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

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CONTENTS

CURRENT TRENDS

ARBOVIRAL DISEASE – United States, August 1974

The following article summarizes the results of recent arbovirus surveillance activities reported from 13 selected states* and the U.S. Department of Agriculture (USDA). So far this summer, these sources have recorded minimal activity in humans, equines, birds, and mosquitoes.

Western Equine Encephalitis (WEE)

Through August 16, 1974, the National Animal Disease Laboratory (NADL), USDA, reported 13 serologically confirmed cases in horses. Cases were sporadically distributed in Minnesota (3), Indiana (2), North Dakota (2), Wyoming (2), Idaho (1), Iowa (1), Oklahoma (1), and Oregon. Also, WEE virus was isolated from a horse from Alabama. In addition, the Texas State Health Department Laboratory and the South Dakota State University Laboratory each reported 2 serologic confirmations in equines.

In other activities, the Kansas State Health Department isolated WEE from 9 of 14 mosquito pools from 3 counties in

*Selected states: Arizona, California, Florida, Georgia, Kansas, Louisiana, Massachusetts, Mississippi, New Jersey, New York, South Dakota, Texas, and Utah.

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

DISEASE	34th WEEK ENDING		MEDIAN 1969-1973	CUMULATIVE, FIRST 34 WEEKS		
	August 24, 1974	August 25, 1973		1974	1973	MEDIAN 1969-1973
Aseptic meningitis	124	230	230	1,748	2,500	2,498
Brucellosis	1	2	3	102	128	128
Chickenpox	231	263	– – –	98,895	144,519	– – –
Diphtheria	3	1	6	165	119	107
Encephalitis:						
Primary: Arthropod-borne and unspecified	40	52	35	587	865	852
Post-Infectious	10	6	6	184	204	231
Hepatitis, Viral:						
Type B	185	167	166	6,180	5,215	5,215
Type A	774	998	1,119	27,610	32,981	36,021
Type unspecified	160			5,474		
Malaria	9	5	30	131	156	1,801
Measles (rubeola)	107	212	185	19,579	23,999	26,651
Meningococcal infections, total	16	14	30	938	1,012	1,714
Civilian	16	14	29	913	988	1,525
Military	–	–	1	25	24	184
Mumps	332	291	446	43,846	54,589	66,989
Pertussis	64	– – –	– – –	1,051	– – –	– – –
Rubella (German measles)	134	87	201	9,536	25,773	37,948
Tetanus	2	5	2	56	57	74
Tuberculosis, new active	583	558	– – –	20,089	20,595	– – –
Tularemia	1	5	4	91	109	92
Typhoid fever	6	17	10	242	459	201
Typhus, tick-borne (Rky. Mt. spotted fever)	34	23	15	605	489	339
Venereal Diseases:						
Gonorrhea	17,197	18,659	– – –	572,916	528,513	– – –
Syphilis, primary and secondary	449	415	– – –	15,881	15,938	– – –
Rabies in animals	57	66	63	1,928	2,442	2,441

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	2	Poliomyelitis, total:	3
Botulism:	9	Paralytic:	3
Congenital rubella syndrome:	27	Psittacosis: Wis. 1	77
Leprosy: *	72	Rabies in man:	–
Leptospirosis: Fla. 1	26	Trichinosis:	65
Plague:	1	Typhus, murine:	15

*Delayed reports: Leprosy: Mass. 1, Hawaii 3

ARBOVIRAL DISEASE – Continued

the western part of the state in July 1974. Confirmatory studies of several suspect cases of human encephalitis in 1 of these counties and an epidemiologic investigation are in progress. In addition, New Jersey State Health Department Laboratories have reported isolating WEE virus from several mosquito pools since August 1, 1974; however, WEE found in the eastern states is a mild strain not known to cause severe human illness or horse deaths. The California Department of Health has also isolated WEE from 4 mosquito pools collected in the irrigated desert valleys in the southern part of the state, indicating minimal arboviral activity.

Eastern Equine Encephalitis (EEE)

Diagnostic studies at NADL identified 12 cases of EEE in horses through August 16. Cases were distributed in Louisiana (9), Indiana (1), Michigan (1), and North Carolina (1). Virus was isolated from 3 of the Louisiana cases and from the Michigan and North Carolina cases. This week, the Massachusetts Department of Public Health confirmed 2 human cases of EEE with onsets of symptoms in early August. Both individuals lived on the fringes of an area which had been shown to have low level EEE activity the first week of August, when 10% of mosquito pools tested were positive. Since that week, isolations from mosquitoes have steadily declined, and in the past week Massachusetts has had no mosquito isolations. No EEE activity in horses, humans, or mosquito pools has been reported from other states.

St. Louis Encephalitis (SLE)

Confirmed human cases of SLE from Memphis, Tennessee, are reported and described in the accompanying report. In addition, SLE has been isolated from 2 mosquito pools collected in the southern desert valley of California. No other confirmed SLE activity has been reported.

Venezuelan Equine Encephalitis (VEE)

VEE activity has not been reported from any state.

