

Morbidity and Mortality



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

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CURRENT TRENDS SURVEILLANCE OF TURTLE-ASSOCIATED SALMONELLOSIS - United States

Revised Federal Regulations for the importation of turtles, tortoises, and terrapins and their bacteriologic testing and certification for interstate shipment went into effect on December 18, 1972 (MMWR, Vol. 21, No. 52). These revisions prohibited the importation of turtles or turtle eggs into the United States and the interstate shipment of turtles that had not been certified free of *Salmonella* and *Arizona* organisms by the health authority of the state of origin. In addition, details of the testing procedure required for certification were stipulated.

In 1973, the first full year that these regulations were in effect, 184 *Salmonella* isolations from turtles or turtle water

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were reported to the CDC Salmonella Surveillance Activity compared with a mean of 200 isolates reported per year for the previous 5 years. Follow-up data on 173 of the 184 isolates reported in 1973 revealed that 47 (27%) were obtained during investigations of 22 incidents of human salmonellosis involving 35 bacteriologically confirmed human

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

DISEASE	24th WEEK ENDING		MEDIAN 1969-1973	CUMULATIVE, FIRST 24 WEEKS		
	June 15, 1974	June 16, 1973		1974	1973	MEDIAN 1969-1973
Aseptic meningitis	39	52	52	863	949	886
Brucellosis	5	1	4	66	61	72
Chickenpox	2,662	4,398	—	89,160	133,834	—
Diphtheria	1	3	1	140	96	80
Encephalitis:						
Primary: Arthropod-borne and unspecified	10	24	24	379	495	484
Post-Infectious	7	5	7	121	137	140
Hepatitis, Viral:						
Type B	175	168	168	4,216	3,622	3,622
Type A	815	—	—	20,052	—	—
Type unspecified	157	882	1,000	3,992	23,748	25,937
Malaria	2	7	41	69	109	1,202
Measles (rubeola)	828	802	813	16,925	21,352	23,494
Meningococcal infections, total	11	26	26	729	799	1,441
Civilian	10	25	25	707	780	1,263
Military	1	1	1	22	19	148
Mumps	1,147	1,530	2,165	38,370	47,727	58,233
Pertussis	24	—	—	572	—	—
Rubella (German measles)	310	670	1,089	8,049	23,626	33,599
Tetanus	1	1	3	27	26	45
Tuberculosis, new active	677	607	—	14,111	14,689	—
Tularemia	8	11	3	48	57	48
Typhoid fever	7	10	8	154	355	127
Typhus, tick-borne (Rky. Mt. spotted fever)	41	32	28	224	176	118
Veneral Diseases:						
Gonorrhea	18,330	15,955	—	390,621	355,832	—
Syphilis, primary and secondary	454	393	—	11,069	11,328	—
Rabies in animals	60	87	76	1,277	1,764	1,769

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	2	Poliomyelitis, total:	2
Botulism:	5	Paralytic:	2
Congenital rubella syndrome: Calif. 1	33	Psittacosis:	12
Leprosy: Tex. 1	56	Rabies in man:	—
Leptospirosis:	20	Trichinosis: N.Y. Ups. 1, N.J. 2	53
Plague:	—	Typhus, murine:	10

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SALMONELLOSIS — Continued

cases. The remaining 126 (73%) isolates were obtained in culture surveys conducted by state and local health departments. Comparable follow-up data are not available for years before 1973.

Between December 1972 and February 1974, 39 lots containing 474,000 turtles were certified as free of *Salmonella* and *Arizona* contamination in accordance with the revised regulations. These certified turtles originated from 5 sources in Mississippi and Louisiana. *Salmonellae* were isolated after shipment in interstate commerce at various points in the distribution chain from turtles shipped in 15 (38%) of the 39 certified lots, and *Arizona* organisms were isolated from turtles in 1 additional certified lot. Specimens cultured included turtles or turtle tank water obtained from retail stores, distributors' warehouses, or homes. In all, 254,000 turtles (54% of the total) were shipped under the 16 lot numbers from which infected turtles were eventually identified (Table 1).

Laboratory and epidemiologic evidence strongly suggests that turtles from at least 4 Mississippi lots were infected prior to certification: 1) *Salmonella panama* was recovered in North Carolina from specimens of groups of turtles from 1 lot of 10,000 turtles (lot no. 27-106) obtained from previously unopened original shipping containers; 2) *Salmonella braenderup*

was recovered from turtles in New Jersey, Oregon, and Washington which had originated in a lot of 13,000 turtles (lot no. 27-1); 3) *Salmonella litchfield* was recovered in Florida, Oregon, Tennessee, and Washington from turtles obtained from a lot of 33,000 (lot no. 27-10); and 4) *Salmonella typhimurium* was recovered in California and North Carolina from turtles originating in a lot of 22,000 (lot no. 27-11). Eight human cases due to the same salmonella serotype (1 *S. braenderup*, 3 *S. litchfield*, and 4 *S. typhimurium*) were associated with turtles from these lots. *Salmonella* isolates from turtles of the remaining 12 Mississippi and Louisiana lots were obtained or serotyped by single states only.

(Reported by the Bacterial Diseases Division, Bureau of Epidemiology, CDC.)

