

# MNWR

## MORBIDITY AND MORTALITY WEEKLY REPORT

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### Epidemiologic Notes and Reports

#### Sporadic Cases of Legionnaires' Disease – United States

As of October 31, 1977, 64 sporadic cases of infection with the agent of Legionnaires' disease have been confirmed in the United States\* either by a 4-fold rise in antibody titer as measured by the indirect fluorescent antibody (FA) test, culture of the organism, or demonstration of the organism in biopsy or autopsy tissue by the direct FA method.† These 64 cases, which are in addition to the confirmed outbreak-associated cases in Ohio, Vermont, and Tennessee, have occurred in residents of 24 states and the District of Columbia. The majority of cases have been in the eastern and mid-western states (Figure 1). There is no obvious urban or rural clustering. The number of cases diagnosed is increasing steadily (Figure 2), in part due to the sharply increased number of specimens being submitted but perhaps partly reflecting the seasonal variation noted in outbreak-associated cases.

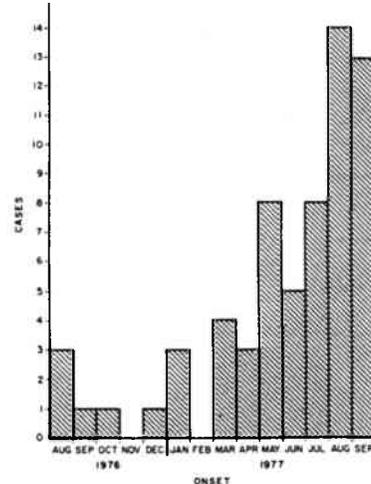
The sporadic cases include 49 men and 15 women, a ratio of 3.3:1. The mean age for the entire group is 51.6 years: 50.1 years for men, 54.0 for women. The youngest case was in a 25-year-old man, the eldest in a 72-year-old man. Death directly attributable to Legionnaires' disease has occurred in 16 cases, 25.0% of the total. Among the fatalities there have been 12 men and 4 women, with a mean age of 51.4 years. Overall, there is no clear trend for an age-related fatality rate.

The clinical nature of the sporadic cases is similar to that \*As of November 9, there were 83 sporadic cases.

†Fifty-six cases have been confirmed by serology alone, 2 by culture alone, 4 by direct FA alone, 1 by FA and culture, and 1 by all 3 methods. All positive cultures have been from either pleural fluid or postmortem lung tissue. All positive FA stains have been on lung tissue.

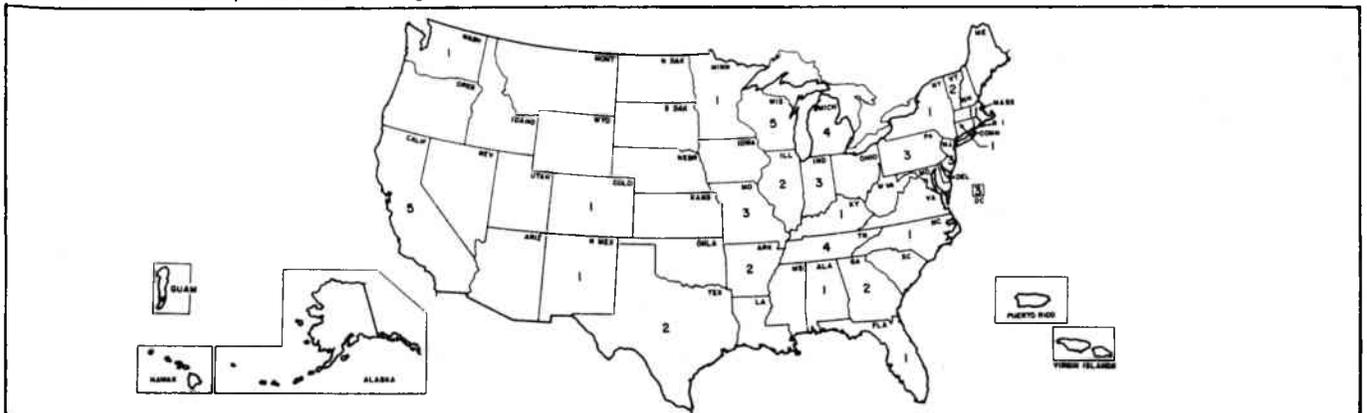
observed in outbreaks. The great majority of cases are pneumonias, either lobar or interstitial by X ray, with a course that progresses over several days to a severe multi-lobar pneumonia with high fever. Numerous cases have required mechanical ventilation.

**FIGURE 2.** Confirmed sporadic cases of Legionnaires' disease by month of onset, 1976-1977



Epidemiologic investigations to date of these 64 cases have not revealed other cases in household members or in work or community contacts. Investigation of many of these sporadic cases is ongoing by state health departments. The source of infection in these cases remains unknown. Reported by State Epidemiologists from 24 states and the District of Columbia; Viral Diseases Div, Bur of Laboratories, and Bacterial Diseases Div, Bur of Epidemiology, CDC.

**FIGURE 1.** Confirmed sporadic cases of Legionnaires' disease, United States, 1976-1977



### St. Louis Encephalitis — Florida

A total of 51 laboratory presumptive or confirmed cases of St. Louis Encephalitis (SLE) have been reported from Florida from August 8 through November 4, 1977. This figure is higher than that reported for any other year in Florida since an outbreak in 1962 and is also greater than the 1977 case total reported for the rest of the country.

The Florida cases are scattered in 16 counties, mostly in the central part of the state (Figure 3). Attack rates have been low, varying from 7.9 per 100,000 persons for Osceola County to 0.1 per 100,000 in Dade County. Only 3 of the 51 patients became ill before mid-September; 35 had onset in October. Typical of SLE infection, 68% of the cases were in persons 60 years of age or older; most had clinical encephalitis.

