	–	3

*Delayed reports:
Aseptic Meningitis: Mo. 1
Brucellosis: Okla. 1
Chickenpox: Me. 35, N.H. 9, Wisc. 4, Calif. 12, Guam 24
Encephalitis, primary: Ark. 5
Encephalitis, post: Ala. 3
Hepatitis B: Ohio 1, La. delete 1, Okla. 11
Hepatitis A: Me. 2, Penn. delete 2, Ohio delete 1, La. delete 2, Okla. 21, Mont. 21, Guam 17
Hepatitis: unspecified: Me. 2, Va. delete 2, Okla. 3, Guam 5

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES FOR WEEKS ENDING NOVEMBER 23, 1974 AND NOVEMBER 24, 1973 (47th WEEK) – Continued

AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1974	Cumulative		1974	Cumulative		1974	Cum. 1974	1974	1974	Cum. 1974	Cum. 1974
		1974	1973		1974	1973						
UNITED STATES	204	21,133	25,532	26	1,234	1,233	1,455	50,770	36	134	11,260	88
NEW ENGLAND	5	958	7,541	2	71	50	53	6,345	–	23	1,175	1
Maine *	1	45	70	1	4	1	–	841	–	–	286	–
New Hampshire *	–	211	967	–	10	7	–	299	–	–	22	1
Vermont	–	56	120	–	12	3	–	17	–	–	41	–
Massachusetts	3	404	3,947	–	17	13	10	1,068	–	3	365	–
Rhode Island	–	61	624	1	10	3	28	2,562	–	–	20	–
Connecticut	1	181	1,813	–	18	23	15	1,558	–	20	441	–
MIDDLE ATLANTIC	34	8,248	2,663	5	182	172	71	3,921	5	15	1,149	7
Upstate New York	4	971	818	2	66	62	22	968	3	5	266	2
New York City	7	623	930	–	40	36	25	743	2	7	166	1
New Jersey	22	5,684	524	3	51	41	11	710	–	3	462	2
Pennsylvania	1	970	391	–	25	33	13	1,500	–	–	255	2
EAST NORTH CENTRAL	69	8,246	8,872	3	156	170	471	14,830	5	29	3,695	10
Ohio *	1	3,060	294	1	65	74	71	3,346	–	1	521	2
Indiana	2	273	683	–	15	5	90	1,189	–	2	626	–
Illinois	9	2,106	2,126	1	11	27	37	1,362	4	5	611	3
Michigan	41	2,197	4,470	–	47	48	161	6,155	1	12	1,321	4
Wisconsin *	16	610	1,299	1	18	16	112	2,778	–	9	616	1
WEST NORTH CENTRAL	2	713	456	–	95	91	66	3,148	1	3	233	13
Minnesota	–	85	22	–	31	12	5	49	–	–	13	2
Iowa	–	134	279	–	15	22	22	1,878	–	–	15	1
Missouri *	–	265	53	–	26	34	6	422	1	1	44	4
North Dakota	1	34	67	–	3	3	7	85	–	–	18	3
South Dakota	–	27	2	–	3	4	–	2	–	–	26	–
Nebraska	–	3	6	–	3	7	–	88	–	–	6	–
Kansas	1	165	27	–	14	9	26	624	–	2	111	3
SOUTH ATLANTIC	8	590	1,293	8	242	208	194	6,082	–	2	1,308	24
Delaware	–	15	10	–	5	2	–	102	–	–	30	–
Maryland	–	24	13	1	24	27	1	134	–	–	5	1
District of Columbia	–	3	8	–	1	4	–	50	–	–	4	–
Virginia *	1	37	425	1	40	43	31	695	–	1	53	3
West Virginia	4	222	224	–	8	6	142	3,224	–	–	306	1
North Carolina	–	5	4	2	48	42	NN	NN	–	–	55	4
South Carolina	–	57	70	–	21	13	3	137	–	–	663	4
Georgia	–	4	152	–	8	23	–	1	–	–	3	1
Florida	3	223	387	4	87	48	17	1,739	–	1	189	10
EAST SOUTH CENTRAL	–	283	630	5	119	115	381	6,303	5	5	643	6
Kentucky	–	196	394	2	46	40	342	2,691	–	1	218	–
Tennessee	–	56	165	2	52	44	29	2,659	4	4	343	2
Alabama	–	18	13	–	12	18	2	565	1	–	63	1
Mississippi	–	13	58	1	9	13	8	388	–	–	19	3
WEST SOUTH CENTRAL	4	235	731	2	206	191	99	3,762	6	29	510	11
Arkansas	–	7	72	1	14	13	–	144	1	–	26	–
Louisiana *	–	13	87	–	53	44	3	256	1	20	130	4
Oklahoma *	–	29	60	–	21	32	3	402	–	1	58	3
Texas	4	186	512	1	118	102	93	2,960	4	8	296	4
MOUNTAIN	36	795	952	1	40	36	19	1,189	3	8	433	1
Montana	–	373	223	–	1	8	1	179	3	–	68	–
Idaho	–	52	256	–	2	4	–	158	–	2	16	–
Wyoming	–	1	81	–	3	1	–	10	–	–	–	–
Colorado	35	71	108	–	9	11	11	583	–	5	165	–
New Mexico	1	62	133	–	3	3	–	179	–	–	125	–
Arizona	–	20	21	1	9	5	–	–	–	1	2	1
Utah	–	16	129	–	9	2	–	67	–	–	24	–
Nevada	–	200	1	–	4	2	7	13	–	–	33	–
PACIFIC	46	1,065	2,394	–	123	200	101	5,190	11	20	2,114	15
Washington *	3	74	1,065	–	16	21	53	1,819	–	4	414	1
Oregon	–	–	460	–	14	16	–	821	–	1	233	2
California	43	925	784	–	86	155	46	2,326	11	15	1,450	11
Alaska	–	–	65	–	4	8	1	150	–	–	–	–
Hawaii	–	66	20	–	3	–	1	74	–	–	17	1
Guam *	–	20	52	–	2	–	–	373	–	–	7	–
Puerto Rico	3	664	1,968	–	6	8	9	1,178	–		33	5
Virgin Islands	1	30	7	–	–	–	–	35	–	–	–	1

