

MNWR

MORBIDITY AND MORTALITY WEEKLY REPORT

	Current Trends
157	Mucocutaneous Lymph Node Syndrome — United States
164	Primary and Secondary Syphilis — United States, March 1976
	Surveillance Summary
163	Leprosy — United States, Puerto Rico

Current Trends

Mucocutaneous Lymph Node Syndrome — United States

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During the past 12 months, 14 suspect cases meeting the diagnostic criteria for mucocutaneous lymph node syndrome (MLNS) have been reported to CDC from Arizona, California, Florida, Hawaii, Iowa, New York, Tennessee, and Washington, D.C.

MLNS is a disease of unknown etiology first described in Japan in 1967 (1) and recently reported from the United States (2,3). A survey of Japanese hospitals in the period 1971-1973 indicated that the disease occurred most commonly in males, particularly infants and children under 5 years of age. Two suspect cases reported to CDC are summarized below.

Case 1 — Tennessee: The patient, a 4-year-old white male, became ill on February 26, 1976, with fever and marked cervical adenopathy. The following day a throat culture was taken, and oral penicillin was begun. The throat culture and the spot test for infectious mononucleosis were negative. On February 29 a "strawberry tongue" and an erythematous rash involving the chest, thighs, axillae, and cubital and pubic areas were noted. Because an epidemic of scarlet fever was present in the community, that diagnosis was made, and benzathine penicillin G was given. On March 1 the rash had spread, and the palms were "fiery red." On March 4, because of persistent fever, slight meningismus, diarrhea, and arthralgia of the left knee, the patient was hospitalized.

On admission, in addition to the above findings, bilateral conjunctival injection and a decrease in the cervical adenopathy were noted. During hospitalization periungual desquamation developed with spread to the palms. The hospital course was otherwise unremarkable with gradual improvement in signs and symptoms.

Laboratory studies during hospitalization included: a WBC of 19,200 with 88% segmented neutrophils, a hemoglobin of 11.2 gm, a sedimentation rate of 52 mm/hr, a normal serum protein electrophoresis, serial platelet counts of 489,000 (3/15), 413,000 (3/22), and 241,000 (3/30), and a positive C-reactive protein.

Case 2 — Washington, D.C.: The patient, a 12-year-old white male, was admitted to the hospital in September, 1975, following the onset of fever and crampy abdominal pain 6 days earlier. Four days before admission, an erythematous, non-pruritic rash developed on the hands and arms and spread to the trunk the following day. Two days before admission the diagnosis of scarlet fever was made, and ampicillin was begun.

On admission the patient's temperature was 100.5°F, his pulse 128, and respiration 28. Significant findings on physical examination included bilateral bulbar conjunctivitis and an erythematous rash on the palms, soles, and trunk with a "sandpaper" skin texture. No cervical adenopathy was noted. Laboratory tests included: a WBC of 11,200 with a shift to the left, a sedimentation rate of 72 mm/hr (Westergren), and an elevated alpha₂ globulin. Throat, nasopharyngeal, and blood cultures, the spot test, and tests for febrile agglutinins, cold agglutinins, and anti-nuclear antibodies were negative.

The hospital course was characterized by intermittent fever (100-101°F), occasional crampy abdominal pain, and progressive desquamation of the skin, beginning in the periungual regions and spreading to the palms, soles, and face. Fissuring of the lips was noted on the third hospital day. The patient was afebrile on the next day and was discharged 2 days later.

The clinical diagnosis of MLNS is based on the presence of typical signs and symptoms and the exclusion of other syndromes, particularly scarlet fever and the Stevens-Johnson syndrome. In the Japanese study, 5 of the following were required for diagnosis: 1. fever lasting at least 5 days and not responding to antibiotics; 2. bilateral conjunctival injection; 3. changes of lips and oral cavity, such as dryness, redness, and fissuring of lips, "strawberry tongue," or erythema of the oropharyngeal mucosa; 4. changes in the peripheral extremities, including erythema of palms and soles, indurative edema of hands and feet, and membranous desquamation from fingertips; 5. polymorphous exanthem of the body trunk without vesicles or

MLNS — Continued

crusts; and 6. acute, nonpurulent swelling of the cervical lymph nodes. Other findings less commonly reported are carditis, diarrhea, arthralgia or arthritis, aseptic meningitis, and mild jaundice. Frequent laboratory findings are: leukocytosis with a shift to the left, thrombocytosis, increased sedimentation rate, increased alpha₂ globulins, negative anti-streptolysin-0 (ASO), increased serum transaminases, and sterile pyuria.

Despite extensive work by Japanese investigators, including establishment of a case registry of more than 7,000 suspect cases of MLNS, no etiology has been established. A report of rickettsial-like organisms in biopsies of skin and lymph nodes of affected patients awaits confirmation (5). The incidence of the syndrome and its clinical spectrum have not been determined in this country.

There is no specific treatment for MLNS. Most children recover in 2 to 3 weeks with general supportive care. However, a case fatality rate of 1 to 2% has been reported. Autopsy reveals coronary artery aneurysms in a number of cases. In such cases pathological examination also shows an arteritis indistinguishable from infantile periarteritis nodosa (4).

Reports of suspect cases of MLNS and inquiries about this syndrome may be sent to local and state health departments and to Viral Diseases Division, Bureau of Epidemiology, CDC, Atlanta, Georgia 30333.

