CENTER FOR DISEASE CONTROL

MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

May 7, 1976 / Vol. 25 / No. 17

Epidemiologic Notes and Reports

Organic Mercury Exposure — Washington

Sixteen members of an extended family in Yakima, Washington, were exposed to organic mercury in the first 3 months of 1976. Their mercury source was treated seed grain, used as chicken feed, and exposure resulted from egg consumption. Early recognition of the hazard prevented development of clinical illness.

A young male member of the family had obtained the mercury-treated grain in January 1976 while he was scavenging at a city dump. He removed approximately 1 ton of mixed grain, chaff, and dirt from the dump from January 3-15. (Since then, another 5 to 10 tons of the mixture, which may have represented granary sweepings, have disappeared from the dump.) The family began to feed the scavenged grain to their 45 chickens soon after it was obtained. No illness was noted in the flock.

On February 19 in an unrelated incident, 400 pounds of mercury-treated barley were reported missing by a Yakima County farmer. Local news media circulated widely a description of the pink color of the treated grain and reviewed the human health hazards associated with its improper use. As a result of this publicity, a concerned local citizen notified the Yakima County sheriff's office on March 1 that she had received 3 sacks of mixed grain containing pink kernels. The grain had been given to her by the above described family. The sheriff's office and the Washington State Department of Agriculture investigated promptly and on March 2 impounded the scavenged grain.

The members of the family were medically examined March 3-5. Three members reported nonspecific symptoms, but none of these appeared related to mercury exposure.

Analysis of 8 grain samples by atomic absorption spectrophotometry showed an average total mercury content of 15,000 parts per billion (ppb) (*1*). By gas chromatography, methyl and phenyl mercury was found in the grain in ratios of 1:2 and 1:5. Analysis of an egg from a chicken that had eaten the treated grain showed organic/inorganic mercury levels of 596/1,902 ppb in the yolk and of 2,719/98 ppb in albumin. Whole blood samples from family members showed total mercury levels ranging from 0.9 to 20.2 ppb; the highest level was found in the man who ate 8 eggs per day. All of the blood mercury levels were below the range at which symptoms reportedly occur.* There was a close correlation noted between blood mercury levels and average daily egg consumption (r=0.92).

Reported by RG Atwood, MD, P Gates, PHN, M Patnode, PHN, Yakima County Health District; R LacQuaye, Yakima County Sheriff's Dept; T Clarkson, PhD, M Greenwood, MS, JC Smith, PhD, University of Rochester; E Nedrow, Washington State Dept of Agriculture; JA Beare, S Milham, Jr, MD, TL Nghiem, MD, DrPH, State Epidemiologist, Washington State Dept of Social and Health Services; Field Services Div, and Environmental Hazards Activity, Cancer and Birth Defects Div, Bur of Epidemiology, CDC.

Editorial Note: Publicity and prompt action prevented in this instance the development of the acute, often irreversible neurologic illness that has been seen in previous episodes of organic mercury poisoning (*3, 4*).

The typical symptoms in mild cases include paresthesias, fatigue, and inability to concentrate. More severe cases progress to concentric narrowing of the visual fields, hearing difficulties, emotional lability, ataxia, paralysis, coma, and death.

References

1. Giovanoli-Jakubczak T, Greenwood MR, Smith JC, et al: Determination of total and inorganic mercury in hair by flameless atomic absorption and of methyl mercury by gas chromatography. Clin Chem 20(2):222, 1974
2. Berglund F, Berlin M, Birke G et al: Methyl mercury in fish, a toxicologic-epidemiologic evaluation of risks, report from an expert group. Nord Hyg T, Supplement 4, 1971
3. Kurland LT, Faro SN, Seidler H: Minamata disease: The outbreak of a neurologic disorder in Minamata, Japan, and its relationship to the ingestion of seafood contaminated by mercuric compounds. World Neurol 1:370-395, 1960
4. Pierce PE, Thompson JF, Likosky WH et al: Alkyl mercury poisoning in humans: Report of an outbreak. JAMA 220:1439-1442, 1972

*A Swedish expert committee has recommended that whole blood mercury levels above 20 ppb be considered to pose a mercury poisoning hazard (*2*).

Botulism Associated with Commercial Cherry Peppers — Oklahoma, Utah, Texas

Following the clinical diagnosis of botulism in 4 unrelated persons from 3 states, the respective state health departments, the Food and Drug Administration, and CDC are jointly investigating a brand of cherry peppers which were the only apparent common exposure among the patients.

Manufactured by Dreher Pickle Company, Denver, Colorado, the peppers carried the brand name, "CODE Sweet Cherry Peppers," and had 1 of the following identifying numbers: 1-MAR-1977, MAR-197, or MAR-1977D. As a precautionary measure, the company is voluntarily recalling all 1-gallon containers with these 3 identification numbers. Other labels produced on the same day are being investigated.

Botulism was clinically diagnosed, but not laboratory-confirmed, in the 4 patients, whose only apparent common exposure was eating cherry peppers obtained from a salad bar at the Ramada Inn, Elk City, Oklahoma, April 13-15. The inn is located on US 40, a major east-west highway. One ill person from Brownwood, Texas, had visited Elk City on business; another, from Ogden, Utah, had stopped there while traveling across the country. The other 2 persons were Elk City residents.

Peppers from the same container may have been served for several days before and after April 13-15. Other undiagnosed cases of botulism may be current.

All of the patients are in stable condition. Three of the four were hospitalized, and 1 of these is requiring mechanical respiratory assistance.

