

Morbidity and Mortality



WEEKLY REPORT

For OCT 3 1975

Week Ending
September 29, 1975
ATLANTA, GA. 30333

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

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EPIDEMIOLOGIC NOTES AND REPORTS

MEASLES - Oregon

Between March 9 and May 3, 1975, 15 cases of measles occurred in residents of Clackamas and Multnomah counties, Oregon. Patients' ages ranged from 2 to 24 years; 3 cases were confirmed serologically.

The index patient, a 2-year-old boy in whom rash developed on March 9, had been exposed to measles in California 2 weeks earlier. He attended a roller skating party on March 8 during the prodromal phase of his illness where he transmitted infection to 3 other children (Patients 2, 3, and 4) (Figure 1). Patient 2, 1 of those exposed at the roller skating party, then transmitted disease to a sibling (Patient 5) and a preschool playmate (Patient 6) without further spread.

Patient 3 was an 8-year-old girl in whom rash appeared on March 24, 16 days after her exposure at the roller skating

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party. She in turn transmitted disease directly and indirectly through her school to 5 other children (Patients 7, 10, 12, 14, and 15). Transmission ended after vaccine had been administered to the remaining susceptible children in her school and after gamma globulin had been administered to other susceptible contacts exposed in her doctor's office 4 days after their exposure.

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

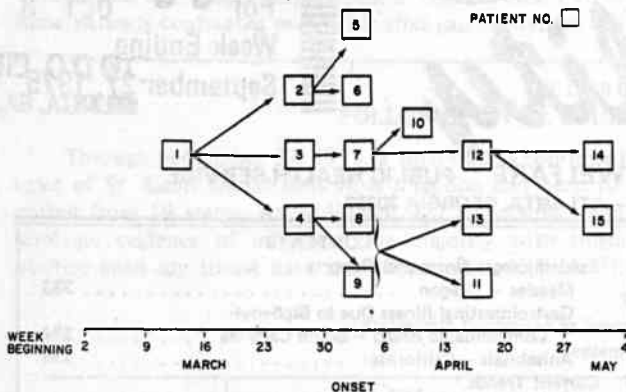
DISEASE	39th WEEK ENDING		MEDIAN 1970-1974	CUMULATIVE, FIRST 39 WEEKS		
	September 27, 1975	September 28, 1974		September 27, 1975	September 28, 1974	MEDIAN 1970-1974
Aseptic meningitis	186	86	194	2,746	2,252	3,437
Brucellosis	8	5	4	179	129	143
Chickenpox	320	324	---	117,620	100,282	---
Diphtheria	-	6	6	216	189	143
Encephalitis	Primary	161	34	1,236	758	1,095
	Post-Infectious	5	2	248	201	228
	Type B	237	221	199	8,645	7,263
Hepatitis, Viral	Type A	682	747	26,140	31,415	41,903
	Type unspecified	160	138	1,149	5,986	6,193
Malaria	9	6	11	316	173	716
Measles (rubeola)	59	83	131	21,384	20,081	27,210
Meningococcal infections, total	21	17	17	1,117	1,024	1,084
Civilian	21	17	17	1,092	998	1,059
Military	-	-	1	25	26	43
Mumps	281	298	428	47,562	45,126	57,663
Pertussis	25	40	---	1,149	1,284	---
Rubella (German measles)	58	147	221	14,958	10,214	26,191
Tetanus	2	1	3	69	69	83
Tuberculosis	639	610	---	24,933	22,951	---
Tularemia	-	2	3	87	115	116
Typhoid fever	11	17	17	245	307	279
Typhus, tick-borne (Rky. Mt. spotted fever)	19	15	8	737	706	460
Venereal Diseases:						
Gonorrhea (Civilian)	22,906	18,067	---	740,264	661,442	---
Military	597	625	---	22,397	22,343	---
Syphilis, primary and secondary (Civilian)	465	507	---	19,105	18,984	---
Military	5	10	---	258	352	---
Rabies in animals	52	122	64	1,851	2,264	2,695

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	-	Poliomyelitis, total: Calif., 1	5
Botulism:	14	Paralytic: Calif., 1	5
Congenital rubella syndrome: Kans., 2	19	Psittacosis:	36
Leprosy:	116	Rabies in man: Calif., 1	2
Leptospirosis: Tenn., 1, Calif., 1	38	Trichinosis: Mass., 1, Ohio, 1, Texas, 1	94
Plague: N.M., 4	13	Typhus, murine:	27

MEASLES - Continued

Figure 1
MEASLES CASES BY WEEK OF ONSET OF RASH,
CLACKAMAS AND MULTNOMAH COUNTIES,
OREGON, MARCH-MAY 1975



Patient 4, a 3-year-old boy exposed at the roller skating party, had onset of rash on March 25. He in turn transmitted infection to 2 unvaccinated children in the neighborhood (Patients 8 and 9) who had rash on April 4. These 2 patients were seen and diagnosed in a local physician's office on April 4, where they transmitted infection to 2 other susceptibles (Patients 11 and 13) who had rash on April 16 and 19, respectively. This chain of transmission was interrupted

GASTROINTESTINAL ILLNESS DUE TO BIPHENYL-CONTAMINATED BREAD - South Carolina

On the evening of May 8, 1975, 11 members of a Columbia, South Carolina, family ate a meal of barbecued chicken, brown peas, commercially prepared bread, and soft drinks. Approximately 15-20 minutes after finishing the meal, 10 family members became ill with nausea (100%), headache (70%), and cramps (50%); 7 later had vomiting. Symptoms lasted from 12 hours or less to more than 3 days; prolonged symptoms were seen in persons who ate the most bread. Three patients saw a physician.