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References

1. Kawasaki T, Yosaki F, Okawa S, et al: A new infantile acute febrile mucocutaneous lymph node syndrome (MLNS) prevailing in Japan. Pediatrics 54:271-276, 1974
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4. Hato H, Koike S, Yamamoto M, Ito Y, Yano E: Coronary aneurysms in infants and young children with acute febrile mucocutaneous lymph node syndrome. J Pediatr 86:892-898, 1975
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Table I. Summary—Cases of Specified Notifiable Diseases: United States

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

DISEASE	20th WEEK ENDING		MEDIAN 1971-1975	CUMULATIVE, FIRST 20 WEEKS		
	May 22, 1976	May 17, 1975		May 22, 1976	May 17, 1975	MEDIAN 1871-1975
Aseptic meningitis	29	24	52	673	707	711
Brucellosis	12	5	2	97	67	52
Chickenpox	5,982	4,745	---	114,995	87,445	---
Diphtheria	-	4	4	98	175	86
Encephalitis	Primary	18	15	293	247	331
	Post-infectious	5	3	107	115	106
Hepatitis, Viral	Type B	282	168	5,466	4,222	3,481
	Type A	619	581	13,648	13,896	20,040
	Type unspecified	203	163	3,411	3,089	
Malaria	6	1	6	132	96	96
Measles (rubeola)	1,841	1,126	1,126	23,880	13,635	17,738
Meningococcal infections, total	32	29	29	787	677	678
Civilian	32	28	28	782	660	660
Military	-	1	1	5	17	20
Mumps	1,247	1,719	2,186	25,262	32,916	41,100
Pertussis	19	23	---	363	472	---
Rubella (German measles)	591	748	1,015	7,838	10,808	15,588
Tetanus	1	-	2	14	22	27
Tuberculosis	650	725	---	12,637	12,134	---
Tularemia	2	1	1	39	26	33
Typhoid fever	6	1	7	117	90	102
Typhus, tick-borne (Rky. Mt. spotted fever)	37	13	14	99	71	53
Veneral Diseases:						
Gonorrhea	19,249	17,942	---	370,248	357,753	---
Civilian	450	491	---	11,711	11,185	---
Military	463	480	---	9,721	9,918	---
Syphilis, primary and secondary	3	5	---	135	137	---
Civilian	3	5	---	135	137	---
Military	3	5	---	135	137	---
Rabies in animals	52	59	84	966	900	1,443

Table II. Notifiable Diseases of Low Frequency: United States

	CUM.		CUM.
Anthrax	2	Poliomyelitis, total	4
Botulism: Montana 1	7	Paralytic	4
Congenital rubella syndrome	10	Psittacosis	21
Leprosy: Pa. 1, Texas 1	53	Rabies in man	-
Leptospirosis: Mo. 1, Hawaii 1	16	Trichinosis: *Ups. N.Y. 1	49
Plague: Calif. 1	2	Typhus, murine: Hawaii 1	8

*Delayed Report: Trichinosis: New Hamp. 1

Table III
Cases of Specified Notifiable Diseases: United States
Weeks Ending May 22, 1976 and May 17, 1975 - 20th Week

AREA REPORTING	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS, VIRAL			MALARIA	
						Primary: Arthropod- borne and Unspecified		Post In- fectious	Type B	Type A	Type Unspecified		
