

Morbidity and Mortality

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE
DATE OF RELEASE: DECEMBER 20, 1974 — ATLANTA, GEORGIA 30333

EPIDEMIOLOGIC NOTES AND REPORTS
HUMAN PLAGUE — New Mexico

CONTENTS

Case 1

On November 11, 1974, a 62-year-old Albuquerque, New Mexico woman awoke with a severe headache and developed nausea, fever, and shaking chills. Early the following morning, she had the onset of severe pain on the medial aspect of her right upper arm and 9-10 hours later noted a tender mass in the same area.

She consulted a physician on November 12 and was hospitalized. At that time, she was complaining of back pain. Physical examination revealed an oral temperature of 103.6°F, a tender, palpable lymph node on the medial aspect of the right arm, clear lungs, and no costovertebral angle tenderness.

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A chest X-ray was negative. The white blood count was 8,400 with 85% polymorphonuclear leukocytes, 8% bands, 1% eosinophils, and 6% lymphocytes. The urinalysis was negative and an IVP was normal, except for incomplete emptying of the bladder. Because the patient had a history of recurrent uri-

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

DISEASE	50th WEEK ENDING		MEDIAN 1969-1973	CUMULATIVE, FIRST 50 WEEKS		
	December 14, 1974	December 15, 1973		1974	1973	MEDIAN 1969-1973
Aseptic meningitis	53	79	75	3,080	4,581	4,581
Brucellosis	7	4	3	181	175	181
Chickenpox	2,933	1,935	—	116,813	157,750	—
Diphtheria	13	10	6	240	190	191
Encephalitis:						
Primary: Arthropod-borne and unspecified	15	21	21	1,039	1,470	1,468
Post-Infectious	4	2	5	244	264	296
Hepatitis, Viral:						
Type B	208	167	143	9,574	7,828	7,828
Type A	777	1,079	1,079	40,002	49,938	52,718
Type unspecified	168					
Malaria	4	5	43	255	236	2,818
Measles (rubeola)	219	195	481	21,726	26,237	30,679
Meningococcal infections, total	27	27	30	1,297	1,316	2,109
Civilian	27	27	28	1,268	1,290	1,889
Military	—	—	2	29	26	220
Mumps	1,658	1,416	2,012	54,895	66,972	84,681
Pertussis	62	—	—	1,700	—	—
Rubella (German measles)	154	155	329	11,654	27,638	42,631
Tetanus	2	1	2	93	86	115
Tuberculosis, new active	585	597	—	29,248	29,937	—
Tularemia	2	2	4	135	157	153
Typhoid fever	9	14	10	414	631	371
Typhus, tick-borne (Rky. Mt. spotted fever)	6	1	1	765	628	450
Venereal Diseases:						
Gonorrhea	16,903	17,158	—	882,590	822,053	—
Syphilis, primary and secondary	461	442	—	24,080	23,852	—
Rabies in animals	34	32	54	2,798	3,223	3,223

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	2	Poliomyelitis, total:	5
Botulism: Alaska 1, Calif. 1	21	Paralytic:	5
Congenital rubella syndrome: Calif. 1, Mich. 1	47	Psittacosis: Va. 2	154
Leprosy: Hawaii 7, La. 1	99	Rabies in man:	—
Leptospirosis: * Pa. 1, Tex. 1	47	Trichinosis:	89
Plague:	6	Typhus, murine: Tex. 1	25

*Delayed reports: Leptospirosis: La. delete 1

HUMAN PLAGUE — Continued

nary tract infections complicated by septicemia, gram negative sepsis was considered the most likely diagnosis. Blood cultures were obtained and the patient was started on intravenous ampicillin therapy.

By November 14, the patient was afebrile although systemic symptoms and pain in the lymph node persisted. On November 15, a gram negative rod was isolated from a November 12 blood culture, and ampicillin was continued. The following day the patient developed a blanching erythematous rash and ampicillin was discontinued; cephalexin monohydrate was begun. On November 17, biochemical tests on the isolate were consistent with plague, and gram and Wayson's stains demonstrated a bipolar gram negative rod. Because plague was suspected, cephalexin was discontinued, and the patient was started on intramuscular streptomycin and oral tetracycline. She recovered uneventfully. Phage sensitivity and fluorescent antibody (FA) tests for *Yersinia pestis* performed on the blood culture isolate were positive.

Epidemiologic investigation revealed that the patient and 6 others had been in the Carson National Forest near Dulce, New Mexico, from November 8 to 10. The patient had remained in or near a camping trailer while other members of the party hunted deer and rabbits. On November 9 and 10, the patient had skinned and dressed 2 cottontail rabbits. Both rabbits were noted to be covered with fleas. The patient did not recall any flea bites or any open cuts or scratches on her hands. The rabbits were recovered from the patient's freezer on November 18. Samples of bone marrow from both rabbits were FA positive and *Y. pestis* was isolated from both specimens.

Case 2

On December 3, 1974, a 23-year-old male student from Sandia Park, N. M., had the onset of fever, malaise, and lower extremity myalgia. The following day he developed shaking chills, with an oral temperature of 104.5°F, headache, and pain in the left axilla.

On December 6, the patient consulted a physician. Because the patient had a history of rheumatic fever at age 4 and a murmur of aortic insufficiency, a diagnosis of endocarditis was considered and a blood culture obtained in the office. The patient returned home for the weekend, during which time he developed a mass in the left axilla and pain and redness of the right eye.