*Delayed reports: Measles: Me. 1, Wisc. 9, Va. delete 2, Wash. delete 1, Guam 3
Meningococcal infection: Me. 1, Ohio 1, Mo. 5
Mumps: Me. 5, N.H. 3, Wisc. 72, Ohio 1, La. delete 1, Guam 3
Rubella: Wisc. 12, La. delete 1, Guam 1
Tetanus: Okla. 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES FOR WEEKS ENDING NOVEMBER 23, 1974 AND NOVEMBER 24, 1973 (47th WEEK) – Continued

AREA	TUBERCULOSIS (New Active)		TULAREMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES						RABIES IN ANIMALS
								GONORRHEA			SYPHILIS (Pri. & Sec.)			
	1974	Cum. 1974	Cum. 1974	1974	Cum. 1974	1974	Cum. 1974	1974	Cumulative 1974	Cumulative 1973	1974	Cumulative 1974	Cumulative 1973	Cum. 1974
UNITED STATES	590	27,527	132	7	389	6	749	18,617	829,967	769,208	493	22,712	22,484	2,668
NEW ENGLAND	41	1,109	–	–	21	–	8	587	22,293	19,129	8	462	595	25
Maine	5	86	–	–	1	–	–	60	1,881	1,240	–	40	25	3
New Hampshire *	–	25	–	–	1	–	–	6	741	729	–	13	11	3
Vermont	–	23	–	–	1	–	–	5	590	328	–	2	21	1
Massachusetts *	28	607	–	–	14	–	6	315	10,191	8,057	5	191	268	4
Rhode Island	–	97	–	–	2	–	2	42	1,985	1,941	–	18	15	4
Connecticut	8	271	–	–	2	–	–	159	6,905	6,834	3	198	255	10
MIDDLE ATLANTIC	88	4,967	2	2	66	1	67	2,512	99,388	106,181	102	4,799	4,983	80
Upstate New York	9	725	2	–	14	1	28	346	18,811	18,390	11	448	347	37
New York City	45	1,922	–	–	33	–	3	1,370	42,931	47,641	49	2,751	2,987	–
New Jersey	12	902	–	1	12	–	4	183	13,601	15,868	19	776	909	25
Pennsylvania	22	1,418	–	1	7	–	32	613	24,045	24,282	23	824	740	18
EAST NORTH CENTRAL	67	3,793	6	1	39	–	26	2,581	131,109	118,275	20	1,941	2,063	190
Ohio *	20	1,000	–	–	6	–	17	529	34,840	28,786	3	300	246	26
Indiana	13	553	–	–	5	–	1	394	12,550	10,807	3	167	265	14
Illinois	23	1,103	3	–	15	–	6	694	41,973	40,998	3	1,002	1,049	45
Michigan	11	1,025	–	1	11	–	2	776	28,972	27,903	8	377	432	5
Wisconsin	–	112	3	–	2	–	–	188	12,774	9,781	3	95	71	100
WEST NORTH CENTRAL	33	1,078	20	1	12	–	17	982	42,945	38,796	11	575	355	707
Minnesota	5	167	–	–	4	–	–	245	9,435	7,762	1	74	94	240
Iowa *	1	115	–	–	2	–	1	49	5,332	4,618	–	34	54	118
Missouri *	16	519	17	1	4	–	9	337	14,280	13,095	6	376	168	38
North Dakota	–	30	–	–	–	–	–	25	692	639	–	3	2	102
South Dakota	3	54	3	–	–	–	2	43	2,055	1,955	–	2	5	134
Nebraska	1	44	–	–	–	–	–	94	3,743	4,444	–	12	10	5