SLE virus has been isolated from pools of *Culex nigripalpus* mosquitoes collected in several locations in central Florida in late September and early October; this subtropical mosquito is thought to be the principle vector of the disease in Florida. Serologic results from chicken flocks bled in September and October indicated high levels of SLE activity in central and southern Florida but not in northern Florida or the panhandle. Mosquito control activities and surveillance for human cases have been intensified in the affected areas.

Reported by E Beck, BS, E Buff, MSC, H Janowski, MPH, A Lewis, DVM, A Rogers, PhD, N Schneider, PhD, F Wellings, PhD, M Yeller, MD, State Epidemiologist, Florida Dept of Health and Rehabilitative

Services; Bur of Tropical Diseases, Vector-Borne Diseases Div, Bur of Laboratories, and Viral Diseases Div, Bur of Epidemiology, CDC.

FIGURE 3. Fifty-one SLE cases in Florida, by county, 1977



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

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

DISEASE	44th WEEK ENDING		MEDIAN 1972-1976	CUMULATIVE, FIRST 44 WEEKS		
	November 5, 1977	November 6, 1976		November 5, 1977	November 6, 1976	MEDIAN 1972-1976
Aseptic meningitis	104	72	144	3,906	2,767	3,489
Bruceellosis	3	1	3	189	257	163
Chickenpox	1,261	1,633	---	163,537	156,399	---
Diphtheria	2	4	4	75	132	157
Encephalitis	Primary	27	30	879	1,254	1,254
	Post-Infectious	4	6	171	236	239
Hepatitis, Viral	Type B	272	292	13,704	12,696	8,276
	Type A	504	593	25,851	28,516	35,481
	Type unspecified	139	154	7,653	6,920	
Malaria	6	6	6	453	399	359
Measles (rubeola)	99	288	207	53,476	35,676	24,955
Meningococcal infections, total	27	18	26	1,469	1,310	1,172
Civilian	26	18	26	1,459	1,293	1,152
Military	1	—	—	10	17	27
Mumps	333	428	803	17,261	34,546	50,280
Pertussis	87	16	---	1,449	816	---
Rubella (German measles)	86	113	119	19,027	11,160	15,399
Tetanus	—	3	2	56	58	82
Tuberculosis	510	540	---	25,681	27,862	---
Tularemia	3	4	2	142	117	117
Typhoid fever	7	10	11	341	360	360
Typhus, tick-borne (Rky. Mt. spotted fever)	5	5	5	1,068	846	741
Venereal Diseases:						
Gonorrhea	20,542	20,322	---	846,935	856,734	---
Civilian	792	674	---	22,918	25,050	---
Military	382	444	---	17,418	20,504	---
Syphilis, primary and secondary	3	11	---	255	295	---
Civilian	3	11	---	255	295	---
Military	—	—	—	—	—	—
Rabies in animals	51	60	42	2,609	2,568	2,568

Table II. Notifiable Diseases of Low Frequency: United States

	CUM.		CUM.
Anthrax:	—	Poliomyelitis, total:	9
Botulism:	87	Paralytic:	8
Congenital rubella syndrome:	14	Psittacosis:	58
Leprosy: Hawaii 1	112	Rabies in man:	1
Leptospirosis: Hawaii 1	37	Trichinosis: Mass. 1, Pa. 1	96
Plague:	15	Typhus, murine:	66

Table III  
Cases of Specified Notifiable Diseases: United States  
Weeks Ending November 5, 1977 and November 6, 1976 - 44th Week