On Monday, December 9, the patient was hospitalized. Physical examination revealed a temperature of 101.4°F, an unchanged murmur of aortic insufficiency, a right-sided non-purulent conjunctivitis and a 1 x 1 cm, tender, nonfluctuant left axillary lymph node. There were no meningeal signs, the lungs were clear by examination and X-ray, and there were no peripheral stigmata of endocarditis or skin lesions suggestive of insect bites. An electrocardiogram showed evidence of left ventricular hypertrophy. A white blood count was 6,100 with 43% polymorphonuclear leukocytes, 37% bands, 15% lymphocytes, 3% monocytes, and 2% atypical lymphocytes. Six additional blood cultures were obtained and the patient was begun on antipyretics. On December 10, the laboratory reported the presence of a slow-growing, bipolar-staining, gram negative rod in the blood culture from December 6 and plague was suspected. The patient was begun on oral chloramphenicol, but later in the day therapy was changed to intramuscular streptomycin and oral tetracycline.

On December 12 an FA stain, phage sensitivity tests, and biochemical tests performed on the blood culture isolate by the New Mexico Scientific Laboratory System were positive for *Y. pestis*. On the following day, 6 additional blood cultures (taken prior to the institution of antibiotic therapy) grew bipolar staining gram negative rods. The patient is still hospitalized.

Epidemiologic investigation revealed that the patient had been in the general vicinity of Albuquerque during the entire week prior to onset of symptoms. He denied insect bites or exposure to rodents or rabbits during this period. The patient lives in a semi-rural area on the outskirts of Albuquerque and has 2 dogs and 5 cats in his home. Approximately 2 weeks prior to onset of symptoms, he allowed one of the cats to sleep on his bed and awoke the next morning with multiple insect bites on his trunk and extremities. These appeared to be flea bites, but the patient did not actually see any fleas on the cat. The patient's dogs and cats are being tested for serologic evidence of plague infection and animal trapping studies are under way in the vicinity of the patient's home.

(Reported by James J. Sharpe, MD, M. G. Hodgkin, MD, O. D. Johnson, MD, private physicians, Albuquerque; Larry Smolka and Neil Berg, microbiologists, Presbyterian Hospital, Robert Smedley, bacteriologist, La Mesa Medical Laboratory, Albuquerque; Eva Wallen, MD, Nancy McCaig, MD, District Health Officers, New Mexico State Health Agency, Janet Gaskin, Loris Hughes, PhD, Scientific Laboratory System, Bryan Miller, Chief, General Sanitation Division, and Neil Weber, Program Manager, Insect and Rodent Control Section, Environmental Improvement Agency, New Mexico Health and Social Services Department; Plague Branch, Vector-Borne Diseases Division, Bureau of Laboratories, CDC; and an EIS Officer.)

Editorial Note

These are the seventh and eighth plague cases to be reported this year. Since 1950, only 2 other reporting years equalled or surpassed 1974; 8 cases occurred in 1965 and 13 in 1970.

Rabbit-associated human plague cases have been described for many years (1), but their role in the ecology and epidemiology of plague was not emphasized until recently (2, 3). The evidence implicating rabbits in human plague cases has usually been (1) a history of hand contact with feral rabbits during the exposure period in patients whose exposure history is otherwise negative, and (2) bacteriologic or serologic evidence of infection of rabbits (or their fleas) trapped in the area where the patient is known to have hunted rabbits. Case 1 is noteworthy since *Y. pestis* was isolated directly from the rabbits cleaned by the patient 2 to 3 days before her illness.

References

1. Moll AA, O'Leary SB: Plague in the Americas, Pan Amer Sanit Bur Pub No 225, 1945
2. Kartman L: The role of rabbits in sylvatic plague epidemiology, with special attention to human cases in New Mexico and use of the fluorescent antibody technique for detection of *Pasteurella pestis* in field specimens. Zoonoses Res 1:1-27, 1960
3. Kartman L: Historical and ecological observations on plague in the United States. Trop Geogr Med 22:257-75, 1970

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**TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING DECEMBER 14, 1974 AND DECEMBER 15, 1973 (50th WEEK)**