Editorial Note

These and other data previously published (MMWR, Vol. 22, Nos. 14 and 25, and Vol. 23, No. 1) indicate that turtle-associated salmonellosis is a continuing public health problem. At the May 1974 meeting of the Conference of State and Territorial Epidemiologists (CSTE), a resolution was passed requesting "that the Food and Drug Administration (FDA) ban all interstate commerce involving the distribution and sale of pet turtles to the general public until the industry can demonstrate that it can reliably produce and market salmonella-free turtles." On May 28, 1974, FDA published in the *Federal Register* 2 alternative proposals to correct the existing problem. One would ban the sale of pet turtles; the other would improve the certification scheme and impose additional requirements on the sale and shipment of turtles. In commenting on the second proposal the article noted that it was being proposed "as the only alternative to a general prohibition, but the Commissioner believes it is cumbersome and unlikely to be completely effective. The Commissioner has, however, reached no final conclusion as to which course of action should be taken; comments are therefore invited in regard to both proposals." These proposals are of concern to health workers in each state and community. Letters commenting on these proposals may be sent on or before July 29, 1974, to the Hearing Clerk, Food and Drug Administration, Room 6-86, 5600 Fishers Lane, Rockville, Maryland 20852.

Table 1
Salmonella Contamination in Interstate Shipments of Turtles
That Had Been Certified *Salmonella*-Free
December 1972–February 1974

State of Origin	No. of Certified Lots		No. of Certified Turtles	
	Total	In Which <i>Salmonellae</i> Isolated	Total	In Lots in Which <i>Salmonellae</i> Isolated
Mississippi	16	12 (75%)	228,000	178,000 (78%)
Louisiana	23	4* (17%)	246,000	76,000* (31%)
Total	39	16* (41%)	474,000	254,000* (54%)

*Includes 1 lot (10,000 turtles) from which only *Arizona* organisms were isolated.

EPIDEMIOLOGIC NOTES AND REPORTS

ANGIOSARCOMA OF THE LIVER — Connecticut

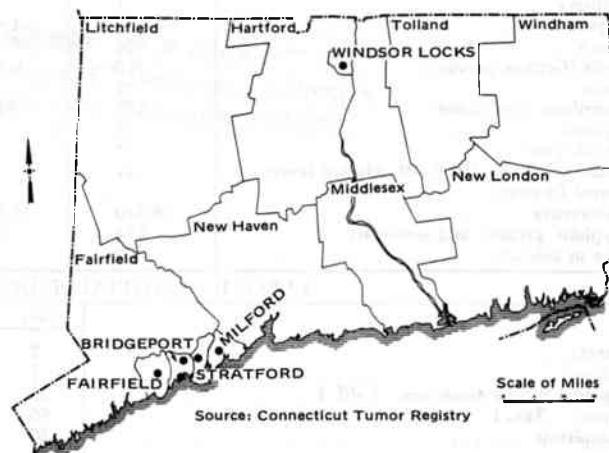
From January 1935 through December 1973, 8 cases of angiosarcoma of the liver were reported to the Connecticut Tumor Registry; the diagnosis of hepatic angiosarcoma has been confirmed in 6 of these cases by pathologists at the National Cancer Institute.

One case was diagnosed in 1950, 1 in 1967, and 4 in 1972 and 1973. The 1950 case occurred in a resident of north-central Connecticut, while the 5 more recent cases were found in residents of 4 closely adjacent communities in the southwestern portion of the state (Figure 1).

Two of the patients appear to have had occupational exposure to polyvinyl chloride (PVC). One, a 47-year-old man diagnosed in January 1973, had been employed for the 10 preceding years as an accountant in a factory which produces vinyl sheets and processes PVC resins; it is reported that he frequently visited the production area of the plant. Another patient, a 61-year-old man diagnosed in June 1973, had worked from 1933 through 1971 in an electrical products manufacturing concern, and from 1938 through 1963 he had operated

(Continued on back page)