Reported by M Roberts, A Start, MD, Oklahoma State Dept of Health; T Fukushima, MD, State Epidemiologist, Utah State Div of Health; MS Dickerson, MD, State Epidemiologist, Texas State Dept of Health Resources; Food and Drug Administration; and Enteric Diseases Br, Bacterial Diseases Div, CDC.

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

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

DISEASE	17th WEEK ENDING		MEDIAN 1971–1975	CUMULATIVE, FIRST 17 WEEKS		MEDIAN 1971–1975
	May 1, 1976	April 26, 1975		May 1, 1976	April 26, 1975	
Aseptic meningitis	24	38	38	583	607	608
Brucellosis	2	1	6	64	49	42
Chickenpox	5,941	5,641	---	96,779	71,444	---
Diphtheria	1	9	5	95	156	67
Encephalitis: Primary	15	15	23	247	210	283
Encephalitis: Post-Infectious	7	9	8	88	89	89
Hepatitis, Viral: Type B	228	200	177	4,635	3,580	2,945
Hepatitis, Viral: Type A	770	652	1,077	11,761	11,789	16,813
Hepatitis, Viral: Type unspecified	157	152		2,860	2,559	
Malaria	9	1	4	107	86	86
Measles (rubeola)	1,243	1,156	1,200	17,258	10,099	14,325
Meningococcal infections, total	38	30	30	696	579	579
Civilian	38	30	30	691	563	563
Military	-	-	1	5	16	17
Mumps	1,188	1,909	2,302	21,615	27,212	34,285
Pertussis	10	32	---	329	399	---
Rubella (German measles)	366	724	1,282	5,961	7,348	12,763
Tetanus	-	1	1	11	20	22
Tuberculosis	688	643	---	10,645	9,935	---
Tularemia	2	3	2	32	20	30
Typhoid fever	5	2	5	105	75	82
Typhus, tick-borne (Rky. Mt. spotted fever)	7	4	3	30	21	21
Venereal Diseases:						
Gonorrhea: Civilian	17,862	19,552	---	312,410	303,151	---
Gonorrhea: Military	643	463	---	9,510	9,527	---
Syphilis, primary and secondary: Civilian	388	487	---	8,416	8,561	---
Syphilis, primary and secondary: Military	5	4	---	123	113	---
Rabies in animals	79	78	94	785	724	1,180

Table II. Notifiable Diseases of Low Frequency: United States

	CUM.		CUM.
Anthrax:	2	Poliomyelitis, total:	4
Botulism:	6	Paralytic:	4
Congenital rubella syndrome:	8	Psittacosis:	21
Leprosy: Ariz. 1, Calif. 5	49	Rabies in man:	-
Leptospirosis: La. 1	14	Trichinosis:	45
Plague:	1	Typhus, murine:	6