AREA	DISEASES												
	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS, VIRAL			MALARIA	
				1974	Cum. 1974	Primary: Arthropod- borne and Unspecified	Post In- fectious	Type B	Type A	Type Unspecified	1974	Cum. 1974	
UNITED STATES	53	7	2,933	13	240	15	21	4	208	777	168	4	255
NEW ENGLAND	3	-	388	-	-	-	-	-	5	27	13	-	11
Maine *	-	-	27	-	-	-	-	-	1	-	1	-	-
New Hampshire *	-	-	-	-	-	-	-	-	-	1	-	-	1
Vermont	-	-	11	-	-	-	-	-	-	1	-	-	1
Massachusetts	2	-	110	-	-	-	-	-	3	7	12	-	2
Rhode Island	-	-	33	-	-	-	-	-	1	8	-	-	3
Connecticut	1	-	207	-	-	-	-	-	-	10	-	-	4
MIDDLE ATLANTIC	9	3	87	-	1	4	2	2	35	118	27	1	50
Upstate New York	5	-	38	-	-	-	2	2	7	30	-	-	17
New York City	-	-	37	-	-	-	-	-	-	17	-	-	18
New Jersey	2	-	NN	-	-	3	-	-	16	26	24	-	8
Pennsylvania	2	3	12	-	1	1	-	-	12	45	3	1	7
EAST NORTH CENTRAL	7	1	1,159	-	2	2	5	-	36	119	13	2	22
Ohio	-	1	145	-	1	-	4	-	3	27	-	-	6
Indiana	-	-	99	-	-	-	-	-	1	7	-	-	-
Illinois	3	-	-	-	1	-	-	-	12	33	9	-	2
Michigan	4	-	456	-	-	1	1	-	14	36	4	2	13
Wisconsin	-	-	459	-	-	1	-	-	6	16	-	-	1
WEST NORTH CENTRAL	3	-	531	-	-	2	2	-	12	27	9	-	7
Minnesota	-	-	58	-	-	-	-	-	6	9	-	-	2
Iowa	2	-	316	-	-	1	-	-	-	1	-	-	3
Missouri *	1	-	5	-	-	1	2	-	3	7	5	-	1
North Dakota	-	-	4	-	-	-	-	-	-	-	-	-	-
South Dakota	-	-	-	-	-	-	-	-	-	-	-	-	1
Nebraska	-	-	14	-	-	-	-	-	2	2	-	-	-
Kansas	-	-	134	-	-	-	-	-	1	8	4	-	-
SOUTH ATLANTIC	4	1	174	-	1	2	1	1	24	128	27	-	36
Delaware	-	-	4	-	-	-	-	-	2	-	-	-	1
Maryland	-	-	6	-	-	1	1	-	5	13	14	-	7
District of Columbia	-	-	-	-	-	-	-	-	-	-	-	-	5
Virginia	-	1	17	-	-	-	-	-	2	11	2	-	7
West Virginia *	-	-	146	-	-	-	-	-	-	3	1	-	2
North Carolina *	-	-	NN	-	1	-	-	-	2	18	2	-	4
South Carolina	-	-	1	-	-	-	-	-	2	11	4	-	1
Georgia	-	-	-	-	-	-	-	-	-	26	-	-	1
Florida	4	-	-	-	-	1	-	1	11	46	4	-	8
EAST SOUTH CENTRAL	2	-	53	-	-	1	4	1	12	57	5	-	10
Kentucky *	-	-	9	-	-	-	-	-	3	20	-	-	6
Tennessee	2	-	NN	-	-	-	3	1	8	35	-	-	1
Alabama *	-	-	43	-	-	-	-	-	-	-	5	-	-
Mississippi	-	-	1	-	-	1	1	-	1	2	-	-	3
WEST SOUTH CENTRAL	11	2	274	-	9	2	3	-	12	109	16	-	17
Arkansas	1	-	1	-	-	2	1	-	1	5	3	-	1
Louisiana	3	-	NN	-	-	-	-	-	5	14	4	-	1
Oklahoma	-	1	40	-	-	-	-	-	1	5	2	-	6
Texas	7	1	233	-	9	-	2	-	5	85	7	-	9
MOUNTAIN	-	-	44	2	39	-	-	-	7	49	13	-	12
Montana	-	-	8	-	-	-	-	-	-	7	-	-	-
Idaho	-	-	-	-	-	-	-	-	-	1	-	-	-
Wyoming	-	-	-	-	-	-	-	-	-	-	1	-	-
Colorado	-	-	16	-	3	-	-	-	4	3	4	-	5
New Mexico	-	-	8	2	16	-	-	-	1	18	5	-	3
Arizona	-	-	-	-	20	-	-	-	2	3	3	-	2
Utah	-	-	4	-	-	-	-	-	-	15	-	-	1
Nevada *	-	-	8	-	-	-	-	-	-	2	-	-	1
PACIFIC	14	-	223	11	188	2	4	-	65	143	45	1	90
Washington	1	-	180	11	177	-	1	-	7	23	9	-	-
Oregon	-	-	-	-	-	-	-	-	6	18	6	-	2
California *	12	-	-	-	7	2	3	-	51	99	11	1	83
Alaska	-	-	34	-	4	-	-	-	-	-	19	-	-
Hawaii	1	-	9	-	-	-	-	-	1	3	-	-	5
Guam *	-	-	-	-	-	-	-	-	-	-	2	-	2
Puerto Rico	---	---	---	---	1	---	-	---	---	---	---	---	-
Virgin Islands	-	-	2	-	-	-	-	-	-	-	2	-	3

*Delayed reports: Aseptic Meningitis: Mo. 3
Chickenpox: Me. 8, N.H. 4, Calif. 5, Guam 16
Encephalitis, primary: Ala. 3
Encephalitis, post: Ala. delete 3

Hepatitis B: Mo. 5
Hepatitis A: W. Va. 1, N.C. delete 1, Ky. delete 2,
Nev. 1, Guam 3
Hepatitis unspecified: W. Va. delete 1, Guam 2