Figure 1
CASES OF ANGIOSARCOMA OF THE LIVER
BY PLACE OF RESIDENCE
CONNECTICUT — 1935-1973



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TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING JUNE 15, 1974 AND JUNE 16, 1973 (24th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS, VIRAL			MALARIA	
						Primary: Arthropod- borne and Unspecified		Post In- fectious	Type B	Type A	Type Unspecified		
	1974	1974	1974	1974	Cum. 1974	1974	1973	1974	1974	1974	1974	1974	Cum. 1974
UNITED STATES	39	5	2,662	1	140	10	24	7	175	815	157	2	69
NEW ENGLAND	1	—	375	—	—	1	2	—	3	29	13	—	5
Maine*	—	—	7	—	—	—	—	—	—	—	—	—	—
New Hampshire*	—	—	7	—	—	—	—	—	—	3	—	—	—
Vermont	—	—	17	—	—	—	—	—	—	2	2	—	—
Massachusetts	—	—	—	—	—	—	2	—	2	8	11	—	1
Rhode Island	—	—	123	—	—	1	—	—	—	6	—	—	3
Connecticut	1	—	221	—	—	—	—	—	1	10	—	—	1
MIDDLE ATLANTIC	2	—	251	—	1	1	—	3	37	99	61	—	9
Upstate New York	—	—	96	—	—	1	—	2	2	24	1	—	3
New York City	—	—	150	—	—	—	—	—	8	27	—	—	3
New Jersey	2	—	NN	—	—	—	—	—	18	17	55	—	1
Pennsylvania	—	—	5	—	1	—	—	1	9	31	5	—	2
EAST NORTH CENTRAL	4	—	1,249	—	2	3	17	1	19	129	8	—	9
Ohio	—	—	204	—	1	1	4	1	—	22	—	—	4
Indiana	1	—	44	—	—	—	—	—	1	13	—	—	—
Illinois	—	—	—	—	1	1	7	—	9	30	5	—	2
Michigan	1	—	592	—	—	1	6	—	5	53	3	—	2
Wisconsin*	2	—	409	—	—	—	—	—	4	11	—	—	1
WEST NORTH CENTRAL	1	—	136	—	—	1	—	—	23	89	11	—	2
Minnesota	—	—	36	—	—	—	—	—	17	65	—	—	—
Iowa*	—	—	74	—	—	—	—	—	5	5	5	—	—
Missouri	1	—	11	—	—	1	—	—	1	10	4	—	1
North Dakota	—	—	13	—	—	—	—	—	—	1	—	—	—
South Dakota	—	—	—	—	—	—	—	—	—	—	—	—	1
Nebraska*	—	—	2	—	—	—	—	—	—	—	—	—	—
Kansas	—	—	—	—	—	—	—	—	—	8	2	—	—
SOUTH ATLANTIC	4	1	203	—	1	1	2	1	12	140	11	1	12
Delaware*	1	—	—	—	—	—	1	—	—	—	—	—	—
Maryland	—	—	3	—	—	1	—	—	1	2	3	—	2
District of Columbia	—	—	4	—	—	—	—	—	—	—	—	—	2
Virginia	—	—	17	—	—	—	—	—	2	7	1	1	3
West Virginia	—	—	127	—	—	—	—	—	—	—	1	—	—
North Carolina	—	1	NN	—	1	—	—	—	—	25	—	—	2
South Carolina	—	—	52	—	—	—	—	—	—	9	3	—	—
Georgia*	—	—	—	—	—	—	—	—	—	39	—	—	—
Florida	3	—	—	—	—	—	1	1	9	58	3	—	3
EAST SOUTH CENTRAL	—	—	36	—	—	—	1	—	11	56	8	1	3
Kentucky	—	—	28	—	—	—	—	—	6	16	8	—	2
Tennessee	—	—	NN	—	—	—	1	—	4	32	—	1	1
Alabama*	—	—	4	—	—	—	—	—	—	7	—	—	—
Mississippi	—	—	4	—	—	—	—	—	1	1	—	—	—
WEST SOUTH CENTRAL	17	1	169	—	8	1	—	—	13	97	6	—	3
Arkansas	—	—	5	—	—	—	—	—	2	13	1	—	—
Louisiana*	6	—	NN	—	—	—	—	—	5	16	1	—	1
Oklahoma	4	—	11	—	—	1	—	—	1	10	4	—	1
Texas	7	1	153	—	8	—	—	—	5	58	—	—	1
MOUNTAIN	—	—	70	—	27	—	—	—	3	38	4	—	3
Montana	—	—	4	—	—	—	—	—	—	4	—	—	—
Idaho	—	—	—	—	—	—	—	—	—	7	—	—	—
Wyoming	—	—	—	—	—	—	—	—	—	—	—	—	—
Colorado	—	—	36	—	—	—	—	—	—	8	3	—	2
New Mexico	—	—	30	—	10	—	—	—	1	8	1	—	1
Arizona	—	—	—	—	17	—	—	—	2	7	—	—	—
Utah	—	—	—	—	—	—	—	—	—	3	—	—	—
Nevada	—	—	—	—	—	—	—	—	—	1	—	—	—
PACIFIC	10	3	173	1	101	2	2	2	54	138	35	—	23
Washington	1	—	144	1	92	—	1	—	4	17	8	—	—
Oregon	—	—	1	—	—	—	—	—	1	9	7	—	—
California*	9	1	—	—	5	2	1	2	49	112	20	—	23
Alaska	—	2	5	—	4	—	—	—	—	—	—	—	—
Hawaii	—	—	23	—	—	—	—	—	—	—	—	—	—
Guam*	—	—	—	—	—	—	—	—	—	—	—	—	1
Puerto Rico	—	—	9	—	—	—	—	—	—	—	9	—	—
Virgin Islands	—	—	8	—	—	—	—	—	—	—	1	—	—

*Delayed reports: Aseptic meningitis: Guam 1
 Chickenpox: Me. 23, N.H. 6, Neb. delete 2,
 Calif. 64, Guam 3
 Encephalitis, primary: Wisc. 2, Iowa 2

Hepatitis B: Del. delete 5, Ala. 50, La. delete 2
 Hepatitis A: Me. 2, Ga. delete 1, Ala. 36, La. delete 1,
 Guam delete 1
 Hepatitis unspecified: Okla. delete 4, Guam 12

