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WEEKLY REPORT

For Week Ending February 28, 1976

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

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CONTENTS

EPIDEMIOLOGIC NOTES AND REPORTS

ANGIOSARCOMA OF THE LIVER – Wisconsin

In the period June 1973-November 1975, 4 cases of angiosarcoma of the liver (ASL) were diagnosed at the Marshfield Clinic, Marshfield, Wisconsin. One was based on hepatic arteriography and 3 on tissue findings later confirmed by pathologic review at the National Cancer Institute (NCI).

An additional 6 cases, confirmed on pathologic review at NCI and identified through a national ASL case surveillance project initiated at CDC in 1974, have been diagnosed since 1964 in Wisconsin residents. This total of 10 cases is roughly twice as large as might be expected (5.5 cases), based on CDC surveillance estimates of crude ASL incidence for the entire United States. (Five additional cases had been reported for Wisconsin; 4 were not confirmed, and 1 was in a resident of another state.)

In view of this relative frequency of cases, together with the recent succession of cases at the Marshfield Clinic, epidemiologic information concerning each of these 10 cases

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

DISEASE	WEEK ENDING		MEDIAN 1971-1975	CUMULATIVE, FIRST 8 WEEKS		
	February 28 1976	February 22 1975		February 28 1976	February 22 1975	MEDIAN 1971-1975
Aseptic meningitis	28	35	33	307	292	292
Brucellosis	7	2	2	38	21	15
Chickenpox	5,764	4,311	---	39,288	29,693	---
Diphtheria	4	14	6	62	64	23
Encephalitis, Primary	13	17	15	129	96	120
Encephalitis, Post-Infectious	4	7	5	32	33	33
Hepatitis, Viral, Type B	242	210	172	1,935	1,568	1,314
Hepatitis, Viral, Type A	726	707	890	5,409	5,428	7,619
Hepatitis, Viral, Type unspecified	133	150		1,365	1,123	
Malaria	3	6	6	43	42	42
Measles (rubeola)	805	578	622	4,318	2,668	4,767
Meningococcal infections, total	53	41	41	284	270	270
Civilian	53	41	40	281	263	263
Military	–	–	1	3	7	9
Mumps	1,366	1,425	1,892	9,366	11,136	14,246
Pertussis	22	24	---	194	201	---
Rubella (German measles)	449	285	645	1,870	1,837	3,534
Tetanus	2	–	–	6	9	8
Tuberculosis	570	505	---	4,572	4,105	---
Tularemia	1	1	1	21	8	13
Typhoid fever	3	2	4	58	29	37
Typhus, tick-borne (Rky. Mt. spotted fever)	–	–	–	3	10	9
Venereal Diseases:						
Gonorrhea, Civilian	18,313	17,273	---	151,748	141,258	---
Gonorrhea, Military	562	419	---	4,708	4,776	---
Syphilis, primary and secondary, Civilian	528	531	---	4,132	3,938	---
Syphilis, primary and secondary, Military	8	3	---	64	52	---
Rabies in animals	39	45	56	249	284	448

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	2	Poliomyelitis, total:	2
Botulism:	4	Paralytic: N.Y.C. 1.	2
Congenital rubella syndrome:	5	Psittacosis: Ohio 1, Calif. 3	19
Leprosy: Pa. 1, Calif. 2	20	Rabies in man:	–
Leptospirosis:	7	Trichinosis: N.J. 1	33
Plague:	–	Typhus, murine: Tex. 1	2

†Delayed Report for week ending 2/21/76

ANGIOSARCOMA – Continued

has been assembled through medical record review and family interview (Table 1). Particular attention has been given to potential occupational or environmental exposure to chemicals known to induce ASL (vinyl chloride, arsenic, and thorium dioxide).

Most cases (7 of 10) were diagnosed since 1970, probably reflecting better case ascertainment in recent years. Ages ranged from 36-71 (mean age 58 years). All but 1 patient were male, and all but 1 were white. Places of usual residence for all cases were widely scattered across the state, roughly corresponding with the state's population (Figure 1).

One patient had a history of prior thorium dioxide exposure. For none of the remaining cases was tumor etiology obvious. Occupations and histories of exposure to potential environmental toxins differed widely, with no more than 1 case associated with any particular industry or mode of exposure. In several instances, however, individual patient occupations or exposures were suggestive of possible oncogenicity (Table 1). Patient 10 had had exposure to a vinyl compound; he had worked in paper and plywood products with potential contact with various chemicals, including polyvinyl acetate. Two other patients gave histories of possible exposure to arsenic: patient 9, who had exposure to insecticides while farming, and patient 8, who worked with wood probably treated with arsenic preservatives in the manufacture of bleachers. All but 3 of the 10 patients were known to have lived on farms during their lifetimes, 2 for all of their lives (Table 1).

(Reported by J Fiechtner, MD, C Reyes, MD, Marshfield Clinic; K Rentmesster, MPH, HG Skinner, MD, State Epidemiologist, Wisconsin State Dept of Health and Social Services; Office of Extramural Coordination and Special Projects, National Institute of Safety and Health; and the Cancer and Birth Defects Div, Bur of Epidemiology, CDC.)

Editorial Note

These data indicate no obvious common-source origins among recent cases of ASL in Wisconsin. The marked male preponderance among cases, however, suggests occupational exposure as the potential origin for at least some of the cases. Anecdotal histories of occupational and environmental exposures in several of the cases may warrant further investigation, particularly in relation to contact with arsenic. Although at present only vinyl chloride monomer (*1*), thorium dioxide (*2*), and arsenic (*3,4*) are clearly implicated as causes of ASL, investigations such as the one described here may well provide useful leads in defining further causes.