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TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING DECEMBER 14, 1974 AND DECEMBER 15, 1973 (50th 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	219	21,726	26,237	27	1,297	1,316	1,658	54,895	62	154	11,654	93
NEW ENGLAND	-	959	7,628	-	75	54	69	6,578	3	7	1,203	1
Maine *	-	45	71	-	4	1	2	880	-	2	295	-
New Hampshire	-	211	1,025	-	11	7	-	303	3	-	23	1
Vermont	-	56	120	-	13	3	1	19	-	-	43	-
Massachusetts *	-	404	3,956	-	17	15	8	1,110	-	3	371	-
Rhode Island	-	61	639	-	10	3	15	2,634	-	-	20	-
Connecticut	-	182	1,817	-	20	25	43	1,632	-	2	451	-
MIDDLE ATLANTIC	19	8,295	2,859	5	194	184	86	4,176	2	10	1,172	8
Upstate New York	1	979	821	2	70	65	21	1,100	-	2	268	2
New York City	10	640	949	1	42	36	13	774	2	1	171	2
New Jersey	8	5,706	689	-	53	48	39	765	-	4	472	2
Pennsylvania	-	970	400	2	29	35	13	1,537	-	3	261	2
EAST NORTH CENTRAL	82	8,471	9,056	7	172	179	695	16,541	11	31	3,815	11
Ohio	3	3,072	317	1	67	76	81	3,536	-	2	537	2
Indiana	3	280	707	1	18	6	60	1,337	-	4	637	-
Illinois	11	2,155	2,182	-	12	28	56	1,509	4	4	628	3
Michigan	41	2,304	4,513	3	53	52	342	6,964	3	13	1,374	5
Wisconsin	24	660	1,337	2	22	17	156	3,195	4	8	639	1
WEST NORTH CENTRAL	40	766	464	1	100	93	176	3,454	1	15	256	14
Minnesota	-	85	24	1	33	13	30	93	-	-	15	2
Iowa	-	134	281	-	15	22	43	1,955	-	-	15	1
Missouri	1	270	56	-	29	34	2	447	1	-	47	5
North Dakota	-	37	67	-	3	3	2	101	-	1	19	3
South Dakota	-	27	3	-	3	5	-	3	-	-	26	-
Nebraska	39	45	6	-	3	7	3	93	-	-	6	-
Kansas	-	168	27	-	14	9	96	762	-	14	128	3
SOUTH ATLANTIC	-	597	1,326	4	252	222	122	6,422	18	23	1,356	25
Delaware	-	16	10	-	5	3	3	106	-	-	31	-
Maryland	-	24	14	-	25	31	3	139	-	-	5	1
District of Columbia	-	3	8	-	1	5	-	50	-	-	4	-
Virginia	-	37	429	-	42	46	36	752	-	7	62	4
West Virginia	-	223	232	-	9	7	32	3,411	-	2	314	1
North Carolina	-	5	4	3	52	43	NN	NN	1	1	57	4
South Carolina	-	57	78	-	21	13	1	140	-	13	685	4
Georgia	-	4	154	-	8	23	-	1	-	-	3	1
Florida	-	228	397	1	89	51	47	1,823	17	-	195	10
EAST SOUTH CENTRAL	3	288	640	4	127	124	97	6,598	11	15	673	7
Kentucky	-	198	403	2	49	48	16	2,823	-	-	223	1
Tennessee	1	57	165	2	55	45	60	2,763	11	13	365	2
Alabama	-	18	14	-	14	18	20	621	-	2	66	1
Mississippi	2	15	58	-	9	13	1	391	-	-	19	3
WEST SOUTH CENTRAL	2	256	751	3	206	208	269	4,289	1	25	545	11
Arkansas	-	7	73	-	14	14	2	219	-	-	26	-
Louisiana	-	14	89	2	50	50	22	319	-	24	154	4
Oklahoma	-	29	66	-	21	33	1	406	-	-	58	3
Texas	2	206	523	1	121	111	244	3,345	1	1	307	4
MOUNTAIN	16	848	1,038	1	42	37	10	1,232	2	4	449	-
Montana	-	373	304	-	1	9	-	179	-	1	69	-
Idaho	-	54	256	1	3	4	-	160	-	-	21	-
Wyoming	-	1	81	-	3	1	-	10	-	-	-	-
Colorado	16	123	110	-	9	11	8	606	-	-	166	-
New Mexico	-	62	136	-	3	3	-	183	2	3	128	-
Arizona	-	20	21	-	10	5	-	-	-	-	2	-
Utah	-	15	129	-	9	2	-	77	-	-	27	-
Nevada	-	200	1	-	4	2	2	17	-	-	36	-
PACIFIC	57	1,246	2,475	2	129	215	134	5,605	13	24	2,185	16
Washington	1	77	1,110	1	18	22	60	2,048	2	12	438	1
Oregon	5	7	460	1	17	17	9	844	3	5	238	2
California	51	1,096	820	-	87	165	65	2,486	8	7	1,492	12
Alaska	-	-	65	-	4	10	-	150	-	-	-	-
Hawaii	-	66	20	-	3	1	-	77	-	-	17	1
Guam *	-	20	52	-	2	1	1	374	-	-	9	1
Puerto Rico	---	665	2,009	---	6	11	---	1,178	---	---	33	5
Virgin Islands	-	30	7	-	-	-	-	45	-	-	-	2

*Delayed reports: Mumps: Me. 9
 Pertussis: Mass. 1
 Rubella: Me. 1, Guam 2

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TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING DECEMBER 14, 1974 AND DECEMBER 15, 1973 (50th WEEK) - Continued