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING JUNE 15, 1974 AND JUNE 16, 1973 (24th 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	828	16,925	21,352	11	729	799	1,147	38,370	24	310	8,049	27
NEW ENGLAND	42	766	6,976	—	40	35	137	5,097	—	33	824	—
Maine *	2	33	57	—	2	—	—	737	—	2	231	—
New Hampshire *	—	196	830	—	7	6	—	221	—	—	15	—
Vermont	—	57	108	—	1	2	—	15	—	1	12	—
Massachusetts	31	306	3,730	—	11	11	19	824	—	9	288	—
Rhode Island	—	57	552	—	7	1	93	2,015	—	—	18	—
Connecticut	9	117	1,699	—	12	15	25	1,285	—	21	260	—
MIDDLE ATLANTIC	406	6,798	1,927	2	94	114	97	2,943	4	37	880	2
Upstate New York	170	494	622	—	41	40	20	654	2	9	204	1
New York City	29	407	783	1	14	22	20	434	2	6	100	—
New Jersey *	184	5,157	277	1	27	27	9	589	—	20	390	1
Pennsylvania	23	740	245	—	12	25	48	1,266	—	2	186	—
EAST NORTH CENTRAL	318	6,702	7,377	1	87	101	435	10,894	7	64	2,620	4
Ohio	125	2,940	245	1	29	43	98	2,696	—	14	440	2
Indiana	3	194	522	—	8	3	23	851	—	4	426	—
Illinois	94	1,526	1,717	—	10	21	36	930	2	8	368	1
Michigan	61	1,679	3,886	—	28	29	235	4,696	4	29	1,005	1
Wisconsin	35	363	1,007	—	12	5	43	1,721	1	9	381	—
WEST NORTH CENTRAL	24	555	412	—	54	65	51	2,521	—	2	201	6
Minnesota	—	77	16	—	17	3	—	31	—	1	8	—
Iowa *	—	40	267	—	10	15	8	1,603	—	—	14	—
Missouri	24	234	47	—	15	30	12	325	—	1	31	2
North Dakota	—	25	52	—	2	3	—	16	—	—	11	1
South Dakota	—	27	—	—	2	3	—	2	—	—	25	—
Nebraska	—	2	3	—	1	4	1	67	—	—	6	—
Kansas	—	150	27	—	7	7	30	477	—	—	106	3
SOUTH ATLANTIC	11	403	1,082	2	140	132	93	4,693	2	83	854	7
Delaware	—	6	8	—	3	1	2	70	—	—	20	—
Maryland	—	21	2	—	15	19	2	82	—	1	1	—
District of Columbia	—	3	3	—	—	3	—	41	—	—	4	—
Virginia	2	21	392	—	27	22	10	435	2	1	29	2
West Virginia	2	104	174	—	6	4	37	2,721	—	9	134	—
North Carolina	—	4	4	—	30	27	NN	NN	—	—	50	—
South Carolina	1	37	51	—	12	10	7	102	—	65	483	1
Georgia	—	4	143	1	6	17	—	—	—	—	2	—
Florida	6	203	305	1	41	29	35	1,242	—	7	131	4
EAST SOUTH CENTRAL	6	128	568	2	84	79	136	4,812	1	9	424	2
Kentucky	6	101	357	—	36	30	35	2,028	1	2	158	—
Tennessee	—	9	157	1	36	31	90	2,009	—	5	199	1
Alabama	—	6	4	—	9	13	9	430	—	2	53	—
Mississippi	—	12	50	1	3	5	2	345	—	—	14	1
WEST SOUTH CENTRAL	5	152	604	1	128	122	80	2,643	3	4	269	2
Arkansas	—	5	67	—	9	13	—	116	—	—	8	—
Louisiana *	1	13	82	1	23	25	16	172	—	—	58	1
Oklahoma	—	22	48	—	12	11	3	331	2	—	30	—
Texas	4	112	407	—	84	73	61	2,024	1	4	173	1
MOUNTAIN	8	685	485	2	21	21	19	906	—	3	322	—
Montana	6	359	13	—	1	4	3	146	—	—	62	—
Idaho	1	50	223	—	2	1	—	153	—	1	12	—
Wyoming *	—	1	40	1	3	—	—	9	—	—	—	—
Colorado	1	29	90	—	2	5	16	429	—	—	114	—
New Mexico	—	49	104	—	2	3	—	149	—	2	90	—
Arizona	—	11	14	1	5	4	—	—	—	—	—	—
Utah	—	3	1	—	3	2	—	17	—	—	13	—
Nevada	—	183	—	—	3	2	—	3	—	—	31	—
PACIFIC	8	736	1,921	1	81	130	99	3,861	7	75	1,655	4
Washington	—	55	888	—	8	15	31	1,441	—	4	320	—
Oregon	—	—	405	—	9	10	16	672	—	1	177	1
California	8	624	549	1	59	101	52	1,614	7	70	1,144	3
Alaska	—	—	65	—	2	4	—	93	—	—	—	—
Hawaii	—	57	14	—	3	—	—	41	—	—	14	—
Guam *	—	7	7	—	1	—	—	301	—	—	2	—
Puerto Rico	18	469	1,507	—	2	4	19	1,088	—	—	16	2
Virgin Islands	—	16	—	—	—	—	1	30	—	—	—	1

*Delayed reports: Measles: N.J. 26, Iowa 8, Wy. delete 3, Guam 1
Meningococcal infection: Iowa 2
Mumps: Me. 2, N.H. 2, La. delete 1, Guam 24
Rubella: Me. 3

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TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING JUNE 15, 1974 AND JUNE 16, 1973 (24th WEEK) - Continued