*Delayed Reports: Trichinosis: Conn. delete 1, Ariz. 1

Table III

Cases of Specified Notifiable Diseases: United States

Weeks Ending May 1, 1976 and April 26, 1975 — 17th Week

AREA REPORTING	ASEPTIC MENINGITIS	BRUCELLOSIS	CHICKENPOX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS, VIRAL			MALARIA	
						Primary: Arthropod-borne and Unspecified		Post Infectious	Type B	Type A	Type Unspecified		
	1976	1976	1976	1976	CUM. 1976	1976	1975	1976	1976	1976	1976	1976	CUM. 1976
UNITED STATES	24	2	5,941	1	95	15	15	7	228	770	157	9	107
NEW ENGLAND	–	–	496	–	–	–	–	–	15	14	17	1	7
Maine	–	–	13	–	–	–	–	–	–	2	–	–	–
New Hampshire*	–	–	17	–	–	–	–	–	1	3	–	–	–
Vermont	–	–	1	–	–	–	–	–	–	–	–	–	–
Massachusetts	–	–	214	–	–	–	–	–	7	3	16	1	4
Rhode Island	–	–	122	–	–	–	–	–	1	–	–	–	1
Connecticut	–	–	129	–	–	–	–	–	6	6	1	–	2
MIDDLE ATLANTIC	–	–	284	–	–	5	3	2	34	52	2	1	19
Upstate New York	–	–	96	–	–	2	–	–	12	20	–	–	5
New York City	–	–	102	–	–	2	1	–	12	20	–	–	9
New Jersey	–	–	NN	–	–	–	–	–	–	–	–	–	–
Pennsylvania	–	–	86	–	–	1	2	2	10	12	2	1	5
EAST NORTH CENTRAL	2	–	2,387	–	–	3	3	1	40	99	17	1	3
Ohio	–	–	315	–	–	1	1	1	2	29	–	–	1
Indiana	NA	NA	NA	NA	–	NA	–	–	NA	NA	NA	NA	–
Illinois	1	–	398	–	–	–	–	–	20	45	12	–	–
Michigan	–	–	881	–	–	2	2	–	13	21	5	1	2
Wisconsin	1	–	793	–	–	–	–	–	5	4	–	–	–
WEST NORTH CENTRAL	–	–	1,239	–	4	–	–	–	9	26	4	–	2
Minnesota	–	–	24	–	–	–	–	–	3	7	–	–	1
Iowa	–	–	438	–	–	–	–	–	–	–	–	–	–
Missouri	–	–	29	–	1	–	–	–	3	10	–	–	–
North Dakota	–	–	28	–	–	–	–	–	1	1	–	–	–
South Dakota	–	–	–	–	3	–	–	–	–	2	–	–	1
Nebraska	–	–	51	–	–	–	–	–	1	2	–	–	–
Kansas	–	–	669	–	–	–	–	–	1	4	4	–	–
SOUTH ATLANTIC	5	2	605	–	–	1	2	1	31	93	22	1	16
Delaware	–	–	11	–	–	–	–	–	–	2	1	–	–
Maryland	2	–	26	–	–	–	–	–	12	10	1	–	1
District of Columbia	–	–	10	–	–	–	–	–	2	3	–	–	2
Virginia	–	1	48	–	–	–	1	–	7	8	7	1	5
West Virginia	–	–	341	–	–	–	–	–	–	2	–	–	–
North Carolina	–	1	NN	–	–	–	–	–	1	12	5	–	2
South Carolina*	–	–	8	–	–	1	–	1	2	9	5	–	–
Georgia	–	–	–	–	–	–	–	–	–	21	–	–	1
Florida*	3	–	161	–	–	–	1	–	7	26	3	–	5
EAST SOUTH CENTRAL	4	–	66	–	–	2	–	1	12	78	7	–	1
Kentucky	1	–	25	–	–	–	–	–	3	16	1	–	–
Tennessee	3	–	NN	–	–	2	–	1	6	24	5	–	–
Alabama	–	–	36	–	–	–	–	–	2	1	1	–	–
Mississippi	–	–	5	–	–	–	–	–	1	37	–	–	1
WEST SOUTH CENTRAL	3	–	366	–	–	2	1	1	7	82	43	–	5
Arkansas	–	–	–	–	–	–	–	–	–	4	–	–	–
Louisiana	1	–	NN	–	–	–	1	–	3	9	3	–	–
Oklahoma*	–	–	50	–	–	–	–	1	2	23	2	–	–
Texas*	2	–	316	–	–	2	–	–	2	46	38	–	5
MOUNTAIN	–	–	218	–	3	–	1	1	12	24	10	–	5
Montana	–	–	27	–	–	–	–	–	1	–	–	–	–
Idaho*	–	–	40	–	–	–	–	–	–	1	1	–	–
Wyoming	–	–	–	–	–	–	–	–	–	–	–	–	–
Colorado	–	–	85	–	3	–	–	1	4	5	5	–	3
New Mexico*	NA	NA	NA	NA	–	NA	1	–	NA	NA	NA	NA	1
Arizona	–	–	–	–	–	–	–	–	6	13	3	–	–
Utah	–	–	48	–	–	–	–	–	1	3	1	–	–
Nevada	–	–	18	–	–	–	–	–	–	2	–	–	1
PACIFIC	10	–	280	1	88	2	5	–	68	302	35	5	49
Washington	–	–	251	1	86	–	–	–	7	14	6	–	1
Oregon	–	–	1	–	–	–	–	–	6	10	7	1	5
California*	7	–	–	–	1	1	5	–	49	139	22	4	42
Alaska	1	–	1	–	1	1	–	–	3	137	–	–	–
Hawaii	2	–	27	–	–	–	–	–	3	2	–	–	1
Guam*	–	–	–	–	–	–	–	–	–	–	–	–	–
Puerto Rico	–	–	9	–	–	–	2	–	–	4	–	–	1
Virgin Islands	–	–	–	–	–	–	–	–	–	–	–	–	–

NA: Not Available. NN: Not Notifiable.

*Delayed Reports: Asep. Meng: Texas delete 1; Chickenpox: N. Hamp. 3, Vt. 14, Calif. 65, Guam 12; Enceph.: N. Hamp. 1; Hep. B: Okla. delete 1, Idaho 3; Hep. A: Idaho 3 (1975), 5 (1976), N. Mex. 8; Hep. Unsp.: Idaho 4 (1975), 21 (1976), N. Mex. 8

Table III-Continued
Cases of Specified Notifiable Diseases: United States
Weeks Ending May 1, 1976 and April 26, 1975 — 17th Week

