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WEEKLY REPORT

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

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EPIDEMIOLOGIC NOTES AND REPORTS
HUMAN LEAD ABSORPTION – Texas

In December 1971, the City-County Health Department in El Paso, Texas, discovered that an ore smelter in El Paso was discharging large quantities of lead and other metallic wastes into the air. Between 1969 and 1971, this smelter had released 1,116 tons of lead, 560 tons of zinc, 12 tons of cadmium, and 1.2 tons of arsenic into the atmosphere through its stacks (Table 1).

Twenty-four hour air samples to determine the amounts of lead and other heavy metals suspended in the atmosphere were collected throughout 1971 and again between July 1972 and June 1973 by the local health department. Both series of tests showed that mean concentrations of metallic wastes in the air were highest immediately downwind of the smelter and that levels decreased logarithmically with distance from the smelter. The annual mean lead level immediately downwind of the smelter in 1971 was 92 $\mu G/m^3$ and in 1972-73 was 43 $\mu G/m^3$; the U.S. Environmental Protection Agency's proposed safe upper limit for airborne lead content is 2.0 $\mu G/m^3$ of air *(1)*. No metallic emissions were found near any of 15 other industrial establishments studied in El Paso.

Similarly, soil samples taken by the health department at selected sites within the urban area between June and

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

DISEASE	49th WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 49 WEEKS		
	December 8, 1973	December 9, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	61	86	80	4,494	4,071	4,194
Brucellosis	4	4	4	171	178	198
Chickenpox	2,146	3,773	– – –	155,711	130,990	– – –
Diphtheria	2	4	4	182	113	186
Encephalitis, primary:						
Arthropod-borne and unspecified	15	22	29	1,447	1,079	1,363
Encephalitis, post-infectious	3	9	6	262	261	316
Hepatitis, serum (Hepatitis B)	160	177	158	7,661	8,436	6,929
Hepatitis, infectious (Hepatitis A)	1,030	1,170	1,162	48,832	51,707	51,707
Malaria	1	7	31	231	797	2,762
Measles (rubeola)	255	565	536	26,013	30,270	30,270
Meningococcal infections, total	35	36	39	1,289	1,265	2,330
Civilian	35	35	39	1,263	1,217	2,054
Military	–	1	1	26	48	218
Mumps	1,642	1,522	2,258	65,492	67,225	95,691
Rubella (German measles)	173	260	380	27,479	23,890	47,371
Tetanus	2	3	3	85	113	132
Tuberculosis, new active	624	605	– – –	29,458	31,966	– – –
Tularemia	6	4	2	155	136	149
Typhoid fever	6	8	8	610	361	361
Typhus, tick-borne (Rky. Mt. spotted fever)	1	2	1	626	519	400
Venereal Diseases:						
Gonorrhea	17,680	15,981	– – –	780,505	714,958	– – –
Syphilis, primary and secondary	419	542	– – –	24,008	24,258	– – –
Rabies in animals	52	53	59	3,191	3,825	3,197

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	1	Poliomyelitis, total:	7
Botulism: Alaska 8	27	Paralytic:	5
Congenital rubella syndrome: Tex. 1	31	Psittacosis:	25
Leprosy: Calif. 1, Hawaii 3	125	Rabies in man:	1
Leptospirosis: Ohio 1	36	Trichinosis:	76
Plague:	2	Typhus, murine:	31

LEAD – Continued

Table 1
Particulate Waste Stack Emissions (in Tons [t]), by Year
El Paso Smelter, 1969-1971

Year	Total Particulates	Lead	Cadmium	Zinc	Arsenic
1969	1,443t	292t	3.3t	139t	0.3t
1970	2,274	511	4.9	264	0.6
1971	1,282	313	3.8	157	0.3
Total	4,999t	1,116t	12.0t	560t	1.2t

Source: El Paso City-County Health Department

December 1972 showed the highest concentrations of lead and other metals to be in surface soil from within 0.2 miles of the smelter (Figure 1). Samples of drinking water, milk, and food obtained from homes in El Paso between January and March 1972 by the health department were uniformly free of lead.