						1976	1975	1976	1976	1976	1976		
UNITED STATES	29	12	5,982	-	98	18	14	5	282	619	203	6	152
NEW ENGLAND	-	-	404	-	-	2	-	-	2	16	14	-	8
Maine	-	-	22	-	-	-	-	-	-	-	1	-	-
New Hampshire*	-	-	3	-	-	-	-	-	-	1	-	-	-
Vermont*	-	-	16	-	-	-	-	-	-	1	-	-	-
Massachusetts	-	-	201	-	-	2	-	-	2	5	12	-	4
Rhode Island	-	-	117	-	-	-	-	-	-	2	-	-	1
Connecticut	-	-	45	-	-	-	-	-	-	7	1	-	3
MIDDLE ATLANTIC	3	-	404	-	-	-	3	-	66	103	34	1	25
Upstate New York	1	-	219	-	-	-	-	-	9	28	16	-	5
New York City	-	-	143	-	-	-	1	-	12	30	-	-	13
New Jersey	-	-	NN	-	-	-	2	-	21	26	18	-	-
Pennsylvania	2	-	42	-	-	-	-	-	24	19	-	1	7
EAST NORTH CENTRAL ..	-	2	2,719	-	-	5	2	-	24	79	14	-	7
Ohio	-	-	116	-	-	3	-	-	-	21	-	-	3
Indiana	-	-	233	-	-	-	-	-	3	7	10	-	-
Illinois	-	-	605	-	-	-	1	-	11	16	2	-	1
Michigan	-	-	1,115	-	-	1	1	-	8	25	2	-	3
Wisconsin	-	2	650	-	-	1	-	-	2	10	-	-	-
WEST NORTH CENTRAL ..	1	2	962	-	4	-	3	-	11	30	10	-	4
Minnesota	-	-	24	-	-	-	-	-	2	4	-	-	3
Iowa	1	-	425	-	-	-	-	-	3	1	-	-	-
Missouri*	-	1	120	-	1	-	-	-	6	14	7	-	-
North Dakota	-	-	1	-	-	-	-	-	-	-	-	-	-
South Dakota	-	-	12	-	3	-	-	-	-	5	-	-	1
Nebraska	-	-	50	-	-	-	-	-	-	1	-	-	-
Kansas	-	1	326	-	-	-	3	-	-	5	3	-	-
SOUTH ATLANTIC	4	-	624	-	-	-	4	-	53	123	33	2	20
Delaware	-	-	12	-	-	-	-	-	-	-	-	-	-
Maryland	1	-	43	-	-	-	1	-	12	13	7	-	2
District of Columbia ..	-	-	5	-	-	-	-	-	2	3	-	-	2
Virginia	-	-	35	-	-	-	2	-	4	5	7	1	6
West Virginia	-	-	213	-	-	-	-	-	2	1	-	-	-
North Carolina	1	-	NN	-	-	-	-	-	7	13	4	1	3
South Carolina	1	-	55	-	-	-	1	-	1	5	2	-	1
Georgia	-	-	-	-	-	-	-	-	-	39	-	-	1
Florida	1	-	261	-	-	-	-	-	25	44	13	-	5
EAST SOUTH CENTRAL ..	4	2	135	-	-	5	2	1	22	51	3	-	1
Kentucky	-	-	119	-	-	-	-	1	7	7	1	-	-
Tennessee	3	1	NN	-	-	1	-	-	7	34	2	-	-
Alabama	-	1	8	-	-	1	-	-	7	3	-	-	-
Mississippi	1	-	8	-	-	3	2	-	1	7	-	-	1
WEST SOUTH CENTRAL ..	14	5	317	-	1	3	-	-	15	68	41	1	6
Arkansas	-	1	21	-	-	-	-	-	1	3	1	-	-
Louisiana	3	-	NN	-	-	-	-	-	9	21	2	-	-
Oklahoma	-	2	47	-	-	1	-	-	5	8	13	-	-
Texas	11	2	249	-	1	2	-	-	-	36	25	1	6
MOUNTAIN	1	1	190	-	3	-	-	2	15	29	18	-	7
Montana*	-	-	5	-	-	-	-	-	-	-	2	-	-
Idaho	-	1	53	-	-	-	-	-	-	4	-	-	-
Wyoming	-	-	-	-	-	-	-	-	-	-	-	-	-
Colorado	1	-	100	-	3	-	-	-	12	10	5	-	4
New Mexico	NA	NA	NA	NA	-	NA	-	-	NA	NA	NA	NA	1
Arizona	-	-	-	-	-	-	-	-	3	9	4	-	1
Utah	-	-	31	-	-	-	-	2	-	4	7	-	-
Nevada	-	-	1	-	-	-	-	-	-	2	-	-	1
PACIFIC	2	-	227	-	90	3	-	2	74	120	36	2	54
Washington	-	-	159	-	88	-	-	-	2	2	1	-	1
Oregon	-	-	1	-	-	-	-	-	10	19	5	-	5
California*	1	-	-	-	1	3	-	2	62	97	30	2	47
Alaska	1	-	6	-	1	-	-	-	-	-	-	-	-
Hawaii	-	-	61	-	-	-	-	-	-	2	-	-	1
Guam	-	-	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico	-	-	51	-	-	-	-	-	-	-	8	-	1
Virgin Islands	-	-	-	-	-	-	-	-	-	-	-	-	-