AREA	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES						RABIES IN ANIMALS
	1974	Cum. 1974		Cum. 1974	1974	Cum. 1974	1974	Cum. 1974	GONORRHEA		SYPHILIS (Pri. & Sec.)			
									1974	Cumulative 1974 1973	1974	Cumulative 1974 1973		
UNITED STATES	677	14,111	48	7	154	41	224	18,330	390,621	355,832	454	11,069	11,328	1,277
NEW ENGLAND	29	585	-	-	5	-	-	506	8,962	9,817	10	216	332	9
Maine	3	47	-	-	-	-	-	43	766	528	-	15	11	1
New Hampshire *	1	15	-	-	1	-	-	16	315	334	1	7	4	2
Vermont	1	6	-	-	-	-	-	12	288	142	-	1	12	1
Massachusetts	10	335	-	-	2	-	-	250	3,787	4,745	5	87	164	3
Rhode Island	2	55	-	-	2	-	-	71	880	1,047	-	8	9	2
Connecticut	12	127	-	-	-	-	-	114	2,926	3,021	4	98	132	-
MIDDLE ATLANTIC	128	2,456	1	1	26	-	12	2,354	47,419	49,394	92	2,447	2,555	15
Upstate New York	12	330	1	-	6	-	2	718	9,141	9,224	9	239	146	9
New York City	61	942	-	1	17	-	-	1,053	20,662	22,587	51	1,407	1,616	-
New Jersey	15	467	-	-	3	-	-	219	6,651	7,146	25	396	448	-
Pennsylvania	40	717	-	-	-	-	10	364	10,965	10,437	7	405	345	6
EAST NORTH CENTRAL	94	1,852	5	1	12	-	2	2,806	55,307	41,624	33	774	662	88
Ohio	30	536	-	1	5	-	2	495	17,273	13,231	4	133	131	-
Indiana	17	279	-	-	1	-	-	339	5,807	5,177	1	89	162	10
Illinois	23	519	3	-	4	-	-	1,226	12,121	6,214	17	323	94	19
Michigan	24	484	-	-	2	-	-	534	14,159	12,689	11	181	237	1
Wisconsin	-	34	2	-	-	-	-	212	5,947	4,313	-	48	38	58
WEST NORTH CENTRAL	24	504	9	1	5	-	1	1,079	20,520	19,766	15	259	137	303
Minnesota	4	81	-	-	3	-	-	215	4,649	3,923	1	40	53	123
Iowa	3	52	-	-	-	-	1	150	2,779	2,604	-	12	14	67
Missouri	15	258	8	-	1	-	-	400	6,605	6,773	13	178	50	20
North Dakota	-	11	-	-	-	-	-	12	310	287	1	3	1	64
South Dakota	-	30	1	-	-	-	-	39	947	1,004	-	2	1	-
Nebraska	2	26	-	-	-	-	-	79	1,702	2,045	-	3	2	2
Kansas	-	46	-	1	1	-	-	184	3,528	3,130	-	21	16	27
SOUTH ATLANTIC	140	2,984	5	-	23	27	137	4,664	99,625	89,790	139	3,556	3,292	155
Delaware	2	42	-	-	-	-	3	102	1,369	1,215	-	42	50	1
Maryland	13	394	-	-	2	-	22	609	9,663	7,620	7	366	334	-
District of Columbia	10	190	-	-	-	-	1	346	7,215	7,284	7	294	380	-
Virginia	21	365	2	-	1	22	46	235	8,460	8,684	22	404	337	55
West Virginia	9	148	-	-	3	-	1	33	1,171	1,414	-	9	11	19
North Carolina *	18	462	1	-	3	3	32	593	13,053	13,094	42	445	277	11
South Carolina	20	306	-	-	2	-	23	602	10,972	9,668	5	426	495	3
Georgia	21	388	2	-	2	2	8	820	20,652	16,695	10	369	571	40
Florida	26	689	-	-	10	-	1	1,324	27,070	24,116	46	1,201	837	26
EAST SOUTH CENTRAL	66	1,285	7	1	16	6	33	1,592	33,727	30,013	31	584	756	138
Kentucky	15	287	1	-	7	-	3	181	4,153	3,731	10	137	297	88
Tennessee	24	429	4	1	7	5	22	632	13,171	11,212	10	225	192	32
Alabama	18	381	2	-	2	1	6	465	9,208	8,431	3	114	77	17
Mississippi	9	188	-	-	-	-	2	314	7,195	6,639	8	108	190	1
WEST SOUTH CENTRAL	69	1,842	18	1	11	6	33	2,386	54,835	48,586	44	1,089	1,311	333
Arkansas *	13	240	12	-	1	-	4	141	5,335	6,154	-	60	73	40
Louisiana *	7	212	1	-	2	-	-	384	11,270	10,235	14	314	397	14
Oklahoma	6	137	4	-	-	6	24	220	4,771	5,041	-	67	91	78
Texas	43	1,253	1	1	8	-	5	1,641	33,459	27,156	30	648	750	201
MOUNTAIN	20	463	2	2	12	2	5	712	14,886	13,219	10	262	380	51
Montana	2	34	-	-	-	-	1	38	858	769	-	1	2	-
Idaho	-	21	-	-	-	1	1	33	864	794	-	5	6	-
Wyoming	-	11	1	1	3	-	1	11	312	227	-	5	17	5
Colorado	-	88	-	-	-	-	1	189	4,236	3,508	5	61	113	1
New Mexico *	-	89	1	1	2	1	1	98	2,052	2,127	-	35	38	22
Arizona *	18	172	-	-	6	-	-	285	4,609	3,875	5	100	80	23
Utah	-	18	-	-	-	-	-	24	763	699	-	7	8	-
Nevada	-	30	-	-	1	-	-	34	1,192	1,220	-	48	116	-
PACIFIC	107	2,140	1	-	44	-	1	2,231	55,340	53,623	80	1,882	1,903	185
Washington	4	133	-	-	9	-	-	235	5,154	4,922	-	43	71	-
Oregon	10	90	-	-	-	-	1	141	4,725	4,638	2	38	34	8
California	76	1,711	1	-	35	-	-	1,762	43,019	41,676	76	1,779	1,711	170
Alaska *	-	41	-	-	-	-	-	60	1,208	1,384	1	2	41	7
Hawaii	17	165	-	-	-	-	-	33	1,234	1,003	1	20	46	-
Guam *	-	22	-	-	-	-	-	-	121	151	-	2	1	-
Puerto Rico	9	259	-	-	2	-	-	59	1,311	2,046	13	402	373	29
Virgin Islands	2	3	-	-	-	-	-	10	139	104	-	13	10	-