AREA	TUBERCULOSIS (New Active)		TULA- REMICIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES					RABIES IN ANIMALS	
	1974	Cum. 1974		Cum. 1974	1974	Cum. 1974	1974	Cum. 1974	GONORRHEA		SYPHILIS (Pri. & Sec.)			Cum. 1974
			1974						Cumulative	1974	Cumulative			
												1973		
UNITED STATES	585	29,248	135	9	414	6	765	16,903	882,590	822,053	461	24,080	23,852	2,798
NEW ENGLAND	24	1,168	-	3	24	-	8	443	23,300	20,108	7	482	603	25
Maine	2	89	-	-	1	-	-	49	2,011	1,320	2	42	26	3
New Hampshire	-	28	-	-	1	-	-	21	811	791	-	13	11	3
Vermont	1	24	-	-	1	-	-	19	628	347	-	2	21	1
Massachusetts	15	643	-	-	14	-	6	105	10,410	8,281	3	197	269	4
Rhode Island	4	106	-	-	2	-	2	53	2,106	2,043	-	20	15	4
Connecticut	2	278	-	3	5	-	-	196	7,334	7,326	2	208	261	10
MIDDLE ATLANTIC	125	5,367	2	1	69	6	73	1,791	105,761	113,414	130	5,105	5,308	81
Upstate New York	23	839	2	1	15	-	28	276	19,872	19,507	11	480	388	38
New York City	36	2,052	-	-	35	-	3	949	45,707	50,562	72	2,925	3,163	-
New Jersey	28	970	-	-	12	-	4	154	14,576	17,163	24	822	960	25
Pennsylvania	38	1,506	-	-	7	6	38	412	25,606	26,182	23	878	797	18
EAST NORTH CENTRAL	75	4,008	7	-	41	-	26	2,627	140,693	126,833	42	2,073	2,212	197
Ohio *	17	1,047	-	-	6	-	17	798	37,856	31,240	12	323	268	26
Indiana	13	584	-	-	5	-	1	117	13,107	11,487	3	177	276	14
Illinois	25	1,168	4	-	17	-	6	823	45,149	43,809	18	1,077	1,140	46
Michigan	20	1,085	-	-	11	-	2	613	30,948	29,850	9	399	456	6
Wisconsin	-	124	3	-	2	-	-	276	13,633	10,447	-	97	72	105
WEST NORTH CENTRAL	19	1,132	21	-	12	-	17	958	46,000	41,301	19	616	377	733
Minnesota	-	175	-	-	4	-	-	219	10,094	8,823	6	86	100	251
Iowa	3	124	-	-	2	-	1	20	5,788	4,835	-	36	54	122
Missouri	8	546	18	-	4	-	9	282	15,281	13,826	10	398	182	38
North Dakota	-	32	-	-	-	-	-	19	743	693	-	3	2	112
South Dakota	5	59	3	-	-	-	2	44	2,181	2,054	-	2	5	134
Nebraska	1	40	-	-	-	-	-	102	4,010	4,793	-	12	11	5
Kansas	2	156	-	-	2	-	5	272	7,903	6,777	3	79	23	71
SOUTH ATLANTIC	118	6,136	10	-	53	-	412	4,130	223,192	198,957	106	7,542	7,022	391
Delaware	1	97	-	-	-	-	10	77	3,115	2,827	-	85	88	1
Maryland	16	780	1	-	8	-	48	522	24,149	17,589	7	713	697	27
District of Columbia	10	356	-	-	1	-	-	333	15,687	17,383	6	646	807	-
Virginia	14	758	4	-	3	-	135	200	20,014	19,547	7	715	777	106
West Virginia	3	290	-	-	13	-	5	78	2,617	2,904	1	19	24	31
North Carolina *	17	910	3	-	4	-	109	801	30,723	28,722	11	926	630	39
South Carolina	8	547	-	-	5	-	55	395	22,305	20,920	6	770	1,162	6
Georgia	19	928	2	-	3	-	48	600	45,461	38,718	36	868	938	135
Florida	30	1,470	-	-	16	-	2	1,124	59,121	50,347	32	2,800	1,899	46
EAST SOUTH CENTRAL	52	2,576	14	1	57	-	117	1,356	72,814	66,836	13	1,232	1,322	236
Kentucky	11	542	3	-	18	-	20	287	9,150	8,041	2	262	351	145
Tennessee	16	822	6	-	29	-	66	567	29,339	25,981	6	460	461	54
Alabama	13	776	2	-	4	-	14	191	19,656	19,204	3	246	192	34
Mississippi	12	436	3	1	6	-	17	311	14,669	13,790	2	264	318	3
WEST SOUTH CENTRAL	50	3,327	59	-	27	-	102	2,485	115,884	107,320	41	2,202	2,570	592
Arkansas *	13	412	31	-	5	-	13	231	11,288	12,202	3	95	136	74
Louisiana	3	461	3	-	9	-	1	285	22,791	22,749	2	557	778	25
Oklahoma *	4	286	18	-	2	-	70	347	11,039	9,680	8	145	164	162
Texas	30	2,168	7	-	11	-	18	1,622	70,766	62,689	28	1,405	1,492	331
MOUNTAIN	22	929	13	-	18	-	7	613	33,714	27,873	7	566	581	171
Montana	-	74	-	-	-	-	1	31	1,860	1,531	-	7	5	7
Idaho	4	37	-	-	-	-	1	37	1,728	1,967	-	12	10	-
Wyoming	1	26	6	-	3	-	1	6	744	499	-	11	31	11
Colorado	5	179	-	-	-	-	1	191	9,347	7,701	6	142	194	27
New Mexico	-	183	2	-	4	-	2	71	5,170	4,901	-	89	108	77
Arizona	12	333	-	-	8	-	-	128	9,384	7,696	1	207	154	48
Utah	-	41	5	-	-	-	1	82	2,087	1,664	-	14	13	1
Nevada *	-	56	-	-	3	-	-	67	3,394	1,914	-	84	66	-
PACIFIC	100	4,605	9	4	113	-	3	2,500	121,232	119,411	96	4,262	3,857	372
Washington	8	323	-	-	13	-	1	360	11,576	11,516	-	93	145	-
Oregon	4	197	2	-	1	-	2	107	11,054	10,391	5	111	57	6
California	81	3,619	7	4	94	-	-	1,951	93,291	92,625	89	4,011	3,571	353
Alaska *	-	110	-	-	2	-	-	50	2,936	2,686	2	17	16	13
Hawaii	7	356	-	-	3	-	-	32	2,375	2,193	-	30	68	-
Guam *	-	31	-	-	1	-	-	7	322	421	-	5	5	-
Puerto Rico	---	503	-	---	4	---	-	---	3,070	4,040	---	676	689	50
Virgin Islands	-	4	-	-	-	-	-	6	298	233	-	32	32	-