Figure 1
GEOGRAPHIC DISTRIBUTION OF CONFIRMED CASES OF ANGIOSARCOMA OF THE LIVER IN WISCONSIN RESIDENTS, 1964-1975, BY PLACE OF USUAL RESIDENCE

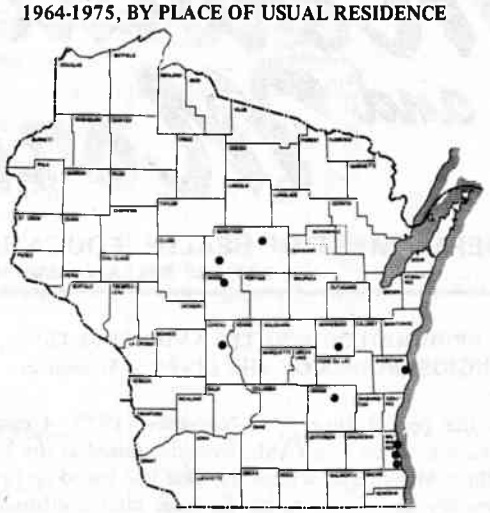

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Table 1
Cases of ASL in Wisconsin Residents 1964–1975

Case Number	Month and Year Diagnosis	Month and Year Death	Usual Town Of Residence	Age at Diagnosis	Race	Sex	Occupation	Comments	Farm Residence
1	4/64	2/65	Sheybogan	71	W	M	University Teacher	Lived near a chemical company which made plastics and resin	Youth
2	2/67	2/67	Oshkosh	61	W	M	Foundry Welder	Exposure to welding materials and resins	None
3	6/67	6/67	Necedah	36	W	F	Secretary	Infectious hepatitis in childhood, mother and sister had liver disease	Youth
4	7/71	7/71	Milwaukee	68	B	M	Hog Scalder		None
5	4/72	4/72	Milwaukee	64	W	M	Unknown	Exposure to thorium dioxide	Unknown
6	4/74	6/74	Brown Deer	46	W	M	Lutheran Pastor	Lived near a paper mill, 1955-1959	Youth
7	7/74	7/74	Wausau	57	W	M	Rock Crusher; Glue-Liner for rubber raincoats, 1940s	Exposure to silica dust, rubber cement	Youth
8	9/74	9/74	Waupun	46	W	M	Postal Mail Carrier formerly employed by company that made bleachers	Contact with lumber, paints, wood preservatives, (ammoniacal-copper-arsenate wood preservative) (?)	Lifetime
9	8/74	8/74	Stratford	66	W	M	Retired Farmer	No tissue diagnosis; ASL diagnosed by hepatic arteriography	Lifetime
10	11/75	11/75	Marshfield	65	W	M	Press operator for paper and plywood company (23 years)	Contact with wood, plywood, glues, polyvinyl acetate, others	Youth

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES FOR WEEKS ENDING FEBRUARY 28, 1976 AND FEBRUARY 22, 1975 (8th WEEK)

AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	CHICKENPOX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS, VIRAL			MALARIA	
						Primary: Arthropod-borne and Unspecified		Post Infectious	Type B	Type A	Type Unspecified		
	1976	1976	1976	1976	Cum. 1976	1976	1975	1976	1976	1976	1976	1976	Cum. 1976
UNITED STATES	28	7	5,764	4	62	13	17	4	242	726	133	3	43
NEW ENGLAND	1	–	192	–	–	1	1	–	3	19	6	–	4
Maine	–	–	5	–	–	–	–	–	–	1	–	–	–
New Hampshire*	–	–	6	–	–	–	–	–	–	2	–	–	–
Vermont	–	–	32	–	–	–	–	–	–	–	–	–	–
Massachusetts	–	–	70	–	–	1	1	–	1	6	6	–	3
Rhode Island	–	–	–	–	–	–	–	–	–	6	–	–	–
Connecticut	1	–	79	–	–	–	–	–	2	4	–	–	1
MIDDLE ATLANTIC	5	–	140	–	–	1	2	–	67	76	20	1	8
Upstate New York	3	–	45	–	–	–	2	–	11	23	5	1	2
New York City	1	–	75	–	–	–	–	–	23	28	–	–	5
New Jersey	–	–	NN	–	–	–	–	–	22	6	13	–	–
Pennsylvania*	1	–	20	–	–	1	–	–	11	19	2	–	1
EAST NORTH CENTRAL	2	1	2,736	–	–	3	3	–	38	116	5	–	1
Ohio	–	1	499	–	–	2	1	–	6	53	–	–	1
Indiana	–	–	203	–	–	–	–	–	2	11	–	–	–
Illinois	1	–	500	–	–	–	–	–	5	13	–	–	–
Michigan	1	–	941	–	–	1	2	–	17	36	5	–	–
Wisconsin	–	–	593	–	–	–	–	–	8	3	–	–	–
WEST NORTH CENTRAL	3	1	1,316	–	2	–	1	1	8	25	13	–	–
Minnesota	–	–	29	–	–	–	–	–	1	2	–	–	–
Iowa	–	1	481	–	–	–	–	1	3	3	1	–	–
Missouri*	3	–	166	–	–	–	1	–	2	13	11	–	–
North Dakota	–	–	1	–	–	–	–	–	–	1	–	–	–
South Dakota	–	–	1	–	2	–	–	–	–	2	–	–	–
Nebraska	–	–	53	–	–	–	–	–	2	1	1	–	–
Kansas	–	–	585	–	–	–	–	–	–	3	–	–	–
SOUTH ATLANTIC	2	1	594	–	–	1	2	–	40	123	22	–	7
Delaware	–	–	4	–	–	1	–	–	–	–	2	–	–
Maryland	–	–	34	–	–	–	–	–	7	8	2	–	–
District of Columbia	–	–	10	–	–	–	–	–	1	–	–	–	2
Virginia*	–	1	46	–	–	–	2	–	7	7	5	–	2
West Virginia	–	–	262	–	–	–	–	–	–	8	–	–	–
North Carolina	–	–	NN	–	–	–	–	–	10	11	3	–	1
South Carolina*	–	–	13	–	–	–	–	–	1	10	5	–	–
Georgia	–	–	–	–	–	–	–	–	–	36	–	–	–
Florida	2	–	225	–	–	–	–	–	14	43	5	–	2
EAST SOUTH CENTRAL	–	–	100	–	–	–	–	–	5	67	2	–	1
Kentucky	–	–	99	–	–	–	–	–	3	42	2	–	–
Tennessee	–	–	NN	–	–	–	–	–	1	18	–	–	–
Alabama	–	–	–	–	–	–	–	–	–	4	–	–	–
Mississippi	–	–	1	–	–	–	–	–	1	3	–	–	1
WEST SOUTH CENTRAL	6	–	325	–	–	2	1	1	17	113	39	–	–
Arkansas	–	–	–	–	–	–	–	1	2	9	1	–	–
Louisiana*	1	–	NN	–	–	1	1	–	5	13	4	–	–
Oklahoma	–	–	95	–	–	1	–	–	4	35	8	–	–
Texas*	5	–	230	–	–	–	–	–	6	56	26	–	–
MOUNTAIN	–	–	109	–	3	–	2	–	9	35	3	–	1
Montana	–	–	3	–	–	–	1	–	2	–	–	–	–
Idaho	–	–	25	–	–	–	1	–	1	–	–	–	–
Wyoming	NA	NA	NA	NA	–	NA	–	–	NA	NA	NA	NA	–
Colorado	–	–	63	–	3	–	–	–	3	3	1	–	–
New Mexico	–	–	1	–	–	–	–	–	–	10	–	–	–
Arizona	–	–	–	–	–	–	–	–	2	20	2	–	–
Utah	–	–	17	–	–	–	–	–	–	1	–	–	–
Nevada	–	–	–	–	–	–	–	–	1	1	–	–	1
PACIFIC	9	4	252	4	57	5	5	2	55	152	23	2	21
Washington	1	–	191	4	57	–	–	–	5	15	8	–	1
Oregon	–	–	–	–	–	–	–	–	8	19	1	–	1
California*	3	2	–	–	–	3	3	–	37	91	14	2	19
Alaska	2	2	50	–	–	2	2	–	4	19	–	–	–
Hawaii	3	–	11	–	–	–	–	2	1	8	–	–	–
Guam	–	–	–	–	–	–	–	–	–	–	–	–	–
Puerto Rico	–	–	10	–	–	–	–	–	4	–	7	–	1
Virgin Islands	–	–	–	–	–	–	–	–	1	–	–	–	–

NN: Not Notifiable NA: Not Available

*Delayed Reports: Asept. Menig: Pa. 2 (1975), Vir. delete 3, Tex. delete 2; Chickenpox: Mo. 1, Calif. 22; Encep. Primary: Pa. 3 (1975), Mo. 10 (1975), 1 (1976); Hep. B.: Pa. 2 (1975), Mo. delete 1, S. Carolina 1, La. delete 1; Hep. A.: N.H. 1, Pa. 7 (1975), Mo. delete 1, S. Carolina delete 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES FOR WEEKS ENDING FEBRUARY 28, 1976 AND FEBRUARY 22, 1975 (8th WEEK) – Continued

AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1976	Cumulative		1976	Cumulative		1976	Cum. 1976	1976	1976	Cum. 1976	Cum. 1976
		1976	1975		1976	1975						
UNITED STATES	805	4,318	2,668	53	284	270	1,366	9,366	22	449	1,870	6
NEW ENGLAND	55	73	29	2	13	13	41	417	-	7	37	-
Maine	-	-	2	-	-	1	-	24	-	-	-	-
New Hampshire	-	-	12	1	1	1	-	18	-	1	3	-
Vermont	-	-	-	-	-	-	-	-	-	-	-	-
Massachusetts	-	2	7	1	4	4	4	69	-	3	12	-
Rhode Island	-	12	1	-	2	2	13	161	-	-	3	-
Connecticut	55	59	7	-	6	5	24	145	-	3	19	-
MIDDLE ATLANTIC	84	583	156	5	25	21	100	629	4	35	337	-
Upstate New York	58	301	42	1	7	9	12	112	3	6	29	-
New York City	9	35	17	2	9	3	43	264	-	-	18	-
New Jersey	11	46	65	-	3	2	38	139	-	28	267	-
Pennsylvania	6	201	32	2	6	7	7	114	1	1	23	-
EAST NORTH CENTRAL	222	1,488	1,128	5	35	36	574	3,740	4	109	622	-
Ohio	-	2	19	1	20	7	143	566	-	12	47	-
Indiana	57	298	67	-	1	-	41	414	-	15	96	-
Illinois	14	127	277	-	1	6	73	446	2	42	125	-
Michigan	16	311	443	4	12	18	189	1,386	2	27	249	-
Wisconsin	135	750	322	-	1	5	128	928	-	13	105	-
WEST NORTH CENTRAL	19	77	627	3	30	20	197	1,117	4	38	99	1
Minnesota	1	12	-	-	2	1	110	289	-	2	6	-
Iowa *	1	10	6	-	5	4	55	372	-	-	1	-
Missouri	3	4	33	-	4	12	22	110	4	-	14	-
North Dakota	-	1	151	-	-	-	8	47	-	-	1	1
South Dakota	-	-	174	-	1	-	-	-	-	-	1	-
Nebraska	1	32	144	-	2	1	2	32	-	-	1	-
Kansas	13	18	119	3	16	2	-	267	-	36	75	-
SOUTH ATLANTIC	21	465	40	17	62	47	184	876	2	173	360	2
Delaware *	7	24	-	-	-	1	-	8	-	2	4	-
Maryland	2	235	-	2	4	1	30	221	-	-	-	1
District of Columbia	-	1	-	-	-	1	5	26	-	-	-	-
Virginia	1	4	5	1	2	8	15	107	-	31	39	-
West Virginia	1	48	27	1	3	-	19	200	1	7	120	-
North Carolina *	-	1	-	-	13	9	93	197	1	-	7	-
South Carolina	-	1	-	-	6	8	2	8	-	133	183	-
Georgia	-	-	-	4	5	7	-	-	-	-	-	-
Florida	10	151	8	9	29	12	20	109	-	-	7	1
EAST SOUTH CENTRAL	9	132	29	3	16	44	64	564	2	8	38	1
Kentucky	9	127	20	-	2	14	12	219	-	7	11	1
Tennessee	-	1	7	2	8	17	50	281	2	1	27	-
Alabama	-	-	-	1	4	8	2	51	-	-	-	-
Mississippi	-	4	2	-	2	5	-	13	-	-	-	-
WEST SOUTH CENTRAL	61	260	34	11	51	55	71	571	3	19	95	1
Arkansas	-	-	-	-	2	4	-	9	1	-	-	-
Louisiana	-	5	-	-	4	13	2	5	-	-	30	1
Oklahoma	7	182	10	1	11	3	37	171	-	1	23	-
Texas	54	73	24	10	34	35	32	386	2	18	42	-
MOUNTAIN	283	970	190	-	15	7	41	395	-	23	53	-
Montana	-	19	-	-	1	2	1	7	-	-	1	-
Idaho	85	345	2	-	-	-	17	216	-	-	4	-
Wyoming	NA	-	-	-	-	-	NA	-	NA	NA	-	-
Colorado	1	19	186	-	8	3	9	39	-	-	4	-
New Mexico	-	3	-	-	1	1	2	68	-	-	3	-
Arizona	16	17	1	-	3	1	-	-	-	-	-	-
Utah	177	562	-	-	2	-	5	57	-	22	39	-
Nevada	4	5	1	-	-	-	7	8	-	1	2	-
PACIFIC	51	270	435	7	37	27	94	1,057	3	37	229	1
Washington	18	25	10	2	8	3	40	477	-	12	45	-
Oregon	-	2	46	-	2	-	21	100	-	1	22	1
California	33	241	379	5	26	24	30	472	3	24	157	-
Alaska	-	-	-	-	-	-	3	5	-	-	-	-
Hawaii	-	2	-	-	1	-	-	3	-	-	5	-
Guam	-	4	2	-	1	-	-	1	-	-	-	-
Puerto Rico	9	21	87	-	1	1	30	162	7	1	4	1
Virgin Islands	-	-	2	-	-	-	5	18	-	-	-	-

NA: Not Available

*Delayed Reports: Measles: Iowa 1 (1975), Del. 9, N. Carolina delete 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING FEBRUARY 28, 1976 AND FEBRUARY 22, 1975 (8th WEEK) – Continued