REPORTING 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	1,243	17,258	10,099	38	696	579	1,188	21,615	10	366	5,961	11
NEW ENGLAND	28	162	86	1	30	33	34	821	–	18	175	–
Maine	–	3	6	–	–	5	6	66	–	–	2	–
New Hampshire	–	3	19	–	2	1	–	24	–	–	10	–
Vermont	–	–	11	–	2	–	–	3	–	–	1	–
Massachusetts	–	2	20	–	8	9	4	124	–	9	92	–
Rhode Island	–	14	1	–	4	3	12	308	–	–	4	–
Connecticut	28	140	29	1	14	15	12	296	–	9	66	–
MIDDLE ATLANTIC	278	3,683	554	5	83	53	98	1,625	3	128	1,173	–
Upstate New York	78	1,245	152	2	31	18	14	266	1	8	202	–
New York City	27	182	67	2	20	9	62	727	1	10	68	–
New Jersey	54	395	194	–	12	10	4	298	–	92	808	–
Pennsylvania	119	1,861	141	1	20	16	18	334	1	18	95	–
EAST NORTH CENTRAL	409	6,798	3,056	3	97	89	537	9,082	1	118	2,016	–
Ohio	19	242	58	1	46	17	125	1,283	–	14	135	–
Indiana	NA	1,204	238	–	4	4	NA	733	NA	NA	242	–
Illinois	7	652	650	1	9	17	39	1,156	–	55	627	–
Michigan	243	2,538	1,601	1	32	42	240	3,708	1	37	756	–
Wisconsin	140	2,162	509	–	6	9	133	2,202	–	12	256	–
WEST NORTH CENTRAL	60	383	3,036	1	47	32	164	2,532	1	15	205	1
Minnesota	14	138	–	–	11	6	6	482	–	3	17	–
Iowa	–	8	271	–	8	5	40	902	–	–	10	–
Missouri	–	6	145	1	12	17	14	202	1	2	20	–
North Dakota	–	1	659	–	1	–	1	106	–	–	1	1
South Dakota	–	1	261	–	1	–	–	2	–	3	7	–
Nebraska	–	40	241	–	2	1	2	53	–	–	1	–
Kansas	46	189	1,459	–	12	3	101	785	–	7	149	–
SOUTH ATLANTIC	32	1,134	125	7	132	116	82	1,696	3	9	1,010	5
Delaware	2	111	4	–	2	4	–	16	–	–	5	–
Maryland	13	530	–	1	10	10	24	453	–	–	1	2
District of Columbia	–	3	–	–	2	4	3	79	–	–	45	–
Virginia	10	157	12	–	12	12	2	156	–	3	154	1
West Virginia	7	111	89	–	4	4	35	491	–	5	203	–
North Carolina	–	–	–	1	23	23	3	280	–	1	10	–
South Carolina	–	2	–	2	24	13	1	31	2	–	567	–
Georgia	–	–	1	2	13	8	–	–	1	–	–	–
Florida	–	220	19	1	42	38	14	190	–	–	25	2
EAST SOUTH CENTRAL	49	427	160	5	50	84	84	1,708	1	8	194	1
Kentucky	49	408	66	4	9	35	9	742	1	1	122	1
Tennessee	–	5	87	–	20	30	52	803	–	7	69	–
Alabama	–	–	3	–	15	11	22	144	–	–	–	–
Mississippi	–	14	4	1	6	8	1	19	–	–	3	–
WEST SOUTH CENTRAL	97	462	136	9	109	91	80	1,440	–	7	262	3
Arkansas	–	–	–	–	3	6	–	56	–	–	42	–
Louisiana	88	116	–	–	15	18	6	12	–	–	71	1
Oklahoma	6	219	45	–	17	8	30	486	–	3	47	–
Texas*	3	127	91	9	74	59	44	886	–	4	102	2
MOUNTAIN	149	3,187	720	2	43	18	32	764	1	27	341	–
Montana	24	149	6	–	2	3	–	15	–	17	183	–
Idaho	106	1,405	4	–	20	2	9	336	–	–	18	–
Wyoming	–	–	–	–	–	–	–	1	–	–	2	–
Colorado	2	134	679	1	10	7	13	130	–	–	12	–
New Mexico*	NA	8	2	–	1	3	NA	123	NA	NA	5	–
Arizona	2	80	14	1	6	1	–	–	–	–	–	–
Utah	14	1,393	2	–	4	2	8	114	1	10	112	–
Nevada	1	18	13	–	–	–	2	45	–	–	9	–
PACIFIC	141	1,022	2,226	5	105	63	77	1,947	–	36	585	1
Washington	–	91	70	–	18	10	26	724	–	7	89	–
Oregon	5	44	91	–	9	–	16	241	–	10	68	1
California	136	885	2,022	5	72	52	35	958	–	18	419	–
Alaska	–	–	–	–	4	–	–	14	–	–	–	–
Hawaii	–	2	43	–	2	1	–	10	–	1	9	–
Guam*	–	5	6	–	1	1	–	4	–	–	–	–
Puerto Rico	–	81	308	–	2	1	7	375	–	–	5	12
Virgin Islands	1	4	4	–	–	–	–	20	–	1	2	1

NA: Not Available
*Delayed Reports: Measles: Texas delete 2, Guam 1; Mening. Inf.: Texas delete 1; Mumps: N. Mex. 1, Guam 1; Rubella: Texas 1, N. Mex. 24

Table III-Continued
Cases of Specified Notifiable Diseases: United States
Weeks Ending May 1, 1976 and April 26, 1975 — 17th Week