Food histories obtained from family members incriminated the bread, which was said to have tasted "like detergent." Analysis of the bread by the Bureau of Laboratories, South Carolina Department of Health and Environmental Control, demonstrated the presence of a chemical, biphenyl, in excessive amounts in the crust (22-1049 ppm); highest levels were detected in the bottom of the loaf, and virtually no biphenyl was detected in the center. Analyses of 24-hour urine specimens obtained on May 18 and 19 from 7 family members and from 1 neighbor who had not been exposed were negative for biphenyl.

Further studies conducted by the state laboratory demonstrated that biphenyl vapors can penetrate plastic bread wrappers and contaminate bread contained within. However, investigation of the family's home, the local food store where the bread had been purchased, the bread distributor, and the bakery did not reveal any source of the chemical. In addition, 2 lots of bread and several bread sacks obtained at the bakery on May 10 were negative for biphenyl. No further illnesses were reported.

(Reported by AE Pugh, MD, and RF Goldie, MD, Director, Richmond County Health Department; Rufus Maxwell, and Joe Heavner, Environmentalists, Ann Marie Lenventis, MS, Chemist, Ed Williams, DrPH, Director, Division of Environ-

by vaccination and administration of gamma globulin to susceptible contacts of Patients 11 and 13 who had been exposed in their homes, in the doctor's office where the diagnoses were made, in school, and in their neighborhoods. After these measures had been taken, a major vaccination campaign was conducted in the area; 11,828 doses of measles vaccine were administered by May 20. No additional measles cases have been reported.

(Reported by Joan Bettendorf, PHN, North Clackamas County School District 12; Thula Edwards, PHN, Margaret Wright, Clinic Nurse, and HM Stolte, MD, Health Officer, Clackamas County Health Department; Jo Furlong, CHN, Nurse Epidemiologist, Dee Rukke, CHN, Communicable Disease Control Coordinator, and Hugh Tilson, MD, Health Officer, Multnomah County Department of Medical Services; Ed Pasternak, Information Representative, Les Cour, Unit Manager, Immunization Program, and John A Googins, MD, State Epidemiologist, Oregon State Health Division.)

Editorial Note

This outbreak demonstrates 3 important concepts: 1) that a single case of measles, even with prompt containment efforts, can give rise to a number of other cases before transmission is interrupted; 2) that spread can occur through doctors' offices or clinics and that such sites of exposure should not be neglected in future outbreak control efforts; and 3) that measles transmission can be successfully contained or terminated through rapid response to reports of suspected cases.

mental Health, AF DiSalvo, MD, Director, Bureau of Laboratories, William B Gamble, MD, Director, Division of Epidemiology, and EK Aycock, MD, Commissioner of Health, South Carolina Department of Health and Environmental Control; Jerry Bridgers, Resident Investigator, Food and Drug Administration; and 2 EIS Officers.)

Editorial Note

In this outbreak, a chemical toxin was suggested as the etiologic agent by the characteristically short incubation period (less than 30 minutes) and the unusual taste of the vehicle. Although no source of biphenyl was identified, this illness appears to have been related to consumption of chemically contaminated bread. This extrinsic contamination could have occurred after packaging through penetration of the plastic wrapper. Previous research on biphenyl toxicity has shown it to cause liver and kidney damage in mice and rats (1). Furthermore, workers chronically exposed to biphenyl vapors have experienced severe headache, nausea, fatigue, and polyneuritic symptoms and have had abnormal liver function tests (2). Since the most common use of biphenyl is as a fungistatic agent impregnated in the wrappers of citrus fruits, the maximum allowable concentrations of the substance in the wrappers has been established by the Environmental Protection Agency as 110 ppm in the United States. This implies a much lower level in the edible part of the fruit.

References

1. Kimbrough RD: The Toxicity of Polychlorinated Polycyclic Compounds and Related Chemicals. In Critical Reviews in Toxicology. Vol. 2. Cleveland, CRC Press, Inc, 1974, pp 445-498
2. Hakkinen J, Siltanen E, Hernberg S, Seppalainen A, Karlu P, Vikkula E: Diphenyl poisoning in fruit paper production. Arch Environ Health 26:70, 1973