AREA	TUBERCULOSIS		TULA-REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (RMSF)		VENEREAL DISEASES (Civilian Cases Only)						RABIES IN ANIMALS
								GONORRHEA			SYPHILIS (Pri. & Sec.)			
	1976	Cum. 1976	Cum. 1976	1976	Cum. 1976	1976	Cum. 1976	1976	Cumulative 1976	Cumulative 1975	1976	Cumulative 1976	Cumulative 1975	Cum. 1976
UNITED STATES	570	4,572	21	3	58	–	3	18,313	151,748	141,258	528	4,132	3,938	249
NEW ENGLAND	24	193	–	–	9	–	–	599	4,258	3,972	13	103	138	6
Maine*	–	9	–	–	–	–	–	50	402	282	1	6	3	6
New Hampshire	3	9	–	–	2	–	–	13	89	117	–	–	5	–
Vermont	–	6	–	–	–	–	–	10	93	63	–	1	2	–
Massachusetts	15	118	–	–	6	–	–	300	2,017	1,849	11	70	91	–
Rhode Island	–	14	–	–	–	–	–	47	288	317	1	5	2	–
Connecticut	6	37	–	–	1	–	–	179	1,369	1,344	–	21	35	–
MIDDLE ATLANTIC	75	656	–	1	12	–	–	2,054	15,126	16,705	97	684	779	–
Upstate New York	27	107	–	–	2	–	–	376	2,263	3,366	4	39	86	–
New York City	11	204	–	–	8	–	–	954	6,372	7,272	72	457	444	–
New Jersey	11	144	–	–	1	–	–	241	2,445	1,963	9	96	118	–
Pennsylvania*	26	201	–	1	1	–	–	483	4,046	4,104	12	92	131	–
EAST NORTH CENTRAL	89	564	–	–	1	–	–	2,990	25,029	24,533	39	383	310	10
Ohio	18	130	–	–	1	–	–	823	6,454	7,197	16	93	69	–
Indiana	10	95	–	–	–	–	–	160	2,207	2,000	1	16	24	1
Illinois	24	137	–	–	–	–	–	1,100	9,166	8,206	9	205	148	3
Michigan	30	183	–	–	–	–	–	607	4,891	4,821	10	54	51	–
Wisconsin	7	19	–	–	–	–	–	300	2,311	2,309	3	15	18	6
WEST NORTH CENTRAL	27	183	9	–	2	–	–	1,055	7,634	6,666	20	135	88	47
Minnesota	5	32	3	–	1	–	–	122	1,515	1,267	1	19	8	18
Iowa	2	17	–	–	–	–	–	136	1,033	873	11	68	5	9
Missouri*	14	88	5	–	1	–	–	559	2,943	2,564	5	34	55	5
North Dakota	–	6	–	–	–	–	–	13	106	115	–	–	3	11
South Dakota	4	11	–	–	–	–	–	31	248	295	–	1	2	–
Nebraska*	–	7	–	–	–	–	–	53	618	544	1	5	2	–
Kansas	2	22	1	–	–	–	–	141	1,171	1,008	2	8	13	4
SOUTH ATLANTIC	129	1,035	3	–	8	–	2	4,444	35,967	35,035	177	1,242	1,192	56
Delaware	2	8	–	–	–	–	–	69	499	438	1	11	10	–
Maryland	18	144	1	–	–	–	–	739	4,862	3,804	12	99	97	–
District of Columbia	2	37	–	–	–	–	–	245	2,173	2,344	19	110	100	–
Virginia	12	185	–	–	1	–	–	358	3,960	3,670	18	109	104	9
West Virginia	13	52	–	–	–	–	–	65	454	406	1	6	–	4
North Carolina	30	201	2	–	–	–	1	618	5,457	5,476	32	221	161	–
South Carolina	11	52	–	–	–	–	–	358	3,322	3,144	13	70	99	1
Georgia	16	139	–	–	1	–	1	1,028	6,818	6,439	22	165	169	35
Florida	25	217	–	–	6	–	–	564	8,422	8,314	59	451	452	7
EAST SOUTH CENTRAL	62	440	3	–	2	–	–	1,607	13,571	11,023	24	183	164	17
Kentucky	9	100	1	–	2	–	–	259	1,744	1,504	8	32	22	12
Tennessee	9	121	2	–	–	–	–	539	5,303	4,577	7	77	66	2
Alabama	32	141	–	–	–	–	–	564	3,684	2,695	3	29	42	3
Mississippi*	12	78	–	–	–	–	–	245	2,840	2,247	6	45	34	–
WEST SOUTH CENTRAL	50	554	2	–	1	–	1	2,448	22,512	17,958	58	453	375	45
Arkansas	5	98	1	–	–	–	1	199	2,069	1,809	5	20	5	11
Louisiana*	8	97	–	–	–	–	–	460	3,276	3,242	4	99	94	–
Oklahoma	4	49	–	–	–	–	–	291	1,988	1,526	2	23	22	12
Texas	33	310	1	–	1	–	–	1,498	15,179	11,381	47	311	254	22
MOUNTAIN	18	128	1	–	3	–	–	674	5,991	5,313	10	120	87	13
Montana	4	10	1	–	–	–	–	46	316	300	1	2	3	9
Idaho	–	4	–	–	–	–	–	31	290	276	–	4	2	–
Wyoming	NA	3	–	NA	–	NA	–	NA	132	112	NA	4	1	1
Colorado	2	18	–	–	–	–	–	191	1,498	1,489	2	39	22	–
New Mexico	1	21	–	–	1	–	–	138	1,330	881	5	37	15	–
Arizona	9	64	–	–	2	–	–	207	1,650	1,418	2	25	34	3
Utah	2	2	–	–	–	–	–	40	360	293	–	1	1	–
Nevada	–	6	–	–	–	–	–	21	415	543	–	8	9	–
PACIFIC	96	819	3	2	20	–	–	2,442	21,660	20,053	90	829	805	55
Washington	11	100	–	–	1	–	–	200	1,846	1,867	–	15	40	–
Oregon	8	28	1	–	–	–	–	214	1,679	1,756	4	28	15	–
California	66	590	2	2	19	–	–	1,845	17,004	15,617	84	772	744	38
Alaska	–	4	–	–	–	–	–	123	663	452	1	1	–	17
Hawaii	11	97	–	–	–	–	–	60	468	361	1	13	6	–
Guam	–	7	–	–	–	–	–	–	51	79	–	–	1	–
Puerto Rico	13	63	–	–	–	–	–	76	426	463	21	81	105	3
Virgin Islands	–	–	–	–	–	–	–	4	47	26	4	18	7	–

NA: Not Available

*Delayed Reports: TB: Maine 4, La. 1; Tularemia: Mo. delete 1; Typhoid Fever: Pa. 1 (1975); G.C.: Nebr. 6, La. delete 1; Syphilis: Pa. 1; Miss. delete 1