REPORTING AREA	TUBERCULOSIS		TULAREMIA	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	688	10,645	32	5	105	7	30	17,862	312,410	303,151	388	8,416	8,561	785
NEW ENGLAND	26	400	–	–	15	–	–	482	8,608	8,298	10	242	312	13
Maine	–	26	–	–	–	–	–	41	722	513	–	8	6	11
New Hampshire	1	17	–	–	2	–	–	19	222	241	–	3	10	–
Vermont	–	11	–	–	–	–	–	13	182	178	–	2	4	–
Massachusetts	19	237	–	–	11	–	–	259	4,090	3,918	8	176	203	1
Rhode Island	1	30	–	–	–	–	–	19	582	625	–	10	4	1
Connecticut	5	79	–	–	2	–	–	131	2,810	2,823	2	43	85	–
MIDDLE ATLANTIC	170	1,984	–	1	19	–	–	1,969	33,655	36,472	55	1,422	1,542	4
Upstate New York	40	310	–	–	4	–	–	516	5,549	6,531	4	92	148	2
New York City	74	782	–	1	10	–	–	801	14,454	16,434	33	918	910	–
New Jersey*	22	372	–	–	3	–	–	161	5,327	4,534	7	194	251	1
Pennsylvania	34	520	–	–	2	–	–	491	8,325	8,973	11	218	233	1
EAST NORTH CENTRAL	89	1,372	–	–	6	–	1	2,232	50,084	49,387	25	772	690	38
Ohio	–	210	–	–	2	–	1	471	12,476	12,830	12	184	148	–
Indiana	NA	186	–	NA	–	NA	–	NA	4,129	4,153	NA	38	43	8
Illinois	68	457	–	–	2	–	–	882	18,571	17,476	4	411	343	9
Michigan	21	445	–	–	1	–	–	576	10,286	9,972	3	94	118	–
Wisconsin	–	74	–	–	1	–	–	303	4,622	4,956	6	45	38	21
WEST NORTH CENTRAL	21	400	10	–	4	–	–	994	15,877	14,824	5	220	194	180
Minnesota	6	78	3	–	2	–	–	142	2,988	3,136	1	36	27	46
Iowa	1	39	–	–	–	–	–	102	2,039	2,017	–	82	9	38
Missouri	8	189	6	–	2	–	–	485	6,184	5,290	3	61	114	19
North Dakota	–	11	–	–	–	–	–	4	234	223	–	–	3	41
South Dakota	–	20	–	–	–	–	–	20	460	605	–	2	3	14
Nebraska	1	19	–	–	–	–	–	95	1,362	1,239	–	13	4	2
Kansas	5	44	1	–	–	–	–	146	2,610	2,314	1	26	34	20
SOUTH ATLANTIC	152	2,301	3	–	13	3	13	4,402	74,902	74,825	129	2,460	2,714	116
Delaware	–	24	–	–	–	–	–	65	1,066	1,068	–	21	28	–
Maryland	27	328	1	–	–	1	2	587	10,476	8,349	11	218	210	–
District of Columbia	4	101	–	–	–	–	–	220	4,593	4,577	15	221	210	–
Virginia	12	382	–	–	3	1	4	507	8,052	7,628	15	224	212	23
West Virginia	14	109	–	–	–	–	–	72	970	941	–	14	9	6
North Carolina	24	398	2	–	1	1	4	425	10,959	10,881	23	499	344	1
South Carolina	11	144	–	–	1	–	2	1,011	7,300	7,023	14	135	200	2
Georgia	19	302	–	–	2	–	1	458	13,764	13,306	13	268	379	69
Florida	41	513	–	–	6	–	–	1,057	17,722	21,052	38	860	1,122	15
EAST SOUTH CENTRAL	63	925	8	–	5	1	7	1,507	28,086	25,032	20	349	386	53
Kentucky	22	214	1	–	3	1	1	126	3,569	3,141	3	53	59	36
Tennessee	20	280	7	–	2	–	5	625	10,962	9,988	12	144	141	12
Alabama	7	261	–	–	–	–	1	416	7,928	6,897	–	65	100	5
Mississippi	14	170	–	–	–	–	–	340	5,627	5,006	5	87	86	–
WEST SOUTH CENTRAL	65	1,235	5	–	3	3	9	2,330	42,587	38,351	32	928	758	183
Arkansas	6	172	1	–	–	2	3	222	3,876	4,102	–	29	23	52
Louisiana*	12	183	1	–	–	–	–	421	6,220	7,231	2	191	178	–
Oklahoma	6	125	–	–	–	1	5	205	3,969	3,528	–	39	35	44
Texas	41	755	3	–	3	–	1	1,482	28,522	23,490	30	669	522	87
MOUNTAIN	7	267	1	–	7	–	–	621	11,903	11,912	15	222	212	51
Montana	1	17	1	–	2	–	–	39	614	663	–	3	3	44
Idaho	–	8	–	–	1	–	–	36	628	626	–	19	5	–
Wyoming	–	4	–	–	–	–	–	43	286	293	–	5	2	1
Colorado	1	58	–	–	1	–	–	196	3,082	3,102	6	61	45	–
New Mexico*	NA	42	–	NA	1	NA	–	NA	2,185	2,069	NA	54	54	–
Arizona	1	119	–	–	2	–	–	237	3,443	3,176	4	58	76	6
Utah	4	9	–	–	–	–	–	25	687	707	5	8	4	–
Nevada	–	10	–	–	–	–	–	45	978	1,276	–	14	23	–
PACIFIC	95	1,761	5	4	33	–	–	3,325	46,708	44,050	97	1,801	1,753	147
Washington	–	166	2	–	2	–	–	248	3,957	4,081	–	37	69	–
Oregon	6	63	1	–	–	–	–	103	3,348	3,513	1	51	38	–
California	75	1,304	2	4	30	–	–	2,854	37,178	34,578	89	1,668	1,629	112
Alaska	–	20	–	–	–	–	–	64	1,310	1,162	2	9	1	35
Hawaii	14	208	–	–	1	–	–	56	915	716	5	36	16	–
Guam*	–	20	–	–	–	–	–	–	111	152	–	1	2	–
Puerto Rico	1	104	–	–	–	–	–	69	898	1,017	5	177	247	13
Virgin Islands	–	2	–	–	–	–	–	6	93	52	1	28	11	–

NA: Not Available

*Delayed Reports: TB: Mich. delete 2, N. Mex. 5, Guam 2; GC: La. delete 2, N. Mex. 142, Guam 13; Syphilis: Ark. delete 1; An. Rabies: N. J. 2