*Delayed reports: Tuberculosis: N.C. delete 3, Ariz. delete 1, Alaska 9, Guam 2
Gonorrhea: N.H. 4, La. delete 3, Guam 9

Syphilis: La. delete 1, N.M. delete 1
Rabies: Ark. delete 2, Ariz. 1

Week No.

TABLE IV. DEATHS IN 121 UNITED STATES CITIES FOR WEEK ENDING JUNE 15, 1974

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

Area	All Causes					Pneumonia and Influenza All Ages	Area	All Causes					Pneumonia and Influenza All Ages
	All Ages	65 years and over	45-64 years	25-44 years	Under 1 year			All Ages	65 years and over	45-64 years	25-44 years	Under 1 year	
NEW ENGLAND	718	479	165	38	20	43	SOUTH ATLANTIC	1,251	691	369	86	45	29
Boston, Mass.	203	120	53	16	8	12	Atlanta, Ga.	96	48	28	6	8	2
Bridgeport, Conn.	46	35	9	1	—	1	Baltimore, Md.	228	119	70	14	16	5
Cambridge, Mass.	22	16	4	2	—	2	Charlotte, N. C.	59	34	17	4	1	—
Fall River, Mass.	31	24	6	—	—	1	Jacksonville, Fla.	78	35	29	4	1	1
Hartford, Conn.	66	38	19	3	4	2	Miami, Fla.	160	84	47	18	4	1
Lowell, Mass.	28	22	4	2	—	2	Norfolk, Va.	62	41	17	—	1	2
Lynn, Mass.	31	23	7	—	—	—	Richmond, Va.	97	49	34	9	2	1
New Bedford, Mass.	27	21	3	2	—	3	Savannah, Ga.	34	24	7	—	2	2
New Haven, Conn.	44	27	13	2	2	1	St. Petersburg, Fla.	87	75	10	1	1	3
Providence, R. I.	57	32	19	4	1	7	Tampa, Fla.	74	46	16	5	4	8
Somerville, Mass.	18	12	4	2	—	2	Washington, D. C.	221	109	77	20	4	4
Springfield, Mass.	51	42	6	1	1	5	Wilmington, Del.	55	27	17	5	1	—
Waterbury, Conn.	36	24	8	—	3	1							
Worcester, Mass.	58	43	10	3	1	4	EAST SOUTH CENTRAL	640	340	193	64	17	31
MIDDLE ATLANTIC	2,893	1,783	758	181	74	119	Birmingham, Ala.	103	58	28	8	4	4
Albany, N. Y.	46	29	10	3	2	—	Chattanooga, Tenn.	47	21	15	5	2	5
Allentown, Pa.	39	34	5	—	—	4	Knoxville, Tenn.	36	21	10	3	—	—
Buffalo, N. Y.	120	63	34	13	4	—	Louisville, Ky.	93	48	31	10	2	8
Camden, N. J.	37	26	6	2	1	3	Memphis, Tenn.	177	89	61	17	3	7
Elizabeth, N. J.	24	15	8	—	—	—	Mobile, Ala.	59	36	11	8	—	—
Erie, Pa.	34	18	11	3	1	3	Montgomery, Ala.	23	11	7	4	1	1
Jersey City, N. J.	56	45	9	2	—	3	Nashville, Tenn.	102	56	30	9	5	6
Newark, N. J.	82	41	27	8	3	5	WEST SOUTH CENTRAL	1,198	631	330	102	63	26
New York City, N. Y.	1,576	979	394	110	44	57	Austin, Tex.	54	33	9	4	1	3
Paterson, N. J.	30	16	10	1	1	4	Baton Rouge, La.	65	34	21	4	3	3
Philadelphia, Pa.	293	178	89	15	5	6	Corpus Christi, Tex.	28	22	3	—	3	1
Pittsburgh, Pa.	162	94	49	5	4	8	Dallas, Tex.	171	90	44	17	8	3
Reading, Pa.	38	22	14	1	1	3	El Paso, Tex.	51	25	13	6	4	5
Rochester, N. Y.	128	82	28	7	1	12	Fort Worth, Tex.	74	42	20	9	—	—
Schenectady, N. Y.	28	20	4	2	1	—	Houston, Tex.	253	109	92	29	11	3
Scranton, Pa.	33	21	10	2	—	1	Little Rock, Ark.	45	28	11	3	—	2
Syracuse, N. Y.	62	36	20	4	1	2	New Orleans, La.	154	84	37	13	9	3
Trenton, N. J.	45	22	16	1	3	3	San Antonio, Tex.	148	72	34	11	17	1
Utica, N. Y.	23	15	6	2	—	2	Shreveport, La.	76	45	25	—	4	—
Yonkers, N. Y.	37	27	8	—	2	3	Tulsa, Okla.	79	47	21	6	3	2
EAST NORTH CENTRAL	2,432	1,384	655	166	91	74	MOUNTAIN	508	269	152	36	25	25
Akron, Ohio	65	40	17	1	1	—	Albuquerque, N. Mex.	64	28	23	3	3	7
Canton, Ohio	46	27	11	2	3	2	Colorado Springs, Colo.	32	16	7	6	3	3
Chicago, Ill.	637	357	176	52	26	27	Denver, Colo.	119	68	35	6	2	5
Cincinnati, Ohio	136	85	35	7	5	3	Las Vegas, Nev.	32	10	19	2	—	1
Cleveland, Ohio	203	102	71	12	5	5	Ogden, Utah	15	6	6	1	—	—
Columbus, Ohio	136	65	42	14	7	2	Phoenix, Ariz.	108	61	30	6	7	4
Dayton, Ohio	104	65	24	4	2	1	Pueblo, Colo.	26	15	6	4	—	3
Detroit, Mich.	317	154	96	31	14	7	Salt Lake City, Utah	51	34	10	1	5	1
Evansville, Ind.	41	25	12	2	—	1	Tucson, Ariz.	61	31	16	7	5	1
Fort Wayne, Ind.	43	26	14	—	—	2	PACIFIC	1,782	1,112	447	97	58	28
Gary, Ind.	21	11	5	1	2	3	Berkeley, Calif.	17	10	4	2	—	—
Grand Rapids, Mich.	40	27	10	2	—	3	Fresno, Calif.	52	32	13	4	2	1
Indianapolis, Ind.	171	89	40	16	9	3	Glendale, Calif.	33	26	4	3	—	1
Madison, Wis.	31	17	8	—	3	3	Honolulu, Hawaii*	57	30	16	4	4	1
Milwaukee, Wis.	140	101	27	5	1	3	Long Beach, Calif.	102	60	30	6	3	3
Peoria, Ill.	47	26	15	1	5	—	Los Angeles, Calif.	591	379	135	31	19	7
Rockford, Ill.	30	18	5	2	3	2	Oakland, Calif.	90	51	26	5	5	2
South Bend, Ind.	55	33	16	4	—	4	Pasadena, Calif.	45	34	2	2	5	1
Toledo, Ohio	107	69	21	8	3	2	Portland, Ore.	133	78	40	9	2	1
Youngstown, Ohio	62	47	10	2	2	1	Sacramento, Calif.	71	41	22	3	1	1
WEST NORTH CENTRAL	724	434	172	47	40	27	San Diego, Calif.	112	76	24	7	1	1
Des Moines, Iowa	35	19	10	2	3	2	San Francisco, Calif.	183	109	54	9	7	3
Duluth, Minn.	26	16	6	3	—	1	San Jose, Calif.	59	38	11	5	1	—
Kansas City, Kans.	27	11	10	2	1	3	Seattle, Wash.	135	81	44	4	4	2
Kansas City, Mo.	125	85	23	5	9	—	Spokane, Wash.	67	45	11	2	4	2
Lincoln, Nebr.	35	20	9	3	1	2	Tacoma, Wash.	35	22	11	1	—	2
Minneapolis, Minn.	100	62	23	6	1	2							
Omaha, Nebr.	75	41	14	7	10	1							
St. Louis, Mo.	194	111	53	13	12	11							
St. Paul, Minn.	55	40	8	1	1	1							
Wichita, Kans.	52	29	16	5	2	4							
Total	12,146	7,123	3,241	817	433	402							
Expected Number	11,804	6,849	3,212	798	423	325							