AREA REPORTING	ASEPTIC MENINGITIS	BRUCELLOSIS	CHICKENPOX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS, VIRAL			MALARIA	
						Primary: Arthropod-borne and Unspecified		Post Infectious	Type B	Type A	Type Unspecified		
						1977	1976	1977	1977	1977	1977		
UNITED STATES	104	3	1,261	2	75	27	30	4	272	504	139	6	453
NEW ENGLAND	6	-	106	-	-	-	-	-	7	5	9	-	25
Maine	-	-	1	-	-	-	-	-	-	1	-	-	1
New Hampshire*	-	-	2	-	-	-	-	-	-	-	-	-	3
Vermont	-	-	17	-	-	-	-	-	1	-	-	-	2
Massachusetts	2	-	74	-	-	-	-	-	1	2	9	-	4
Rhode Island	-	-	3	-	-	-	-	-	2	1	-	-	5
Connecticut*	4	-	9	-	-	-	-	-	3	1	-	-	10
MIDDLE ATLANTIC	13	-	84	-	5	2	4	1	18	34	22	5	103
Upstate New York	5	-	24	-	-	1	1	-	2	4	1	1	23
New York City	2	-	18	-	5	1	1	-	10	15	7	3	48
New Jersey*	4	-	NN	-	-	-	-	-	6	15	14	1	14
Pennsylvania	1	-	42	-	-	-	2	1	NA	NA	NA	-	18
EAST NORTH CENTRAL	17	-	580	-	-	6	4	-	78	82	14	-	33
Ohio*	5	-	21	-	-	3	4	-	13	43	-	-	12
Indiana*	8	-	64	-	-	-	-	-	5	5	4	-	2
Illinois	-	-	74	-	-	-	-	-	29	16	4	-	2
Michigan	4	-	271	-	-	-	-	-	26	9	6	-	14
Wisconsin	-	-	150	-	-	3	-	-	5	12	-	-	3
WEST NORTH CENTRAL	-	-	143	-	1	2	1	2	19	38	9	-	35
Minnesota	-	-	-	-	-	-	1	-	14	16	-	-	12
Iowa	-	-	65	-	-	-	-	-	-	-	-	-	1
Missouri*	-	-	-	-	1	-	-	2	2	16	8	-	16
North Dakota*	-	-	2	-	-	-	-	-	-	1	-	-	1
South Dakota	-	-	33	-	-	-	-	-	-	-	-	-	1
Nebraska	-	-	5	-	-	-	-	-	3	4	-	-	-
Kansas	-	-	38	-	-	2	-	-	-	1	1	-	4
SOUTH ATLANTIC	21	2	151	-	-	1	2	-	43	62	18	1	86
Delaware	-	-	5	-	-	-	-	-	1	1	-	-	-
Maryland	-	-	28	-	-	-	1	-	7	10	3	-	21
District of Columbia	1	-	-	-	-	-	1	-	-	-	-	-	6
Virginia	6	2	3	-	-	1	-	-	8	6	3	-	20
West Virginia	-	-	95	-	-	-	-	-	2	5	-	-	2
North Carolina	4	-	NN	-	-	-	-	-	8	11	2	-	9
South Carolina	3	-	2	-	-	-	-	-	-	1	4	-	-
Georgia	-	-	-	-	-	-	-	-	5	17	-	-	8
Florida	7	-	18	-	-	-	-	-	12	11	6	1	20
EAST SOUTH CENTRAL	10	1	41	-	-	8	10	-	13	35	2	-	10
Kentucky	-	1	39	-	-	-	-	-	-	-	-	-	4
Tennessee	4	-	NN	-	-	-	5	-	12	24	2	-	1
Alabama	-	-	1	-	-	3	5	-	-	-	-	-	4
Mississippi	6	-	1	-	-	5	-	-	1	11	-	-	1
WEST SOUTH CENTRAL	8	-	27	-	3	2	2	-	21	54	13	-	26
Arkansas	-	-	1	-	-	-	2	-	8	10	1	-	2
Louisiana	-	-	NN	-	-	-	-	-	1	1	-	-	2
Oklahoma*	3	-	2	-	-	-	-	-	3	8	4	-	-
Texas	5	-	24	-	3	2	-	-	9	35	8	-	22
MOUNTAIN	1	-	55	-	5	-	-	-	10	52	16	-	14
Montana	-	-	24	-	-	-	-	-	-	3	2	-	2
Idaho	1	-	19	-	-	-	-	-	-	2	2	-	-
Wyoming	-	-	-	-	-	-	-	-	-	1	-	-	2
Colorado	-	-	12	-	-	-	-	-	4	9	5	-	7
New Mexico	-	-	-	-	4	-	-	-	3	6	-	-	1
Arizona*	-	-	NN	-	1	-	-	-	3	29	6	-	2
Utah	-	-	-	-	-	-	-	-	-	2	1	-	-
Nevada	-	-	-	-	-	-	-	-	-	-	-	-	-
PACIFIC	28	-	74	2	61	6	7	1	63	142	36	-	121
Washington	5	-	66	2	55	-	-	-	2	10	9	-	5
Oregon	2	-	-	-	-	-	1	-	5	13	3	-	2
California*	15	-	-	-	4	4	6	1	50	107	23	-	108
Alaska	-	-	7	-	2	-	-	-	2	7	-	-	2
Hawaii	6	-	1	-	-	2	-	-	4	5	1	-	4
Guam*	NA	NA	NA	NA	-	NA	-	-	NA	NA	NA	NA	-
Puerto Rico	-	-	3	-	-	-	-	-	-	3	4	-	2
Virgin Islands	-	-	-	-	-	-	-	-	-	-	-	-	-

NN: Not notifiable

NA: Not available

\*Delayed reports: Asep. meng.: N.J. +2, Mo. +1; Chickenpox: Mo. +45, Calif. +23, Guam +2; Enceph.: Conn. +1, Ind. +7; Hep. B: N.J. +1, Ohio +1, N. Dak. +1, Okla. +1; Hep. A: N.H. -1, N.J. -1, Ohio -1, N. Dak. -1, Ariz. -4; Hep. unsp.: N.H. +1, Mo. -1, Ariz. -1.

Table III-Continued  
**Cases of Specified Notifiable Diseases: United States**  
*Weeks Ending November 5, 1977 and November 6, 1976 - 44th Week*