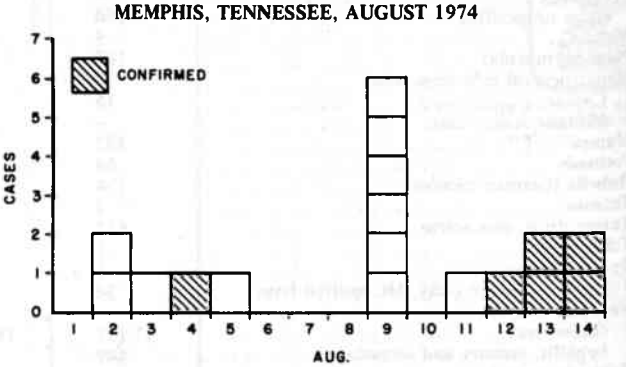
(Reported by Wes Press, M.S., Chief Microbiologist, and Philip M. Hotchkiss, D.V.M., State Epidemiologist, Arizona State Department of Health; Richard Emmons, M.D., Medical Epidemiologist, and Edward H. Lennette, M.D., Chief, Biomedical Laboratory, California State Department of Health; Chester L. Nayfield, M.D., State Epidemiologist, Florida Division of Health; John E. McCroan, Ph.D., State Epidemiologist, Georgia Department of Human Resources; Frank Moussa, M.S., Entomologist, and Donald E. Wilcox, M.D., State Epidemiologist, Kansas State Department of Health and Resources; Charles T. Caraway, D.V.M., State Epidemiologist, Louisiana Health and Social and Rehabilitation Services Administration; Nicholas Brill, Assistant Commissioner, George Grady, M.D., Acting Superintendent, State Laboratory Institute, and George Waterman, M.D., Assistant Director, Communicable Diseases Division, Massachusetts Department of Public Health; Durward L. Blakey, M.D., State Epidemiologist, Mississippi State Board of Health; Martin Goldfield, M.D., Assistant Commissioner, Division of Laboratories and Epidemiology, New Jersey State Department of Health; Thomas F. Bast, Ph.D., Associate Medical Entomologist, and Alan R. Hinman, M.D., Assistant Commissioner for Epidemiology and Preventive Health Services, New York State Department of Health; George C. Parikh, Ph.D., Professor of Virology, Microbiology Department, South Dakota State University; Robert S. Westaby, M.D., State Epidemiologist, South Dakota State Health Department; William R. Bilderback, D.V.M., Zoonoses Control, and M.S. Dickerson, M.D., State Epidemiologist, Texas State Department of Health; Taira Fukushima, M.D., State Epidemiologist, Utah State Division of Health; Bob M. Mathis, D.V.M., VEE Surveillance, Animal and Plant Inspection Service, Hyattsville, Maryland, and J.E. Pearson, D.V.M., Head, Equine Viruses, Diagnostic Virology, Veterinary Services Laboratories, National Animal Disease Laboratory, U.S. Department of Agriculture; and the Vector-borne Diseases Division, Bureau of Laboratories, CDC.)

EPIDEMIOLOGIC NOTES AND REPORTS
ST. LOUIS ENCEPHALITIS – Tennessee

On August 9, 1974, 4 cases of encephalitis were reported to the Memphis-Shelby County Health Department. The following week, an intensive surveillance system was established in Memphis hospitals. A designated representative in each hospital called the health department daily to report patients with the following: headache and fever, aseptic meningitis, or encephalitis (fever, cerebrospinal fluid pleocytosis, and altered sensorium).

Between August 9 and 23, 44 cases of encephalitis were reported. Of these, 6 have been confirmed as St. Louis encephalitis (SLE) (by a 4-fold rise in antibody titer), and 11 are presumptive SLE cases (titer greater than 1:40); one of the confirmed cases was fatal. The 17 cases had onset of illness between August 1 and 15 (Figure 1). The median age of the patients is 65 years; 9 are female. Ten are from the lower socioeconomic sections of Memphis along the Mississippi and Wolf Rivers, 4 are from other parts of Shelby County, and 3 are from Mississippi. Clinically, the patients developed fever (17), headache (10), lethargy (10), nuchal rigidity (10), disorientation (8), focal neurologic signs (7), tremors (7), and coma (6). Initial spinal taps revealed pleocytosis (17) and predominance of monocytes (15). The 6 confirmed cases had convalescent hemagglutination inhibition titers from 1:40 to 1:160 (Table 1).

Figure 1
ST. LOUIS ENCEPHALITIS CASES, BY DATE OF ONSET, MEMPHIS, TENNESSEE, AUGUST 1974



This is the first SLE outbreak in Memphis since 1964 *(1)* when 4 cases were reported. In June 1974 environmentalists conducting an SLE surveillance project found SLE titers in

(Continued on page 299)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES FOR WEEKS ENDING AUGUST 24, 1974 AND AUGUST 25, 1973 (34th WEEK)

AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	CHICKENPOX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS, VIRAL			MALARIA	
						Primary: Arthropod-borne and Unspecified		Post Infectious	Type B	Type A	Type Unspecified		
	1974	1974	1974	1974	Cum. 1974	1974	1973	1974	1974	1974	1974	1974	Cum. 1974
UNITED STATES	124	1	231	3	165	40	52	10	185	774	160	9	131
NEW ENGLAND	3	–	44	–	–	1	2	–	2	26	20	–	6
Maine *	–	–	–	–	–	–	–	–	–	1	1	–	–
New Hampshire *	–	–	1	–	–	–	2	–	1	2	–	–	–
Vermont	–	–	4	–	–	–	–	–	–	–	2	–	–
Massachusetts	2	–	24	–	–	1	–	–	–	11	17	–	2
Rhode Island	1	–	4	–	–	–	–	–	–	6	–	–	3
Connecticut	–	–	11	–	–	–	–	–	1	6	–	–	1
MIDDLE ATLANTIC	7	–	47	–	1	4	6	3	36	89	36	2	19
Upstate New York	2	–	2	–	–	1	4	3	8	32	3	–	4
New York City	–	–	45	–	–	–	–	–	9	22	–	2	9
New Jersey	3	–	NN	–	–	2	–	–	7	20	31	–	3
Pennsylvania	2	–	–	–	1	1	2	–	12	15	2	–	3
EAST NORTH CENTRAL	18	–	79	–	2	5	28	2	16	149	16	–	11
Ohio	6	–	9	–	1	1	16	1	1	31	–	–	4
Indiana	4	–	19	–	–	–	1	–	1	19	–	–	–
Illinois	–	–	–	–	1	–	3	1	5	45	14	–	2
Michigan	7	–	14	–	–	4	5	–	7	52	2	–	4
Wisconsin	1	–	37	–	–	–	3	–	2	2	–	–	1
WEST NORTH CENTRAL	5	–	4	–	–	1	3	1	14	34	11	–	3
Minnesota	–	–	–	–	–	–	–	1	8	17	–	–	1
Iowa	3	–	4	–	–	–	–	–	–	–	–	–	–
Missouri *	1	–	–	–	–	–	1	–	1	6	10	–	1
North Dakota	1	–	–	–	–	–	–	–	–	–	–	–	–
South Dakota	–	–	–	–	–	–	–	–	2	5	–	–	1
Nebraska	–	–	–	–	–	–	–	–	1	2	–	–	–
Kansas	–	–	–	–	–	1	2	–	2	4	1	–	–
SOUTH ATLANTIC	41	1	13	–	1	8	4	1	28	183	20	–	21
Delaware	1	–	–	–	–	–	–	–	–	–	1	–	–
Maryland	1	–	1	–	–	–	1	–	4	10	1	–	3
District of Columbia	–	–	–	–	–	–	–	–	1	1	–	–	2
Virginia	2	–	1	–	–	–	–	–	4	5	2	–	6
West Virginia	–	–	10	–	–	–	1	–	–	1	2	–	–
North Carolina *	2	–	NN	–	1	1	2	–	6	16	1	–	4
South Carolina	3	–	1	–	–	–	–	–	–	3	–	–	–
Georgia	–	–	–	–	–	–	–	–	–	26	–	–	1
Florida	32	1	–	–	–	7	–	1	13	121	13	–	5
EAST SOUTH CENTRAL	31	–	9	–	–	6	–	–	16	75	1	–	4
Kentucky	2	–	8	–	–	–	–	–	4	39	–	–	3
Tennessee	1	–	NN	–	–	1	–	–	2	20	1	–	1
Alabama	28	–	1	–	–	–	–	–	6	7	–	–	–
Mississippi	–	–	–	–	–	5	–	–	4	9	–	–	–
WEST SOUTH CENTRAL	6	–	3	–	9	4	2	–	6	19	4	–	10
Arkansas	–	–	2	–	–	1	–	–	1	8	1	–	1
Louisiana	1	–	NN	–	–	1	–	–	–	3	2	–	1
Oklahoma *	5	–	1	–	–	2	2	–	5	8	1	–	3
Texas	---	---	---	---	9	---	–	---	---	---	---	---	5
MOUNTAIN	–	–	7	–	28	–	–	–	9	41	24	1	7
Montana *	–	–	–	–	–	–	–	–	–	2	–	–	–
Idaho	–	–	–	–	–	–	–	–	–	10	2	–	–
Wyoming	–	–	–	–	–	–	–	–	–	–	–	–	–
Colorado	–	–	1	–	–	–	–	–	4	1	16	1	5
New Mexico	–	–	4	–	10	–	–	–	–	18	–	–	1
Arizona	–	–	–	–	18	–	–	–	3	7	5	–	–
Utah	–	–	2	–	–	–	–	–	2	3	1	–	–
Nevada	–	–	–	–	–	–	–	–	–	–	–	–	1
PACIFIC	13	–	25	3	124	11	7	3	58	158	28	6	50
Washington	2	–	8	1	113	4	–	2	3	6	12	–	–
Oregon	1	–	4	–	–	1	–	1	2	12	2	–	1
California *	7	–	–	2	7	6	7	–	46	131	13	5	47
Alaska	–	–	7	–	4	–	–	–	6	5	–	–	–
Hawaii	3	–	6	–	–	–	–	–	1	4	1	1	2
Guam *	–	–	–	–	–	–	–	–	–	–	–	–	2
Puerto Rico	–	–	15	–	–	–	–	–	–	–	9	–	1
Virgin Islands	---	---	---	---	–	---	–	---	---	---	---	---	–

*Delayed reports: Aseptic meningitis: N.H. 1, Mo. delete 3
Chickenpox: Me. 3, N.H. 7, Mont. 6, Calif. 7, Guam 3
Encephalitis, primary: Mont. 2
Hepatitis B: N.H. 1, Guam 2
Hepatitis A: Me. 1, N.H. delete 1, N.C. delete 1, Okla. delete 1, Mont. 5, Guam 7
Hepatitis unspecified: Guam 6

