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MORBIDITY AND MORTALITY WEEKLY REPORT

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Epidemiologic Notes and Reports

Chlordane Contamination of a Municipal Water System — Tennessee

At approximately 5:45 pm on March 24, 1976, several residents of Chattanooga noticed that their tap water had suddenly turned white and smelled of insecticide. By the following day it was established that a 3-street area was affected, and the water supply was promptly cut off by the water company. Samples of water taken on the evening of March 24 revealed chlordane as the contaminant in concentrations up to 1,200,000 parts per billion.

A house-to-house survey, conducted on March 26 and 27, reached 45 of the 49 affected households (92%). One hundred and twelve persons were questioned, and 17 (15%) gave a history of having drunk the suspect water, while another 15 (13%) had casual contact through washing, bathing, or brushing teeth. Blood samples for chlordane analyses were obtained from 71 persons who gave a history of water contact or who had symptoms possibly related to chlordane toxicity.

Four persons gave a history of probable chlordane toxicity, that is, gastrointestinal symptoms such as nausea, vomiting, abdominal pain, in addition to evidence of neurologic involvement such as dizziness, blurred vision, irritability, headache, paresthesias, muscle weakness, or twitching. Nine other persons had gastrointestinal symptoms alone or isolated neurologic symptoms. One of the suspect cases developed a fever of 102°F; she had recently recovered from an episode of intrahepatic cholestasis. None of the residents was hospitalized, and all affected persons improved within 36-48 hours after exposure.

Results of quantitative analyses for chlordane in water focused attention on a section of one affected street as the possible source of contamination. A strong smell of chlordane came from the foundation of a house there, and soil samples from around that house were found to contain chlordane in concentrations of greater than 1,000,000 parts per billion. Further questioning of the residents established that chlordane had been used at the house on March 24 for extermination of termites. The concentrated chlordane solution had been diluted with tap water approximately 90 minutes before chlordane was detected downstream in the water system.

Blood analyses on the 13 individuals with symptoms revealed measurable levels of transnonachlor, a chlordane metabolite, in 11 (85%). The highest level, 1.27 parts per billion, was recorded in the 1 individual who also had the only detectable oxychlordane level (0.37 parts per billion). Results of blood tests on the remaining 58 exposed individuals are pending.

The water company has replaced all the street pipes and is in the process of flushing each house in an attempt to remove residual chlordane.

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Editorial Note: This appears to be the first recorded incident of chlordane contamination of a public water supply in which symptoms of toxicity have been cited.

The exact mode of entry of the pesticide into the water supply is not clear. The most likely explanation is that back siphonage of chlordane occurred during the process of diluting the pesticide when the hose from the water faucet dipped below the level of the concentrated chlordane. Such an explanation is quite possible because several main pipes had been broken the preceding week by building contractors, causing variable water pressure in the system.

The significance of the chlordane levels in this exposed population is difficult to assess. Oxychlordane and transnonachlor are recently discovered metabolites of chlordane, and review of the literature reveals no population studies of chlordane levels to date.

International Notes

Imported Infections — United Kingdom, Wales, 1975

A proportion of the infections reported by laboratories in England and Wales are acquired abroad, though the country of origin is not always known. Of infections in which this information is available for 1975 about half were thought to have been contracted in the Indian subcontinent, a quarter in Africa, and most of the rest from Europe, the Near East, and the Far East. This geographical distribution often reflects the amount of travel and immigration from these areas; it is not necessarily indicative of the relative risk of exposure to the infections there.

Malaria is one of the most serious of the imported infections. In 1975, about 750 cases were diagnosed and reported to the Malaria Reference Laboratory. About two-thirds of these cases were caused by *Plasmodium vivax*—mostly from the Indian subcontinent—and a few from Africa or the Far East. Nearly all the *P. falciparum* infections, on the other hand, were contracted in Africa; but during 1975 some were thought to have been acquired in the Indian subcontinent (mainly Pakistan), where the risk of acquiring this malignant form of malaria may be increasing.

Amoebiasis due to *Entamoeba histolytica* is another important protozoal infection in patients who have been abroad. In 1975 about 300 cases were reported. Not all of these were necessarily acquired in 1975; some had chronic abscesses from infections presumably acquired earlier, and some may have been carriers. The Indian subcontinent was specified in about half the cases in which the country of origin was known, Africa in about a third, and, with the exception of 2 patients who were thought to have acquired their infections in South or Central America, the remainder in the Near East or Far East. The risk of amoebiasis may not be confined to tropical and subtropical areas, as there were 2 patients from Europe—1 from Italy and the other from Western Russia.

Helminth infections, commonly reported by laboratories, in 1975 included about 1,000 hookworm, 1,000 ascaris, and 1,500 trichuris infections. Most of these infections, the hookworms in particular, were probably acquired abroad. About 300 *Hymenolepis nana* infections were reported during the year, and about half of these were from the Indian subcontinent.