REPORTING AREA	MEASLES (Rubella)			MENINGOCOCCAL INFECTIONS TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1977	CUMULATIVE		1977	CUMULATIVE		1977	CUM. 1977	1977	1977	CUM. 1977	CUM. 1977
		1977	1976		1977	1976						
UNITED STATES .....	99	53,476	35,676	27	1,469	1,310	333	17,261	87	86	19,027	56
NEW ENGLAND .....	4	2,486	437	1	57	65	13	697	-	3	1,219	1
Maine .....	2	172	9	-	3	1	9	73	-	-	70	-
New Hampshire .....	1	511	9	-	3	6	-	92	-	-	243	-
Vermont .....	-	294	84	-	6	3	-	8	-	-	64	-
Massachusetts .....	1	635	37	-	16	21	-	127	-	2	387	-
Rhode Island .....	-	64	15	-	2	7	1	63	-	-	134	-
Connecticut* .....	-	810	283	1	27	27	3	334	-	1	321	1
MIDDLE ATLANTIC .....	14	8,403	7,112	2	208	186	17	1,355	3	16	6,038	4
Upstate New York .....	9	3,845	2,951	-	52	69	11	309	-	5	3,373	1
New York City .....	5	745	476	-	51	49	5	506	3	1	323	1
New Jersey .....	-	197	613	1	45	29	-	357	-	1	1,783	2
Pennsylvania .....	-	3,616	3,072	1	60	39	1	183	-	9	559	-
EAST NORTH CENTRAL .....	23	11,461	15,089	7	155	166	89	5,836	7	38	3,847	5
Ohio .....	1	1,859	579	3	61	68	4	690	6	1	1,130	1
Indiana .....	5	4,346	3,446	2	12	8	8	346	-	1	965	1
Illinois .....	2	1,787	1,661	-	23	20	28	1,056	-	3	334	1
Michigan .....	9	1,014	5,884	2	45	59	34	1,987	-	25	996	2
Wisconsin .....	6	2,453	3,519	-	14	11	15	1,757	1	8	422	-
WEST NORTH CENTRAL .....	5	9,378	1,358	1	74	89	84	3,908	-	8	530	9
Minnesota .....	1	2,625	426	-	25	14	1	7	-	-	17	2
Iowa .....	1	4,309	45	-	6	10	4	1,308	-	1	170	1
Missouri* .....	-	915	70	1	31	39	22	1,344	-	1	38	3
North Dakota .....	-	26	3	-	1	3	-	20	-	-	13	-
South Dakota .....	-	75	4	-	4	3	-	59	-	-	18	-
Nebraska .....	-	214	55	-	2	6	-	78	-	-	3	-
Kansas .....	3	1,214	755	-	5	14	57	1,092	-	6	271	3
SOUTH ATLANTIC .....	11	4,661	2,196	7	317	256	28	865	16	3	1,690	12
Delaware .....	-	22	130	-	7	9	3	137	-	-	26	-
Maryland .....	-	372	715	1	22	21	-	72	-	-	6	-
District of Columbia .....	-	14	13	-	-	2	-	6	-	-	-	-
Virginia .....	1	2,740	772	-	30	39	6	111	-	1	580	1
West Virginia .....	5	254	202	-	9	8	12	202	14	1	157	-
North Carolina .....	-	65	17	3	69	49	3	63	-	1	447	-
South Carolina .....	2	155	4	-	35	36	-	14	-	-	230	-
Georgia .....	-	768	2	-	52	26	-	26	2	-	55	1
Florida* .....	3	271	341	3	93	66	4	234	-	-	189	10
EAST SOUTH CENTRAL .....	-	2,014	890	6	155	121	22	963	-	2	1,945	5
Kentucky .....	-	1,191	752	-	31	23	5	110	-	-	84	1
Tennessee .....	-	707	121	4	41	50	15	578	-	2	1,742	2
Alabama .....	-	78	-	-	53	34	2	236	-	-	110	2
Mississippi .....	-	38	17	2	30	14	-	39	-	-	9	-
WEST SOUTH CENTRAL .....	22	2,142	767	1	285	194	42	1,581	2	2	819	11
Arkansas .....	-	29	16	-	16	11	22	113	-	-	3	2
Louisiana .....	-	75	226	1	130	35	1	56	1	-	27	2
Oklahoma .....	2	64	293	-	14	21	11	535	1	-	33	-
Texas* .....	20	1,974	227	-	125	127	8	877	-	2	756	7
MOUNTAIN .....	1	2,534	5,165	-	33	39	3	615	5	2	383	2
Montana .....	-	1,162	281	-	4	5	-	12	-	-	16	1
Idaho .....	-	161	2,020	-	4	6	-	126	1	-	13	-
Wyoming .....	-	19	4	-	1	-	-	4	-	-	6	1
Colorado .....	-	504	314	-	1	6	3	271	1	-	241	-
New Mexico .....	-	256	16	-	9	4	-	105	3	-	11	-
Arizona .....	1	319	227	-	10	10	-	-	-	-	16	-
Utah .....	-	20	2,237	-	3	6	-	81	-	2	71	-
Nevada .....	-	93	66	-	1	2	-	16	-	-	9	-
PACIFIC .....	19	10,397	2,662	2	185	194	35	1,441	54	12	2,556	7
Washington* .....	2	544	354	-	26	33	6	303	-	1	446	-
Oregon .....	-	366	173	-	17	17	3	262	43	1	116	-
California .....	17	9,392	2,123	1	110	119	23	818	11	10	1,579	7
Alaska .....	-	60	9	1	30	22	-	30	-	-	1	-
Hawaii .....	-	35	3	-	2	3	3	28	-	-	414	-
Guam .....	NA	9	16	-	1	-	NA	6	NA	NA	11	-
Puerto Rico .....	-	995	449	-	1	4	3	776	-	-	35	10
Virgin Islands .....	-	14	15	-	-	1	-	189	-	-	2	-

NA: Not available

\*Delayed reports: Measles: Mo. -1, Texas -1; Men. inf.: Conn. +1; Mumps: Mo. +41; Pertussis: Fla. -1; Rubella: Mo. +2, Wash. +3

Table III-Continued  
Cases of Specified Notifiable Diseases: United States  
Weeks Ending November 5, 1977 and November 6, 1976 - 44th Week