Table IV
Deaths in 121 United States Cities*
Week Ending May 1, 1976 – 17th 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	640	402	165	29	25	35
Boston, Mass.	184	103	53	9	11	11
Bridgeport, Conn.	51	32	11	7	-	4
Cambridge, Mass.	13	7	4	2	-	2
Fall River, Mass.	29	20	7	-	-	-
Hartford, Conn.	62	33	19	6	2	1
Lowell, Mass.	22	14	5	2	1	3
Lynn, Mass.	14	7	5	-	1	-
New Bedford, Mass.	20	18	2	-	-	-
New Haven, Conn.	43	25	15	1	-	-
Providence, R.I.	65	37	20	1	5	7
Somerville, Mass.	10	9	1	-	-	-
Springfield, Mass.	51	37	12	-	2	4
Waterbury, Conn.	31	22	7	1	-	1
Worcester, Mass.	45	38	4	-	3	2
MIDDLE ATLANTIC	2,956	1,859	760	168	94	111
Albany, N. Y.	53	26	13	6	8	3
Allentown, Pa.	15	8	7	-	-	-
Buffalo, N. Y.	113	70	32	3	6	5
Camden, N. J.	33	23	9	-	-	1
Elizabeth, N. J.	29	18	10	-	-	-
Erie, Pa.	37	24	10	1	-	2
Jersey City, N. J.	41	25	12	1	1	-
Newark, N. J.	56	27	18	5	5	3
New York City, N. Y†	1,474	949	360	90	33	44
Paterson, N. J.	42	24	9	5	3	5
Philadelphia, Pa.	497	298	133	37	20	5
Pittsburgh, Pa.	184	118	47	9	4	12
Reading, Pa.	29	19	7	-	1	4
Rochester, N. Y.	101	60	28	4	5	8
Schenectady, N. Y.	28	17	11	-	-	3
Scranton, Pa.	55	41	10	2	1	2
Syracuse, N. Y.	80	54	16	3	6	3
Trenton, N. J.	42	26	14	2	-	3
Utica, N. Y.	20	14	6	-	-	4
Yonkers, N. Y.	27	18	8	-	1	4
EAST NORTH CENTRAL	2,334	1,397	638	159	64	66
Akron, Ohio	68	43	14	4	5	-
Canton, Ohio	42	24	15	-	-	1
Chicago, Ill.	571	323	153	55	17	6
Cincinnati, Ohio	153	89	48	8	2	6
Cleveland, Ohio	176	100	52	10	4	2
Columbus, Ohio	92	52	26	6	7	16
Dayton, Ohio	106	49	43	6	4	2
Detroit, Mich.	303	178	92	20	2	3
Evansville, Ind.	44	26	9	2	4	1
Fort Wayne, Ind.	70	50	12	6	2	7
Gary, Ind.	37	19	13	4	1	4
Grand Rapids, Mich.	48	32	11	2	1	3
Indianapolis, Ind.	129	75	39	8	5	-
Madison, Wis.	36	24	9	2	1	4
Milwaukee, Wis.	145	97	34	8	4	3
Peoria, Ill.	39	25	6	4	1	2
Rockford, Ill.	35	25	8	2	-	2
South Bend, Ind.	49	34	12	2	-	4
Toledo, Ohio	125	90	26	6	1	-
Youngstown, Ohio	66	42	16	4	3	-
WEST NORTH CENTRAL	724	452	175	36	29	37
Des Moines, Iowa	54	36	12	2	2	1
Duluth, Minn.	27	25	1	1	-	6
Kansas City, Kans.	33	20	9	1	2	3
Kansas City, Mo.	126	71	40	3	4	5
Lincoln, Nebr.	34	25	4	1	4	2
Minneapolis, Minn.	84	53	21	7	-	2
Omaha, Nebr.	69	41	17	4	3	2
St. Louis, Mo.	168	96	44	12	8	6
St. Paul, Minn.	60	44	13	2	1	6
Wichita, Kans.	69	41	14	3	5	4

REPORTING AREA	ALL CAUSES					Pneumonia and Influenza
	ALL AGES	65 Years and Over	45-64 Years	25-44 Years	Under 1 Year	ALL AGES
SOUTH ATLANTIC	1,290	702	390	88	55	53
Atlanta, Ga.	130	69	44	9	4	4
Baltimore, Md.	274	142	85	23	7	7
Charlotte, N. C.	63	27	23	6	1	6
Jacksonville, Fla.	63	34	17	6	-	-
Miami, Fla.	97	51	36	3	7	3
Norfolk, Va.	38	18	14	1	3	7
Richmond, Va.	86	47	28	7	2	7
Savannah, Ga.	42	22	12	6	1	3
St. Petersburg, Fla.	72	64	6	-	-	2
Tampa, Fla.	72	42	17	3	4	9
Washington, D. C.	318	161	99	23	26	5
Wilmington, Del.	35	25	9	1	-	-
EAST SOUTH CENTRAL	700	397	210	50	19	34
Birmingham, Ala.	115	64	31	13	3	3
Chattanooga, Tenn.	50	30	12	3	3	5
Knoxville, Tenn.	42	27	14	1	-	1
Louisville, Ky.	95	60	27	2	2	5
Memphis, Tenn.	174	103	46	15	1	6
Mobile, Ala.	57	31	18	4	1	2
Montgomery, Ala.	28	14	10	2	1	1
Nashville, Tenn.	139	68	52	10	8	11
WEST SOUTH CENTRAL	1,160	608	341	93	54	45
Austin, Tex.	31	17	9	2	-	2
Baton Rouge, La.	25	14	8	1	-	1
Corpus Christi, Tex.	28	17	5	3	2	1
Dallas, Tex.	170	81	56	12	10	11
El Paso, Tex.	58	25	20	3	5	6
Fort Worth, Tex.	74	47	19	2	4	2
Houston, Tex.	281	127	89	33	10	7
Little Rock, Ark.	46	24	16	2	2	1
New Orleans, La.	141	73	46	9	7	1
San Antonio, Tex.	163	89	40	15	11	7
Shreveport, La.	63	43	14	4	1	2
Tulsa, Okla.	80	51	19	7	2	4
MOUNTAIN	523	309	122	45	20	16
Albuquerque, N. Mex.	61	36	14	5	4	2
Colorado Springs, Colo.	27	14	5	2	-	3
Denver, Colo.	115	64	28	11	9	6
Las Vegas, Nev.	34	16	9	5	-	-
Ogden, Utah	20	12	3	3	1	2
Phoenix, Ariz.	120	80	27	8	2	2
Pueblo, Colo.	16	11	2	2	-	-
Salt Lake City, Utah	52	35	10	3	1	-
Tucson, Ariz.	78	41	24	6	3	1
PACIFIC	1,620	1,038	389	78	58	60
Berkeley, Calif.	19	14	4	1	-	-
Fresno, Calif.	43	22	14	4	2	4
Glendale, Calif.	13	8	4	-	-	-
Honolulu, Hawaii	47	19	20	3	3	2
Long Beach, Calif.	102	70	19	8	1	4
Los Angeles, Calif.	527	350	109	25	21	16
Oakland, Calif.	68	41	20	3	4	2
Pasadena, Calif.	37	26	10	1	-	-
Portland, Oreg.	105	75	20	3	2	2
Sacramento, Calif.	70	41	18	2	4	-
San Diego, Calif.	126	67	40	10	7	4
San Francisco, Calif.	158	101	41	8	3	3
San Jose, Calif.	54	37	10	5	-	2
Seattle, Wash.	152	97	41	1	7	9
Spokane, Wash.	57	38	13	2	2	8
Tacoma, Wash.	42	32	6	2	2	4
TOTAL	11,947	7,164	3,190	746	418	457
Expected Number	12,051	7,293	3,167	766	368	429