Morbidity and Mortality Weekly Report

**TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING SEPTEMBER 27, 1975 AND SEPTEMBER 28, 1974 (39 WEEK)**

AREA	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		
						1975	1974	1975	1975	1975	1975		
UNITED STATES	186	8	320	-	216	161	34	5	237	682	160	9	316
NEW ENGLAND	3	-	19	-	-	-	-	-	6	29	13	1	15
Maine *	-	-	-	-	-	-	-	-	-	-	-	-	1
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-	-
Vermont	-	-	-	-	-	-	-	-	-	6	1	-	3
Massachusetts	2	-	9	-	-	-	-	-	3	5	11	1	5
Rhode Island	1	-	3	-	-	-	-	-	-	6	-	-	2
Connecticut	-	-	7	-	-	-	-	-	3	12	1	-	4
MIDDLE ATLANTIC	30	-	25	-	-	9	6	-	41	32	1	-	78
Upstate New York	17	-	7	-	-	3	-	-	28	1	1	-	6
New York City	6	-	18	-	-	-	-	-	7	25	-	-	21
New Jersey *	7	-	NN	-	-	6	2	-	6	6	-	-	11
Pennsylvania	-	-	-	-	-	-	4	-	-	-	-	-	40
EAST NORTH CENTRAL	64	-	136	-	5	52	9	1	35	127	13	-	7
Ohio	11	-	-	-	-	31	7	-	8	28	-	-	2
Indiana	8	-	5	-	-	-	-	-	2	11	-	-	-
Illinois	9	-	10	-	4	-	-	-	9	17	9	-	4
Michigan	30	-	62	-	1	17	2	-	15	61	4	-	1
Wisconsin	6	-	59	-	-	4	-	1	1	10	-	-	-
WEST NORTH CENTRAL	8	-	31	-	6	34	3	-	10	37	14	-	12
Minnesota	-	-	-	-	-	10	3	-	5	7	-	-	5
Iowa	1	-	28	-	-	-	-	-	2	3	1	-	-
Missouri	5	-	1	-	-	15	-	-	1	14	8	-	5
North Dakota *	-	-	2	-	6	-	-	-	-	1	-	-	1
South Dakota	-	-	-	-	-	-	-	-	-	1	-	-	-
Nebraska	-	-	-	-	-	2	-	-	-	2	-	-	1
Kansas	2	-	-	-	-	7	-	-	2	9	5	-	-
SOUTH ATLANTIC	22	4	43	-	-	11	1	1	29	132	28	2	49
Delaware	-	-	1	-	-	1	-	-	-	1	-	-	-
Maryland	4	-	-	-	-	1	-	-	3	5	1	-	9
District of Columbia	-	-	1	-	-	2	-	-	1	-	-	-	9
Virginia	10	3	1	-	-	-	1	1	1	8	4	1	7
West Virginia *	-	-	39	-	-	3	-	-	-	5	-	-	2
North Carolina	7	-	NN	-	-	1	-	-	2	10	3	1	6
South Carolina *	1	-	-	-	-	-	-	-	5	8	4	-	2
Georgia	-	-	-	-	-	1	-	-	-	38	-	-	9
Florida	-	1	1	-	-	2	-	-	17	57	16	-	5
EAST SOUTH CENTRAL	26	1	2	-	-	36	9	1	12	42	4	-	11
Kentucky	3	-	2	-	-	10	-	-	3	14	3	-	3
Tennessee	6	1	NN	-	-	10	-	1	5	26	-	-	-
Alabama *	17	-	-	-	-	1	6	-	4	1	1	-	6
Mississippi	-	-	-	-	-	15	3	-	-	1	-	-	2
WEST SOUTH CENTRAL	15	1	18	-	6	8	-	1	26	92	24	-	21
Arkansas	1	-	-	-	-	1	-	-	1	10	-	-	1
Louisiana	-	1	NN	-	-	-	-	-	2	8	4	-	-
Oklahoma	10	-	5	-	-	5	-	-	9	13	12	-	2
Texas	4	-	13	-	6	1	-	1	14	61	8	-	18
MOUNTAIN	1	2	9	-	18	5	-	-	11	34	20	-	13
Montana	-	-	2	-	1	-	-	-	1	-	-	-	-
Idaho	-	1	-	-	-	-	-	-	-	2	-	-	-
Wyoming	-	-	-	-	-	-	-	-	-	-	-	-	-
Colorado	-	-	7	-	-	1	-	-	7	8	16	-	8
New Mexico	-	-	-	-	3	1	-	-	1	13	-	-	-
Arizona	-	-	-	-	14	3	-	-	2	2	1	-	3
Utah	-	1	-	-	-	-	-	-	-	3	3	-	2
Nevada *	1	-	-	-	-	-	-	-	-	6	-	-	-
PACIFIC	17	-	37	-	181	6	6	1	67	157	43	6	110
Washington	3	-	28	-	172	1	1	-	7	9	13	-	4
Oregon	-	-	-	-	-	1	-	1	1	18	2	1	10
California *	14	-	-	-	4	4	5	-	59	126	28	5	91
Alaska	-	-	9	-	5	-	-	-	-	-	-	-	2
Hawaii	-	-	-	-	-	-	-	-	-	4	-	-	3
Guam	-	-	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico	-	-	8	-	-	-	-	-	2	5	-	-	1
Virgin Islands	-	-	1	-	-	-	-	-	-	-	-	-	-

NN: Not Notifiable --- Data Not Available
 * Delayed Reports: Aseptic Meningitis: N.J. delete 1, S.C. delete 2
 Chicken Pox: Nev. 1, Calif. 3
 Hepatitis A: Maine 1, N.D. delete 2, W.Va. 1, N.D. delete 1, Ala. 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING SEPTEMBER 27, 1975 AND SEPTEMBER 28, 1974 (39 WEEK) - Continued

AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1975	Cumulative		1975	Cumulative		1975	Cum. 1975	1975	1975	Cum. 1975	Cum. 1975
		1975	1974		1975	1974						
UNITED STATES	59	21,384	20,081	21	1,117	1,024	281	47,562	25	58	14,958	69
NEW ENGLAND	-	314	935	1	62	56	14	1,632	2	4	2,053	3
Maine	-	14	43	-	6	3	-	76	-	-	39	-
New Hampshire	-	21	209	-	2	7	-	74	-	-	305	-
Vermont	-	49	56	-	-	10	-	16	-	-	70	-
Massachusetts	-	114	389	1	22	15	8	218	-	3	1,203	1
Rhode Island	-	3	61	-	3	7	-	596	-	-	26	-
Connecticut	-	113	177	-	29	14	6	652	2	1	410	2
MIDDLE ATLANTIC	4	1,782	8,041	2	116	152	20	2,603	1	9	1,709	11
Upstate New York	1	591	950	-	34	56	4	935	1	2	277	1
New York City	2	148	600	-	29	34	14	787	-	4	167	2
New Jersey	1	462	5,528	2	20	44	2	348	-	3	991	3
Pennsylvania	-	581	963	-	33	18	-	533	-	-	274	5
EAST NORTH CENTRAL	17	6,390	7,793	5	160	130	107	19,661	5	23	4,206	6
Ohio	-	110	3,045	1	46	52	17	2,251	1	-	612	2
Indiana	8	402	240	1	9	13	12	2,017	-	8	983	-
Illinois	4	1,823	2,042	1	21	10	12	2,275	3	2	301	3
Michigan	1	3,016	1,950	2	64	39	28	8,086	1	8	1,415	-
Wisconsin*	4	1,039	516	-	20	16	38	5,032	-	5	895	1
WEST NORTH CENTRAL	1	4,975	687	1	67	74	26	3,344	-	-	1,463	3
Minnesota	-	182	83	1	16	24	2	51	-	-	37	1
Iowa	-	574	134	-	6	13	21	1,066	-	-	30	-
Missouri	-	271	259	-	33	18	2	911	-	-	732	1
North Dakota	1	1,052	28	-	-	3	1	465	-	-	66	-
South Dakota	-	356	27	-	1	3	-	6	-	-	18	-
Nebraska	-	395	2	-	2	3	-	38	-	-	21	-
Kansas	-	2,145	154	-	9	10	-	807	-	-	559	1
SOUTH ATLANTIC	-	343	553	7	234	206	26	3,211	3	5	1,552	15
Delaware	-	35	10	1	7	5	-	9	-	-	19	-
Maryland	-	48	24	1	27	22	10	256	-	-	37	1
District of Columbia	-	1	3	-	5	1	3	124	-	-	-	-
Virginia	-	38	33	1	19	34	4	764	-	1	315	1
West Virginia	-	154	205	-	5	7	6	1,063	1	3	207	1
North Carolina	-	2	5	-	42	42	1	104	-	-	43	6
South Carolina	-	-	51	-	34	16	-	49	-	-	751	2
Georgia	-	40	4	-	14	8	-	17	-	1	4	-
Florida	-	25	218	4	81	71	2	825	2	-	176	4
EAST SOUTH CENTRAL	16	293	226	3	161	101	15	4,460	-	1	958	4
Kentucky	-	85	160	2	68	39	9	1,700	-	-	237	2
Tennessee	-	178	35	-	50	45	5	2,083	-	1	693	-
Alabama	-	5	18	-	29	10	-	377	-	-	21	1
Mississippi	16	25	13	1	14	7	1	300	-	-	7	1
WEST SOUTH CENTRAL	8	323	202	2	171	164	29	4,315	13	4	716	15
Arkansas*	-	-	7	1	10	12	-	172	-	-	20	-
Louisiana	-	1	13	-	30	36	3	337	3	-	279	4
Oklahoma	6	131	27	1	10	17	3	194	1	-	85	-
Texas	2	191	155	-	121	99	23	3,612	9	4	332	11
MOUNTAIN	-	1,406	744	-	34	35	7	894	1	1	511	-
Montana	-	50	373	-	7	1	-	28	1	-	252	-
Idaho	-	12	51	-	5	2	-	12	-	-	74	-
Wyoming	-	1	1	-	-	3	-	2	-	-	-	-
Colorado	-	1,158	30	-	9	8	1	599	-	-	131	-
New Mexico	-	13	61	-	4	3	1	20	-	1	16	-
Arizona	-	79	16	-	1	7	-	-	-	-	2	-
Utah	-	66	13	-	7	8	-	138	-	-	28	-
Nevada	-	27	199	-	1	3	5	95	-	-	8	-
PACIFIC	13	5,558	900	-	112	106	37	7,442	-	11	1,790	12
Washington	1	290	64	-	17	12	11	3,719	-	3	273	1
Oregon	1	197	-	-	5	13	-	629	-	3	174	-
California	11	5,007	770	-	84	75	24	3,011	-	5	1,326	10
Alaska	-	-	-	-	5	3	-	43	-	-	-	-
Hawaii	-	64	66	-	1	3	2	40	-	-	17	1
Guam	-	22	17	-	2	1	-	25	-	-	7	-
Puerto Rico	2	626	593	-	1	6	4	722	7	-	23	13
Virgin Islands	-	8	31	-	-	-	-	221	-	-	3	3

--- Data Not Available
* Delayed Reports: Measles: Wisc. delete 3
Mumps: Ark. 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING SEPTEMBER 27, 1975 AND SEPTEMBER 28, 1974 (39 WEEK) - Continued