*Delayed reports: Tuberculosis: Ohio delete 13, N.C. delete 1, Alaska 29
RMSF: Okla. delete 1

Gonorrhea: Nev. 55, Guam 6
Syphilis: Ohio delete 1, Ark. 1, Nev. 2
Alaska delete 1

TABLE IV. DEATHS IN 121 UNITED STATES CITIES FOR WEEK ENDING DECEMBER 14, 1974

Week No.
50

(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	695	448	181	31	20	42	SOUTH ATLANTIC	1,387	749	452	87	47	71
Boston, Mass.	205	124	49	17	10	12	Atlanta, Ga.	158	83	49	15	7	7
Bridgeport, Conn.	46	30	13	3	—	1	Baltimore, Md.	329	166	107	27	16	10
Cambridge, Mass.	27	19	5	2	—	4	Charlotte, N. C.	60	31	17	5	2	3
Fall River, Mass.	40	30	10	—	—	1	Jacksonville, Fla.	99	52	33	2	4	6
Hartford, Conn.	43	24	13	2	3	6	Miami, Fla.	174	102	55	4	5	10
Lowell, Mass.	21	14	7	—	—	—	Norfolk, Va.	49	21	21	3	2	8
Lynn, Mass.	24	19	3	1	—	1	Richmond, Va.	80	40	30	7	1	7
New Bedford, Mass.	24	16	6	—	—	2	Savannah, Ga.	40	22	14	2	1	3
New Haven, Conn.	45	30	11	2	—	2	St. Petersburg, Fla.	66	57	8	1	—	4
Providence, R. I.	71	37	27	1	4	5	Tampa, Fla.	77	38	31	5	3	8
Somerville, Mass.	9	5	4	—	—	—	Washington, D. C.	196	108	63	14	5	2
Springfield, Mass.	46	31	12	1	2	3	Wilmington, Del.	59	29	24	2	1	3
Waterbury, Conn.	38	30	8	—	—	—	EAST SOUTH CENTRAL	855	484	246	61	32	45
Worcester, Mass.	56	39	13	2	1	5	Birmingham, Ala.	169	85	60	11	7	4
MIDDLE ATLANTIC	3,027	1,905	753	185	85	122	Chattanooga, Tenn.	58	35	15	4	4	7
Albany, N. Y.	48	24	13	5	3	1	Knoxville, Tenn.	53	36	9	6	2	1
Allentown, Pa.	23	17	6	—	—	1	Louisville, Ky.	155	87	43	13	7	19
Buffalo, N. Y.	130	85	32	6	3	9	Memphis, Tenn.	172	96	49	10	6	1
Camden, N. J.	60	36	18	3	3	4	Mobile, Ala.	85	51	26	4	1	2
Elizabeth, N. J.	39	21	14	2	1	1	Montgomery, Ala.	52	30	17	3	1	5
Erie, Pa.	25	14	6	2	1	—	Nashville, Tenn.	111	64	27	10	4	6
Jersey City, N. J.	35	29	4	2	—	1	WEST SOUTH CENTRAL	1,415	743	404	120	72	52
Newark, N. J.	67	39	19	5	2	—	Austin, Tex.	58	37	12	7	1	1
New York City, N. Y. †	1,678	1,045	411	119	40	65	Baton Rouge, La.	48	25	15	4	1	5
Paterson, N. J.	38	28	8	1	—	1	Corpus Christi, Tex.	37	24	10	—	2	—
Philadelphia, Pa.	296	183	78	13	15	6	Dallas, Tex.	162	75	52	24	8	2
Pittsburgh, Pa.	176	118	42	7	6	13	El Paso, Tex.	62	31	13	4	5	6
Reading, Pa.	36	25	6	2	1	3	Fort Worth, Tex.	86	44	23	7	9	3
Rochester, N. Y.	125	75	33	8	5	5	Houston, Tex.	439	212	133	50	17	16
Schenectady, N. Y.	26	19	5	2	—	2	Little Rock, Ark.	34	23	8	—	1	1
Scranton, Pa.	37	27	8	—	2	2	New Orleans, La.	145	74	51	7	8	1
Syracuse, N. Y.	86	52	22	4	3	—	San Antonio, Tex.	178	99	48	9	10	8
Trenton, N. J.	42	27	12	2	—	4	Shreveport, La.	73	40	21	3	6	4
Utica, N. Y.	31	21	9	—	—	3	Tulsa, Okla.	93	59	18	5	4	5
Yonkers, N. Y.	29	20	7	2	—	1	MOUNTAIN	537	296	138	36	38	21
EAST NORTH CENTRAL	2,557	1,507	700	150	91	71	Albuquerque, N. Mex.	46	24	15	1	2	7
Akron, Ohio	105	70	29	3	3	—	Colorado Springs, Colo.	25	11	7	2	3	2
Canton, Ohio	37	22	13	1	—	2	Denver, Colo.	117	60	28	7	15	3
Chicago, Ill.	584	331	159	44	25	21	Las Vegas, Nev.	34	11	17	1	2	—
Cincinnati, Ohio	149	101	36	6	3	3	Ogden, Utah	22	14	4	—	2	2
Cleveland, Ohio	215	125	61	15	5	3	Phoenix, Ariz.	119	74	26	4	10	3
Columbus, Ohio	137	76	36	7	12	4	Pueblo, Colo.	36	20	9	4	2	4
Dayton, Ohio	108	62	31	10	2	3	Salt Lake City, Utah	48	30	12	4	1	—
Detroit, Mich.	311	161	99	26	7	10	Tucson, Ariz.	90	52	20	13	1	—
Evansville, Ind.	42	30	6	1	2	3	PACIFIC	1,685	1,060	420	104	46	30
Fort Wayne, Ind.	55	33	13	5	1	2	Berkeley, Calif.	14	9	5	—	—	1
Gary, Ind.	27	16	6	1	1	1	Fresno, Calif.	60	33	19	4	1	—
Grand Rapids, Mich.	44	29	12	2	—	2	Glendale, Calif.	27	21	5	1	—	1
Indianapolis, Ind.	186	110	50	7	11	—	Honolulu, Hawaii *	54	29	15	4	3	1
Madison, Wis.	47	27	12	2	2	2	Long Beach, Calif.	96	61	26	4	4	—
Milwaukee, Wis.	166	97	51	8	4	4	Los Angeles, Calif.	529	340	117	39	10	7
Peoria, Ill.	39	22	9	2	4	—	Oakland, Calif.	112	74	25	7	2	3
Rockford, Ill.	47	33	8	2	1	4	Pasadena, Calif.	33	26	6	—	1	—
South Bend, Ind.	47	31	13	1	—	4	Portland, Ore.	136	73	41	4	14	—
Toledo, Ohio	144	85	38	6	7	—	Sacramento, Calif.	47	25	17	4	1	—
Youngstown, Ohio	67	46	18	1	1	3	San Diego, Calif.	116	69	33	8	1	1
WEST NORTH CENTRAL	848	565	192	35	28	28	San Francisco, Calif.	167	104	43	14	2	10
Des Moines, Iowa	74	57	14	—	3	2	San Jose, Calif.	64	44	11	3	3	2
Duluth, Minn.	19	17	1	—	—	2	Seattle, Wash.	143	93	37	8	1	2
Kansas City, Kans.	44	21	12	5	2	3	Spokane, Wash.	50	32	12	4	2	2
Kansas City, Mo.	117	76	25	5	5	2	Tacoma, Wash.	37	27	8	—	1	—
Lincoln, Nebr.	40	29	5	4	—	3	Total	13,007	7,757	3,486	809	459	482
Minneapolis, Minn.	114	78	25	6	3	4	Expected Number	12,815	7,735	3,394	812	408	467
Omaha, Nebr.	77	49	12	5	7	2							
St. Louis, Mo.	211	132	64	5	3	—							
St. Paul, Minn.	77	53	17	3	2	3							
Wichita, Kans.	76	53	17	2	2	9							