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES FOR WEEKS ENDING AUGUST 24, 1974 AND AUGUST 25, 1973 (34th 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	107	19,579	23,999	16	938	1,012	332	43,846	64	134	9,536	56
NEW ENGLAND	3	908	7,340	1	51	46	30	5,839	5	12	954	1
Maine *	–	41	64	–	2	1	1	784	–	1	272	–
New Hampshire *	1	198	857	–	12	6	–	279	4	–	16	1
Vermont	–	57	118	–	2	3	–	28	–	–	18	–
Massachusetts	–	379	3,898	1	15	12	4	950	1	2	330	–
Rhode Island	–	59	603	–	7	3	22	2,383	–	–	19	–
Connecticut	2	174	1,800	–	13	21	3	1,415	–	9	299	–
MIDDLE ATLANTIC	40	7,952	2,419	4	138	136	21	3,515	5	14	1,040	5
Upstate New York	13	923	792	1	54	48	5	854	–	3	234	2
New York City	9	570	884	3	27	27	10	609	2	1	140	1
New Jersey	8	5,513	398	–	42	32	–	652	3	3	436	1
Pennsylvania	10	946	345	–	15	29	6	1,400	–	7	230	1
EAST NORTH CENTRAL	21	7,544	8,420	3	108	125	45	12,556	17	32	3,141	9
Ohio	2	3,023	279	1	37	54	6	3,098	–	3	490	2
Indiana	2	220	620	1	10	4	3	972	–	6	522	–
Illinois	7	1,950	2,037	–	10	24	5	1,087	10	3	497	3
Michigan	5	1,898	4,345	1	35	38	20	5,377	2	11	1,174	3
Wisconsin	5	453	1,139	–	16	5	11	2,022	5	9	458	1
WEST NORTH CENTRAL	–	685	436	–	71	79	12	2,668	3	–	208	9
Minnesota	–	83	19	–	22	7	1	41	–	–	11	1
Iowa	–	134	277	–	13	19	1	1,617	1	–	15	–
Missouri	–	261	49	–	18	32	6	381	2	–	34	2
North Dakota	–	28	58	–	3	3	1	30	–	–	11	3
South Dakota	–	27	–	–	3	4	–	2	–	–	25	–
Nebraska	–	2	6	–	3	7	3	81	–	–	6	–
Kansas	–	150	27	–	9	7	–	516	–	–	106	3
SOUTH ATLANTIC	25	505	1,193	4	188	172	171	5,355	6	45	1,092	12
Delaware	–	7	8	1	4	1	1	90	–	–	27	–
Maryland	–	22	12	–	18	23	5	107	–	–	4	–
District of Columbia	–	3	5	–	1	4	–	49	–	–	4	–
Virginia	11	33	414	1	30	31	2	560	2	1	41	3
West Virginia	10	167	198	–	7	4	12	2,896	–	18	205	–
North Carolina	–	5	4	–	40	36	NN	NN	4	–	53	3
South Carolina	–	48	58	–	16	12	1	110	–	12	590	1
Georgia	–	4	149	–	8	21	–	1	–	–	2	–
Florida	4	216	345	2	64	40	150	1,542	–	14	166	5
EAST SOUTH CENTRAL	1	204	595	1	98	91	20	5,478	1	14	524	2
Kentucky	1	140	367	–	38	32	5	2,201	–	7	188	–
Tennessee	–	34	165	–	44	37	8	2,407	1	6	263	1
Alabama	–	17	9	–	9	15	7	500	–	1	58	–
Mississippi	–	13	54	1	7	7	–	370	–	–	15	1
WEST SOUTH CENTRAL	1	181	662	1	156	158	2	3,042	3	3	314	6
Arkansas	–	6	69	–	11	13	–	127	2	–	8	–
Louisiana	–	13	84	1	33	34	–	201	1	–	58	3
Oklahoma	1	25	53	–	17	28	2	362	–	3	44	1
Texas	---	137	456	---	95	83	---	2,352	---	---	204	2
MOUNTAIN	3	728	715	1	29	32	5	1,031	2	4	398	–
Montana *	–	372	16	–	1	6	–	172	–	–	65	–
Idaho	–	51	252	–	2	4	–	156	–	1	14	–
Wyoming	–	1	80	–	3	–	–	9	–	–	–	–
Colorado	–	30	105	–	7	11	1	497	–	–	158	–
New Mexico	1	55	114	–	2	3	2	172	–	2	111	–
Arizona	–	15	19	1	5	4	–	–	–	–	–	–
Utah	2	5	128	–	6	2	1	20	2	1	17	–
Nevada	–	199	1	–	3	2	1	5	–	–	33	–
PACIFIC	13	872	2,219	1	99	173	26	4,362	22	10	1,865	12
Washington	1	63	1,008	–	11	17	3	1,525	8	1	333	1
Oregon	–	–	454	–	12	12	6	757	1	2	205	1
California	12	748	673	1	70	138	17	1,927	13	7	1,310	10
Alaska	–	–	65	–	3	6	–	97	–	–	–	–
Hawaii	–	61	19	–	3	–	–	56	–	–	17	–
Guam *	–	14	49	–	1	–	–	353	–	–	5	–
Puerto Rico	2	567	1,762	–	6	8	21	900	1	–	28	3
Virgin Islands	---	24	1	---	–	–	---	30	---	---	–	1

*Delayed reports: Mumps: N.H. 2, Mont. 1, Guam 4
Pertussis: N.H. 1
Rubella: Me. 2

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING AUGUST 24, 1974 AND AUGUST 25, 1973 (34th WEEK) – Continued