AREA	TUBERCULOSIS		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (RMSF)		VENEREAL DISEASES (Civilian Cases Only)					RABIES IN ANIMALS	
	1975	Cum. 1975	Cum. 1975	1975	Cum. 1975	1975	Cum. 1975	GONORRHEA		SYPHILIS (Pri. & Sec.)			Cum. 1975	
								1975	Cumulative		1975	Cumulative		
									1975	1974		1975		1975
UNITED STATES	639	24,933	87	11	245	19	737	22,906	740,264	661,442	465	19,105	18,984	1,851
NEW ENGLAND	21	989	-	-	10	-	6	649	20,187	17,918	11	672	667	52
Maine *	-	58	-	-	-	-	-	-	1,541	1,465	-	21	33	31
New Hampshire	-	26	-	-	-	-	-	18	555	572	-	12	9	2
Vermont *	-	20	-	-	-	-	-	22	490	484	-	6	1	-
Massachusetts	15	572	-	-	6	-	2	286	9,315	8,182	9	441	471	11
Rhode Island	3	108	-	-	-	-	3	58	1,666	1,521	-	16	14	1
Connecticut	3	205	-	-	4	-	1	265	6,620	5,694	2	176	139	7
MIDDLE ATLANTIC	109	4,553	4	1	45	1	73	2,139	86,629	82,229	90	3,523	4,108	81
Upstate New York	40	656	3	1	8	1	30	587	15,396	15,237	5	331	402	65
New York City	34	1,827	-	-	21	-	-	1,134	37,601	35,473	71	2,047	2,369	-
New Jersey	35	871	1	-	7	-	9	418	12,356	11,889	14	552	658	-
Pennsylvania	-	1,199	-	-	9	-	34	-	21,276	19,630	-	593	679	16
EAST NORTH CENTRAL	83	3,468	5	-	28	-	19	3,780	121,099	104,968	39	1,558	1,615	92
Ohio *	27	993	-	-	10	-	16	1,099	33,424	27,019	16	384	228	5
Indiana	11	452	-	-	-	-	1	754	10,982	10,247	4	127	143	8
Illinois	26	961	-	-	12	-	1	1,042	41,275	34,394	12	737	835	22
Michigan	19	949	1	-	5	-	1	659	23,699	23,711	7	248	327	8
Wisconsin	-	113	4	-	1	-	-	226	11,719	9,597	-	62	82	49
WEST NORTH CENTRAL	18	911	14	-	13	-	25	1,077	37,010	34,652	7	466	493	406
Minnesota	3	123	-	-	3	-	-	159	7,570	7,260	1	92	62	105
Iowa	1	95	1	-	1	-	-	122	5,179	4,616	1	25	33	80
Missouri	12	447	10	-	7	-	13	387	13,425	11,593	4	217	326	43
North Dakota	-	11	-	-	-	-	-	25	576	532	-	5	6	79
South Dakota *	-	54	-	-	-	-	-	31	1,430	1,606	-	5	2	48
Nebraska	-	29	1	-	1	-	2	141	3,328	2,917	-	15	10	4
Kansas	2	152	2	-	1	-	10	212	5,502	6,128	1	107	54	47
SOUTH ATLANTIC	166	5,528	17	-	34	6	375	5,358	182,209	171,200	87	5,917	5,967	266
Delaware	2	109	-	-	-	-	4	61	2,645	2,343	-	69	63	3
Maryland	22	896	1	-	6	-	28	584	21,939	17,606	14	431	590	7
District of Columbia	5	292	1	-	1	-	-	307	10,631	14,938	17	526	484	-
Virginia	27	651	6	-	6	3	103	875	18,149	15,605	10	457	587	88
West Virginia	8	203	-	-	4	-	4	56	2,281	2,026	3	48	13	3
North Carolina *	27	899	-	-	2	2	121	812	25,600	22,900	19	748	699	10
South Carolina	10	344	3	-	5	1	78	293	16,838	16,197	14	422	536	9
Georgia	28	800	5	-	1	-	32	1,036	34,223	33,696	10	792	887	123
Florida	37	1,334	1	-	9	-	5	1,334	49,903	45,889	-	2,424	2,108	23
EAST SOUTH CENTRAL	60	2,140	10	1	22	6	100	2,024	63,020	56,609	26	852	945	127
Kentucky	5	404	1	-	7	4	9	223	8,278	6,982	4	130	220	84
Tennessee	11	796	9	-	10	1	67	671	24,737	22,416	11	323	358	20
Alabama	34	630	-	-	2	-	8	704	17,554	15,668	3	195	182	23
Mississippi	10	310	-	1	3	1	16	426	12,451	11,543	8	204	185	-
WEST SOUTH CENTRAL	64	2,801	33	1	11	6	132	3,426	91,347	86,216	70	1,655	1,695	404
Arkansas	4	373	14	1	1	1	19	367	9,775	8,867	3	52	77	64
Louisiana	3	358	2	-	4	-	-	372	16,434	17,991	5	371	467	6
Oklahoma *	6	239	9	-	-	5	89	273	8,786	7,432	1	63	99	88
Texas	51	1,831	8	-	6	-	24	2,414	56,352	51,926	61	1,169	1,052	246
MOUNTAIN	11	725	2	-	7	-	6	1,064	29,342	25,576	11	440	426	207
Montana	4	43	1	-	-	-	4	58	1,598	1,414	-	4	2	143
Idaho	-	24	-	-	-	-	1	66	1,481	1,313	1	11	8	1
Wyoming	-	21	1	-	1	-	-	53	710	565	-	10	2	5
Colorado	-	149	-	-	1	-	1	273	7,357	7,150	-	72	99	-
New Mexico	7	105	-	-	2	-	-	165	5,319	3,641	3	118	64	37
Arizona	-	309	-	-	3	-	-	260	7,930	7,378	4	166	190	18
Utah	-	31	-	-	-	-	-	111	1,864	1,450	1	13	10	3
Nevada *	-	43	-	-	-	-	-	78	3,083	2,665	2	46	51	-
PACIFIC	107	3,818	2	8	75	-	1	3,389	109,421	82,074	124	4,022	3,068	216
Washington	8	309	1	-	5	-	1	300	10,005	8,994	-	142	95	-
Oregon	4	141	-	-	-	-	-	258	8,335	8,344	8	108	72	7
California	86	2,884	1	8	68	-	-	2,739	86,614	60,922	115	3,723	2,875	206
Alaska	-	48	-	-	1	-	-	45	2,634	2,071	1	6	4	3
Hawaii	9	436	-	-	1	-	-	47	1,833	1,743	-	43	22	-
Guam	-	48	-	-	-	-	-	-	294	-	-	12	-	-
Puerto Rico	6	392	-	1	4	-	-	53	2,201	2,528	12	546	671	37
Virgin Islands	-	3	-	-	2	-	-	9	150	580	-	28	47	-