† Delayed report for week ending Dec. 7, 1974.

* Estimate based on average percent of divisional total.

SURVEILLANCE SUMMARY
MUMPS SURVEILLANCE 1973 — the United States

In 1973, a total of 69,087 cases of mumps were reported in the United States, 37% below the average reported for the 5-year period 1968-1972. The disease incidence, 32.8 cases per 100,000 population, has reached the lowest point in the history of mumps surveillance (Figure 1). This low level of activity has continued through the first 24 weeks of 1974, with 38,370 cases reported as compared with 47,691 cases reported for the same period in 1973.

The seasonal pattern of mumps cases, with a peak incidence in the winter and spring months, has remained unchanged during the last few years.

The number of cases reported by each state for the 10-year period 1964-1973 varies considerably from year to year within most states, and from region to region within a given year. Four regions—New England, Middle Atlantic, South Atlantic, and East South Central—reported increases in the number of cases in 1973 compared with 1972, while the remaining 6 regions reported decreases.

Reporting of mumps cases by age group from selected areas has shown that mumps is predominantly a childhood disease, but cases also occur in adolescents and adults. More than 50% of reported cases occurred in the 5-9 year age group, and 90% occurred in children 14 years old or younger.

Data on mumps encephalitis, a frequently reported complication of mumps, is available through 1972. The number of cases has decreased from 849 in 1967 to 163 in 1972. The ratio of encephalitis cases to mumps cases since 1968 has been stable at 2.5 per 1,000 cases.

Data on mumps-associated deaths are provided by the National Center for Health Statistics and are available through 1971. The number of deaths attributed to mumps has declined steadily since 1968, in spite of an increase in reported mumps cases in both 1970 and 1971. Thirty-eight percent of the deaths occurred in persons 40 years of age or older (Table 1).

The U.S. Immunization Survey conducted in 1973 by the Bureau of the Census revealed that 28.9% of the population 1-13 years of age have a history of having received mumps vaccine (1). Vaccine-induced immunity levels were higher in the 1-4 and 5-9 year age groups than in older individuals.

The only major public health program for mumps immunization began in Massachusetts in 1969 (2). During the first 2 years of the program, schoolchildren 5-14 years of age were the target group; in 1971, efforts were directed toward preschoolers as well. As shown in Figure 2, this immunization program has resulted in a significant decrease in reported cases of mumps throughout the state.