Preliminary testing programs to evaluate the effect of the environmental contamination on human blood lead levels were conducted in El Paso between January and March 1972 by the local health department, the smelting company, and CDC. These initial studies showed that 43% of persons in all age groups and 62% of children through age 10 years living within 1 mile of the smelter had blood lead levels $\geq 40\ \mu G\%$, a level considered to be evidence of undue lead absorption *(2)*. There was a lower prevalence among persons living at greater distances from the smelter. No cases of overt lead poisoning were noted.

In August 1972, a random survey of the entire population living within 4.1 miles of the smelter in south and west El Paso was conducted by the health department and CDC. The area was divided along census tract lines into 3 strata, roughly concentric about the smelter and each with a radius of 1.0-1.5 miles. In the small, innermost stratum, all households were visited; in the 2 outer strata, approximately 2% of households were selected. Of 833 occupied households included in the survey, 672 (80.6%) were reached for the interview. A venous blood sample for lead analysis by atomic absorption spectrophotometry (AAS) was obtained from all persons up to age 20 years and from every other person above that age; samples of paint, soil, household dust, and pottery were also collected in each home for lead analysis by AAS. In all age groups, the percentage of blood lead levels $\geq 40\ \mu G\%$ was found to be highest in those persons living nearest the smelter (Figure 2), and the prevalence was highest in the youngest individuals; migration rates among these persons were low. In area I, 5 (8.5%) of 59 persons 1-19 years of age with blood lead levels $\geq 40\ \mu G\%$ had moved into the area in the 2 years preceding the survey. In areas II and III, the migration rate for persons 1-19 years of age with blood levels $\geq 40\ \mu G\%$ was 8.2% (4 of 49); 1 person in this group had moved from area I.

A total of 1,971 paint samples were collected for lead analysis. In area I, 9 (39.1%) of 23 children 1-4 years had exposure to at least 1 paint sample with a lead content of 1.0% or more; the comparable figures for areas II and III were 11 (33.3%) of 33 and 17 (34.0%) of 50 children, respectively. These three rates were virtually identical ($p > 0.9$ by Chi-square).