Kansas	7	149	–	–	2	–	5	189	7,408	6,283	4	74	22	70
SOUTH ATLANTIC	120	5,806	10	–	52	2	412	4,448	210,578	186,630	165	7,192	6,574	373
Delaware	2	94	–	–	–	–	10	95	2,866	2,692	6	83	82	1
Maryland	5	736	1	–	8	–	48	700	22,521	16,551	8	694	651	26
District of Columbia	7	334	–	–	1	–	–	264	14,821	16,150	21	617	769	–
Virginia	13	716	4	–	3	–	135	631	19,110	18,423	9	696	743	100
West Virginia *	9	275	–	–	13	–	5	61	2,436	2,761	–	17	23	31
North Carolina *	21	867	3	–	3	2	109	743	28,787	27,313	36	888	582	38
South Carolina	9	529	–	–	5	–	55	409	21,263	19,347	8	735	1,049	6
Georgia	14	864	2	–	3	–	48	365	43,159	36,059	20	807	885	131
Florida	40	1,391	–	–	16	–	2	1,180	55,615	47,334	57	2,655	1,790	40
EAST SOUTH CENTRAL	49	2,422	13	–	52	–	111	1,545	68,920	62,162	32	1,184	1,253	219
Kentucky	9	517	3	–	18	–	20	180	8,551	7,488	6	258	340	130
Tennessee	16	760	6	–	25	–	65	698	27,592	24,227	11	435	429	52
Alabama	18	728	2	–	4	–	10	425	18,884	17,578	7	239	177	34
Mississippi	6	417	2	–	5	–	16	242	13,893	12,869	8	252	307	3
WEST SOUTH CENTRAL	43	3,171	59	2	27	3	98	2,397	109,153	99,790	42	2,098	2,437	553
Arkansas	10	379	31	1	5	–	13	439	10,764	11,278	–	89	124	71
Louisiana *	2	441	3	1	9	–	1	511	21,732	21,044	11	543	745	24
Oklahoma *	3	278	18	–	2	2	66	303	10,109	8,963	1	131	154	150
Texas	28	2,073	7	–	11	1	18	1,144	66,548	58,505	30	1,335	1,414	308
MOUNTAIN	12	872	13	–	18	–	7	865	31,614	26,229	9	528	553	166
Montana	1	71	–	–	–	–	1	77	1,762	1,484	–	6	5	7
Idaho	–	32	–	–	–	–	1	20	1,599	1,854	–	12	10	–
Wyoming	3	22	6	–	3	–	1	14	676	465	–	9	29	11
Colorado	–	161	–	–	–	–	1	253	8,802	7,148	3	129	190	27
New Mexico	1	179	2	–	4	–	2	111	4,860	4,682	–	81	101	73
Arizona	4	315	–	–	8	–	–	229	8,785	7,276	5	195	142	47
Utah	2	38	5	–	–	–	1	73	1,926	1,499	–	14	13	1
Nevada	1	54	–	–	3	–	–	88	3,204	1,821	1	82	63	–
PACIFIC	137	4,309	9	1	102	–	3	2,700	113,967	112,016	104	3,933	3,671	355
Washington	6	297	–	–	13	–	1	246	10,822	10,848	–	80	137	–
Oregon	4	184	2	–	1	–	2	293	10,371	9,685	4	98	54	6
California	117	3,405	7	1	84	–	–	1,990	87,734	86,862	100	3,710	3,398	338
Alaska	–	82	–	–	2	–	–	114	2,784	2,547	–	16	16	11
Hawaii	10	341	–	–	2	–	–	57	2,256	2,074	–	29	66	–
Guam *	–	30	–	–	1	–	–	–	302	395	–	5	5	–
Puerto Rico	13	489	–	–	4	–	–	86	2,997	3,800	13	794	651	50
Virgin Islands	–	3	–	–	–	–	–	4	277	212	–	43	31	–