*By place of occurrence and week of filing certificate. Excludes fetal deaths. †Delayed Report for Week Ending 4/24/76 (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.

Cholera-like Illness Associated with an Enterotoxigenic Strain of *Escherichia coli* — Georgia

On August 9, 1974, approximately 30 hours after leaving Guam, where a cholera outbreak had recently occurred, a 41-year-old male who had been on antacid therapy for peptic ulcer experienced the onset of profuse watery diarrhea. At the time of admission to a Georgia hospital his stool was described as clear liquid containing flecks and strings of mucus suggesting the possibility of cholera. He was treated with intravenous fluids and made a full recovery. Rectal cultures were negative for *Vibrio cholerae, Vibrio parahaemolyticus,* salmonella, and shigella but grew a pure culture of *Escherichia coli*. Ten colonies of the *E. coli* strain were tested for enterotoxin production in the infant mouse assay (*1*); all ten were positive. Filtrates of strains retested in the infant mouse assay after boiling for 15 minutes were still positive, indicating a heat-stable enterotoxin. Tests for heat-labile toxin and mucosal invasiveness were negative.

Reported by LR Harvey, MD, Sandersville, Georgia; JE McCroan, PhD, State Epidemiologist, Georgia Dept of Human Resources; Enteric Diseases Br and Epidemiologic Investigations Laboratory Br, Bacterial Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: This man's illness appears to have been caused by a strain of *Escherichia coli* that elaborated a heat-stable enterotoxin (*2*). The strain was rough so that O serogrouping could not done.

References

1. Dean AG, Ching YC, Williams RG, Harden LB: Test for *Escherichia coli* enterotoxin using infant mice: Application in a study of diarrhea in children in Honolulu. J Infect Dis 125:407-411, 1972
2. Sack RB: Human diarrheal disease caused by enterotoxigenic *Escherichia coli*. Annu Rev Microbiol 29:333-353, 1975

Tuberculosis in Southeast Asian Immigrants — Virginia

A total of 115,768 Southeast Asian refugees were screened for tuberculosis in the period from May-December 1975. Of these, 349 were classified as Class A ("active," or "suspect active" tuberculosis) for immigration purposes; 2,770 persons were classified as Class B, indicating a tuberculous condition other than active tuberculosis.

Despite this screening process, it was anticipated that additional cases would be found. In recent years it has been recognized that an increasing proportion of tuberculosis cases in Canada, the United States, and much of Western Europe is occurring in new immigrants from parts of the world where tuberculosis is still highly prevalent. The problem is not so much in persons known to have tuberculosis at the time they enter the country, but rather in infected persons who enter the country in good health and develop clinical tuberculosis after establishing residence (*1, 2, 3*).

Since the arrival of refugees last summer to the Charlottesville, Virginia, area, 7 cases of tuberculosis have been encountered. Descriptions of these cases—which include cases diagnosed at the refugee centers as well as 3 which were not—are described below.

The first patient was a 26-year-old woman who consulted a private physician because of a 2-week history of fever, cough, and night sweats. She was referred to the local health department where a diagnosis of tuberculosis was made. The chest X-ray showed extensive fibronodular infiltrates with a cavity in the left lung. A 5 TU tuberculin skin test was read as positive (10x10mm). Smears and cultures were positive for *Mycobacterium tuberculosis.* The patient was admitted to the state sanatorium for treatment.

The second patient, a 32-year-old contact of the first, had a 60x60mm reaction to a 5 TU tuberculin skin test. Chest X-ray revealed prominent left hilar markings. She was diagnosed as having "primary" pulmonary tuberculosis and was started on isoniazid preventive therapy. The patient subsequently left the Charlottesville area and has been lost to follow-up.

The third case was a 17-year-old man who was hospitalized at Fort Indiantown Gap, Pennsylvania. A diagnosis of "active" pulmonary tuberculosis was made on the basis of a chest X-ray which showed infiltrates in the right upper lobe and a positive sputum smear. He was started on treatment with isoniazid and ethambutol in the refugee camp and came under the medical supervision of the health department after leaving the camp to reside in Charlottesville.

The fourth patient, the 3-year-old brother of the third patient, was found to have a 13mm tuberculin reaction. The child's chest X-ray at Fort Indiantown Gap had been read as normal, but the X-rays in Charlottesville were thought to show bilateral hilar adenopathy with an infiltrate in the right middle lobe. The child was started on isoniazid and recent X-rays have shown improvement.