(Continued on page 123)

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

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

DISEASE	15th ..... WEEK ENDING		MEDIAN 1971–1975	CUMULATIVE, FIRST 15 WEEKS		MEDIAN 1971–1975
	April 17, 1976	April 12, 1975		April 17, 1976	April 12, 1975	
Aseptic meningitis	32	41	39	527	534	534
Brucellosis	–	8	5	61	44	34
Chickenpox	5,687	4,357	---	84,030	61,765	---
Diphtheria	–	5	4	88	133	66
Encephalitis: Primary	10	12	15	224	182	251
Encephalitis: Post-Infectious	9	7	5	77	74	74
Hepatitis, Viral: Type B	288	228	196	4,163	3,107	2,591
Hepatitis, Viral: Type A	586	669	1,121	10,303	10,406	14,792
Hepatitis, Viral: Type unspecified	221	154		2,561	2,236	
Malaria	5	5	5	90	75	75
Measles (rubeola)	1,657	1,043	1,135	14,698	8,046	11,997
Meningococcal infections, total	46	31	34	606	508	516
Civilian	46	30	34	602	494	495
Military	–	1	1	4	14	15
Mumps	1,285	1,757	2,182	19,302	23,140	29,825
Pertussis	13	20	---	309	330	---
Rubella (German measles)	391	818	818	5,199	5,755	10,483
Tetanus	1	2	1	9	17	17
Tuberculosis	645	608	---	9,254	8,536	---
Tularemia	–	–	–	29	14	27
Typhoid fever	6	5	5	93	69	73
Typhus, tick-borne (Rky. Mt. spotted fever)	5	3	2	15	16	16
Venereal Diseases:						
Gonorrhea: Civilian	17,846	16,913	---	277,278	265,617	---
Gonorrhea: Military	491	450	---	8,301	8,527	---
Syphilis, primary and secondary: Civilian	484	467	---	7,561	7,481	---
Syphilis, primary and secondary: Military	9	12	---	116	100	---
Rabies in animals	56	50	96	629	600	1,004

Table II. Notifiable Diseases of Low Frequency: United States

	CUM.		CUM.
Anthrax:	2	Poliomyelitis, total:	4
Botulism: Calif. 1	6	Paralytic:	4
Congenital rubella syndrome:	8	Psittacosis:	21
Leprosy: Mo. 1, Texas 2	39	Rabies in man:	–
Leptospirosis:	12	Trichinosis: N.J. 1	45
Plague:	1	Typhus, murine:	5

Table III
Cases of Specified Notifiable Diseases: United States
Weeks Ending April 17, 1976 and April 12, 1975 — 15th Week

AREA REPORTING	ASEPTIC MENINGITIS	BRUCELLOSIS	CHICKENPOX	DIPHTHERIA		ENCEPHALITIS Primary: Arthropod-borne and Unspecified		ENCEPHALITIS Post Infectious	HEPATITIS, VIRAL Type B	HEPATITIS, VIRAL Type A	HEPATITIS, VIRAL Type Unspecified	MALARIA	
	1976	1976	1976	1976	CUM. 1976	1976	1975	1976	1976	1976	1976	1976	CUM. 1976
UNITED STATES	32	-	5,687	-	88	10	12	9	288	586	221	5	90
NEW ENGLAND	1	-	466	-	-	-	1	-	3	22	12	-	5
Maine	-	-	19	-	-	-	-	-	-	1	-	-	-
New Hampshire *	-	-	8	-	-	-	-	-	1	2	-	-	-