*Delayed reports: Tuberculosis: Ohio delete 5, Iowa delete 1, N.C. delete 2
Typhoid: Mo. 1
RMSF: Okla 1
Gonorrhea: N.H. 3, Mass. 379, W. Va. 27, La. delete 2, Guam 18
Syphilis: Mass. 6, La. 2, Guam 2

Week No. 47

TABLE IV. DEATHS IN 121 UNITED STATES CITIES FOR WEEK ENDING NOVEMBER 23, 1974

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

Area	All Causes					Pneumonia and Influenza All Ages
	All Ages	65 years and over	45-64 years	25-44 years	Under 1 year	
NEW ENGLAND	660	399	180	39	18	41
Boston, Mass.	195	96	63	19	6	15
Bridgeport, Conn.	44	24	15	3	1	4
Cambridge, Mass.	19	16	1	1	1	2
Fall River, Mass.	18	15	3	–	–	–
Hartford, Conn.	48	26	16	3	1	4
Lowell, Mass.	22	15	5	–	–	–
Lynn, Mass.	20	16	3	1	–	1
New Bedford, Mass.	26	14	9	–	2	1
New Haven, Conn.	46	27	13	4	–	–
Providence, R. I.	53	32	15	2	2	7
Somerville, Mass.	12	7	2	3	–	3
Springfield, Mass.	56	41	11	–	3	2
Waterbury, Conn.	44	29	13	1	1	–
Worcester, Mass.	57	41	11	2	1	2
MIDDLE ATLANTIC	3,132	1,952	803	174	106	100
Albany, N. Y.	60	31	22	2	4	–
Allentown, Pa.	26	19	5	1	1	–
Buffalo, N. Y.	160	90	52	5	8	9
Camden, N. J.	39	23	11	4	–	2
Elizabeth, N. J.	40	28	8	1	1	2
Erie, Pa.	26	18	5	–	1	5
Jersey City, N. J.	47	31	11	5	–	3
Newark, N. J.	79	38	19	10	5	4
New York City, N. Y. †	1,448	934	339	88	44	39
Paterson, N. J.	32	16	12	4	–	2
Philadelphia, Pa.	603	352	175	29	26	6
Pittsburgh, Pa.	161	91	49	9	7	10
Reading, Pa.	56	39	12	2	2	2
Rochester, N. Y.	100	68	18	7	2	9
Schenectady, N. Y.	22	17	5	–	–	1
Scranton, Pa.	42	30	9	1	1	1
Syracuse, N. Y.	97	65	23	4	4	3
Trenton, N. J.	31	17	13	–	–	1
Utica, N. Y.	24	16	5	2	–	1
Yonkers, N. Y.	39	29	10	–	–	–
EAST NORTH CENTRAL	2,571	1,432	725	188	111	55
Akron, Ohio	69	36	20	3	7	–
Canton, Ohio	49	28	16	3	–	2
Chicago, Ill.	662	346	192	69	31	16
Cincinnati, Ohio	191	104	55	11	11	1
Cleveland, Ohio	194	94	65	18	11	3
Columbus, Ohio	134	73	37	10	7	1
Dayton, Ohio	116	75	27	3	6	3
Detroit, Mich.	320	180	87	20	10	5
Evansville, Ind.	50	24	21	2	3	–
Fort Wayne, Ind.	53	27	16	4	1	3
Gary, Ind.	37	15	10	4	1	1
Grand Rapids, Mich.	48	31	10	3	2	4
Indianapolis, Ind.	170	105	46	8	5	–
Madison, Wis.	51	28	15	3	1	7
Milwaukee, Wis.	133	84	40	6	1	4
Peoria, Ill.	40	21	8	5	3	–
Rockford, Ill.	43	28	5	5	3	3
South Bend, Ind.	40	28	7	3	2	1
Toledo, Ohio	110	62	36	5	5	1
Youngstown, Ohio	61	43	12	3	1	–
WEST NORTH CENTRAL	770	483	177	41	40	31
Des Moines, Iowa	50	29	14	5	2	4