The fifth patient, a 25-year-old woman, was diagnosed in Alexandria, Virginia, as having "far advanced" pulmonary tuberculosis. She was admitted to the state sanatorium for treatment. Since discharge she has been living in the Charlottesville area where she has been under the supervision of the local health department.

The sixth patient was a 65-year-old man who had been diagnosed at Fort Indiantown Gap as having "inactive" tuberculosis on the basis of an abnormal chest X-ray. He was started on isoniazid preventive therapy in the refugee camp and subsequently came under the care of the local health department after moving to Nelson County, Virginia. As part of his assessment in Virginia, additional bacteriologic studies were done. Initial sputum smears were negative, and culture results are pending. Additional antituberculosis drugs were added to his regimen while the bacteriologic culture results were pending.

The seventh patient was a 34-year-old male who had an abnormal chest X-ray at Eglin Air Force Base, Florida; the X-ray was interpreted as suspected tuberculosis. When he moved to Fluvanna County, Virginia, the local health department was notified of the abnormal X-ray. Further examination revealed a positive reaction of 18x18mm to a 5 TU tuberculin skin test and negative smears and cultures for *M. tuberculosis* on multiple sputum specimens. His diagnosis was "inactive minimal" pulmonary tuberculosis; he was treated with isoniazid and ethambutol.

Reported by JC Alexander, MD, Thomas Jefferson Health District, Charlottesville, Virginia; RS Jackson, MD, State Epidemiologist,

Tuberculosis — Continued

Virginia Dept of Health; and Tuberculosis Control Div, Bur of State Services, CDC.

Editorial Note: All the Class A cases and many of the Class B cases were started on antituberculosis chemotherapeutic regimens in the refugee camps. The refugees who were receiving treatment were referred to local health departments after leaving the camps; the health departments were notified so that supervision of treatment could be assumed by local health authorities without interruption. Class B cases who were not started on treatment in the camps were asked to report to local health authorities for reassessment after leaving the camps; health departments also received notices of these persons. Preventive therapy was started in the camps on some individuals, especially if they were family contacts of infectious cases of tuberculosis. These contacts on preventive therapy were also referred to health departments after leaving the camps.

While there is no reason to establish duplicate screening programs for Vietnamese immigrants at the local level, they do have a higher incidence of tuberculosis than usually seen in the United States. Those advised in refugee camps to present themselves at local health departments should be reevaluated and continued or started on treatment, if indicated. For children who have had BCG vaccination, CDC recommends that reactions greater than 10mm of induration to a 5 TU tuberculin skin test be considered evidence of tuberculous infection, especially if there has been exposure to an infectious case of tuberculosis.

References

1. Ashley MJ, Anderson TW, le Riche WH: The influence of immigration on tuberculosis in Ontario. Am Rev Respir Dis 110:137, 1974
2. Importing tuberculosis—a paradox. N Engl J Med 293:357, 1975
3. Epidemiology of tuberculosis in Canada. N Engl J Med 293:880, 1975

Malaria in Pilgrims to India

Approximately 900 Hare Krishna pilgrims from 30 countries traveled to India for their annual spring pilgrimage March 8-April 12, 1976. Based on preliminary reports, 7 confirmed and 6 possible cases of malaria have been diagnosed in the 360 American members of the group on their return to the United States.

The confirmed American cases were reported from New York City, Philadelphia, Atlanta, and Los Angeles. One case was caused by *Plasmodium falciparum;* the other 6 were caused by *P. vivax.* The attack rate was 8% in the cities where the numbers of cases and persons at risk were known.

The pilgrims had spent 2 weeks in Nadia, West Bengal State, near Calcutta, followed by 2 weeks in Vrindavan, Uttar Pradesh State, near New Delhi. No antimalarial chemoprophylaxis was used.

Because of the heavy mosquito exposure, the recognition of malaria cases in the group, and the 1 diagnosis of *P. falciparum,* CDC has recommended that all the Americans who participated in the pilgrimage receive oral chloroquine phosphate prophylaxis. State health departments and the 31 Hare Krishna temples in the United States have been notified of the outbreak and the recommended prophylaxis. In addition, the World Health and Pan American Health Organizations have been informed of the exposure in the approximately 540 participants from countries other than the United States.

In contacting the United States temples, CDC learned of several additional illnesses. Two cases of hepatitis, 2 cases of shigellosis, and 1 case of giardiasis were diagnosed in the 38 pilgrims from the Los Angeles temple. Attempts are being made to determine the extent of similar illnesses in other temples.

Reported by A Brown, MD, Roosevelt Hospital, New York City; S Plotkin, MD, Children's Hospital of Philadelphia; RL Sharrar, MD, City of Philadelphia Dept of Public Health; R Roberto, MD, California State Dept of Health; JE McCroan, PhD, State Epidemiologist, Georgia State Dept of Human Resources; JS Marr, MD, New York City Epidemiologist, Bureau of Preventable Diseases; New York State Dept of Health; WD Schrack, MD, Pennsylvania State Dept of Health; Field Services Div, and Parasitic Diseases Br, Parasitic Diseases Div, Bur of Epidemiology, CDC.

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

Director, Center for Disease Control, David J. Sencer, M.D.
Director, Bureau of Epidemiology, Philip S. Brachman, M.D.
Editor, Michael B. Gregg, M.D.
Managing Editor, Anne D. Mather, M.A.

OFFICIAL BUSINESS **FIRST CLASS**

HEW Publication No. (CDC) 76-8017