AREA	TUBERCULOSIS (New Active)		TULAREMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES						RABIES IN ANIMALS
								GONORRHEA			SYPHILIS (Pri. & Sec.)			
	1974	Cum. 1974	Cum. 1974	1974	Cum. 1974	1974	Cum. 1974	1974	Cumulative 1974	Cumulative 1973	1974	Cumulative 1974	Cumulative 1973	Cum. 1974
UNITED STATES	583	20,089	91	6	242	34	605	17,197	572,916	528,513	449	15,881	15,938	1,928
NEW ENGLAND	35	829	–	–	7	–	7	452	13,921	14,455	20	334	455	12
Maine	1	66	–	–	–	–	–	38	1,244	839	–	24	20	1
New Hampshire	–	19	–	–	1	–	–	17	484	490	–	9	5	2
Vermont	–	17	–	–	–	–	–	12	407	232	–	2	13	1
Massachusetts	18	446	–	–	3	–	5	222	5,781	6,856	7	134	208	4
Rhode Island	5	78	–	–	2	–	2	48	1,343	1,481	1	12	10	4
Connecticut	11	203	–	–	1	–	–	115	4,662	4,557	12	153	199	–
MIDDLE ATLANTIC	123	3,632	2	2	35	1	53	2,408	69,810	74,872	124	3,541	3,661	41
Upstate New York	9	508	2	–	6	–	26	504	13,184	13,193	7	329	228	15
New York City	68	1,418	–	2	23	–	1	999	30,493	34,684	62	2,040	2,264	–
New Jersey	22	686	–	–	5	1	4	278	9,501	10,529	25	570	643	15
Pennsylvania	24	1,020	–	–	1	–	22	627	16,632	16,466	30	602	526	11
EAST NORTH CENTRAL	93	2,754	5	2	22	1	19	3,187	84,141	61,944	42	1,172	867	144
Ohio	18	756	–	–	5	1	12	772	24,439	20,019	3	186	178	26
Indiana	23	408	–	–	1	–	1	446	8,830	7,526	3	129	197	11
Illinois	26	788	3	2	9	–	6	935	21,485	8,810	31	518	129	25
Michigan	23	729	–	–	6	–	–	738	20,392	19,097	2	267	311	2
Wisconsin	3	73	2	–	1	–	–	296	8,995	6,492	3	72	52	80
WEST NORTH CENTRAL	24	747	16	–	7	3	14	923	30,078	29,135	12	392	240	524
Minnesota	1	122	–	–	3	–	–	172	7,029	6,042	6	58	72	182
Iowa	2	82	–	–	1	–	1	114	3,820	4,058	–	24	58	95
Missouri *	17	361	11	–	1	–	9	298	9,555	9,758	6	263	85	24
North Dakota	–	17	2	–	–	–	–	24	458	440	–	3	1	86
South Dakota	1	38	3	–	–	1	1	55	1,434	1,447	–	2	4	91
Nebraska	1	32	–	–	–	–	–	99	2,546	2,921	–	8	4	4
Kansas	2	95	–	–	2	2	3	161	5,236	4,469	–	34	16	42
SOUTH ATLANTIC	113	4,239	8	–	31	24	348	5,124	147,926	132,255	151	5,108	4,700	251
Delaware	10	73	–	–	–	–	9	85	2,003	1,850	1	53	64	1
Maryland	–	538	–	–	2	2	41	616	15,396	11,279	5	490	472	19
District of Columbia	6	256	–	–	1	–	–	315	10,747	11,134	17	431	577	–
Virginia	12	527	3	–	1	14	119	502	12,809	13,219	14	555	509	65
West Virginia	4	193	–	–	8	–	4	49	1,695	1,960	–	9	17	24
North Carolina	20	662	3	–	3	3	89	529	19,407	19,283	17	628	387	29
South Carolina	9	413	–	–	3	5	50	425	15,257	13,649	20	568	727	3
Georgia	30	591	2	–	2	–	34	1,092	31,106	25,596	22	570	717	79
Florida	22	986	–	–	11	–	2	1,511	39,506	34,285	55	1,804	1,230	31
EAST SOUTH CENTRAL	62	1,798	9	1	37	4	86	1,566	49,115	44,428	30	823	1,001	178
Kentucky	6	402	2	–	14	2	13	187	6,099	5,359	8	191	359	111
Tennessee	27	563	5	1	17	2	55	669	19,376	16,955	12	325	291	41
Alabama	22	535	2	–	3	–	7	418	13,609	12,810	7	154	120	25
Mississippi	7	298	–	–	3	–	11	292	10,031	9,304	3	153	231	1
WEST SOUTH CENTRAL	26	2,356	40	–	21	1	69	657	76,380	72,352	8	1,471	1,824	435
Arkansas *	4	282	25	–	1	1	8	120	7,406	8,774	2	71	103	55
Louisiana *	18	341	2	–	8	–	1	264	15,722	15,116	5	413	550	21
Oklahoma	4	211	11	–	2	–	52	273	6,823	7,143	1	90	116	109
Texas *	---	1,522	2	---	10	---	8	---	46,429	41,319	---	897	1,055	250
MOUNTAIN	21	639	7	–	13	–	6	625	22,031	18,989	9	373	480	111
Montana *	3	54	–	–	–	–	1	48	1,218	1,082	–	3	3	5
Idaho	–	22	–	–	–	–	1	21	1,193	1,233	1	9	7	–
Wyoming	–	13	3	–	3	–	1	11	430	326	–	5	21	9
Colorado	1	115	–	–	–	–	1	163	6,142	5,092	1	84	143	27
New Mexico	8	135	2	–	2	–	1	114	3,274	3,347	–	51	56	36
Arizona *	5	227	–	–	6	–	–	208	6,528	5,436	6	145	98	33
Utah	3	33	2	–	–	–	1	20	1,195	998	1	12	9	1
Nevada	1	40	–	–	2	–	–	40	2,051	1,475	–	64	143	–
PACIFIC	86	3,095	4	1	69	–	3	2,255	79,514	80,083	53	2,667	2,710	232
Washington	7	216	–	–	12	–	1	---	6,958	7,330	---	53	102	–
Oregon	7	138	–	–	–	–	2	276	7,085	7,076	3	58	44	8
California	65	2,444	4	1	54	–	–	1,836	61,986	62,225	50	2,521	2,454	216
Alaska	–	56	–	–	2	–	–	96	1,790	1,942	–	11	52	8
Hawaii	7	241	–	–	1	–	–	47	1,695	1,510	–	24	58	–
Guam *	–	27	–	–	–	–	–	–	199	264	–	2	2	–
Puerto Rico	6	352	–	–	3	–	–	82	2,038	2,786	18	561	481	40
Virgin Islands	---	3	–	---	–	---	–	---	201	155	---	31	16	–