REPORTING AREA	TUBERCULOSIS		TULA-REMIA	TYPHOID FEVER		TYPHUS FEVER TICK-BORNE (RMSF)		VENEREAL DISEASES (Civilian Cases Only)						RABIES IN ANIMALS
	1977	CUM. 1977	CUM. 1977	1977	CUM. 1977	1977	CUM. 1977	GONORRHEA		SYPHILIS (Pri. & Sec.)			CUM. 1977	
								1977	CUMULATIVE		1977	CUMULATIVE		
									1977	1976		1977		1977
UNITED STATES	510	25,681	142	7	341	5	1,068	20,542	846,935	856,734	382	17,418	20,504	2,609
NEW ENGLAND	24	950	2	2	19	-	10	543	22,810	24,026	17	689	696	44
Maine	1	73	-	-	-	-	-	33	1,665	2,052	2	25	20	32
New Hampshire*	1	25	-	-	1	-	-	31	933	714	-	4	10	1
Vermont	-	32	-	-	-	-	-	13	566	601	-	7	9	-
Massachusetts	12	535	2	1	13	-	5	197	9,684	11,363	12	482	497	8
Rhode Island	2	79	-	1	3	-	3	25	1,812	1,693	-	8	17	-
Connecticut*	8	206	-	-	2	-	2	244	8,150	7,623	3	163	143	3
MIDDLE ATLANTIC	97	4,161	3	-	64	1	74	2,521	88,841	98,194	47	2,459	3,419	98
Upstate New York	13	717	3	-	8	-	41	395	15,178	16,211	4	231	204	56
New York City	41	1,317	-	-	26	1	2	801	34,332	42,871	29	1,548	2,166	-
New Jersey	15	1,039	-	-	19	-	11	608	16,082	15,418	3	317	483	28
Pennsylvania	28	1,088	-	-	11	-	20	717	23,249	23,694	11	363	566	14
EAST NORTH CENTRAL	67	3,967	3	-	32	1	37	4,108	134,835	135,036	24	1,781	1,752	126
Ohio*	11	688	1	-	10	-	17	1,559	36,135	33,608	4	416	427	-
Indiana	9	460	-	-	3	-	2	267	12,462	13,135	1	134	90	9
Illinois	17	1,541	-	-	6	1	16	1,329	43,503	46,871	7	921	921	39
Michigan*	27	1,107	-	-	12	-	2	719	30,945	29,419	10	215	219	6
Wisconsin	3	171	2	-	1	-	-	234	11,790	12,003	2	95	95	72
WEST NORTH CENTRAL	20	859	26	1	22	-	33	863	44,119	45,108	12	388	397	656
Minnesota	3	184	-	-	5	-	-	168	7,952	7,852	5	122	88	235
Iowa	-	74	-	-	-	-	1	97	5,129	5,736	1	39	38	108
Missouri	7	368	23	1	12	-	18	293	18,222	17,969	4	153	160	49
North Dakota	1	27	-	-	1	-	-	12	826	705	-	-	-	101
South Dakota	1	44	2	-	-	-	2	40	1,342	1,324	-	9	5	120
Nebraska*	3	35	1	-	1	-	1	72	3,817	3,767	-	25	33	3
Kansas*	5	127	-	-	3	-	11	181	6,831	7,755	2	40	73	40
SOUTH ATLANTIC	99	5,620	11	-	55	2	572	4,407	208,062	209,717	89	4,764	6,192	311
Delaware*	2	55	-	-	-	-	3	61	2,868	2,948	-	19	58	2
Maryland	15	794	2	-	4	-	75	564	25,438	27,184	5	294	491	-
District of Columbia	5	287	-	-	1	-	-	297	13,677	14,298	5	478	493	-
Virginia	-	638	2	-	8	2	154	399	21,752	22,469	2	465	588	5
West Virginia	2	207	-	-	5	-	5	77	2,802	2,615	-	3	22	9
North Carolina*	25	919	2	-	4	-	216	804	31,207	30,163	8	649	1,128	11
South Carolina	6	507	2	-	3	-	52	502	19,620	19,793	3	212	318	30
Georgia	13	766	3	-	14	-	64	964	40,213	39,854	20	1,056	928	184
Florida*	31	1,447	-	-	16	-	1	739	50,485	50,456	46	1,588	2,166	70
EAST SOUTH CENTRAL	47	2,362	8	-	11	-	169	1,650	74,928	75,637	13	671	782	69
Kentucky*	14	620	2	-	5	-	43	199	10,052	9,924	2	87	112	25
Tennessee	25	730	5	-	2	-	99	805	29,817	30,169	8	218	262	33
Alabama	8	598	1	-	1	-	19	576	20,834	21,127	3	144	165	11
Mississippi	-	414	-	-	3	-	8	70	14,225	14,417	-	222	243	-
WEST SOUTH CENTRAL	50	3,009	70	1	29	1	155	2,631	106,130	107,940	77	2,538	2,447	699
Arkansas	2	320	48	-	6	1	53	264	8,181	10,073	2	62	91	103
Louisiana	3	543	1	-	1	-	6	499	15,976	15,802	12	608	501	22
Oklahoma*	2	258	12	1	2	-	68	231	10,366	10,482	1	69	86	221
Texas*	43	1,888	9	-	20	-	28	1,637	71,607	71,583	62	1,799	1,769	353
MOUNTAIN	7	724	13	-	27	-	13	891	34,227	34,779	9	401	515	177
Montana	1	48	1	-	-	-	6	56	1,813	1,732	1	5	11	45
Idaho	1	28	-	-	-	-	4	33	1,555	1,879	-	11	22	-
Wyoming	1	18	1	-	-	-	2	10	785	716	-	4	4	1
Colorado	1	101	3	-	8	-	1	185	8,919	8,751	-	107	117	57
New Mexico*	1	138	-	-	-	-	-	178	5,035	6,353	2	111	126	19
Arizona*	2	307	3	-	13	-	-	257	9,516	10,218	5	138	183	44
Utah	-	34	5	-	5	-	-	47	2,036	1,895	-	10	20	11
Nevada*	-	50	-	-	1	-	-	125	4,568	3,235	1	15	32	-
PACIFIC	99	4,029	6	3	82	-	5	2,928	132,983	126,297	94	3,727	4,304	429
Washington*	-	246	-	-	2	-	-	312	10,305	10,625	-	187	142	2
Oregon	2	154	1	-	3	-	1	190	9,239	9,548	3	125	95	7
California	87	3,051	5	3	75	-	4	2,251	106,464	100,144	91	3,358	3,968	383
Alaska*	-	71	-	-	-	-	-	109	4,181	3,674	-	25	22	37
Hawaii	10	507	-	-	2	-	-	66	2,794	2,306	-	32	77	-
Guam*	NA	49	-	NA	1	NA	-	NA	169	285	NA	2	2	-
Puerto Rico	3	330	-	-	7	-	-	72	2,733	2,316	5	447	521	49
Virgin Islands	-	1	-	-	-	-	-	6	178	208	-	8	48	-

NA: Not available

\*Delayed reports: TB: Ohio -2, Mich. -4, Kans -1, Dela. -1; N.C. -4, Fla. -5, Ky. -3, Ariz. -1, Wash. +26, Alaska +6; RMSF: Okla. +1; GC: N.H. +2 mil., Nebr. +1 civ., N. Mex. +1 civ., Nev. +1, Wash. +65 mil., Guam +10 civ.; Syphilis: Texas -1 civ., Wash. +29 civ. +1 mil.; An. rabies: Conn. +3.