--- Data Not Available
 * Delayed Reports: Tuberculosis: Ohio delete 1, N.C. delete 5
 Gonorrhoea: Maine 93, Vt. 8, S. Dak. delete 1, Nev. 26
 Syphilis: La. delete 3

Morbidity and Mortality Weekly Report

TABLE IV. DEATHS IN 121 UNITED STATES CITIES FOR WEEK ENDING SEPTEMBER 27, 1975

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

Area	All Causes					Pneumonia and Influenza All Ages	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	616	399	151	40	14	35	SOUTH ATLANTIC	1,089	605	311	76	63	46
Boston, Mass.	189	105	50	21	8	9	Atlanta, Ga.	123	74	30	10	7	5
Bridgeport, Conn.	34	19	12	3	-	3	Baltimore, Md.	237	133	64	21	13	4
Cambridge, Mass.	30	23	7	-	-	7	Charlotte, N. C.	40	16	16	4	2	3
Fall River, Mass.	21	14	6	-	-	7	Jacksonville, Fla.	85	44	26	5	6	1
Hartford, Conn.	44	25	14	1	2	-	Miami, Fla.	98	55	30	8	3	1
Lowell, Mass.	21	18	1	-	-	2	Norfolk, Va.	50	23	15	4	4	6
Lynn, Mass.	21	16	4	1	-	1	Richmond, Va.	71	45	22	2	-	9
New Bedford, Mass.	21	19	2	-	-	2	Savannah, Ga.	27	16	8	2	-	1
New Haven, Conn.	49	31	14	4	-	7	St. Petersburg, Fla.	79	67	10	1	-	4
Providence, R. I.	54	35	14	3	2	7	Tampa, Fla.	71	39	15	5	7	7
Somerville, Mass.	10	7	2	1	-	-	Washington, D. C.	143	62	46	12	18	4
Springfield, Mass.	46	35	11	-	-	3	Wilmington, Del.	65	31	29	2	3	1
Waterbury, Conn.	23	19	3	1	-	1	EAST SOUTH CENTRAL	676	363	205	46	28	37
Worcester, Mass.	53	33	13	3	2	-	Birmingham, Ala.	92	46	26	5	10	3
MIDDLE ATLANTIC	2,894	1,772	724	195	119	115	Chatanooga, Tenn.	55	27	16	2	5	2
Albany, N. Y.	47	31	10	3	1	2	Knoxville, Tenn.	48	26	15	4	1	1
Allentown, Pa.	22	17	1	2	1	2	Louisville, Ky.	88	50	26	8	2	6
Buffalo, N. Y.	251	139	69	15	19	18	Memphis, Tenn.	178	96	55	11	6	12
Camden, N. J.	30	20	6	3	1	-	Mobile, Ala.	53	33	13	4	-	-
Elizabeth, N. J.	26	17	7	1	-	-	Montgomery, Ala.	34	23	8	3	-	-
Erie, Pa.	32	22	9	-	1	4	Nashville, Tenn.	128	62	46	9	4	13
Jersey City, N. J.	76	52	18	3	3	3	WEST SOUTH CENTRAL	1,108	592	317	79	57	27
Newark, N. J.	56	26	12	9	7	4	Austin, Tex.	29	17	9	1	1	1
New York City, N. Y.	1,349	828	336	106	45	42	Baton Rouge, La.	50	28	16	3	2	2
Paterson, N. J.	35	22	8	2	3	1	Corpus Christi, Tex.	46	24	12	2	4	4
Philadelphia, Pa.	404	245	96	29	22	4	Dallas, Tex.	179	86	53	18	9	3
Pittsburgh, Pa.	190	107	57	7	7	16	El Paso, Tex.	45	29	9	3	2	4
Reading, Pa.	36	27	8	-	1	3	Fort Worth, Tex.	77	40	23	2	6	4
Rochester, N. Y.	122	77	27	7	2	4	Houston, Tex.	222	120	58	18	12	3
Schenectady, N. Y.	32	20	9	2	1	2	Little Rock, Ark.	66	33	24	1	5	-
Scranton, Pa.	43	29	11	1	1	1	New Orleans, La.	131	77	38	9	2	-
Syracuse, N. Y.	61	43	15	2	1	1	San Antonio, Tex.	143	72	43	9	12	3
Trenton, N. J.	34	23	10	-	1	3	Shreveport, La.	61	28	17	11	1	1
Utica, N. Y.	16	6	6	2	2	-	Tulsa, Okla.	59	38	15	2	3	2
Yonkers, N. Y.	32	21	9	1	-	6	MOUNTAIN	382	223	98	24	23	15