Vermont *	-	-	17	-	-	-	-	-	-	1	-	-	-
Massachusetts	1	-	274	-	-	-	1	-	2	7	12	-	3
Rhode Island	-	-	75	-	-	-	-	-	-	1	-	-	1
Connecticut	-	-	73	-	-	-	-	-	-	10	-	-	1
MIDDLE ATLANTIC	9	-	219	-	-	2	-	-	80	107	38	-	18
Upstate New York	3	-	103	-	-	1	-	-	20	32	11	-	5
New York City	-	-	105	-	-	-	-	-	13	17	-	-	9
New Jersey	5	-	NN	-	-	1	-	-	23	20	21	-	-
Pennsylvania	1	-	11	-	-	-	-	-	24	38	6	-	4
EAST NORTH CENTRAL	7	-	2,866	-	-	3	6	4	37	86	35	-	2
Ohio *	1	-	382	-	-	3	4	-	1	12	31	-	1
Indiana	2	-	192	-	-	-	-	4	1	13	-	-	-
Illinois	1	-	625	-	-	-	2	-	10	24	-	-	-
Michigan	3	-	921	-	-	-	-	-	19	34	4	-	1
Wisconsin	-	-	746	-	-	-	-	-	6	3	-	-	-
WEST NORTH CENTRAL	-	-	897	-	4	1	-	1	13	23	5	1	1
Minnesota	-	-	22	-	-	-	-	-	7	4	-	-	-
Iowa	-	-	321	-	-	-	-	-	-	-	-	-	-
Missouri *	-	-	160	-	1	1	-	-	3	12	3	-	-
North Dakota	-	-	-	-	-	-	-	-	-	-	-	-	-
South Dakota	-	-	1	-	3	-	-	-	-	-	-	1	1
Nebraska	-	-	39	-	-	-	-	-	-	-	-	-	-
Kansas	-	-	354	-	-	-	-	1	3	7	2	-	-
SOUTH ATLANTIC	4	-	419	-	-	-	3	2	41	89	15	1	12
Delaware	-	-	7	-	-	-	-	-	-	1	-	-	-
Maryland	1	-	25	-	-	-	-	-	6	10	4	-	-
District of Columbia	-	-	12	-	-	-	-	-	4	-	-	-	2
Virginia	-	-	37	-	-	-	1	1	1	1	-	-	3
West Virginia	-	-	252	-	-	-	-	-	-	4	-	-	-
North Carolina	-	-	NN	-	-	-	-	-	5	10	4	-	2
South Carolina	1	-	23	-	-	-	-	-	3	7	1	-	-
Georgia	-	-	-	-	-	-	-	-	-	24	-	1	1
Florida	2	-	63	-	-	-	2	1	22	32	6	-	4
EAST SOUTH CENTRAL	3	-	31	-	-	2	-	2	16	47	6	-	1
Kentucky	-	-	11	-	-	-	-	-	1	10	2	-	-
Tennessee	-	-	NN	-	-	2	-	2	12	30	2	-	-
Alabama	1	-	18	-	-	-	-	-	2	4	2	-	-
Mississippi	2	-	2	-	-	-	-	-	1	3	-	-	1
WEST SOUTH CENTRAL	1	-	390	-	-	-	1	-	26	79	44	1	5
Arkansas	-	-	1	-	-	-	-	-	1	8	2	-	-
Louisiana *	-	-	NN	-	-	-	1	-	4	4	2	-	-
Oklahoma	-	-	34	-	-	-	-	-	3	11	2	-	-
Texas	1	-	355	-	-	-	-	-	18	56	38	1	5
MOUNTAIN	1	-	160	-	3	-	1	-	4	12	17	1	5
Montana	-	-	44	-	-	-	1	-	1	-	-	-	-
Idaho	-	-	19	-	-	-	-	-	-	2	-	-	-
Wyoming	-	-	-	-	-	-	-	-	-	-	1	-	-
Colorado	-	-	65	-	3	-	-	-	3	4	2	-	3
New Mexico	-	-	-	-	-	-	-	-	-	1	3	1	1
Arizona	-	-	-	-	-	-	-	-	-	3	7	-	-
Utah	1	-	31	-	-	-	-	-	-	2	-	-	-
Nevada	-	-	1	-	-	-	-	-	-	-	4	-	1
PACIFIC	6	-	239	-	81	2	-	-	68	121	49	1	41
Washington	-	-	155	-	79	-	-	-	2	2	1	-	1
Oregon	-	-	3	-	-	-	-	-	6	7	8	-	4
California *	6	-	-	-	1	2	-	-	60	112	38	-	35
Alaska	-	-	46	-	1	-	-	-	-	-	-	-	-
Hawaii	-	-	35	-	-	-	-	-	-	-	2	1	1
Guam *	-	-	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico	-	-	19	-	-	-	-	-	4	5	-	-	1
Virgin Islands	NA	NA	NA	NA	-	NA	-	-	NA	NA	NA	NA	-