Duluth, Minn.	23	17	2	–	1	2
Kansas City, Kans.	32	16	9	2	3	–
Kansas City, Mo.	113	75	26	6	3	3
Lincoln, Nebr.	24	13	6	2	2	2
Minneapolis, Minn.	104	70	20	7	5	3
Omaha, Nebr.	97	63	21	5	5	3
St. Louis, Mo.	208	124	53	13	12	6
St. Paul, Minn.	65	46	10	–	2	3
Wichita, Kans.	54	30	16	1	5	5
SOUTH ATLANTIC	1,282	684	388	89	64	49
Atlanta, Ga.	110	41	40	16	7	6
Baltimore, Md.	299	165	83	22	15	5
Charlotte, N. C.	57	26	18	3	7	1
Jacksonville, Fla.	129	68	43	9	5	1
Miami, Fla.	118	74	29	7	4	6
Norfolk, Va.	69	36	23	2	4	3
Richmond, Va.	105	49	34	7	13	12
Savannah, Ga.	43	23	14	3	–	2
St. Petersburg, Fla.	72	59	11	1	–	3
Tampa, Fla.	64	41	12	2	3	4
Washington, D. C.	157	75	58	13	5	5
Wilmington, Del.	59	27	23	4	1	1
EAST SOUTH CENTRAL	735	419	201	41	45	28
Birmingham, Ala.	120	66	29	13	8	–
Chattanooga, Tenn.	53	39	9	–	2	6
Knoxville, Tenn.	49	34	13	–	1	–
Louisville, Ky.	124	61	44	7	10	10
Memphis, Tenn.	192	102	53	10	18	1
Mobile, Ala.	54	42	9	1	1	2
Montgomery, Ala.	41	19	15	3	1	4
Nashville, Tenn.	102	56	29	7	4	5
WEST SOUTH CENTRAL	1,157	627	333	71	65	23
Austin, Tex.	50	34	6	2	4	4
Baton Rouge, La.	39	26	6	2	2	–
Corpus Christi, Tex.	33	18	8	–	4	–
Dallas, Tex.	177	97	55	11	6	2
El Paso, Tex.	44	27	11	2	2	1
Fort Worth, Tex.	69	42	19	4	1	1
Houston, Tex.	233	106	81	20	13	4
Little Rock, Ark.	66	35	14	3	14	2
New Orleans, La.	173	92	57	11	6	2
San Antonio, Tex.	145	78	39	8	10	3
Shreveport, La.	59	32	18	3	1	4
Tulsa, Okla.	69	40	19	5	2	–
MOUNTAIN	482	273	134	36	23	16
Albuquerque, N. Mex.	43	24	15	3	–	5
Colorado Springs, Colo.	27	15	8	1	–	3
Denver, Colo.	134	77	37	11	8	2
Las Vegas, Nev.	21	11	6	1	2	–
Ogden, Utah	23	15	7	1	–	3
Phoenix, Ariz.	119	65	34	11	6	–
Pueblo, Colo.	23	14	7	–	1	3
Salt Lake City, Utah	46	26	10	4	3	–
Tucson, Ariz.	46	26	10	4	3	–
PACIFIC	1,953	1,236	509	111	50	58
Berkeley, Calif.	16	11	5	–	–	–
Fresno, Calif.	70	46	14	6	2	1
Glendale, Calif.	43	35	6	2	–	–
Honolulu, Hawaii	56	37	13	4	2	3
Long Beach, Calif.	108	81	22	3	1	1
Los Angeles, Calif.	766	498	189	46	15	13
Oakland, Calif.	82	43	31	3	2	3
Pasadena, Calif.	46	33	11	1	–	2
Portland, Oreg.	118	71	35	4	6	13
Sacramento, Calif.	66	39	18	6	–	5
San Diego, Calif.	145	84	42	8	6	2
San Francisco, Calif.	142	93	31	10	4	7
San Jose, Calif.	51	28	15	6	1	1
Seattle, Wash.	143	77	44	9	10	2
Spokane, Wash.	65	39	21	3	–	3
Tacoma, Wash.	36	21	12	–	1	2
Total	12,742	7,505	3,450	790	522	401
Expected Number	12,432	7,451	3,305	807	407	422