NA: Not Available NN: Not Notifiable

*Delayed Reports: Chickenpox: N. Hamp. add 1, Mont. add 41, Calif. add 22; Enceph., prim.: N. Hamp. delete 1, Ind. delete 1; Enceph., post: N. Hamp. add 1; Hep. A: N. Hamp. delete 1, Vt. add 1, Mo. delete 1

Table III-Continued
 Cases of Specified Notifiable Diseases: United States
 Weeks Ending May 22, 1976 and May 17, 1975 - 20th Week

REPORTING AREA	MEASLES (Rubella)			MENINGOCOCCAL INFECTIONS TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1976	CUMULATIVE		1976	CUMULATIVE		1976	CUM. 1976	1976	1976	CUM. 1976	CUM. 1976
		1975	1976		1975	1976						
UNITED STATES	1,841	23,880	13,635	32	787	677	1,247	25,262	19	591	7,838	14
NEW ENGLAND	9	191	147	1	34	40	23	942	-	19	205	-
Maine	-	3	9	-	-	5	3	81	-	-	2	-
New Hampshire	2	5	19	-	2	1	-	24	-	-	11	-
Vermont	-	-	34	-	3	-	-	5	-	-	1	-
Massachusetts	-	2	48	1	10	12	-	135	-	13	109	-
Rhode Island	-	15	1	-	4	3	6	342	-	-	4	-
Connecticut	7	166	36	-	15	19	14	355	-	6	78	-
MIDDLE ATLANTIC	344	4,807	892	6	103	65	121	1,997	11	225	1,700	-
Upstate New York	119	1,722	269	1	38	21	14	291	10	63	334	-
New York City	41	277	87	3	25	12	73	947	1	9	101	-
New Jersey	28	524	304	-	16	10	22	380	-	147	1,135	-
Pennsylvania	156	2,284	232	2	24	22	12	379	-	6	130	-
EAST NORTH CENTRAL	771	9,968	3,989	7	131	98	460	10,580	3	226	2,756	-
Ohio	1	316	78	2	74	19	30	1,476	2	10	179	-
Indiana	245	2,018	302	-	4	5	119	1,022	-	31	358	-
Illinois	46	1,032	892	1	10	18	77	1,415	-	79	886	-
Michigan	319	4,024	2,085	3	35	45	116	4,051	-	88	1,028	-
Wisconsin	160	2,578	632	1	8	11	118	2,616	1	18	305	-
WEST NORTH CENTRAL	244	737	3,823	1	52	37	180	2,892	1	19	276	1
Minnesota	53	226	-	-	11	8	29	531	-	2	23	-
Iowa	1	10	348	-	8	5	52	1,045	-	9	32	-
Missouri	1	10	172	1	14	19	27	234	-	-	27	-
North Dakota	-	1	904	-	3	-	1	112	-	-	1	1
South Dakota	-	2	332	-	1	1	2	4	-	2	12	-
Nebraska	-	40	315	-	2	1	2	62	-	-	3	-
Kansas	189	448	1,752	-	13	3	67	904	1	6	178	-
SOUTH ATLANTIC	70	1,377	149	7	150	130	88	1,939	-	14	1,083	7
Delaware	-	114	8	-	2	4	1	24	-	-	6	-
Maryland	51	643	-	1	11	14	23	515	-	-	1	2
District of Columbia	-	3	-	-	2	4	3	91	-	-	45	-
Virginia	8	213	16	2	18	14	1	164	-	7	171	1
West Virginia	10	138	103	-	4	4	26	583	-	6	233	-
North Carolina	-	-	-	3	29	26	13	302	-	-	13	-
South Carolina	-	3	-	-	27	15	2	36	-	1	568	-
Georgia	1	1	2	-	13	8	-	-	-	-	-	-
Florida	-	262	20	1	44	41	19	224	-	-	46	4
EAST SOUTH CENTRAL	10	525	192	2	56	97	159	2,091	-	15	234	2
Kentucky	9	505	69	-	10	41	42	863	-	7	130	1
Tennessee	-	5	113	-	23	36	114	1,031	-	8	101	1
Alabama	-	-	3	1	16	12	2	172	-	-	-	-
Mississippi	1	15	7	1	7	8	1	25	-	-	3	-
WEST SOUTH CENTRAL	32	501	197	5	119	109	126	1,718	2	16	451	3
Arkansas	-	-	-	2	5	6	1	60	-	-	187	-
Louisiana	17	131	-	2	17	22	1	13	-	8	80	1
Oklahoma	7	228	89	-	18	8	37	567	-	2	51	-
Texas	8	142	108	1	79	73	87	1,078	2	6	133	2
MOUNTAIN	279	4,378	893	1	26	26	32	919	1	8	400	-
Montana	18	172	11	-	2	3	2	19	-	2	194	-
Idaho	113	1,823	4	-	2	4	16	419	1	-	18	-
Wyoming	-	-	-	-	-	-	-	1	-	-	2	-
Colorado	7	248	831	-	10	8	13	163	-	5	17	-
New Mexico	NA	12	4	-	1	3	NA	124	NA	NA	30	-
Arizona	8	331	24	1	7	1	-	-	-	-	-	-
Utah	133	1,736	4	-	4	6	-	122	-	-	122	-
Nevada	-	56	15	-	-	1	1	71	-	1	17	-
PACIFIC	82	1,396	3,353	2	116	75	58	2,184	1	49	733	1
Washington	-	93	112	-	19	13	12	777	-	15	117	-
Oregon	2	87	113	-	9	3	4	270	-	9	101	1
California	80	1,214	3,082	-	80	58	39	1,106	1	25	504	-
Alaska	-	-	-	2	6	-	1	17	-	-	-	-
Hawaii	-	2	46	-	2	1	2	14	-	-	11	-
Guam	-	6	10	-	1	1	-	7	-	-	3	-
Puerto Rico	16	108	361	-	2	1	45	458	5	-	5	14
Virgin Islands	-	4	6	-	-	-	-	20	-	-	3	1