References

1. U.S. Immunization Survey, CDC and Bureau of the Census, 1973.
2. Fiumara NJ: Mumps Vaccination in the United States. In Proceedings of International Conference on the Application of Vaccine Against Viral, Rickettsial, and Bacterial Diseases of Man, Washington, 14-18 Dec 1970. Washington, Pan American Health Organization, 1971, pp 225-228

Figure 1
REPORTED CASES OF MUMPS, UNITED STATES, 1922-1973

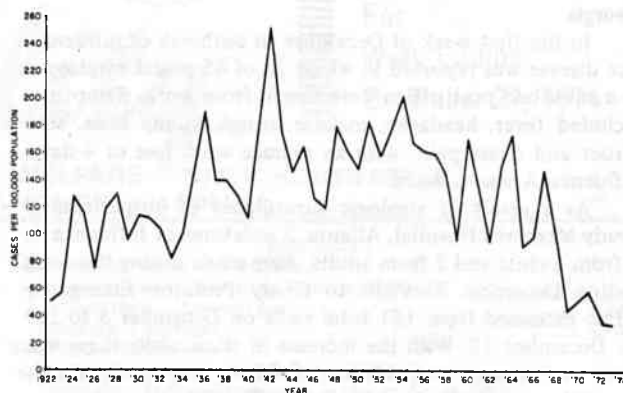
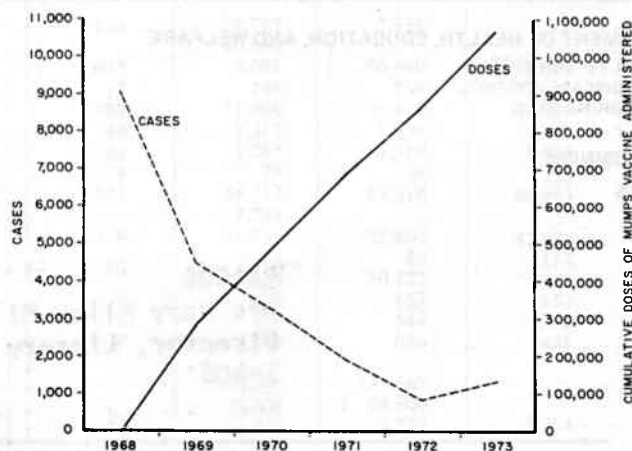


Table 1
Mumps-Associated Deaths by Age and Sex*
in the United States, 1966-1971

Age Group	Male	Female	Total	% Total
0-4	18	12	30	19.0
5-9	21	14	35	22.2
10-14	7	7	14	8.8
15-19	1	6	7	4.4
20-29	2	5	7	4.4
30-39	2	3	5	3.2
40+	21	39	60	38.0
Total	72	86	158	100

*Data from National Center for Health Statistics

Figure 2
REPORTED CASES OF MUMPS, AND CUMULATIVE DOSES OF
MUMPS VACCINE ADMINISTERED
MASSACHUSETTS, 1968-1973



A copy of the original report from which these data were derived is available on request from
Center for Disease Control
Attn: Chief, Investigations and Evaluations Branch, Field Services Division
Atlanta, Georgia 30333

EPIDEMIOLOGIC NOTES AND REPORTS
INFLUENZA — Georgia, Tennessee

The first confirmed outbreaks of influenza-like disease in the continental United States have occurred in two south-eastern states.

Georgia

In the first week of December an outbreak of influenza-like disease was reported in which 26 of 45 postal employees in a suburban post office were absent from work. Symptoms included fever, headache, malaise, cough, runny nose, sore throat and chest pain, with an average work loss of 4 days. Influenza A was isolated.

As a result of virologic surveillance of outpatients at Grady Memorial Hospital, Atlanta, 3 isolations of Influenza A, 1 from a child and 2 from adults, were made during the week ending December 7. Visits to Grady Pediatric Emergency Clinic increased from 151 total visits on December 5 to 203 on December 12. With the increase in clinic visits there was also an increase in incidence of febrile respiratory disease from 24 cases (40% of total visits) to 73 (67%).

As of December 18 outbreaks of influenza-like disease were reported in Whitfield, Floyd, Richmond, and Polk counties, with absenteeism in some schools as high as 34%. One elementary school reported 7 of 16 teachers absent with influenza-like disease. Thus far influenza activity is confined to the region from Atlanta northward; school absentee rates elsewhere in the state reflect normal levels.

(Reported by Leigh Gedney, MD, Regional Medical Officer, Southern Region, U.S. Post Office; William M. Marine, MD, John E. McGowan, MD, Grady Hospital Epidemiology Unit,

Emory University Departments of Preventive Medicine and Community Health, Medicine, and Pediatrics, Atlanta; Thomas W. McKinley, Assistant Director, John E. McCroan, PhD, Director, Epidemiology Section, Division of Physical Health, Georgia Department of Human Resources.)

Tennessee

In the first week of December in Memphis and Shelby counties an increase in reported cases of influenza-like disease occurred. Influenza A, Port Chalmers strain, was isolated and identified in cases at the Student Health Service of the University of Tennessee Center for Health Sciences and in the local community.

(Reported by James Mann, MD, University of Tennessee Center for Health Sciences; Cheryl Shipley, Immunization Representative, Robert C. Rentorf, MD, Director of Communicable Diseases, George F. Lovejoy, MD, Director, Memphis and Shelby County Health Department; Robert H. Hutcherson, Jr, MD, State Epidemiologist, Tennessee Department of Public Health.)

ERRATA, Vol. 23, No. 48, p. 415

In the article "Follow-up: Introduced Malaria — California" the following county was inadvertently omitted from the title of Figure 1: Butte County.

Page 416

In the article "Multiple Antibiotic Resistance in *Shigella dysenteriae*-1 from India — California" an EIS officer was inadvertently omitted from the credits.

The Morbidity and Mortality Weekly Report, circulation 42,000, is published by the Center for Disease Control, Atlanta, Ga.

Director, Center for Disease Control
Director, Bureau of Epidemiology, CDC
Editor, MMWR

David J. Sencer, M.D.
Philip S. Brachman, M.D.
Michael B. Gregg, M.D.

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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