†Delayed report for week ending Nov. 16, 1974

CLOSTRIDIUM PERFRINGENS – Continued

References

1. Hobbs BC, Smith ME, Oakley CL, Warrack GH, Cruickshank JC: *Clostridium welchii* food poisoning. J Hyg (Camb) 51:75-101, 1953
2. Smith HW, Crabb WE: The faecal bacterial flora of animals and man: Its development in the young. J Pathol Bacteriol 82:53-66, 1961
3. Boyd MJ, Logan MA, Tytell AF: The growth requirements of *Clostridium perfringens (welchii)* BP6K. J Biol Chem 174: 1013-1025, 1948
4. Center for Disease Control: Foodborne and Waterborne Disease Outbreaks Annual Summary–1973. In press.

BOTULISM – Alaska

On the evening of September 15, 1974, a 38-year-old male in Stebbins, Alaska, became ill with abdominal pain, nausea, vomiting, diarrhea, and dry throat. The next morning he had double vision, dysphonia, and dysphagia and the patient's 36-year-old wife developed similar symptoms. Both patients were evacuated by air to Nome, Alaska, that day and subsequently transferred to a hospital in Anchorage on September 17.

On admission to the Anchorage hospital, the man had dilated, non-reactive pupils, while the woman's pupils were normal size and non-reactive. Both had bilateral ptosis, a hypoactive gag reflex, and symmetrical peripheral muscle weakness. Both received trivalent (ABE) botulinal antitoxin that day; the man was given 2½ vials and the woman 3½ vials. Later that day, the woman had a respiratory arrest from which she was successfully resuscitated. She required ventilatory assistance for 7 days; the man did not require ventilatory assistance. Both patients recovered. Type E botulinal toxin was identified in pre-treatment serum specimens from both individuals; post-treatment stool specimens were negative for botulinal toxin.

Epidemiologic investigation revealed that the patients' 2 children (ages 10 and 12) were asymptomatic; no one else in Stebbins had symptoms compatible with botulism. Serum specimens from the children were negative for botulinal toxin.

On September 14, the father and mother each had eaten approximately 4 strips of salmon dipped in seal oil. In addition, the son had eaten 1 strip and the daughter a small piece of the salmon after reportedly dipping the salmon in the oil. The salmon had been caught one month before and had been placed in the sun to dry. The seal oil was derived from blubber taken from a dead, partially decomposed seal 7 to 10 days before the patients' illnesses. Pieces of seal meat were present in seal oil found in the patients' home. Type E toxin was identified in the pieces of seal meat but not in the seal oil itself. Salmon from the patients' home was negative for botulinal toxin.

(Reported by Mary Ramond, Health Aide, Jacinta Katchean, Health Aide, Norton Sound Health Corporation, Stebbins; John Greif, M.D., Richard Bagge, M.D., Physicians, Maynard McDougal Memorial Hospital, Nome; William Blevins, M.D., Physician, Alaska Native Medical Center, Anchorage; Jenny Andersen, R.N., Public Health Nurse, Donald K. Freedman, M.D., M.P.H., Director, Division of Health, Alaska Department of Health and Social Services; Alaska Activity, Bureau of Epidemiology; Anaerobe Section, Enterobacteriology Branch, Bacteriology Division, Bureau of Laboratories, CDC; and 2 EIS Officers.)

Editorial Note

Since laboratory studies identified type E botulinal toxin in pieces of seal meat present in the seal oil but not in the oil itself, the adults presumably ingested some of the pieces of seal meat along with the salmon which they dipped in the oil.