NA: Not Available

*Delayed Reports: Measles: R.I. delete 1, Mo.add 1, Ariz. add 10, Montana add 7; Mening. Inf.: Mo. add 3; Rubella: Montana add 4

Table III-Continued
 Cases of Specified Notifiable Diseases: United States
 Weeks Ending May 22, 1976 and May 17, 1975 - 20th Week

REPORTING AREA	TUBERCULOSIS		TULA-REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (RMSF)		VENEREAL DISEASES (Civilian Cases Only)						RABIES IN ANIMALS CUM. 1976
	1976	CUM. 1976	CUM. 1976	1976	CUM. 1976	1976	CUM. 1976	GONORRHEA			SYPHILIS (Pri. & Sec.)			
								1976	CUMULATIVE		1976	CUMULATIVE		
									1975	1976		1975	1976	
UNITED STATES	650	12,637	39	6	117	37	99	19,249	370,248	357,753	463	9,721	9,918	966
NEW ENGLAND	26	476	-	-	16	1	1	516	10,119	9,804	21	292	356	17
Maine	1	30	-	-	-	-	-	47	861	640	-	8	8	12
New Hampshire	-	20	-	-	2	-	-	11	266	277	-	4	10	-
Vermont	-	14	-	-	-	-	-	17	233	228	-	2	4	-
Massachusetts	14	283	-	-	12	1	1	282	4,829	4,692	15	213	233	4
Rhode Island	2	35	-	-	-	-	-	25	655	749	1	11	4	1
Connecticut	9	94	-	-	2	-	-	134	3,275	3,218	5	54	97	-
MIDDLE ATLANTIC	98	2,345	-	-	19	2	4	2,666	40,259	42,542	77	1,642	1,841	9
Upstate New York	16	354	-	-	4	1	1	270	6,104	7,543	6	104	176	2
New York City	37	955	-	-	10	-	-	1,314	17,802	18,667	33	1,040	1,054	-
New Jersey	22	439	-	-	3	1	3	492	6,498	5,676	16	226	293	3
Pennsylvania	23	597	-	-	2	-	-	590	9,855	10,656	22	272	318	4
EAST NORTH CENTRAL ..	131	1,665	-	2	10	-	1	2,574	60,409	59,862	60	894	804	46
Ohio*	26	286	-	-	3	-	1	546	14,833	16,244	14	210	181	-
Indiana	15	232	-	-	-	-	-	194	5,481	5,382	4	48	54	13
Illinois	56	533	-	-	3	-	-	930	22,405	20,709	37	482	389	9
Michigan	24	518	-	2	3	-	-	617	12,090	11,714	4	105	137	1
Wisconsin	10	96	-	-	1	-	-	287	5,600	5,813	1	49	43	23
WEST NORTH CENTRAL ..	21	464	11	-	5	-	-	1,040	18,793	17,623	1	235	219	216
Minnesota	4	90	3	-	2	-	-	146	3,469	3,655	1	39	42	56
Iowa*	1	42	1	-	-	-	-	131	2,373	2,320	-	83	9	46
Missouri	10	222	6	-	3	-	-	459	7,481	6,509	-	69	123	26
North Dakota	-	13	-	-	-	-	-	14	270	272	-	-	3	47
South Dakota	1	23	-	-	-	-	-	20	534	712	-	2	3	14
Nebraska	1	22	-	-	-	-	-	101	1,557	1,498	-	13	4	4
Kansas*	4	52	1	-	-	-	-	169	3,109	2,657	-	29	35	23
SOUTH ATLANTIC	156	2,769	3	-	13	21	52	4,806	88,826	87,994	122	2,858	3,089	148
Delaware	1	36	-	-	-	-	-	46	1,202	1,224	5	40	35	-
Maryland*	26	397	1	-	-	-	3	651	12,509	9,860	-	234	232	11
District of Columbia ..	7	122	-	-	-	-	-	258	5,314	5,469	6	264	244	-
Virginia	30	468	-	-	3	4	13	425	9,393	8,977	14	269	242	25
West Virginia	3	119	-	-	-	-	-	56	1,173	1,103	-	15	10	8
North Carolina	26	471	2	-	1	12	22	803	13,248	12,770	20	564	392	1
South Carolina	22	202	-	-	1	5	13	692	8,690	8,161	7	149	215	2
Georgia	15	355	-	-	2	-	1	808	16,368	15,838	13	301	417	81
Florida	26	599	-	-	6	-	-	1,067	20,929	24,592	57	1,022	1,302	20
EAST SOUTH CENTRAL ..	59	1,092	9	1	6	5	16	1,732	33,293	29,343	12	396	437	60
Kentucky	12	253	1	-	3	1	3	282	4,334	3,715	1	63	66	38
Tennessee	18	324	8	1	3	4	11	642	13,016	11,843	8	164	160	14
Alabama	19	316	-	-	-	-	1	585	9,370	7,852	3	78	111	8
Mississippi	10	199	-	-	-	-	1	223	6,573	5,933	-	91	100	-
WEST SOUTH CENTRAL ..	54	1,432	9	-	3	8	25	2,212	49,481	44,992	68	1,082	863	247
Arkansas	7	195	3	-	-	3	7	216	4,572	4,777	6	37	23	68
Louisiana*	8	209	1	-	-	-	-	295	7,106	8,368	10	227	200	-
Oklahoma	4	141	2	-	-	5	16	160	4,563	4,166	-	40	39	58
Texas	35	887	3	-	3	-	2	1,541	33,240	27,681	52	778	601	121
MOUNTAIN	28	345	1	-	7	-	-	515	13,949	13,980	12	264	256	58
Montana*	-	17	1	-	2	-	-	32	678	775	-	3	3	49
Idaho*	-	9	-	-	1	-	-	43	744	709	1	22	7	-
Wyoming	-	7	-	-	-	-	-	12	320	342	1	6	4	1
Colorado	8	76	-	-	1	-	-	197	3,613	3,604	4	68	49	-
New Mexico	NA	55	-	NA	1	NA	-	NA	2,738	2,491	NA	71	71	-
Arizona	18	154	-	-	2	-	-	190	4,004	3,693	5	66	90	8
Utah	-	14	-	-	-	-	-	-	728	850	-	10	6	-
Nevada	2	13	-	-	-	-	-	41	1,124	1,516	1	18	26	-
PACIFIC	77	2,049	6	3	38	-	-	3,188	55,119	51,613	90	2,058	2,053	165
Washington	10	195	2	-	2	-	-	274	4,614	4,839	-	45	69	1
Oregon	2	70	1	-	-	-	-	329	4,149	3,939	-	53	47	-
California	53	1,513	3	3	35	-	-	2,488	43,830	40,688	85	1,908	1,919	127
Alaska	-	25	-	-	-	-	-	60	1,492	1,293	1	11	1	37
Hawaii	12	246	-	-	1	-	-	37	1,034	854	4	41	17	-
Guam	-	24	-	-	-	-	-	-	148	170	-	1	3	-
Puerto Rico	8	123	-	-	-	-	-	52	1,044	1,148	16	220	279	15
Virgin Islands	-	2	-	-	-	-	-	4	104	63	-	31	13	-

NA: Not Available

*Delayed Reports: TB: Iowa delete 1, Kansas delete 1, Maryland delete 1, Montana add 4; GC: La. delete 2, Montana add 28 civ., add 1 mil; Syphilis: Ohio delete 1, Iowa delete 64, Idaho delete 1

Table IV
Deaths in 121 United States Cities*
Week Ending May 22, 1976 - 20th Week