EAST NORTH CENTRAL	2,446	1,433	636	162	107	51	Albuquerque, N. Mex.	50	28	12	2	5	2
Akron, Ohio	73	47	18	3	2	-	Colorado Springs, Colo.	27	21	5	1	-	1
Canton, Ohio	32	25	6	1	-	2	Denver, Colo.	37	18	11	3	3	3
Chicago, Ill.	611	331	167	60	26	11	Las Vegas, Nev.	16	8	6	2	-	2
Cincinnati, Ohio	156	85	50	9	6	-	Ogden, Utah	25	15	6	1	1	2
Cleveland, Ohio	200	116	61	11	4	2	Phoenix, Ariz.	95	55	27	7	5	2
Columbus, Ohio	134	82	33	6	8	1	Pueblo, Colo.	20	11	6	1	1	3
Dayton, Ohio	103	60	26	7	7	2	Salt Lake City, Utah	43	28	4	3	5	-
Detroit, Mich.	304	157	85	24	15	3	Tucson, Ariz.	69	39	21	4	3	-
Evansville, Ind.	42	26	14	1	1	-	PACIFIC	1,622	988	414	114	46	32
Fort Wayne, Ind.	54	38	12	-	3	4	Berkeley, Calif.	15	8	5	2	-	2
Gary, Ind.	24	12	6	5	1	-	Fresno, Calif.	49	26	15	3	1	2
Grand Rapids, Mich.	42	29	10	1	2	4	Glendale, Calif.	29	20	7	1	1	-
Indianapolis, Ind.	164	91	42	10	8	5	Honolulu, Hawaii	51	22	20	5	4	-
Madison, Wis.	49	31	6	5	5	2	Long Beach, Calif.	103	63	24	9	3	-
Milwaukee, Wis.	131	95	26	4	3	3	Los Angeles, Calif.	523	315	133	40	16	7
Peoria, Ill.	68	38	17	4	6	3	Oakland, Calif.	64	46	8	6	2	-
Rockford, Ill.	40	26	8	1	-	2	Pasadena, Calif.	29	24	5	-	-	-
South Bend, Ind.	49	34	10	2	3	4	Portland, Ore.	129	80	28	10	5	4
Toledo, Ohio	111	79	20	4	4	1	Sacramento, Calif.	74	36	24	7	2	4
Youngstown, Ohio	59	31	19	4	3	2	San Diego, Calif.	114	69	33	4	4	-
WEST NORTH CENTRAL	724	454	180	36	33	28	San Francisco, Calif.	161	91	43	17	5	4
Des Moines, Iowa	47	29	12	2	1	-	San Jose, Calif.	54	34	14	2	1	1
Duluth, Minn.	24	10	10	-	3	2	Seattle, Wash.	147	94	41	5	1	3
Kansas City, Kans.	38	23	6	7	1	1	Spokane, Wash.	49	36	9	2	-	3
Kansas City, Mo.	112	60	33	8	7	5	Tacoma, Wash.	31	24	5	1	1	2
Lincoln, Nebr.	38	28	7	1	1	2	Total	11,557	6,829	3,036	772	490	386
Minneapolis, Minn.	95	59	23	3	7	2	Expected Number	11,819	7,010	3,139	811	369	372
Omaha, Nebr.	76	49	21	3	2	1							
St. Louis, Mo.	184	120	44	7	10	5							
St. Paul, Minn.	62	45	11	3	1	-							
Wichita, Kans.	48	31	13	2	1	10							

* Delayed Report for Week Ending September 23, 1975

CURRENT TRENDS
FOLLOW-UP ON ST. LOUIS ENCEPHALITIS - United States

Through September 30, 1975, a total of 541 confirmed cases of St. Louis encephalitis virus infection had been reported from 19 states and the District of Columbia. An additional 496 cases with some serologic evidence of infection (the majority with single positive antibody titers) have also been reported (Table 1).

(Reported by the State Epidemiologists and/or other health officials of: Alabama, Arkansas, Colorado, Georgia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maryland, Mississippi, Missouri, Nebraska, New Jersey, North Dakota, Ohio, Pennsylvania, Tennessee, Texas, Washington, D.C., and West Virginia.)