Week No. 8

TABLE IV. DEATHS IN 121 UNITED STATES CITIES FOR WEEK ENDING FEBRUARY 28, 1976

(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	926	656	195	38	17	168
Boston, Mass.	263	175	62	11	9	46
Bridgeport, Conn.	63	40	16	7	–	9
Cambridge, Mass.	37	32	3	2	–	13
Fall River, Mass.	34	24	8	–	–	2
Hartford, Conn.	74	51	18	2	1	10
Lowell, Mass.	28	23	4	1	–	7
Lynn, Mass.	22	16	4	2	–	3
New Bedford, Mass.	26	21	5	–	–	4
New Haven, Conn.	75	49	17	4	1	7
Providence, R. I.	90	66	14	1	5	17
Somerville, Mass.	15	12	3	–	–	5
Springfield, Mass.	76	55	16	5	–	18
Waterbury, Conn.	46	32	11	1	–	6
Worcester, Mass.	77	60	14	2	1	21
MIDDLE ATLANTIC	4,304	2,930	955	234	89	444
Albany, N. Y.	51	31	15	–	2	–
Allentown, Pa.	44	33	10	–	–	4
Buffalo, N. Y.	175	122	37	8	6	26
Camden, N. J.	62	36	16	2	2	3
Elizabeth, N. J.	49	37	11	1	–	1
Erie, Pa.	47	33	10	2	1	6
Jersey City, N. J.	85	46	34	5	–	3
Newark, N. J.	88	52	17	12	4	10
New York City, N. Y. †	2,550	1,785	515	155	42	280
Paterson, N. J.	57	40	14	2	1	9
Philadelphia, Pa.	389	233	116	16	14	10
Pittsburgh, Pa.	187	105	59	9	7	11
Reading, Pa.	45	37	6	–	1	3
Rochester, N. Y.	176	122	35	10	3	31
Schenectady, N. Y.	30	18	9	2	1	5
Scranton, Pa.	52	40	11	1	–	7
Syracuse, N. Y.	97	73	15	5	4	23
Trenton, N. J.	42	31	8	1	–	5
Utica, N. Y.	36	22	12	1	1	2
Yonkers, N. Y.	42	34	5	2	–	5
EAST NORTH CENTRAL	2,617	1,608	667	166	91	128
Akron, Ohio	65	40	17	4	3	1
Canton, Ohio	49	30	11	3	3	3
Chicago, Ill.	702	419	168	59	28	38
Cincinnati, Ohio	186	108	52	17	4	2
Cleveland, Ohio	213	131	57	12	3	10
Columbus, Ohio	132	73	43	7	8	3
Dayton, Ohio	93	54	25	6	3	5
Detroit, Mich.	325	206	79	24	6	16
Evansville, Ind.	41	26	10	2	3	3
Fort Wayne, Ind.	44	33	8	1	2	2
Gary, Ind.	16	8	5	2	1	–
Grand Rapids, Mich.	71	44	20	2	2	7
Indianapolis, Ind.	198	123	45	10	10	6
Madison, Wis.	36	22	9	2	2	4
Milwaukee, Wis.	129	81	39	4	1	9
Peoria, Ill.	54	33	16	2	3	4
Rockford, Ill.	54	34	13	1	5	8
South Bend, Ind.	44	36	7	1	–	5
Toledo, Ohio	106	69	26	4	3	2
Youngstown, Ohio	59	38	17	3	1	–
WEST NORTH CENTRAL	885	590	190	44	37	54
Des Moines, Iowa	66	43	14	1	5	2
Duluth, Minn.	24	19	5	–	–	2
Kansas City, Kans.	34	17	10	4	1	3
Kansas City, Mo.	130	83	31	7	7	2
Lincoln, Nebr.	46	35	4	5	2	5
Minneapolis, Minn.	132	86	30	4	8	11
Omaha, Nebr.	87	60	13	8	4	4
St. Louis, Mo.	244	157	60	13	8	13
St. Paul, Minn.	77	56	18	–	2	8
Wichita, Kans.	45	34	5	2	–	4
SOUTH ATLANTIC	1,520	895	440	92	54	101
Atlanta, Ga.	123	60	46	12	3	6
Baltimore, Md.	449	262	123	19	32	23
Charlotte, N. C.	56	33	13	4	3	3
Jacksonville, Fla.	88	52	28	6	1	1
Miami, Fla.*	105	71	26	3	3	4
Norfolk, Va.	91	48	29	6	6	14
Richmond, Va.	86	48	26	6	1	11
Savannah, Ga.	27	16	10	–	–	2
St. Petersburg, Fla.	84	72	12	–	–	4
Tampa, Fla.	66	34	30	2	–	11
Washington, D. C.	301	170	86	30	5	19
Wilmington, Del.	44	29	11	4	–	3
EAST SOUTH CENTRAL	744	452	197	36	29	51
Birmingham, Ala.	101	61	27	5	7	4
Chattanooga, Tenn.	52	38	7	2	2	5
Knoxville, Tenn.	49	31	9	3	4	2
Louisville, Ky.	122	64	43	4	6	7
Memphis, Tenn.	198	126	47	7	6	13
Mobile, Ala.	58	35	14	4	1	3
Montgomery, Ala.	56	37	14	4	1	7
Nashville, Tenn.	108	60	36	7	2	10
WEST SOUTH CENTRAL	1,406	826	373	81	64	76
Austin, Tex.	53	30	9	6	3	5
Baton Rouge, La.*	41	19	15	3	2	4
Corpus Christi, Tex.	45	28	13	–	2	–
Dallas, Tex.	207	123	59	11	7	15
El Paso, Tex.	49	32	10	2	3	6
Fort Worth, Tex.	115	72	31	4	4	6
Houston, Tex.	291	162	86	21	15	12
Little Rock, Ark.	76	41	22	3	9	6
New Orleans, La.	166	103	42	6	7	4
San Antonio, Tex.	165	97	43	9	4	4
Shreveport, La.	103	58	25	7	4	3
Tulsa, Okla.	95	61	18	9	4	11
MOUNTAIN	642	404	142	41	30	71
Albuquerque, N. Mex.	106	71	21	5	4	20
Colorado Springs, Colo.	42	28	7	3	2	9
Denver, Colo.	138	92	28	5	5	12
Las Vegas, Nev.	21	15	5	–	1	1
Ogden, Utah	16	12	2	2	–	4
Phoenix, Ariz.	133	74	33	14	8	4
Pueblo, Colo.	32	22	6	4	–	12
Salt Lake City, Utah	57	25	18	4	7	8
Tucson, Ariz.	97	65	22	4	3	1
PACIFIC	2,218	1,467	493	125	63	98
Berkeley, Calif.	18	16	2	–	–	–
Fresno, Calif.	70	44	17	3	3	5
Glendale, Calif.	50	38	9	2	–	1
Honolulu, Hawaii	57	36	14	2	3	4
Long Beach, Calif.	96	53	35	6	2	4
Los Angeles, Calif.	815	537	172	60	24	27
Oakland, Calif.	87	51	22	9	4	–
Pasadena, Calif.	46	32	12	–	1	–
Portland, Oreg.	175	123	38	4	6	9
Sacramento, Calif.	81	56	19	3	1	–
San Diego, Calif.	160	101	36	7	5	5
San Francisco, Calif.	200	134	43	11	8	12
San Jose, Calif.	67	52	7	3	2	4
Seattle, Wash.	199	132	48	9	1	14
Spokane, Wash.	62	41	12	4	3	9
Tacoma, Wash.	35	21	7	2	–	4
Total	15,262	9,828	3,652	857	474	1,191
Expected Number	12,962	7,956	3,366	794	398	535