ACUTE COPPER POISONING – Arizona

On June 19, 1974, approximately ten minutes after a 9:00 a.m. refreshment break, 8 children (ages 1-4) attending a nursery Bible school class at a church in Mesa, Arizona, experienced the acute onset of nausea; 7 vomited. One of 2 adults who drank the beverage experienced nausea but did not vomit. The childrens' symptoms lasted approximately 1 hour; there were no sequelae. An orange-flavored drink served during the break had been prepared at approximately 4:00 p.m. the previous day, placed in a brass pot, and refrigerated overnight.

When more of this beverage was prepared using the same method and container, analysis revealed a copper concentration of 34.0 parts per million. Concentrations of other metals were 7.1 ppm zinc, 4.0 ppm iron, 0.18 ppm lead, 0.05 ppm chromium, 0.05 ppm cobalt, 0.05 ppm maganese, and 0.05 ppm nickel. The pH was not recorded.

(Reported by Louis A. Rosati, M.D., Pathologist, Desert Samaritan Hospital, Mesa; Donald Whitcomb, Ph.D., Chief Chemist, Jon Counts, Ph.D., Director, State Laboratory; Francis J. Marks, Epidemiological Assistant, Philip M. Hotchkiss, D.V.M., M.P.H., State Epidemiologist, Arizona Department of Health Services.

Editorial Note

The symptoms and incubation period of the illness are compatible with a mild form of acute copper poisoning; vomiting is caused by the local action of copper ions on the gastrointestinal tract (*1*). In more severe cases, hepatic and acute tubular necrosis may occur (*1*).

The beverage was allowed to remain in a brass container for approximately 17 hours. Although the pH of the beverage was not measured, previous studies have demonstrated that acid solutions (pH 3.4-5.0) in contact with copper tubing may become contaminated by copper ions (*2*).

An 8-ounce glass of the beverage made in the same manner as the vehicle in this outbreak would have contained approximately 8.5 mg of copper, an amount comparable to that which caused illness in adults in an outbreak of acute copper poisoning that was traced to the consumption of an alcoholic beverage prepared in a metal cocktail shaker (*3*).

References

1. Copper. In Clinical Toxicology of Commercial Products: Acute Poisoning, edited by Gleason MN, Gosselin RE, Hodge HC, Smith RP. 3rd ed. Baltimore, The Williams and Wilkins Co, 1969, pp 72-74
2. Hopper SH, Adams HS: Copper poisoning from vending machines. Public Health Rep 73:910-914, 1958
3. Wyllie J: Copper poisoning at a cocktail party. Am J Public Health 47:617, 1957

INTERNATIONAL NOTES
QUARANTINE MEASURES

The following changes should be made in the "Supplement – Health Information for International Travel," Morbidity and Mortality Weekly Report, Vol. 23, September 1974:

SAUDI ARABIA – delete all information concerning cholera and insert:

Cholera – During the period from 16 October 1974 to 12 January 1975 (season of periodic mass congregations):

A Certificate showing a single dose of vaccine administered not less than one week and not more than three months before arriving in Saudi Arabia is required of all travelers.

In addition, all travelers arriving from countries any parts of which are infected or endemic are required to possess: (i) a certificate showing that, before arriving in Saudi Arabia, they have spent five days in a cholera-free area in their countries which should be designated by health authorities and notified in advance to Saudi Arabia Health Authorities (time spent on board a vessel may be considered as a period spent in a cholera-free area provided no case appears on board); (ii) a certificate from local health authorities showing that arrivals have taken adequate doses of tetracycline or any substitute antibiotic for four subsequent days immediately before leaving the local infected area or during their stay in the cholera-free area.

Delete code II and insert code I.

The Morbidity and Mortality Weekly Report, circulation 41,500, is published by the Center for Disease Control, Atlanta, Ga.

Director, Center for Disease Control — David J. Sencer, M.D.
Director, Bureau of Epidemiology, CDC — Philip S. Brachman, M.D.
Editor, MMWR — Michael B. Gregg, M.D.
Managing Editor, MMWR

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.

In addition to the established procedures for reporting morbidity and mortality, 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, B-SB-2
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.

DHEW Publication No. (CDC) 75-8017