NA: Not Available, NN: Not Notifiable

*Delayed Reports: Asept. Meng: N.J. 1, Mo. delete 2; Brucellosis: Mo. 1; Chickenpox: N. Hamp. 8, Vt. 19, Ohio 1, Calif. 41, Guam 8; Enceph: Mo. delete 1; Hep. B: La. delete 1, Guam 3; Hep A: N. Hamp. 1, Nev. 2

Table III-Continued
Cases of Specified Notifiable Diseases: United States
Weeks Ending April 17, 1976 and April 12, 1975 — 15th Week

REPORTING AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1976	CUMULATIVE 1976	CUMULATIVE 1975	1976	CUMULATIVE 1976	CUMULATIVE 1975	1976	CUM. 1976	1976	1976	CUM. 1976	CUM. 1976
UNITED STATES	1,657	14,698	8,046	46	606	508	1,285	19,302	13	391	5,199	9
NEW ENGLAND	6	134	67	3	28	32	40	755	1	15	150	-
Maine	-	3	6	-	-	4	-	56	-	-	2	-
New Hampshire	-	1	18	-	2	1	-	24	-	-	9	-
Vermont	-	2	1	-	1	-	-	3	-	-	1	-
Massachusetts	-	2	18	1	8	9	11	118	1	5	79	-
Rhode Island	-	14	1	-	4	3	14	287	-	-	4	-
Connecticut	6	112	23	2	13	15	15	267	-	10	55	-
MIDDLE ATLANTIC	339	3,130	406	10	75	39	131	1,446	1	62	980	-
Upstate New York	120	1,080	124	3	28	13	39	240	1	17	151	-
New York City	22	133	62	1	18	7	61	624	-	9	50	-
New Jersey*	21	300	126	1	11	7	13	291	-	32	708	-
Pennsylvania	176	1,617	94	5	18	12	18	291	-	4	71	-
EAST NORTH CENTRAL	805	5,977	2,580	7	85	81	586	8,079	1	188	1,739	-
Ohio	21	181	53	5	38	15	89	1,097	1	12	113	-
Indiana	117	1,150	172	-	4	4	47	663	-	8	227	-
Illinois	178	618	535	1	8	14	48	1,056	-	74	489	-
Michigan	346	2,107	1,356	1	29	39	218	3,280	-	76	679	-
Wisconsin	143	1,921	464	-	6	9	184	1,983	-	18	231	-
WEST NORTH CENTRAL	17	287	2,462	1	48	31	163	2,263	2	12	174	1
Minnesota	13	100	-	1	9	6	4	462	-	1	14	-
Iowa	-	8	207	-	7	4	59	816	-	1	10	-
Missouri	-	6	117	-	10	17	39	183	2	-	16	-
North Dakota	-	1	511	-	1	-	-	105	-	-	1	1
South Dakota	-	1	209	-	1	-	-	2	-	-	2	-
Nebraska	-	36	192	-	2	1	2	51	-	-	1	-
Kansas*	4	135	1,226	-	18	3	59	644	-	10	130	-
SOUTH ATLANTIC	13	960	104	4	119	102	75	1,521	3	16	940	3
Delaware	4	106	1	1	2	3	1	14	-	1	5	-
Maryland	2	414	-	1	9	5	30	410	-	-	1	1
District of Columbia	-	2	-	-	2	4	6	70	-	-	45	-
Virginia	3	130	10	-	12	11	2	147	-	4	134	-
West Virginia	1	98	74	1	4	4	20	416	-	11	195	-
North Carolina	-	-	-	-	20	18	6	268	3	-	9	-
South Carolina	-	1	-	-	18	13	2	27	-	-	526	-
Georgia	-	-	-	1	11	8	-	-	-	-	-	-
Florida	3	209	19	-	41	36	8	169	-	-	25	2
EAST SOUTH CENTRAL	26	354	94	2	39	68	98	1,403	1	20	173	1
Kentucky	18	335	57	-	5	26	14	581	1	10	110	1
Tennessee	-	5	32	2	18	25	55	683	-	7	60	-
Alabama	-	-	1	-	11	10	29	122	-	-	-	-
Mississippi	8	14	4	-	5	7	-	17	-	3	3	-
WEST SOUTH CENTRAL	9	334	104	6	96	87	83	1,312	2	7	243	3
Arkansas	-	-	-	-	3	4	1	56	-	-	41	-
Louisiana*	6	28	-	-	15	17	-	6	-	-	72	1
Oklahoma	-	200	20	-	15	8	23	436	-	-	37	-
Texas	3	106	84	6	63	58	59	814	2	7	93	2
MOUNTAIN	350	2,793	570	1	22	15	37	722	-	44	280	-
Montana*	24	140	-	-	2	2	2	14	-	40	146	-
Idaho	137	1,147	4	-	1	1	16	327	-	-	18	-
Wyoming	-	-	-	-	-	-	-	1	-	-	2	-
Colorado	87	126	554	1	9	6	7	108	-	1	10	-
New Mexico	-	8	2	-	1	3	-	123	-	-	5	-
Arizona	5	78	4	-	5	1	-	-	-	-	-	-
Utah	97	1,277	-	-	4	2	12	106	-	3	90	-
Nevada	-	17	6	-	-	-	-	43	-	-	9	-
PACIFIC	92	729	1,659	12	94	53	72	1,801	2	27	520	1
Washington	11	75	51	2	17	8	7	677	-	1	77	-
Oregon	1	13	52	3	8	-	14	208	-	11	58	1
California	80	639	1,522	7	63	45	51	892	2	15	379	-
Alaska	-	-	-	-	4	-	-	14	-	-	-	-
Hawaii	-	2	34	-	2	-	-	10	-	-	6	-
Guam*	-	4	5	-	1	1	-	2	-	-	-	-
Puerto Rico	6	70	209	-	2	1	17	342	-	-	5	12
Virgin Islands	NA	2	4	-	-	-	NA	20	NA	NA	1	-

NA: Not Available

*Delayed Reports: Measles: N.J. delete 1, Mont. delete 34; Mening. Inf.: Mo. 1, Kansas delete 7; Mumps: Guam 1; Pertussis: Mo. 1; Rubella: La. delete 2, Mont. 19

Table III-Continued
Cases of Specified Notifiable Diseases: United States
Weeks Ending April 17, 1976 and April 12, 1975 — 15th Week