*Estimate based on average percent of divisional total.

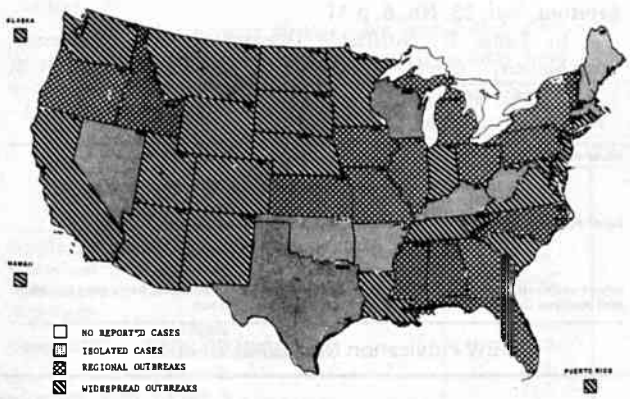
† Delayed report for week ending 2/21/76

CURRENT TRENDS
INFLUENZA

Worldwide: Outbreaks of influenza A have been reported recently from Canada, Denmark, France, French Guiana, Hungary, Jamaica, Korea, Netherlands, Spain, Sweden, and Switzerland. With the exception of the Jamaican isolates, which were similar to A/England/864/75, all the further characterized isolates from these countries were similar to A/Victoria/3/75. The United Kingdom has experienced a marked increase in influenza illness; the majority of recent isolates have been A/Victoria-like. Spain has experienced outbreaks of influenza B; sporadic cases of influenza B have also been reported from Denmark, Sweden, and Switzerland. *(Reported by the World Health Organization in the* Weekly Epidemiologic Record *51[6, 7, 8]:51, 59, 65, Feb 6, 13, 20, 1976.)*

United States: Influenza A continues to be widespread in the United States. Although the epidemic has peaked in the Northeast, increasing activity has been reported from the western states (Figure 1). In a telephone survey conducted on February 26, 24 states, the District of Columbia, and Puerto Rico reported widespread outbreaks, 16 states recorded regional outbreaks, and the remaining 10 states reported isolated cases.

Figure 1
REPORTED INFLUENZA ACTIVITY
FEBRUARY 26, 1976, CDC TELEPHONE SURVEY



Forty-one states, the District of Columbia, and Puerto Rico now have reported isolates of influenza A. All of the recently characterized isolates have been similar to A/Victoria/3/75. Isolates of influenza B from sporadic cases have been made in 6 western states and in New York.

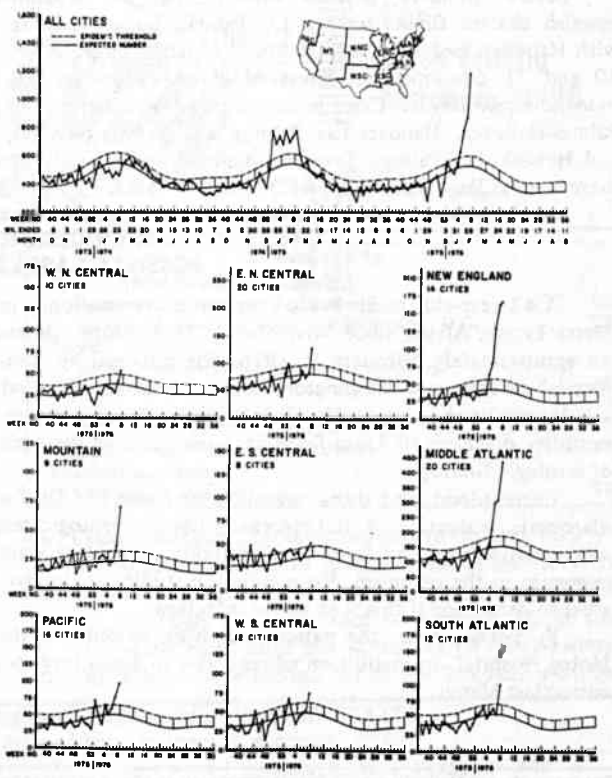
Weekly pneumonia and influenza (P & I) deaths from 121 cities in the United States (Figure 2) have exceeded the level reached during recent influenza epidemics, but are much lower than the peak in the 1968-69 epidemic. All regions of the country have now reported P & I deaths in excess of the epidemic threshold, with the New England and Middle Atlantic states continuing to have the highest elevations.