†Delayed Report for week ending June 8, 1974.

*Estimate based on average percent of divisional total.

RECOMMENDATION OF THE PUBLIC HEALTH SERVICE ADVISORY COMMITTEE ON IMMUNIZATION PRACTICES

INFLUENZA VACCINE

INTRODUCTION

Some influenza occurs in the United States every year, but there is great variation in its incidence and geographic extent. Periodically, influenza becomes epidemic. This appears to occur when antibody levels wane or when the antigens of prevalent influenza viruses have changed sufficiently to render the population susceptible. Epidemics caused by type A influenza viruses are more frequent and are generally more severe than those caused by type B.

Inactivated influenza vaccine, the best available means of protection against influenza, has been variably effective, and vaccine-induced antibody appears to be relatively short-lived. Consequently, public health recommendations on influenza immunization in the United States are oriented toward protecting those at greatest risk of serious disease and death by emphasizing the selective vaccination of "high-risk" groups.

Repeated observations during influenza epidemics indicate that mortality is almost completely restricted to the chronically ill and the elderly, especially those persons over age 65. Epidemics caused by type A influenza viruses, but rarely those caused by type B, are notable for inducing mortality in excess of what is normally expected.

Annual vaccination of the "high-risk" group is urged as routine medical practice regardless of the amount of influenza expected in any specific geographic area. In this way, those at particular risk can maintain the highest possible level of protection. Selective vaccination of the "high-risk" group should be emphasized by public health authorities in view of the finding in surveys on immunization that only 10-15 percent of this group are vaccinated each year.

Influenza control through widespread vaccination of the general population is not currently a public health objective for several reasons: the variable effectiveness and short-lived antibody levels with available influenza vaccines; the relatively low attack rates of influenza in community outbreaks; and the low frequency of serious complications from the disease in healthy people in the general population.