*Delayed reports: Tuberculosis: Texas delete 54
Tularemia: Ariz. delete 1
RMSF: Mo. 5

Gonorrhea: La. delete 1, Mont. 45, Guam 10
Rabies: Ark. delete 4

Week No. 34

TABLE IV. DEATHS IN 121 UNITED STATES CITIES FOR WEEK ENDING AUGUST 24, 1974

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

Area	All Causes					Pneumonia and Influenza All Ages
	All Ages	65 years and over	45-64 years	25-44 years	Under 1 year	
NEW ENGLAND	677	388	190	32	39	32
Boston, Mass.	174	92	49	11	12	5
Bridgeport, Conn.	42	25	14	–	3	1
Cambridge, Mass.	24	16	4	1	1	5
Fall River, Mass.	19	7	9	1	2	–
Hartford, Conn.	63	34	23	3	2	2
Lowell, Mass.	24	14	7	–	2	–
Lynn, Mass.	30	21	7	–	1	1
New Bedford, Mass.	27	18	6	2	–	–
New Haven, Conn.	41	21	11	4	2	–
Providence, R. I.	85	43	23	5	10	4
Somerville, Mass.	7	6	1	–	–	3
Springfield, Mass.	45	34	8	2	1	5
Waterbury, Conn.	26	14	10	–	2	–
Worcester, Mass.	70	43	18	3	1	6
MIDDLE ATLANTIC	2,753	1,619	746	189	92	82
Albany, N. Y.	46	24	14	5	1	–
Allentown, Pa.	22	14	7	1	–	–
Buffalo, N. Y.	100	57	32	5	4	9
Camden, N. J.	39	23	8	1	3	4
Elizabeth, N. J.	25	11	10	3	–	1
Erie, Pa.	37	25	8	2	1	2
Jersey City, N. J.	33	22	10	1	–	1
Newark, N. J.	81	36	23	12	4	3
New York City, N. Y. †	1,427	849	370	111	49	44
Paterson, N. J.	30	19	8	–	–	2
Philadelphia, Pa.	389	206	118	29	17	4
Pittsburgh, Pa.	144	76	50	5	4	3
Reading, Pa.	41	33	6	2	–	–
Rochester, N. Y.	127	87	26	5	3	3
Schenectady, N. Y.	20	12	6	2	–	–
Scranton, Pa.	30	24	5	1	–	–
Syracuse, N. Y.	86	52	27	2	3	1
Trenton, N. J.	29	14	12	1	1	–
Utica, N. Y.	26	20	2	–	2	3
Yonkers, N. Y.	21	15	4	1	–	2
EAST NORTH CENTRAL	2,339	1,298	691	154	109	48
Akron, Ohio	84	49	24	4	2	–
Canton, Ohio	44	27	15	–	2	–
Chicago, Ill.	624	337	181	52	26	16
Cincinnati, Ohio	120	69	34	4	6	–
Cleveland, Ohio	228	103	88	15	20	2
Columbus, Ohio	133	82	32	8	7	3
Dayton, Ohio	104	67	25	3	7	1
Detroit, Mich.	286	142	100	26	8	4
Evansville, Ind.	42	23	16	1	2	3
Fort Wayne, Ind.	56	28	15	4	4	5
Gary, Ind.	24	11	5	3	3	3
Grand Rapids, Mich.	53	26	16	5	3	3
Indianapolis, Ind.	132	76	33	9	7	2
Madison, Wis.	32	20	8	2	–	–
Milwaukee, Wis.	101	69	26	3	1	1
Peoria, Ill.	37	19	11	3	4	–
Rockford, Ill.	36	21	9	3	–	1
South Bend, Ind.	42	21	17	2	1	1
Toledo, Ohio	94	66	21	4	1	3
Youngstown, Ohio	67	42	15	3	5	–
WEST NORTH CENTRAL	738	434	182	55	36	14
Des Moines, Iowa	49	34	7	4	2	1
Duluth, Minn.	21	11	7	1	1	–
Kansas City, Kans.	24	16	5	2	–	–
Kansas City, Mo.	151	94	35	9	5	2
Lincoln, Nebr.	22	16	3	1	–	1
Minneapolis, Minn.	103	57	29	6	9	1
Omaha, Nebr.	83	43	22	9	4	–
St. Louis, Mo.	179	97	48	17	13	1
St. Paul, Minn.	71	44	17	3	1	3
Wichita, Kans.	35	22	9	3	1	5