REPORTING AREA	ALL CAUSES					Pneumonia and Influenza ALL AGES	REPORTING AREA	ALL CAUSES					Pneumonia and Influenza ALL AGES
	ALL AGES	85 Years and Over	45-84 Years	25-44 Years	Under 1 Year			ALL AGES	85 Years and Over	45-84 Years	25-44 Years	Under 1 Year	
NEW ENGLAND	630	391	163	50	16	31	SOUTH ATLANTIC	1,142	634	327	83	51	47
Boston, Mass.	165	91	47	18	5	7	Atlanta, Ga.	121	60	37	12	6	4
Bridgeport, Conn.	45	32	10	3	-	5	Baltimore, Md.	240	142	65	20	4	9
Cambridge, Mass.	26	19	4	2	1	4	Charlotte, N. C.	54	33	11	6	3	3
Fall River, Mass.	26	21	4	1	-	1	Jacksonville, Fla.	80	42	22	4	7	-
Hartford, Conn.	61	32	18	6	4	4	Miami, Fla.	124	66	44	5	5	2
Lowell, Mass.	22	15	3	2	2	2	Norfolk, Va.	50	26	13	6	3	3
Lynn, Mass.	16	12	3	1	-	-	Richmond, Va.	74	47	22	3	-	4
New Bedford, Mass.	22	17	2	3	-	-	Savannah, Ga.	51	24	19	3	2	5
New Haven, Conn.	54	33	19	-	-	-	St. Petersburg, Fla.	67	53	10	-	2	1
Providence, R.I.	64	39	20	4	1	8	Tampa, Fla.	62	37	20	1	2	8
Somerville, Mass.	13	10	3	-	-	-	Washington, D. C.	173	77	53	16	17	5
Springfield, Mass.	38	25	6	5	1	1	Wilmington, Del.	46	27	11	7	-	3
Waterbury, Conn.	28	19	9	-	-	1							
Worcester, Mass.	50	26	15	5	2	-							
							EAST SOUTH CENTRAL	691	378	212	49	26	37
MIDDLE ATLANTIC	2,763	1,722	706	184	84	142	Birmingham, Ala.	117	69	30	6	6	1
Albany, N. Y.	41	22	17	1	1	-	Chattanooga, Tenn.	79	45	20	6	4	10
Allentown, Pa.	27	17	7	3	-	1	Knoxville, Tenn.	38	20	11	6	1	-
Buffalo, N. Y.	139	82	38	6	7	12	Louisville, Ky.	115	62	42	9	1	10
Camden, N. J.	27	19	5	1	-	-	Memphis, Tenn.	136	70	45	8	5	3
Elizabeth, N. J.	23	15	5	2	1	-	Mobile, Ala.	57	32	15	3	3	1
Erie, Pa.	35	23	10	-	1	2	Montgomery, Ala.	57	34	19	2	2	7
Jersey City, N. J.	49	31	16	1	1	4	Nashville, Tenn.	92	46	30	9	4	5
Newark, N. J.	76	37	26	9	2	4							
New York City, N. Y.†	1,359	855	335	101	41	63	WEST SOUTH CENTRAL	1,046	588	255	83	62	32
Paterson, N. J.	21	15	3	1	2	3	Austin, Tex.	41	33	5	1	-	4
Philadelphia, Pa.	406	225	109	34	21	28	Baton Rouge, La.	51	31	11	6	1	3
Pittsburgh, Pa.	174	111	43	9	4	13	Corpus Christi, Tex.	41	26	10	1	2	-
Reading, Pa.	33	24	6	2	1	4	Dallas, Tex.	171	99	49	10	6	6
Rochester, N. Y.	127	85	29	9	-	2	El Paso, Tex.	43	23	10	6	2	2
Schenectady, N. Y.	21	19	2	-	-	-	Fort Worth, Tex.	81	46	23	6	2	2
Scranton, Pa.	38	29	9	-	-	-	Houston, Tex.	160	74	42	18	14	3
Syracuse, N. Y.	83	57	19	4	2	3	Little Rock, Ark.	72	45	15	3	3	6
Trenton, N. J.	33	23	9	1	-	-	New Orleans, La.	140	75	33	8	20	-
Utica, N. Y.	25	14	11	-	-	2	San Antonio, Tex.	122	64	28	13	7	1
Yonkers, N. Y.	26	19	7	-	-	1	Shreveport, La.	65	39	17	5	1	2
							Tulsa, Okla.	59	33	12	6	4	3
EAST NORTH CENTRAL	2,180	1,249	580	151	111	76	MOUNTAIN	468	274	120	34	14	17
Akron, Ohio	53	27	18	3	2	-	Albuquerque, N. Mex.	41	22	9	7	-	2
Canton, Ohio	38	27	8	3	-	4	Colorado Springs, Colo.	33	14	13	3	3	2
Chicago, Ill.	566	306	148	43	39	17	Denver, Colo.	133	82	34	5	5	5
Cincinnati, Ohio	132	76	34	12	6	1	Las Vegas, Nev.	15	11	3	1	-	1
Cleveland, Ohio	149	92	38	9	7	4	Ogden, Utah	16	12	2	1	-	2
Columbus, Ohio	136	75	43	9	7	11	Phoenix, Ariz.	102	57	30	8	2	1
Dayton, Ohio	80	38	31	6	3	3	Pueblo, Colo.	24	17	4	1	1	4
Detroit, Mich.	248	131	65	24	13	6	Salt Lake City, Utah	49	26	12	4	2	-
Evansville, Ind.	55	39	11	2	1	2	Tucson, Ariz.	55	33	13	4	1	-
Fort Wayne, Ind.	55	27	13	5	6	4							
Gary, Ind.	28	10	8	5	3	5	PACIFIC	1,559	943	400	111	47	51
Grand Rapids, Mich.	57	33	15	2	7	4	Berkeley, Calif.	15	10	3	-	1	-
Indianapolis, Ind.	160	96	38	9	7	1	Fresno, Calif.	78	50	14	3	3	1
Madison, Wis.	16	9	5	-	-	3	Glendale, Calif.	27	18	6	1	-	2
Milwaukee, Wis.	107	71	26	3	6	2	Honolulu, Hawaii	49	24	17	5	2	1
Peoria, Ill.	37	28	4	3	1	1	Long Beach, Calif.	94	60	24	5	1	2
Rockford, Ill.	49	30	13	4	1	6	Los Angeles, Calif.	408	248	113	31	8	23
South Bend, Ind.	51	28	18	2	-	2	Oakland, Calif.	91	54	25	7	4	-
Toledo, Ohio	105	68	26	6	2	-	Pasadena, Calif.	27	21	4	1	1	2
Youngstown, Ohio	58	38	18	1	-	-	Portland, Oreg.	136	89	35	6	3	-
							Sacramento, Calif.	68	39	15	8	1	1
WEST NORTH CENTRAL	655	414	147	39	35	23	San Diego, Calif.	102	53	26	12	4	3
Des Moines, Iowa	43	30	8	1	3	5	San Francisco, Calif.	167	109	44	11	1	5
Duluth, Minn.	23	17	4	1	-	3	San Jose, Calif.	64	36	15	2	4	2
Kansas City, Kans.	32	15	14	1	1	1	Seattle, Wash.	158	84	44	11	11	3
Kansas City, Mo.	109	74	21	7	6	-	Spokane, Wash.	51	29	13	6	2	5
Lincoln, Nebr.	26	20	5	1	-	3	Tacoma, Wash.	24	19	2	2	1	1
Minneapolis, Minn.	70	46	11	4	7	2							
Omaha, Nebr.	75	51	17	4	3	2							
St. Louis, Mo.	175	95	47	12	10	3							
St. Paul, Minn.	57	42	7	2	4	1							
Wichita, Kans.	45	24	13	6	1	3							
							TOTAL	11,134	6,593	2,910	784	446	456
							Expected Number	11,802	7,101	3,109	761	364	386

*By place of occurrence and week of filing certificate. Excludes fetal deaths. †Delayed Report for Week Ending 5/15/76 (For NYC)

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The editor welcomes accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Send reports to: Center for Disease Control, Attn.: Editor, Morbidity and Mortality Weekly Report, Atlanta, Georgia 30333.