Figure 1
LEAD SURFACE SOIL LEVELS
EL PASO, TEXAS, AND DONA ANA COUNTY, NEW MEXICO – 1972

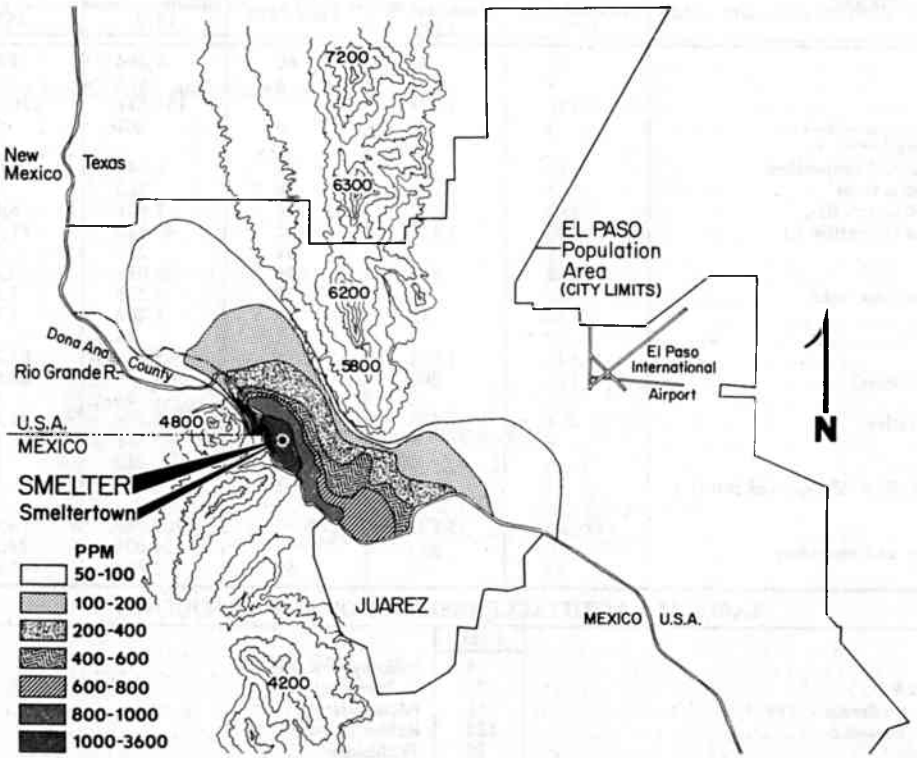
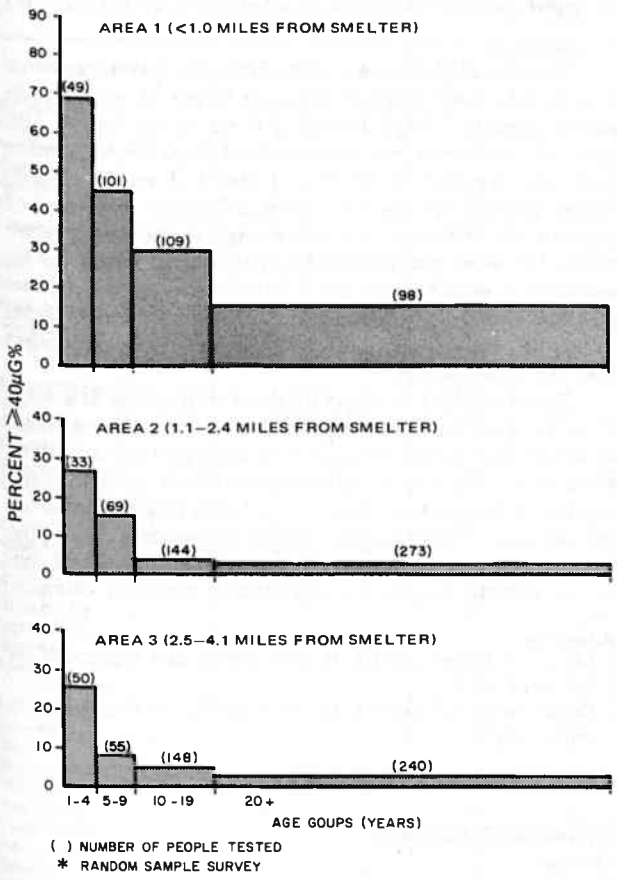


Figure 2
PERCENT OF HUMAN BLOOD SAMPLES* WITH LEAD LEVELS ≥40 μG%, EL PASO, TEXAS – 1972



Analysis of over 4,000 soil and household dust samples indicated that the mean content of lead in these specimens was significantly higher in area I than in areas II and III. Furthermore, persons 1-19 years with blood lead levels ≥ 40 μG% were found to have been exposed to soil and dust samples with significantly higher ($p < 0.001$) mean lead contents (3,264 ppm for soil, 3,522 ppm for dust) than persons with blood lead levels below 40 μG% (means: 1,032 ppm and 1,279 ppm).

Pottery vessels were used for food storage or preparation in 37 homes visited. After 1% hydrochloric acid incubation for 6 hours, 2 of 6 vessels from sector I, 6 of 19 from sector II, and 4 of 12 from sector III had a lead content ≥ 100 μG per ml in the eluate.