Area	All Causes					Pneumonia and Influenza All Ages
	All Ages	65 years and over	45-64 years	25-44 years	Under 1 year	
SOUTH ATLANTIC	1,119	607	332	88	40	37
Atlanta, Ga.	136	59	48	13	7	1
Baltimore, Md.	214	107	73	20	6	2
Charlotte, N. C.	51	27	14	5	2	–
Jacksonville, Fla.	98	63	27	4	1	4
Miami, Fla.	119	64	33	7	6	2
Norfolk, Va.	40	18	18	2	1	1
Richmond, Va.	86	44	28	8	1	7
Savannah, Ga.	28	17	8	2	1	4
St. Petersburg, Fla.	86	68	17	–	1	5
Tampa, Fla.	84	56	16	6	2	6
Washington, D. C.	137	63	39	19	8	2
Wilmington, Del.	40	21	11	2	4	3
EAST SOUTH CENTRAL	686	384	175	65	28	29
Birmingham, Ala.	106	56	25	9	10	2
Chattanooga, Tenn.	42	27	8	3	3	6
Knoxville, Tenn.	35	20	11	2	1	–
Louisville, Ky.	125	70	34	13	5	11
Memphis, Tenn.	159	84	42	20	4	2
Mobile, Ala.	70	40	16	7	4	1
Montgomery, Ala.	54	32	12	5	–	2
Nashville, Tenn.	95	55	27	6	1	5
WEST SOUTH CENTRAL	1,123	600	296	99	49	21
Austin, Tex.	44	28	11	1	–	3
Baton Rouge, La.	51	29	12	5	–	1
Corpus Christi, Tex.	30	17	3	2	3	–
Dallas, Tex.	152	73	50	12	8	1
El Paso, Tex.	51	27	10	6	2	2
Fort Worth, Tex.	84	52	17	6	3	–
Houston, Tex.	277	132	92	31	9	2
Little Rock, Ark.	40	24	13	1	1	1
New Orleans, La.	135	63	38	16	8	1
San Antonio, Tex.	142	75	30	11	12	1
Shreveport, La.	45	26	12	5	–	4
Tulsa, Okla.	72	54	8	3	3	5
MOUNTAIN	518	285	131	40	24	15
Albuquerque, N. Mex.	44	22	10	1	4	4
Colorado Springs, Colo.	17	11	3	1	1	3
Denver, Colo.	125	58	44	11	2	2
Las Vegas, Nev.	23	15	4	3	–	–
Ogden, Utah	20	11	6	2	1	1
Phoenix, Ariz.	138	79	38	8	8	1
Pueblo, Colo.	22	14	3	2	–	3
Salt Lake City, Utah	65	37	12	5	7	1
Tucson, Ariz.	64	38	11	7	1	–
PACIFIC	1,532	917	416	93	49	31
Berkeley, Calif.	18	13	2	2	–	–
Fresno, Calif.	61	32	17	3	5	2
Glendale, Calif.	18	12	4	2	–	–
Honolulu, Hawaii	48	26	16	2	2	–
Long Beach, Calif.	107	68	32	5	2	1
Los Angeles, Calif.	437	253	129	28	9	5
Oakland, Calif.	61	39	13	4	3	1
Pasadena, Calif.	27	20	5	2	–	1
Portland, Oreg.	126	76	39	3	1	4
Sacramento, Calif.	65	36	21	4	3	1
San Diego, Calif.	112	64	32	7	4	2
San Francisco, Calif.	179	109	43	15	5	8
San Jose, Calif.	59	39	15	4	–	3
Seattle, Wash.	129	78	25	7	14	1
Spokane, Wash.	50	32	12	4	1	1
Tacoma, Wash.	35	20	11	1	–	1
Total	11,485	6,532	3,159	815	466	309
Expected Number	11,602	6,681	3,161	807	430	333

†Delayed report for week ending Aug. 17, 1974.

ST. LOUIS ENCEPHALITIS – Continued

house sparrows. On June 25 intensified larvacide and adulticide of mosquitoes was begun in areas of Memphis known to be heavily infested. A total of 18,000 gallons of 95% malathion were sprayed over the next 2 months in an attempt to avert or lessen an epidemic. As soon as human cases were confirmed, ground spraying of 95% malathion was initiated in all urban areas of Memphis and Shelby County.

(Reported by Alan L. Bisno, M.D., Director, Infectious Diseases, Department of Medicine, University of Tennessee College of Medicine; Robert C. Rendtorff, M.D., Director, Division of Communicable Diseases, I.K. Mosley, Director, Field Services Division, Harold Carver, Administrative Assistant, and Irene Duncan, R.N., Supervisor, Communicable Diseases, Memphis-Shelby County Health Department; Robert H. Hutcheson, Jr., M.D., M.P.H., State Epidemiologist; the Arbovirus Reference Branch, Vector-borne Diseases Division, and the Virology Division, Bureau of Laboratories, CDC; a Public Health Advisor; and an EIS Officer.)

Table 1
Hemagglutination Inhibition (HI) Titers to St. Louis Encephalitis Virus in 6 Patients Memphis, Tennessee, August 1974

Case No.	Serum Specimen	
	Acute	Convalescent
1	1:20	1:160
2	1:40	1:160
3	1:20	1:160
4	1:10	1:80
5	1:10	1:80
6	1:10	1:40

Reference

1. Sudia WD, Fowinkle E, Coleman BH: St. Louis Encephalitis in Memphis, Tennessee, 1964. J Med Entomol 4:77-79, 1967

ILLNESS ASSOCIATED WITH TCDD-CONTAMINATED SOIL – Missouri

In 1972 the Missouri Division of Health and CDC investigated a horse arena in eastern Missouri where 54 of 57 horses exposed to the arena had died of an illness characterized by skin lesions, severe weight loss, and hepatotoxicity. Birds, dogs, cats, insects, and rodents were also found dead in and around the arena, and one 6-year-old girl exposed developed hemorrhagic cystitis. Urine cultures for bacterial and viral pathogens were negative. Immediately prior to the onset of illness, the arena had been sprayed with salvage motor oil for dust control.

Similar horse illnesses and deaths occurred in 2 other horse arenas in the eastern Missouri area sprayed by the same salvage oil company. The 3 arenas had been sprayed within 1 month of each other. Subsequent to investigation, soil from all 3 arenas was excavated and disposed. No further problems have occurred since these excavations.