**Table IV**  
**Deaths in 121 United States Cities\***  
*Week Ending November 5, 1977 - 44th Week*

REPORTING AREA	ALL CAUSES					Pneumonia and Influenza ALL AGES	REPORTING AREA	ALL CAUSES					Pneumonia and Influenza ALL AGES
	ALL AGES	65 Years and Over	45-64 Years	25-44 Years	Under 1 Year			ALL AGES	65 Years and Over	45-64 Years	25-44 Years	Under 1 Year	
<b>NEW ENGLAND</b>	679	452	146	36	28	43	<b>SOUTH ATLANTIC</b>	1,231	731	360	79	50	49
Boston, Mass.	189	117	38	13	12	12	Atlanta, Ga.	102	56	33	4	2	-
Bridgeport, Conn.	46	31	10	4	-	4	Baltimore, Md.	242	134	73	12	14	3
Cambridge, Mass.	24	18	6	-	-	1	Charlotte, N. C.	61	31	14	7	4	1
Fall River, Mass.	24	19	5	-	-	1	Jacksonville, Fla.	111	66	30	8	5	10
Hartford, Conn.	50	27	16	3	2	2	Miami, Fla.	112	58	42	10	1	7
Lowell, Mass.	26	22	2	1	-	-	Norfolk, Va.	43	23	15	5	3	2
Lynn, Mass.	22	16	4	1	1	1	Richmond, Va.	86	45	31	5	4	10
New Bedford, Mass.	20	13	4	1	1	1	Savannah, Ga.	43	30	9	1	1	3
New Haven, Conn.	57	37	10	2	8	1	St. Petersburg, Fla.	74	59	13	2	-	2
Providence, R.I.	71	45	20	3	1	7	Tampa, Fla.	72	45	23	-	-	3
Somerville, Mass.	12	7	3	1	1	1	Washington, D. C.	244	133	68	21	13	6
Springfield, Mass.	48	34	12	2	-	1	Wilmington, Del.	41	24	9	4	3	2
Waterbury, Conn.	42	28	9	4	-	4							
Worcester, Mass.	48	38	7	1	2	4	<b>EAST SOUTH CENTRAL</b>	727	436	192	38	23	33
							Birmingham, Ala.	109	71	22	4	5	3
<b>MIDDLE ATLANTIC</b>	2,880	1,812	716	174	89	137	Chattanooga, Tenn.	72	43	18	4	5	4
Albany, N. Y.	40	22	16	1	1	1	Knoxville, Tenn.	42	30	11	1	-	2
Allentown, Pa.	17	13	4	-	-	1	Louisville, Ky.	112	58	39	3	2	7
Buffalo, N. Y.	125	80	29	7	4	10	Memphis, Tenn.	156	92	41	12	6	4
Camden, N. J.	46	29	10	4	3	2	Mobile, Ala.	57	37	13	3	-	1
Elizabeth, N. J.	27	18	7	-	2	1	Montgomery, Ala.	57	28	19	3	2	4
Erie, Pa. <sup>†</sup>	35	24	8	1	1	3	Nashville, Tenn.	122	77	29	8	3	8
Jersey City, N. J.	37	31	2	2	1	1							
Newark, N. J.	75	34	23	9	5	3	<b>WEST SOUTH CENTRAL</b>	1,300	694	356	111	85	28
New York City, N. Y.	1,459	905	356	102	46	42	Austin, Tex.	44	28	10	3	-	3
Paterson, N. J.	42	30	7	2	2	2	Baton Rouge, La.	50	24	15	5	1	-
Philadelphia, Pa.	414	257	114	23	12	36	Corpus Christi, Tex.	43	22	10	3	7	-
Pittsburgh, Pa.	161	101	40	9	6	12	Dallas, Tex.	198	114	47	15	13	3
Reading, Pa.	43	34	5	1	-	2	El Paso, Tex.	50	25	14	3	7	2
Rochester, N. Y.	133	85	34	8	3	14	Fort Worth, Tex.	95	52	26	9	3	3
Schenectady, N. Y.	23	12	10	1	-	1	Houston, Tex.	368	167	118	33	33	3
Scranton, Pa.	42	32	6	3	1	1	Little Rock, Ark.	71	43	15	3	7	4
Syracuse, N. Y.	53	32	16	-	1	1	New Orleans, La.	107	60	29	13	3	-
Trenton, N. J.	46	29	14	2	1	2	San Antonio, Tex.	155	87	42	13	8	1
Utica, N. Y.	27	20	7	-	-	2	Shreveport, La.	45	23	14	5	1	2
Yonkers, N. Y.	35	24	8	2	-	-	Tulsa, Okla.	74	49	16	6	2	7
<b>EAST NORTH CENTRAL</b>	2,252	1,346	573	146	94	70	<b>MOUNTAIN</b>	548	339	114	43	19	21
Akron, Ohio	68	41	17	6	2	-	Albuquerque, N. Mex.	68	37	15	4	4	5
Canton, Ohio	39	28	7	2	1	-	Colorado Springs, Colo.	37	26	5	1	4	4
Chicago, Ill.	520	294	134	39	29	14	Denver, Colo.	119	67	33	11	3	4
Cincinnati, Ohio	153	93	50	5	2	3	Las Vegas, Nev.	34	25	4	4	-	2
Cleveland, Ohio	160	102	38	9	6	6	Ogden, Utah	9	3	5	-	-	1
Columbus, Ohio	139	82	42	6	4	9	Phoenix, Ariz.	133	85	26	13	3	1
Dayton, Ohio	114	60	35	9	7	1	Pueblo, Colo.	21	15	5	-	-	3
Detroit, Mich.	295	170	67	27	14	5	Salt Lake City, Utah	54	35	8	1	4	1
Evansville, Ind.	37	27	7	1	1	1	Tucson, Ariz.	73	46	13	9	1	-
Fort Wayne, Ind.	46	21	11	4	8	2							
Gary, Ind.	18	8	7	1	-	3	<b>PACIFIC</b>	1,554	966	376	111	47	29
Grand Rapids, Mich.	61	38	18	2	-	3	Berkeley, Calif.	18	9	6	3	-	1
Indianapolis, Ind.	158	92	36	16	6	5	Fresno, Calif.	57	32	11	7	4	2
Madison, Wis.	24	20	4	-	-	3	Glendale, Calif.	25	23	5	-	-	1
Milwaukee, Wis.	105	72	23	3	5	3	Honolulu, Hawaii	44	22	16	3	3	-
Peoria, Ill.	20	11	8	1	-	3	Long Beach, Calif.	104	55	38	6	3	8
Rockford, Ill.	51	31	12	2	1	4	Los Angeles, Calif.	470	286	112	37	15	8
South Bend, Ind.	63	46	9	4	2	4	Oakland, Calif.	72	44	13	8	4	1
Toledo, Ohio	118	73	31	6	4	-	Pasadena, Calif.	22	15	7	-	-	2
Youngstown, Ohio	63	40	17	3	2	1	Portland, Oreg.	133	82	31	10	3	-
							Sacramento, Calif.	57	40	14	3	-	-
<b>WEST NORTH CENTRAL</b>	758	494	158	27	49	29	San Diego, Calif.	121	83	18	9	4	4
Des Moines, Iowa	47	34	8	3	1	1	San Francisco, Calif.	150	97	33	9	7	1
Duluth, Minn.	14	9	5	-	-	3	San Jose, Calif.	49	32	10	5	1	1
Kansas City, Kans.	45	27	12	2	2	1	Seattle, Wash.	128	87	28	7	2	6
Kansas City, Mo.	118	77	23	4	8	5	Spokane, Wash.	50	30	19	-	-	2
Lincoln, Nebr.	33	21	8	1	3	1	Tacoma, Wash.	54	32	15	4	1	-
Minneapolis, Minn.	133	69	22	3	7	3							
Omaha, Nebr.	73	52	15	3	2	1	<b>TOTAL</b>	11,929	7,240	2,991	765	484	436
St. Louis, Mo.	174	110	37	6	11	5	Expected Number	11,260	6,857	2,904	724	377	375
St. Paul, Minn.	61	42	14	2	2	2							
Wichita, Kans.	90	53	14	3	13	7							