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Surveillance Summary

Leprosy — United States, Puerto Rico

In the 3-year period 1971-1973, 419 cases of leprosy were reported to CDC for the United States and Puerto Rico. Of these, 137 cases were reported in 1971, 132 in 1972, and 150 in 1973, for an average incidence of 0.067 cases per 100,000 population per year.

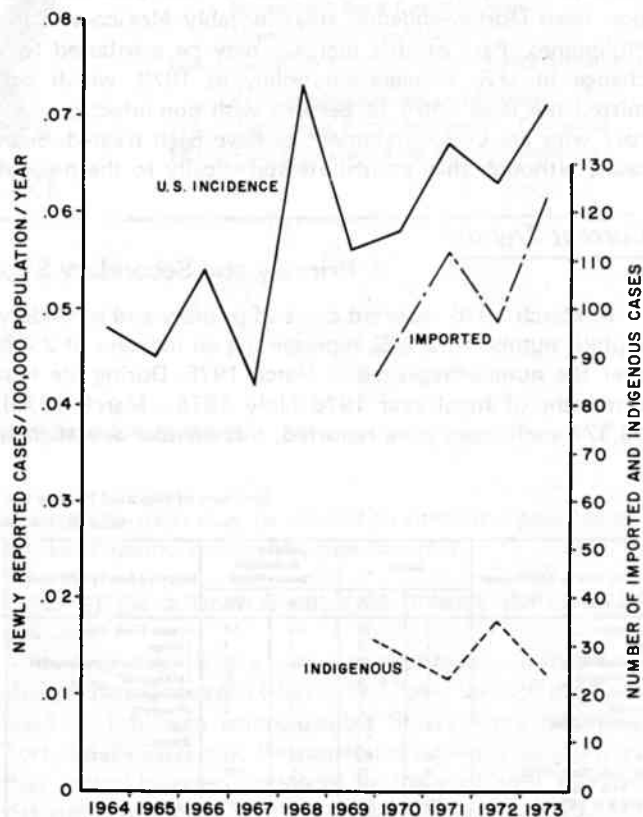
Eighty of these cases occurred in individuals born in the United States, who gave no history of residence or military duty in leprosy-endemic countries or United States Territories. Of these indigenous cases, 73 (91.3%) were reported from California, Texas, and Hawaii (Table 1). These 3 states also accounted for 84.6% of the total (including imported and endemic) cases.

Cases reported from California increased from 39 in 1971 to 68 in 1973; there was a similar large rise in cases reported in Hawaii. In both instances the increase resulted from a significant rise in the number of cases in persons born in the Philippines and American Samoa who now live in those states. There was a decrease in reported cases from Florida and New York City because of fewer numbers of new arrivals from Cuba and Puerto Rico.

Information regarding age, sex, and clinical type of diseases was available in 416 cases. Over the 3-year period, 175 (42%) of reported cases were under 30 years old; 25% of the patients were diagnosed as having leprosy in their 30s. Of the total cases, 243 (58.4%) were male. The 419 total leprosy cases categorized by clinical type were: lepromatous (194 cases) and dimorphous (73), together accounting for 62.4% of cases, and tuberculoid (120) and indeterminate (28), accounting for a total of 35.8% of cases.

Information regarding duration of illness was available in 386 cases. The mean interval from onset of symptoms to diagnosis by clinical type was 6.8 years for lepromatous leprosy, 4.0 years for tuberculoid leprosy, and 2.7 and 2.2 years for the dimorphous and indeterminate forms, respectively.

FIGURE 1. Incidence of reported leprosy, United States, 1964-1973



Over the 10-year period 1964-1973 there has been an absolute increase in the number of cases and in the incidence of leprosy (Figure 1). Since 1969 the increasing incidence has closely paralleled a rise in the number of imported cases. The number of indigenous cases has remained

TABLE 1. Leprosy by place of birth, place and year of report, United States, 1971-1973

	PLACE OF BIRTH													Total Imported	All Cases	
	U.S. Born			Born U.S. Territories			Foreign Born									
	Indigeneous	Imported*	Total	Samoa	Puerto Rico	Total	Mexico	Philippines	Cuba	West Indies S. America	Africa Asia Pacific	Europe Australia Canada	Total			
1971	CA	2	6	8	2	0	2	17	7	2	1	2	0	29	37	39
	TX	13	2	15	0	0	0	10	0	0	0	2	0	12	14	27
	HI	5	2	7	10	0	10	0	16	0	0	0	0	16	28	33
	Other	4	3	7	0	2	2	2	3	8	5	10	1	29	34	38
	Total	24	13	37	12	2	14	29	26	10	6	14	1	86	113	137
1972	CA	2	3	5	6	0	6	29	8	1	0	3	0	41	50	52
	TX	21	1	22	0	0	0	5	0	0	1	0	0	6	7	28
	HI	8	0	8	13	0	13	0	21	0	0	1	0	22	35	43
	Other	3	1	4	0	0	0	0	1	0	2	2	0	5	6	9
	Total	34	5	39	19	0	19	34	30	1	2	7	0	74	98	132
1973	CA	4	6	10	6	0	6	27	15	2	1	7	0	52	64	68
	TX	12	1	13	0	0	0	10	1	1	0	1	0	13	14	26
	HI	6	1	7	7	1	8	0	23	0	0	1	0	24	33	39
	Other	0	5	5	0	1	1	2	1	2	1	5	0	11	17	17
	Total	22	13	36	13	2	15	39	40	5	2	14	0	100	127	150
Total	CA	8	15	23	14	0	14	73	30	5	2	12	0	122	151	159
	TX	46	4	50	0	0	0	25	1	1	0	4	0	31	35	81
	HI	19	3	22	30	1	30	0	60	0	0	2	0	62	96	115
	Other	7	9	16	0	3	3	4	5	10	8	17	1	45	57	64
	Total	80	31	111	44	4	48	102	96	16	10	35	1	260	339	419