REPORTING AREA	TUBERCULOSIS		TULAREMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (RMSF)		VENEREAL DISEASES (Civilian Cases Only)						RABIES IN ANIMALS
								GONORRHEA			SYPHILIS (Pri. & Sec.)			
									CUMULATIVE			CUMULATIVE		
	1976	CUM. 1976	CUM. 1976	1976	CUM. 1976	1976	CUM. 1976	1976	1976	1975	1976	1976	1975	CUM. 1976
UNITED STATES	645	9,254	29	6	93	5	15	17,846	277,278	265,617	484	7,561	7,481	629
NEW ENGLAND	27	351	-	2	15	-	-	434	7,631	7,551	10	214	269	11
Maine	2	26	-	-	-	-	-	32	640	454	1	8	5	11
New Hampshire*	-	11	-	-	2	-	-	18	194	218	-	3	10	-
Vermont	-	11	-	-	-	-	-	12	156	157	-	2	4	-
Massachusetts	16	208	-	2	11	-	-	252	3,624	3,671	8	155	177	-
Rhode Island	4	25	-	-	-	-	-	10	517	561	-	9	4	-
Connecticut	5	70	-	-	2	-	-	110	2,500	2,490	1	37	69	-
MIDDLE ATLANTIC	156	1,670	-	1	17	-	-	2,223	29,961	32,272	79	1,287	1,378	2
Upstate New York	10	244	-	1	4	-	-	278	4,707	5,623	4	80	140	1
New York City	39	640	-	-	8	-	-	1,017	12,852	14,670	49	830	809	-
New Jersey	22	319	-	-	3	-	-	510	5,073	4,127	13	181	214	1
Pennsylvania	85	467	-	-	2	-	-	418	7,329	7,852	13	196	215	-
EAST NORTH CENTRAL	77	1,177	-	-	5	-	-	2,522	44,474	43,821	46	696	612	32
Ohio*	10	196	-	-	2	-	-	361	11,217	11,655	11	162	128	-
Indiana	9	173	-	-	-	-	-	84	4,029	3,771	1	37	41	7
Illinois	31	360	-	-	1	-	-	1,250	16,030	15,046	24	371	303	7
Michigan	12	387	-	-	1	-	-	541	9,094	8,918	5	88	105	-
Wisconsin	15	61	-	-	1	-	-	286	4,104	4,431	5	38	35	18
WEST NORTH CENTRAL	18	364	9	-	3	-	-	805	14,005	12,835	14	230	165	139
Minnesota	7	70	3	-	2	-	-	225	2,700	2,664	2	32	17	38
Iowa*	3	34	-	-	-	-	-	40	1,786	1,522	4	108	9	31
Missouri	6	172	5	-	1	-	-	264	5,439	4,721	4	53	101	17
North Dakota	-	11	-	-	-	-	-	9	216	199	-	-	3	34
South Dakota*	-	20	-	-	-	-	-	30	408	536	-	2	3	1
Nebraska	2	18	-	-	-	-	-	80	1,177	1,116	2	12	3	2
Kansas	-	39	1	-	-	-	-	157	2,279	2,077	2	23	29	16
SOUTH ATLANTIC	128	1,987	3	-	11	2	6	4,830	66,972	65,901	135	2,193	2,343	95
Delaware	1	20	-	-	-	-	-	21	948	974	-	17	26	-
Maryland	15	281	1	-	-	-	-	628	9,269	7,405	18	196	185	-
District of Columbia	7	95	-	-	-	-	-	235	4,158	4,054	9	185	188	-
Virginia	25	333	-	-	2	-	2	695	7,263	6,651	3	190	198	19
West Virginia	4	90	-	-	-	-	-	66	849	804	1	14	9	5
North Carolina	25	359	2	-	1	1	2	615	9,938	9,681	44	453	276	-
South Carolina	4	127	-	-	-	1	1	340	6,289	6,156	5	121	173	2
Georgia	16	257	-	-	2	-	1	1,075	12,612	11,868	6	249	332	57
Florida	31	425	-	-	6	-	-	1,155	15,646	18,308	49	768	956	12
EAST SOUTH CENTRAL	54	812	6	2	5	3	4	1,806	25,115	21,750	14	308	336	48
Kentucky	21	183	1	1	3	-	-	303	3,252	2,847	-	48	54	34
Tennessee	7	246	5	1	2	3	3	713	9,755	8,649	7	128	123	11
Alabama	13	235	-	-	-	-	1	458	7,110	5,803	4	58	90	3
Mississippi	13	148	-	-	-	-	-	332	4,998	4,451	3	74	69	-
WEST SOUTH CENTRAL	55	1,076	5	-	3	-	5	2,226	38,096	33,642	68	858	676	143
Arkansas	9	160	1	-	-	-	1	144	3,462	3,423	1	27	20	47
Louisiana*	8	159	1	-	-	-	-	277	5,513	6,309	11	183	156	-
Oklahoma	9	110	-	-	-	-	4	201	3,548	3,082	1	38	32	34
Texas	29	647	3	-	3	-	-	1,604	25,573	20,828	55	610	468	62
MOUNTAIN	31	253	1	-	7	-	-	597	10,684	10,318	7	196	190	34
Montana	1	13	1	-	2	-	-	28	549	609	-	3	3	28
Idaho	3	8	-	-	1	-	-	40	565	519	1	17	3	-
Wyoming	-	4	-	-	-	-	-	9	229	249	-	5	2	1
Colorado	11	55	-	-	1	-	-	193	2,693	2,715	5	55	37	-
New Mexico	2	42	-	-	1	-	-	110	2,185	1,812	-	54	53	-
Arizona	14	116	-	-	2	-	-	136	3,035	2,698	1	47	68	5
Utah	-	5	-	-	-	-	-	26	630	606	-	2	4	-
Nevada*	-	10	-	-	-	-	-	55	798	1,110	-	13	20	-
PACIFIC	99	1,564	5	1	27	-	-	2,403	40,340	37,527	111	1,579	1,512	125
Washington	13	159	2	-	2	-	-	230	3,509	3,575	-	37	69	-
Oregon	4	55	1	-	-	-	-	150	2,967	3,127	2	49	34	-
California	61	1,150	2	1	24	-	-	1,954	31,987	29,231	107	1,465	1,392	95
Alaska	-	20	-	-	-	-	-	44	1,090	932	-	2	1	30
Hawaii	21	180	-	-	1	-	-	25	787	662	2	26	16	-
Guam*	-	14	-	-	-	-	-	-	94	133	-	-	2	-
Puerto Rico	-	93	-	-	-	-	-	68	766	900	10	162	213	11
Virgin Islands	NA	-	-	NA	-	NA	-	NA	72	49	NA	25	11	-

NA: Not Available

*Delayed Reports: TB: N. Hamp. 2, Ohio delete 6, Guam 1; GC: La. delete 14, Nev. 66, Guam 11; Syphilis: Iowa delete 28, Guam 1; An. Rabies: S. Dak. 13

Table IV
Deaths in 121 United States Cities*
Week Ending April 17, 1976 — 15th Week