Review of morbidity data collected from 532 reporting institutions in the United States indicated increased absenteeism in 30% of the schools and 29% of the industries, and increased emergency room visits in 43% of the hospitals. Morbidity appeared to be highest in the New England and Middle Atlantic areas, where 60% of schools, 46% of industries, and 43% of hospitals reported increases.

A/Swine-like influenza

New Jersey: Investigation of the outbreak of A/Swine-like influenza at Fort Dix is continuing. One additional serologically confirmed case was reported, bringing the number of confirmed cases to 12. Of 1,321 single sera collected at Fort Dix, 273 (21%) had positive HI titers to the A/Swine antigen. No new cases of A/Swine-like influenza at Fort Dix, nor suspect cases in the civilian New Jersey population, have been reported.

Figure 2
PNEUMONIA-INFLUENZA DEATHS IN 121 UNITED STATES CITIES



Mississippi: Of 33 family members and close contacts of the patient who had Hodgkin's disease and suspected swine influenza (*MMWR* 25[7]), only 1—a fellow-worker at the swine slaughterhouse—had an elevated HI titer. Sixteen of 34 other slaughterhouse employees were found to have elevated HI titers.

Virginia: Confirmatory serologic evidence of swine influenza infection in 2 patients with pneumonia in a university hospital has been reported. Preliminary investigation showed no evidence of spread of the illness to family members or close contacts of the 2 patients.

(Reported by M Goldfield, MD, R Altman, MD, State Epidemiologist, New Jersey Dept of Health; J Bartley, Col, Health and Environment, USAMEDDAC, Ft Dix, NJ; T Nowosiwsky, Col, Div of Preventive Medicine, PK Russell, Col, Div of Communicable Disease and Immunology, FH Top, Jr, Col, Dept of Virology, Walter Reed Army Institute of Research, Washington, DC; DL Blakey, MD, State Epidemiologist, Mississippi Board of Health; R Webster, PhD, St Jude's Children's Hospital, Memphis; JM Gwaltney, Jr, MD, RP Wenzel, MD, University of Va School of Medicine; RS Jackson, MD, State Epidemiologist, Va Dept of Health; LJ Legters, Col, Health and Environment, Office of the Surgeon General Headquarters, Dept of the Army, Washington, DC; Virology Div, Bur of Laboratories, and Viral Diseases Div, Bur of Epidemiology, CDC.)

INTERNATIONAL NOTES

SALMONELLA TYPHIMURIUM

Canary Islands, Finland, and the Federal Republic of Germany

Several hundred persons who traveled on separate Spanish charter flights linking Las Palmas, Canary Islands, with Hanover, Germany, and Helsinki, Finland, on February 20 and 21 developed an intestinal illness caused by *Salmonella typhimurium.* Cases occurred on several flights: Las Palmas-Hanover, Hanover-Las Palmas, Las Palmas-Helsinki, and Helsinki-Las Palmas. Several patients were seriously ill; there were at least 2 deaths.

Food prepared in Las Palmas and served aboard flights of the airline is believed to have caused the outbreak. The World Health Organization is collaborating with Spanish health authorities in an epidemiologic investigation.

(Reported by the World Health Organization in the Weekly Epidemiological Record *51(9):75, February 27, 1976.)*

EPIDEMIOLOGIC NOTES AND REPORTS

POSSIBLE LASSA FEVER – Washington, D.C.

A 42-year-old female Peace Corps volunteer stationed in Sierra Leone, Africa, since November 1975 developed illness on approximately February 9, 1976. She returned by commercial air carrier to Washington, D.C. on February 28 and was hospitalized there on March 1 for further study. A presumptive diagnosis of Lassa fever has been made on the basis of serologic findings.

Urine, blood, and throat washings were sent to CDC for diagnostic evaluation. A fluorescent antibody serologic test was positive for Lassa fever virus antibody, suggesting prior exposure to the organism. Virus isolation studies are in progress to determine if this is an active infection.

In Sierra Leone the patient had been working in the Mobai Hospital, an institution where a case of Lassa fever occurred last March.

Persons with whom the patient had contact while in transit from Africa are being traced and placed under medical surveillance.

(Reported by JN Sheagrin, MD, Washington, DC; VO Oner, MD, JR Pate, MD, Acting State Epidemiologist, District of Columbia Community Health and Hospital Admin; M Wolfe, MD, US Dept of State; Vector-borne Disease Div, Virology Div, Bur of Laboratories, and Viral Diseases Div, Bur of Epidemiology, CDC.)

Erratum, Vol. 25, No. 6, p 41

In Table II, Notifiable Diseases of Low Frequency, "Trichinosis," delete Mississippi 1, and insert Missouri 1.

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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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