*Individuals born and reported in the United States who have resided or served in leprosy-endemic foreign parts.

Leprosy - Continued

roughly constant over the same 5-year period. Part of the increase in imported cases is related to increased immigration from leprosy-endemic areas, notably Mexico and the Philippines. Part of this increase may be attributed to a change in U.S. immigration policy in 1970, which permitted the legal entry of persons with non-infectious leprosy who are under treatment or have been treated. Such cases, although they contribute statistically to the pool of

U.S. leprosy, pose no significant health hazard to other U.S. residents.

Reported by the Special Pathogens Br, Bacterial Diseases Div, Bur of Epidemiology, CDC.

▲ A copy of the report from which these data were derived is available on request from Center for Disease Control, Attn.: Chief, Special Pathogens Branch, Bacterial Diseases Division, Bureau of Epidemiology, Atlanta, Ga. 30333

Current Trends

Primary and Secondary Syphilis - United States, March 1976

In March 1976 reported cases of primary and secondary syphilis numbered 2,245, representing an increase of 2.4 % over the number reported in March 1975. During the first 9 months of fiscal year 1976 (July 1975 - March 1976), 19,377 such cases were reported; this number was slightly

less (0.4%) than the number reported in the same period of the previous year.

Reported by Venereal Disease Control Div, Bur of State Services, CDC.

Summary of Reported Primary and Secondary Syphilis Cases by Reporting Area
March 1976 and March 1975 - Provisional Data

Reporting Area by HEW Regions	March		Calendar Year Cumulative January-March		Reporting Area by HEW Regions	March		Calendar Year Cumulative January-March		Reporting Area by HEW Regions	Month		Calendar Year Cumulative Month-Month	
	1976	1975	1976	1975		1976	1975	1976	1975		1976	1975	1976	1975
Connecticut	17	25	40	53	Illinois (Excl. Chicago)	9	40	35	53	Arizona	23	21	63	70
Maine	1	1	8	8	Chicago	67	67	232	211	California (Excl. LA & SF)	209	168	594	423
Massachusetts	57	48	126	153	Indiana (Excl. Indianapolis)	9	9	21	33	Los Angeles*	178	140	500	440
New Hampshire	3	4	3	10	Indianapolis*	6	0	14	3	San Francisco*	73	94	211	261
Rhode Island	4	1	9	3	Michigan	28	31	77	88	Hawaii	7	9	18	15
Vermont	1	2	2	3	Minnesota	7	6	29	14	Nevada	3	8	13	16
REGION I TOTAL	83	81	186	230	Ohio	43	36	136	111	REGION IX TOTAL	483	440	1,399	1,225
New Jersey	51	73	143	215	Wisconsin	18	11	29	29	Alaska	1	0	2	0
New York (Excl. NYC)	35	32	73	120	REGION V TOTAL	187	200	573	542	Idaho	0	1	8	4
New York City	274	250	685	708	Arkansas	5	11	25	17	Oregon	13	13	41	29
REGION II TOTAL	360	355	911	1,043	Louisiana	68	42	166	133	Washington	10	12	37	51
Delaware	2	9	15	21	New Mexico	13	21	53	49	REGION X TOTAL	24	26	88	84
District of Columbia	47	47	157	154	Oklahoma	11	7	35	29	UNITED STATES TOTAL	2,245	2,193	6,399	6,380
Maryland (Excl. Baltimore)	14	17	46	57	Texas	237	133	501	386	Puerto Rico	47	75	132	206
Baltimore	40	42	107	107	REGION VI TOTAL	334	214	780	614	Virgin Islands	1	1	12	7
Pennsylvania (Excl. Phila.)	25	32	58	79	Iowa	4	4	15	10	United States, Including Outlying Areas	2,293	2,269	6,543	6,593
Philadelphia	37	28	86	121	Kansas	8	12	23	28					
Virginia	51	60	156	163	Missouri	11	26	51	79					
West Virginia	5	5	11	8	Nebraska	3	0	8	3					
REGION III TOTAL	221	240	636	710	REGION VII TOTAL	26	42	97	120					
Alabama	18	24	47	75	Colorado	11	10	41	36					
Florida	176	249	651	786	Montana	1	0	4	3					
Georgia (Excl. Atlanta)	38	60	144	145	North Dakota	0	0	1	2					
Atlanta*	29	42	130	111	South Dakota	1	1	2	2					
Kentucky	16	20	48	48	Utah	0	2	1	3					
Mississippi	22	17	66	59	Wyoming	0	0	4	0					
North Carolina	140	74	379	274	REGION VIII TOTAL	13	13	53	46					
South Carolina	38	52	109	159										
Tennessee	27	44	100	110										
REGION IV TOTAL	504	582	1,674	1,766										

*County Data

Note: Cumulative totals include revised and delayed reports through previous months.
Source: CDC 9-98, HEW-CDC-BSS-VD Control Division, Atlanta, Georgia

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