REPORTING AREA	ALL CAUSES					Pneumonia and Influenza
	ALL AGES	65 Years and Over	45-64 Years	25-44 Years	Under 1 Year	ALL AGES
NEW ENGLAND	648	399	171	41	20	44
Boston, Mass.	224	116	65	18	15	13
Bridgeport, Conn.	45	30	14	1	-	3
Cambridge, Mass.	29	20	6	2	-	4
Fall River, Mass.	25	17	8	-	-	1
Hartford, Conn.	37	21	11	3	-	1
Lowell, Mass.	27	23	4	-	-	3
Lynn, Mass.	24	16	7	1	-	2
New Bedford, Mass.	19	17	1	1	-	1
New Haven, Conn.	47	29	11	7	-	-
Providence, R.I.	63	30	27	4	1	9
Somerville, Mass.	9	6	2	1	-	3
Springfield, Mass.	33	23	5	1	2	1
Waterbury, Conn.	29	22	5	1	-	3
Worcester, Mass.	37	29	5	1	2	-
MIDDLE ATLANTIC	2,663	1,643	704	143	97	120
Albany, N. Y.	62	41	16	-	4	2
Allentown, Pa.	21	15	3	3	-	1
Buffalo, N. Y.	126	67	44	11	3	11
Camden, N. J.	35	17	14	4	-	2
Elizabeth, N. J.	24	18	3	2	1	1
Erie, Pa.	29	21	5	-	-	6
Jersey City, N. J.	53	35	10	2	5	2
Newark, N. J.	53	22	20	7	2	1
New York City, N. Y†	1,414	895	349	84	45	53
Paterson, N. J.	32	21	9	-	2	1
Philadelphia, Pa.	301	166	95	15	14	4
Pittsburgh, Pa.	165	98	51	5	6	15
Reading, Pa.	34	24	8	-	-	3
Rochester, N. Y.	121	78	28	5	6	9
Schenectady, N. Y.	24	17	5	-	-	-
Scranton, Pa.	18	13	5	-	-	2
Syracuse, N. Y.	82	46	23	2	8	3
Trenton, N. J.	34	24	8	1	1	-
Utica, N. Y.	17	12	5	-	-	2
Yonkers, N. Y.	18	13	3	2	-	2
EAST NORTH CENTRAL	2,363	1,410	619	168	80	69
Akron, Ohio	45	32	10	1	1	-
Canton, Ohio	35	27	6	-	1	6
Chicago, Ill.	576	310	167	49	24	10
Cincinnati, Ohio	192	119	48	16	6	8
Cleveland, Ohio	169	90	54	18	2	-
Columbus, Ohio	169	99	48	9	7	-
Dayton, Ohio	121	81	30	5	4	7
Detroit, Mich.	320	190	78	24	13	10
Evansville, Ind.	60	36	12	8	-	2
Fort Wayne, Ind.	29	17	7	2	1	3
Gary, Ind.	30	17	9	2	1	-
Grand Rapids, Mich.	43	30	8	2	1	3
Indianapolis, Ind.	161	101	40	6	9	6
Madison, Wis.	35	20	8	4	1	5
Milwaukee, Wis.	117	81	29	4	1	4
Peoria, Ill.	30	17	9	1	1	1
Rockford, Ill.	27	15	8	3	-	2
South Bend, Ind.	46	29	14	2	1	2
Toledo, Ohio	100	68	18	6	5	-
Youngstown, Ohio	58	31	16	6	1	-
WEST NORTH CENTRAL	762	479	183	39	36	44
Des Moines, Iowa	73	51	15	2	1	3
Duluth, Minn.	30	19	6	1	2	2
Kansas City, Kans.	32	19	7	2	3	1
Kansas City, Mo.	137	95	25	7	8	9
Lincoln, Nebr.	27	17	6	3	1	2
Minneapolis, Minn.	84	51	24	3	2	4
Omaha, Nebr.	79	50	16	4	5	4
St. Louis, Mo.	163	91	46	14	7	4
St. Paul, Minn.	63	41	18	1	3	3
Wichita, Kans.	74	45	20	2	4	12
SOUTH ATLANTIC	1,076	630	292	72	40	58
Atlanta, Ga.	124	68	42	7	3	8
Baltimore, Md.	216	119	63	20	6	2
Charlotte, N. C.	70	46	13	6	1	7
Jacksonville, Fla.	51	30	13	4	1	1
Miami, Fla.	126	69	40	8	3	5
Norfolk, Va.	56	39	12	-	3	6
Richmond, Va.	94	51	20	7	15	11
Savannah, Ga.	50	30	14	4	1	5
St. Petersburg, Fla.	70	59	5	2	3	3
Tampa, Fla.	62	38	15	4	-	2
Washington, D. C.	117	57	41	9	4	2
Wilmington, Del.	40	24	14	1	-	6
EAST SOUTH CENTRAL	568	320	152	57	18	37
Birmingham, Ala.	98	51	27	11	7	3
Chattanooga, Tenn.	43	21	12	4	1	3
Knoxville, Tenn.	33	19	6	3	2	1
Louisville, Ky.	101	62	30	5	2	16
Memphis, Tenn.	119	75	25	14	2	2
Mobile, Ala.	56	37	12	4	3	2
Montgomery, Ala.	27	13	9	3	-	4
Nashville, Tenn.	91	42	31	13	1	6
WEST SOUTH CENTRAL	1,138	620	313	72	65	61
Austin, Tex.	36	20	7	4	1	6
Baton Rouge, La.	78	38	21	7	9	13
Corpus Christi, Tex.	39	21	11	3	3	2
Dallas, Tex.	165	101	41	9	5	10
El Paso, Tex.	58	32	10	5	5	8
Fort Worth, Tex.	80	44	21	5	6	2
Houston, Tex.	250	123	78	17	14	3
Little Rock, Ark.	53	35	10	5	1	4
New Orleans, La.	130	71	43	3	5	2
San Antonio, Tex.	122	71	33	6	7	4
Shreveport, La.	74	34	23	5	6	2
Tulsa, Okla.	53	30	15	3	3	5
MOUNTAIN	561	326	123	44	41	10
Albuquerque, N. Mex.	76	38	20	7	6	-
Colorado Springs, Colo.	32	17	10	3	1	2
Denver, Colo.	119	63	34	7	10	3
Las Vegas, Nev.	26	19	5	2	-	1
Ogden, Utah	12	6	4	1	-	-
Phoenix, Ariz.	124	85	18	8	7	-
Pueblo, Colo.	27	21	3	2	1	1
Salt Lake City, Utah	54	26	12	3	10	1
Tucson, Ariz.	91	51	17	11	6	2
PACIFIC	1,663	1,036	431	93	54	76
Berkeley, Calif.	15	11	4	-	-	-
Fresno, Calif.	55	35	12	3	1	2
Glendale, Calif.	17	11	4	1	-	3
Honolulu, Hawaii	61	37	12	4	5	1
Long Beach, Calif.	130	79	40	4	5	2
Los Angeles, Calif.	432	262	117	27	13	28
Oakland, Calif.	79	51	18	4	4	1
Pasadena, Calif.	37	22	7	2	2	-
Portland, Oreg.	143	87	34	8	7	2
Sacramento, Calif.	55	30	19	3	3	4
San Diego, Calif.	124	77	33	11	2	4
San Francisco, Calif.	174	106	53	11	3	8
San Jose, Calif.	54	38	7	6	1	3
Seattle, Wash.	187	120	51	7	3	11
Spokane, Wash.	57	43	9	-	3	4
Tacoma, Wash.	43	27	11	2	2	3
TOTAL	11,442	6,863	2,988	729	451	519
Expected Number	12,266	7,453	3,216	772	373	462