\*By place of occurrence and week of filing certificate. Excludes fetal deaths.  
 †(Erie, Pa.) Estimate based on average percent of regional total.

The Morbidity and Mortality Weekly Report, circulation 67,500, is published by the Center for Disease Control, Atlanta, Georgia. The data in this report are provisional, based on weekly telegrams 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.

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## Histoplasmosis — Northern Louisiana

An outbreak of acute pulmonary disease, presumptively identified as histoplasmosis, occurred in early September 1977 in northwest Louisiana. The outbreak involved all 6 men who cleared a field of bamboo cane on August 25 and 26. The field was known to be a blackbird roosting site and was located in an area considered to be heavily endemic for histoplasmosis (1).

Although no birds were present when the work was done, the grounds and a doghouse in the middle of the field were covered with several inches of bird droppings. One man, in addition to clearing the cane, cleaned off the roof of the doghouse while the others stood nearby. After the cane was bulldozed, it was burned and buried, and a fresh topping of soil was applied to the field.

The first person to become ill was the oldest participant, a 38-year-old man, whose illness began with low-grade fever and generalized aching 6 days after exposure. Over the next few days he had abdominal cramps and diarrhea followed by increasing fever, cough, chest pain, and dyspnea. His chest X ray showed widespread miliary infiltrates. The patient was hospitalized and improved over the next 2 weeks. The other 5 workers, all college students in their early 20s, developed acute illness with symptoms of fever, body aches, cough, and dyspnea 11-13 days after exposure. Chest X rays on all showed widespread miliary infiltrates. Bacterial and fungal cultures of sputum and blood were negative.

One patient developed respiratory failure, was treated with amphotericin B, and recovered. The others all recovered without specific anti-fungal therapy. Five had 4-fold or greater rises in titer to *Histoplasma capsulatum* yeast-phase complement fixation (CF) antigen, reaching a level of  $\geq 1:64$  in 4 patients and 1:32 in the fifth. The other man had a single titer of 1:16. Histoplasmin skin tests on 4 people, placed at the same time that the acute-phase serum specimens were drawn, were all negative. An aqueous suspension of the bird droppings from the doghouse showed structures identified as the tuberculate macroconidia of *H. capsulatum*. Cultures of the soil and the bird droppings from the doghouse roof are pending.

## Follow-up on Influenza — Puerto Rico

Influenza is widespread throughout the western and central areas of the island. Influenza A isolates collected on October 18 from 4 of 6 patients in Sabana Grande have been characterized as being related to A/Texas/1/77. Virus has been isolated from 8 of 23 throat swabs from patients seen in clinics in Sabana Grande and Anasco, a military dependent in Juana Diaz, and a guard in the municipal prison in Bayamon. Four of these isolates, obtained from patients who had onset October 22-24, have been characterized as resembling A/Texas/1/77. Nine additional cases of serologically identified influenza A (H3N2) have been detected from 39 pairs of serum specimens collected from patients with febrile illness who did not exhibit an antibody titer rise to dengue. A total of 22 serologically confirmed diagnoses of influenza A (H3N2) have been made from 15 of 78 municipalities.

Physicians in municipal clinics anecdotally report that scattered cases of influenza-like illness began in late August. Reports of patient visits to clinics for febrile illness (collected as a function of routine influenza surveillance) began to

Reported by ES Butler, MD, Haynesville, Louisiana; RB George, MD, E Kotcher, ScD, AD Oberle, MS, LSU Medical School, Shreveport; CT Caraway, DVM, MPH, State Epidemiologist, Louisiana State Health and Human Resources Administration; Field Services Div, Special Pathogens Br, Bacterial Diseases Div, Bur of Epidemiology, CDC.