Table 1
States with Confirmed or Seropositive Cases of SLE Virus Infection
September 30, 1975

State	Cases		Total	State	Cases		Total
	Confirmed	Some Serologic Evidence			Confirmed	Some Serologic Evidence	
Alabama	22	18	40	Missouri	4	6	10
Arkansas	6	9	15	Nebraska	3	0	3
Colorado	2	0	2	New Jersey	20	0	20
Georgia	2	0	2	North Dakota	10	0	10
Illinois	162	243	405	Ohio	55	35	90
Indiana	75	16	91	Pennsylvania	4	1	5
Iowa	5	10	15	Tennessee	25	23	48
Kentucky	26	14	40	Texas	15	32	47
Louisiana	2	7	9	Washington, D.C.	6	0	6
Maryland	4	1	5	West Virginia	0	4	4
Mississippi	93	77	170	Total	541	496	1,037

USE OF DDT IN MOSQUITO CONTROL

Mosquito control technology has shifted away from the use of DDT, a compound which was employed extensively in the past as a mosquito larvicide and a thermal "fog" to kill adult mosquitoes. In the 1940s and 1950s mosquito resistance to DDT began to appear in the United States and throughout the world. Resistance to DDT in the 2 mosquito species recently involved in encephalitis transmission, *Culex tarsalis* and *Culex quinquefasciatus*, began appearing in 1951. By 1962, resistance to DDT in 1 or the other of these species had been confirmed in 9 states, and since then relatively little DDT has been used in mosquito control efforts in this country.

Although DDT is still available for use in public health emergencies, there are newer and more effective insecticides and techniques. Seventeen insecticides are now registered for use against mosquitoes; of these, the principal compounds being used are malathion, larvicidal oils, naled, fenthion, Abate, pyrethrins, and resmethrin.

The best available technique for controlling mosquitoes in an epidemic is aerial or ground ultralow-volume application of insecticides such as malathion or naled. Because DDT is a solid crystalline chemical, it cannot be used in this type of application equipment.

(Reported by the Bureau of Tropical Diseases, CDC.)

EPIDEMIOLOGIC NOTES AND REPORTS
ANISAKIASIS - California

In November 1974 a 13-year-old boy from Santa Clara County, California, coughed up a small live white worm 5 days after eating "ceviche," a dish which his father had made from raw red snapper marinated for 24 hours in lemon juice. He otherwise remained asymptomatic. In February 1975 a Marin County man coughed, felt something in the back of his throat, and manually extracted a wriggling white worm (29 mm x 1 mm). He also had no other symptoms. About 10 days earlier he had eaten "sashimi," another fish dish prepared at home from raw white sea bass purchased at a local fish market. Physical and laboratory examinations in each patient were unremarkable except for slight, transient eosinophilia. Family members of both patients who had also eaten these delicacies remained unaffected. Both worms were identified as larvae of an anisakian nematode belonging to the genus *Phocanema*.

The family Anisakidae contains the genera *Anisakis*, *Contracaecum*, *Multicaecum*, *Porrocaecum*, and *Phocanema*; however, most human cases of anisakiasis have been attributed

to *Anisakis sp.*, which also appears to be the most invasive. The life cycle of these marine ascarids is not completely known but can involve birds, marine mammals, and fish. Larvae of anisakian nematodes in the musculature and viscera of marine fish develop to maturity in the intestine of marine mammals. When an infected fish is ingested by humans, the larvae do not mature, but the parasites may live long enough to cause a variety of symptoms.

Human anisakiasis may take several forms. In the luminal form there is no tissue penetration. These mild infections, often asymptomatic, become manifest when living nematodes are expelled by coughing, vomiting, or defecation. In gastric and intestinal anisakiasis the larvae penetrate the mucosa and attach or embed themselves in the submucosa. In the mesenteric form the parasites perforate the intestinal wall and migrate to involve the mesenteric veins or other abdominal organs. The invasive forms of infection result in granulomatous, abscess-like reactions characterized by eosinophilia, fever, and abdominal symptoms. Patients often

ANISAKIASIS – Continued

present with a "surgical abdomen," as symptoms may mimic appendicitis and intestinal obstruction.

Hundreds of cases of anisakiasis have been recorded since the first report from the Netherlands in 1955 associated with ingestion of marinated herring. Most cases have occurred in Japan where raw fish is commonly consumed. Recovery of anisakian larvae from humans in North America was first confirmed in 1972; 7 cases have now been reported, including the 2 described above.

The increasing appeal for Americans of raw fish delicacies such as sashimi, herring, ceviche, and gravlax could result in an increasing public health problem. Many species

of salt water fish caught on the Atlantic and Pacific coasts harbor anisakian larvae. The parasite can survive refrigeration, as commonly practiced during shipment of fish and in market display cases, and smoking at low temperatures. However, it is quickly killed at normal cooking temperatures or by freezing. Eating fresh raw marine fish should be recognized as a potential health hazard.

(Reported by the California State Department of Health in California Morbidity, No. 26, 4 July 1975.)

References

1. Chitwood MD: Nematodes of medical significance found in market fish. *Am J Trop Med Hyg* 19:599-602, 1970
2. Kates S, et al: A case of human infection with the cod nematode *Phocanema sp.* *Am J Trop Med Hyg* 22:606-608, 1973

**INTERNATIONAL NOTES
QUARANTINE MEASURES**

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

New Zealand – In the notes concerning smallpox insert: Oceania: Antarctic Territories, New Guinea-Papua, United Kingdom (by trans-polar or trans-Pacific flights)

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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.

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