*By place of occurrence and week of filing certificate. Excludes fetal deaths.
†Delayed Report for Week Ending 4/10/76 (For NYC)

The Morbidity and Mortality Weekly Report, circulation 52,000, is published by the Center for Disease Control, Atlanta, Georgia. 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.

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

Send mailing list additions, deletions, and address changes to: Center for Disease Control, Attn.: Distribution Services, GSO, 1-SB-36, Atlanta, Georgia 30333. When requesting changes be sure to give your former address, including zip code and mailing list code number, or send an old address label.

Imported Infections — Continued

Other helminth reports in 1975 included 180 schistosoma infections; about half of these were *S. mansoni* and a quarter were *S. haematobium.* Most of these infections were probably acquired in Africa, but about 10% were thought to have been acquired in the Near East.

Some bacterial infections were also acquired abroad. In 1975 about 180 imported typhoid fever infections were reported. About 100 of these were acquired in the Indian subcontinent. Europe was the next most common source; 32 cases were reported during the year, mostly from Spain. Twenty-two of these infections were in a group of vacationers who went to a beach barbecue in Majorca; they were subsequently found to be infected with *Salmonella typhi,* phage type E1. *S. typhi* infections were also diagnosed in persons traveling from the Near East, Far East, and Africa. About 40 paratyphoid infections from abroad were reported; most of the infections with *S. paratyphi* A were contracted in the Indian subcontinent, whereas *S. paratyphi* B mainly came from Europe and the Near East. An infection with *Vibrio cholerae* was contracted in Iraq.

From notes based on reports to the Public Health Laboratory Service from public health and hospital laboratories in the United Kingdom and the Republic of Ireland, published in the British Medical Journal, *January 24, 1976.*

Epidemiologic Notes and Reports

Meningococcal Disease — Oregon, Washington, and British Columbia, Canada

Washington State: Since June 1975, 8 cases of serogroup A meningococcal meningitis or septicemia have been reported to the State Division of Health. There were no serogroup A cases identified in the preceding 2 years. Six of the 8 patients were adults who resided before their illness in 1 section of downtown Seattle; 5 of the 6 were alcoholics, and 4 were unemployed. The other 2 patients were children. One child, age 6 months, lives in the same section of downtown Seattle; the other, age 3 months, lives on the Olympic peninsula. Approximately 5,000 persons live in the area inhabited by the 7 Seattle cases. Four of the 8 isolates have been tested for sulfadiazine sensitivity (*1*); all are sensitive.

Oregon: Since January 1976, 4 cases of serogroup A meningococcal meningitis have been reported to the State Health Division. There had been only 3 group A cases identified in the preceding 5 years, 1 each in 1973, 1974, and 1975. Three of the 1976 patients were unemployed alcoholic adults who reside in 1 section of downtown Portland. The fourth is an 8-year-old boy from another section of Portland. Approximately 2,300 persons live in the downtown section of Portland inhabited by the 3 adult patients.

Vancouver, British Columbia, Canada: In the 6-month period October 1975-March 1976, 5 cases of meningococcal meningitis or meningococcemia caused by serogroup A were recognized in residents of the Vancouver area. No such cases were observed in the same interval 1 year earlier.