**Editorial Note:** As is often the case with this disease, the organism was not cultured from any of the patients in this outbreak. The diagnosis is supported, however, by the clinical illness, X rays, and serologic and epidemiologic findings. Numerous reports have indicated that a single histoplasmin skin test may stimulate humoral antibodies to *H. capsulatum* antigens in histoplasmin-hypersensitive individuals. In one study of 139 individuals who were skin-tested and later bled, none of the 25 who had negative skin tests had measurable antibodies, while 12 of the 114 who were skin-test positive had CF titers  $\geq 1:8$ . Those 12 included 10 who responded to a level of  $\geq 1:8$  to the mycelial phase CF antigen and 2 who responded to a 1:8 level to the yeast-phase CF antigen. The highest titers observed were in 2 patients who had levels of 1:32 to the mycelial phase antigen (2).

In this outbreak the patients skin-tested were all skin-test negative and showed high titer serologic responses to the yeast-phase antigen. Thus, it is unlikely that the serologic responses are the result of skin-testing. As a general rule, however, skin-testing plays no role in the diagnosis of acute histoplasmosis since it usually does not provide helpful diagnostic information and potentially confuses the interpretation of serologic tests.

The danger of working with soil containing *H. capsulatum* organisms can be minimized if only workers with positive histoplasmin skin tests are involved and if the soil is decontaminated beforehand with 3% formalin.

### References

1. Edwards LD, Acquaviva FA, Livesay VT: An atlas of sensitivity to tuberculin, PPD-B, and histoplasmin in the United States. *Am Rev Respir Dis* 99:1-132, 1969
2. Kaufman L, Terry RT, Schubert JH, and McLaughlin D: Effects of a single histoplasmin skin test on the serological diagnosis of histoplasmosis. *J Bacteriol* 94:798-803, 1967

show an increase in September. These illnesses were generally presumed to be dengue. On October 20, influenza A infections in Puerto Rico were confirmed serologically. Since that time the proportion of cases reported as influenza has increased while the proportion attributed to dengue has decreased. The number of reported visits for febrile illness attributed to either influenza or dengue reached its peak in mid-October and now appears to be decreasing.

Reported by H Negron, MD, State Epidemiologist, Puerto Rico Dept of Health; WHO Collaborating Center for Influenza, San Juan Laboratories, Respiratory Virology Br, Virology Div, Bur of Laboratories, Surveillance and Assessment Br, Immunization Div, Bur of State Services, Field Services Div, Bur of Epidemiology, CDC.

**Editorial Note:** Traditional influenza surveillance indicators such as outpatient visits for "influenza" were of limited use in identifying this outbreak. Outbreaks of dengue were occurring simultaneously with cases of influenza, obscuring the perception of any increases due to influenza. The clinical diagnosis of the 2 diseases is often confused. In the differential diagnosis, cough and rash are important discriminating signs. Cough is not thought to be generally

*Influenza - Continued*

characteristic of dengue; rash is uncommon in influenza. Among Puerto Rican patients serologically positive for dengue, 43% had cough; among those with febrile illness

but serologically negative for dengue, 63% had cough. In patients virologically or serologically confirmed to have had influenza, all have had cough.

International Notes**Surveillance of Rabies in the Americas, 1976**

As has been regularly observed in the current decade, in the United States and Canada rabies is predominant in wild animals, whereas in the rest of the American continent cases are most frequent in urban domestic animals, particularly in dogs and, consequently, man (Table 1, Figure 4). In 1976, for example, 2,724 cases of rabies in wildlife were reported in the United States; the rest of the Americas reported only 1,266 such cases.

No cases of human or animal rabies were reported in French Guyana, Guyana, Uruguay, or several small islands in the Caribbean. The Argentinian and Chilean Patagonia, as well as the desert area in the north of Chile, continue to be free from infection.

There were 2 important outbreaks of canine and human rabies in 1976: 1 in the metropolitan area of Buenos Aires, Argentina, with approximately 4,300 rabid dogs and 15 human cases, and the other in Honduras, where 11 human

cases were reported in a 6-month period. In addition, an outbreak was reported in Talca, a city in the south of Peru, (2 human and 60 canine cases). On the U.S.-Mexican border in Laredo, Texas, an outbreak also occurred, involving no human cases but 76 canine cases and 4 in other animals; most of these occurred in the first 5 months of 1977, however (7).

In Brazil, where a national campaign was launched 2 years ago, considerable progress has been attained in the larger cities. As compared with previous years, cases of human rabies decreased by 40% in 1976. Anti-rabies vaccination was given to 3.2 million dogs, an amount that represents a considerable increase over the almost 2 million vaccinated in 1975 and 1 million vaccinated in 1974. Likewise, canine vaccination campaigns in the main cities of Colombia resulted in a dramatic decrease in the incidence of human rabies, with only 1 case of the disease reported there in 1976, as compared with over 30 annual cases in previous years. However, human-canine endemic rates continue to be high with recurrent epidemic outbreaks in other countries where rabies control programs are inadequate.

*Reported by the Pan American Zoonoses Center in the Weekly Epidemiologic Record, No. 33, 1977; and Respiratory and Special Pathogens Br, Viral Diseases Div, CDC.*

**Reference**

1. MMWR 26:260, 1977

**TABLE 1. Rabies in humans and in animals, the Americas, 1976**

Rabies in man	183
Rabies in animals	23,659
Dogs	12,198
Cats	1,010
Cattle	3,178
Other domestic animals	372
Wildlife	3,990
Unspecified	2,911

**FIGURE 4. Rabies in humans, cattle, and dogs in the Americas, 1976**



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

Director, Center for Disease Control, William H. Foege, M.D.  
 Director, Bureau of Epidemiology, Philip S. Brachman, M.D.  
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HEW Publication No. (CDC) 78-8017



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