Recent results from laboratory analysis of soil samples taken from the initial arena implicate 2,4,5-trichlorophenol and 2,3,7,8-tetrachlorodibenzodioxin (TCDD) as the probable toxic substances. TCDD is a waste byproduct in the synthesis of trichlorophenol and the herbicide 2,4,5-trichlorophenoxyacetic acid. An investigation is underway to determine the source and extent of the TCDD disposal.

(Reported by H. Denny Donnell, Jr., M.D., State Epidemiologist, and Pat Phillips, D.V.M., Division of Health, Missouri Department of Health and Welfare; the Toxicology Branch, Clinical Chemistry Division, Bureau of Laboratories, and the Cancer and Birth Defects Division, Bureau of Epidemiology, CDC; and 2 EIS Officers.)

Editorial Note

TCDD is a very persistent chemical and a potent contact poison *(1)*. Its acute oral LD-50 for rabbits, mice, guinea pigs, and other species is in the microgram-per-kilogram range. TCDD may cause chloracne and liver damage in humans, chick-edema disease in chickens, and porphyria cutanea tarda in animals and perhaps man. It has been shown to be teratogenic in some mice strains and has also a general embryotoxic effect.

Reference

1. Kimbrough RD: Toxicity of chlorinated hydrocarbons and related compounds. Arch Environ Health 25:125-131, 1972

TULAREMIA MIMICKING PLAGUE – New Mexico

On May 19, 1974, a 39-year-old man from Coolidge, New Mexico, developed rhinorrhea, headache, generalized malaise, and a fever of 103°F. He was seen by a physician at a Gallup outpatient clinic and given long-acting penicillin intramuscularly. His symptoms improved until May 24, when he developed a tender swelling at the anterior axillary line. On June 6 physical examination revealed a rectal temperature of 100°F and 2 right para-axillary and 3 right epitrochlear tender lymph nodes.

An interview revealed that 1 day prior to the onset of his illness, the man had shot a prairie dog near Coolidge. He took the carcass to his wife, who skinned and dressed the animal. Both the man and his wife ate some of the meat after it had been cooked for 2 hours over a wood fire. Bubonic plague was suspected, and the patient was hospitalized.

A direct smear of lymph node aspirate stained by Gram's method and with *Yersinia pestis* fraction 1 specific fluorescent antibody did not reveal suspicious organisms. Cultures of blood, sputum, and lymph node aspirate were negative for *Y. pestis*. Table 2 gives the results of serologic tests performed on a serum specimen obtained on June 6.

The patient denied a history of recent insect bites, tick attachments, or carbuncles. He repeatedly denied having skinned or dressed rabbits or other small mammals. The

Table 2
Results of Serologic Tests for Plague and Tularemia June 6, 1974

	Tube Agg. Titer	PHA* Titer
Plague	Negative	Negative
Tularemia	1:320	1:8192

*Passive hemagglutination

TULAREMIA – Continued

prairie dog meat which he and his wife had eaten was reportedly well-cooked. Although the patient's history of exposure to a dead rodent in a plague enzootic area suggested that his illness was bubonic plague, the clinical and serologic evidence is compatible with the glandular form of tularemia. *(Reported by James Cox, M.D., Indian Health Service Hospital, Gallup, New Mexico; the Vector-borne Diseases Division, Bureau of Laboratories, CDC; and an EIS Officer.)*

Editorial Note

The differentiation between human plague and tularemia may be difficult if the patient resides in or has traveled to an area where both diseases are known to be enzootic. This patient lived in an area where *Y. pestis* has recently been recovered from prairie dog fleas *(1)* and where cases of bubonic plague were occurring *(2)*. The patient's history of exposure to a dead prairie dog, followed by an acute illness with fever and painful lymphadenopathy, suggested that his illness was bubonic plague. However, the clinical and serologic evidence revealed that the man probably had acute tularemia. Several patients were recently described with suspect tularemia whose illnesses were retrospectively diagnosed as plague *(3)*.

Careful questioning of a patient regarding possible exposures may be helpful in establishing the correct diagnosis. If the patient admits to recent contact with feral mammals, one should establish the degree of exposure; tularemia usually does not occur unless the person has skinned, dressed, or ingested inadequately cooked meat from the animal. A history of tick attachment distal to the site of lymphadenopathy would be more compatible with tularemia than plague.

The initial skin lesion associated with plague, although unusual, may be a papulovesicular lesion or an ulcer with violaceous borders, usually located peripherally. A skin ulcer at the portal of entry is more common with tularemia; 70-80% of patients with tularemia develop the ulceroglandular form of the disease.

The serologic test for tularemia agglutinins is not helpful in the early diagnosis of tularemia since titers are almost routinely negative during the first week of the disease. *Francisella tularensis* grows well on blood dextrose cystine agar, but not on media commonly used for isolation of clinical pathogens. Demonstration of bipolar staining bacilli in exudate from a skin lesion or lymph node aspirate using Giemsa or polychromatic stains furnishes early presumptive evidence of plague infection. When cultures of lymph node, skin lesion, or blood specimens do not yield *Y. pestis*, tularemia and other infections presenting with the abrupt onset of fever and lymphadenopathy should be considered.

References

1. Barnes AM, Poland JD: Personal communication
2. Center for Disease Control: Morbidity and Mortality Weekly Rep 23(26):231-232, 29 June 1974
3. Sites VR, Poland JD, Hudson BW: Bubonic plague misdiagnosed as tularemia. Retrospective serologic diagnosis. JAMA 222:1642-1643, 1972

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The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials.

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