Reported by L Bergner, MD, AHB Pedersen, MD, Seattle-King County Dept of Public Health; TL Nghiem, MD, DrPH, State Epidemiologist, Washington State Dept of Social and Health Services; E Goldblatt, MD, H Tilson, MD, Multnomah County Health Dept; JA Googins, MD, State Epidemiologist, Oregon State Health Div; EJ Bowmer, MD, FRC Path, Department of Health, British Columbia, Canada; F White, MD, Communicable Disease Section, Bur of Epidemiology, Laboratory Centre for Disease Control, Ottawa, Canada; Antimicrobics Investigations Section, Bacteriology Div, Bur of Laboratories; and Special Pathogens Br, Bacterial Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: Meningococcal disease caused by serogroup A has been uncommon in the United States since the epidemic in 1945. From September 1973 through August 1974, only 1.5% of isolates from patients with meningococcal disease submitted to CDC were serogroup A. During the same period, 1,273 cases of meningococcal disease were reported through the National Morbidity Reporting system (*2*). If the isolates sent to CDC are representative, an estimated 19 of the 1,273 reported cases were caused by serogroup A. Since August 1974, only 3 serogroup A cases from states other than Washington and Oregon have become known to CDC, although meningococcal disease is not routinely reported by serogroup. The last reported cluster of serogroup A cases occurred in Washington in 1971 when 2 apparently otherwise unrelated cases occurred in Seattle (*3*).

The reason for the clustering of serogroup A cases in similar populations in Seattle and Portland is not clear. However, many persons in the population at risk are transient, moving frequently between coastal cities. This high mobility may have contributed to the outbreaks. It is not known whether the high prevalence of alcholism in these populations makes these persons more susceptible to meningococcal disease.

The use of vaccine against serogroup A meningococcal disease should be considered in groups clearly demonstrated to be at high risk (4). However, the transient nature of the of the population makes vaccination difficult, and influx from other areas lowers the percentage of the population that has been vaccinated. Continuing active surveillance of serogroup A meningococcal disease will be needed to define future vaccination needs.

Because meningococci require a high concentration of carbon dioxide for growth, routine Kirby-Bauer sensitivity testing is not appropriate. Disc testing is easily, rapidly, and reliably done by the method of Bennett, Camp, and Eickhoff (*1*).

References

1. Bennett JV, Camp HV, Eickhoff TC: Rapid sulfonamide disc sensitivity test for meningococci. Appl Microbiol 16:1056-1060, 1968
2. Jacobson JA, Weaver RA, Thornsberry C: Trends in meningococcal disease, 1974. J Infect Dis 132:480-484, 1975
3. MMWR 20(30):268-269, 1971
4. McCormick JB, Bennett JV: Public health considerations in the management of meningococcal disease. Ann Intern Med 83:883-886, 1975

Current Trends

Influenza — United States

Influenza in the United States has decreased markedly, and there is no longer evidence of nationwide epidemic activity. Pneumonia and influenza (P and I) mortality from 121 cities has fallen below the epidemic threshold for the first time in 11 weeks (Figure 1). P and I mortality is at or below epidemic thresholds in all regions except the Pacific and West South Central regions.

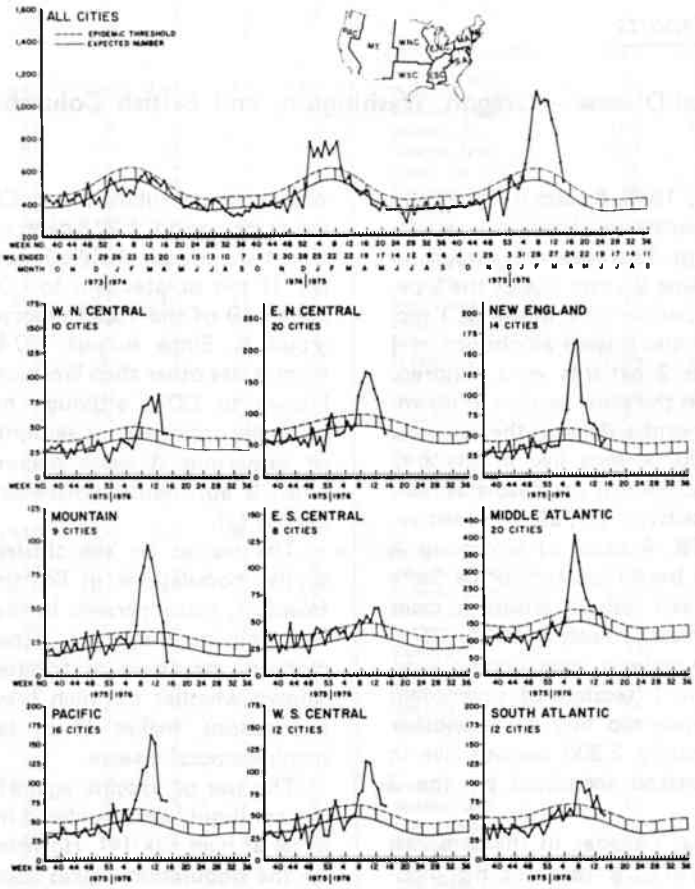
Although preliminary and based on extrapolations for the entire country from deaths due to P and I in 121 cities, an estimated 11,000 P and I excess deaths can be attributed to the A/Victoria epidemic this year. This is the highest number since the Hong Kong 1968-1969 epidemic, when an estimated 12,700 P and I deaths occurred, according to the National Center for Health Statistics (*1*).

Reported by the Viral Diseases Div, Bur of Epidemiology, CDC.

Reference

1. Dowdle WR, Coleman MT, Gregg MB: Natural History of Influenza Type A in the United States, 1957-1972. Prog Med Virol 17:91-135, 1974

FIGURE 1. Mortality in 121 United States cities



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