INFLUENZA VIRUS VACCINE

Bivalent Vaccine*

The Bureau of Biologics, Food and Drug Administration, reviews influenza vaccine formulation regularly and recommends reformulation with contemporary antigens when indicated. Bivalent influenza vaccine this year will contain a new type A influenza virus representative of currently prevalent "England" strains. Each adult dose of the 1974-75 vaccine will contain not less than 1200 chick cell agglutinating (CCA) units of antigen in the following proportion: 700 CCA units of a type A strain comparable to the prototype, A/Port Chalmers/1/73(H3N2)** and 500 CCA units of a type B strain, B/Hong Kong/5/72. Vaccines from all producers are highly purified and should be relatively free from significant

adverse reactions. Minor reactions such as erythema and tenderness at the injection site and low-grade fever can be expected to occur occasionally.

VACCINE USAGE

General Recommendations

Annual vaccination is strongly recommended for persons of all ages who have such chronic conditions as 1) heart disease of any etiology, particularly with mitral stenosis or cardiac insufficiency; 2) chronic bronchopulmonary diseases, such as asthma, chronic bronchitis, bronchiectasis, and emphysema; 3) chronic renal disease; and 4) diabetes mellitus and other chronic metabolic disorders.

Annual vaccination is recommended for older persons, particularly those over age 65 years, because influenza outbreaks are commonly associated with excess mortality in older age groups.

Vaccination may also be considered for persons who provide essential community services if local priorities justify. However, before undertaking such an immunization effort, those responsible should take into account a number of reasonable constraints: difficulties inherent in predicting influenza epidemics, variability in vaccine effectiveness, cost, and availability of vaccine.

Vaccination of patients not at "high risk" in an attempt to reduce their chances of acquiring influenza is a decision for practicing physicians. The foregoing discussion of influenza and influenza vaccine may be useful in helping to judge the relative merits of vaccination.

Pregnancy is not an indication for influenza vaccination.

Schedule

The primary series of bivalent influenza vaccine has traditionally been 2 doses. Data indicate that with the more potent influenza vaccines available in recent years, the second dose provides little additional benefit. It is, therefore, reasonable to give a single dose of vaccine for either primary or annual booster vaccination. (Dose volumes for adults and children and the recommended route of administration are specified in the manufacturers' package labeling.)

Influenza vaccine should be administered by mid-November.

Precautions

Influenza vaccine is prepared from viruses grown in embryonated eggs and should not be administered to persons clearly hypersensitive to egg protein, ingested or injected.

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*Official name: Influenza Virus Vaccine, Bivalent

**The World Health Organization has recommended a revised system of nomenclature for type A influenza viruses which includes their strain designation and a description of the 2 surface antigens, hemagglutinin (H) and neuraminidase (N).

ANGIOSARCOMA — Continued

machinery there which applied plastics containing PVC to wires as insulating material.

Another 2 patients who had no occupational exposure to PVC had been long-time residents of the Bridgeport-Stratford area. One of these was a 73-year-old man, diagnosed in 1967, who had lived his entire life within 2 miles of the electrical products factory mentioned above. He had worked as a firefighter from 1917 to 1942, as a metal worker from 1942 to 1944, and as a corset cutter from 1945 until his retirement in 1961; additionally he had a history of chronic alcohol ingestion. The other resident was an 83-year-old woman, a housewife and retired cook, who was diagnosed in December 1973. She had lived for 35 years within 1/2 mile of the vinyl products plant.

There was no history of occupational or of potential community exposure to PVC for the 2 remaining patients. One was a housewife in north-central Connecticut, the other an unemployed, disabled man with chronic alcoholism who had moved to Connecticut from New York City 4 months before his diagnosis in May 1973. None of the 6 confirmed patients had known exposure to thorium dioxide (1) or to arsenical compounds (2), 2 materials known specifically to induce angiosarcoma of the liver in man. By history, none had excessive exposure to aerosol sprays. None had a past history of hepatitis. Two had histories of alcoholism, as noted, but none are known to have taken other potentially hepatotoxic drugs or medications.

(Reported by Barbara W. Christine, M.D., Chief, Chronic Disease Control Section, Harold S. Barrett, M.D., Deputy Commissioner of Health, and Douglas S. Lloyd, M.D., Commissioner of Health, Connecticut State Department of Health; the National Institute of Occupational Safety and Health, and the Cancer and Birth Defects Division, Bureau of Epidemiology, CDC.)

Editorial Note

Recent reports (3,4) have described 13 cases of angiosarcoma of the liver among men engaged in the synthesis of

PVC from vinyl chloride monomer (VCM). There is evidence to suggest that VCM may have been the cause of hepatic angiosarcoma in those cases (5,6). In the present series 2 cases of hepatic angiosarcoma are described in men who had no known exposure to VCM, but who did work with PVC. While these findings establish no causal connection between exposure to PVC and angiosarcoma of the liver, they do raise the possibility of such a relationship. Further studies throughout the nation will be needed to define the possible risk factors in persons who have worked with PVC.

The additional finding in this study of angiosarcoma of the liver in 2 persons who had no occupational exposure to vinyl chloride, but who may have had community exposure, is also worrisome but again establishes no causal connection. It might be expected on the basis of data from the Third National Cancer Survey that approximately 4 cases of angiosarcoma of the liver would occur in Connecticut in a 10-year period and that approximately 0.6 cases would occur in the 4 previously mentioned communities in southern Connecticut during the same interval. Epidemiologic investigation of additional cases of hepatic angiosarcoma that may be found to have had possible community exposure to vinyl chloride will be necessary to clarify the significance of these cases.

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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 outbreaks or case investigations of current interest to health officials.

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