(Reported by Bernard F. Rosenblum, M.D., M.P.H., Director, El Paso City-County Health Department; James M. Shoults, Acting Environmental Engineer, El Paso City-County Health Department; J. Julian Chisolm, Jr., M.D., Chief of Pediatrics, Baltimore City Hospitals; Community and Environmental Management Activities, Bureau of State Services, CDC; the Field Services Branch, Bureau of Epidemiology, the Toxicology Section, Clinical Chemistry, Hematology, and Pathology Branch, Bureau of Laboratories, CDC; and a team of EIS Officers.)

Editorial Note

It may be estimated from this prevalence survey, using 1970 U.S. Census data, that at least 2,700 persons 1-19 years of age in El Paso had blood lead levels ≥ 40 μG% at the time of the survey (Table 2). These results indicate that the problem of undue lead absorption affects persons across all of south and west El Paso to a distance of at least 4 miles from the smelter. Lead emitted by the smelter and deposited in soil and dust would appear to be the major source of the lead absorbed by humans; the accumulation in the soil and dust of emitted lead is facilitated by several features of the local environment, particularly the aridity, the sheltering effect of the high mountains, and the frequent thermal inversions. Ingestion of lead-based paint may account for a small fraction of cases of undue absorption (at most 1/3) in the youngest children. Careful neurologic and psychologic studies of persons in El Paso with blood lead levels ≥ 40 μG% have been conducted and are being compared with results of similar studies in a matched group with lower lead levels. This study will make it possible to ascertain objectively whether any persons are suffering subtle but possibly permanent neurologic or psychologic sequelae from prolonged lead absorption.

Control measures undertaken to date include partial reduction of smelter emission and relocation to more distant public housing of approximately 500 persons who had lived closely adjacent to the smelter property.

References

1. Written Communication. U.S. Environmental Protection Agency, 1972
2. Medical Aspects of Childhood Lead Poisoning. Pediat 48:464-468, 1971

Table 2
Estimated Numbers of Persons 1-19 Years With Blood Lead Levels ≥40 μG%, by Distance from Smelter
El Paso, Texas – August 1972

Distance from Smelter (Miles)	Sample Group		Population 1-19 Years*	
	No. Tested	% With Blood Lead ≥ 40 μG%	No. of Children	Projected No. with Blood Lead ≥ 40 μG%
0-1.0	259	43.2	723	312
1.1-2.4	246	11.0	12,316	1,355
2.5-4.1	253	9.5	11,486	1,091
Total	758	19.9	24,525	2,758

*1970 Census

HEPATITIS-A IN HUMANS ASSOCIATED WITH NONHUMAN PRIMATES – Ohio

Between June 29 and July 22, 1973, 5 persons associated with an Ohio zoo–2 zookeepers, a zoologist, his wife, and his 3-year-old son–had onset of an illness diagnosed as hepatitis-A by their physicians. All 5 had jaundice and elevated transaminase enzymes, and all had negative radioimmunoassay tests for hepatitis-B antigen.

The 5 patients all gave a history of contact with a shipment of 3 siamangs that had arrived at the zoo on May 7, 1973. Each patient was interviewed to determine whether there were other potential sources of hepatitis. Except for the siamang contact, no animal, human, or food exposure was common to all 5 patients. The ill zookeeper and zoologist had had fre-

HEPATITIS – Continued

quent contact with the siamangs while the animals were held in quarantine at the zoo during May and June 1973. However, the zoologist's wife and son had contact with the siamangs on only 1 occasion. On June 1, 1973, they visited the zoologist at his office when the siamangs were being groomed on a table outside their cage. The siamangs had diarrhea at the time, and the table was grossly contaminated. Although the wife and son recalled no direct contact with the animals, both said they had touched the table.

Six other persons at the zoo had close contact with the siamangs in May and June 1973; all denied jaundice. Two of them voluntarily underwent liver function tests in the second week in July. One had borderline abnormalities (bilirubin 1.4 mg%, SGOT 55 I.U.), and the other had normal results. Other persons who had come in contact with the siamangs were questioned about illness and were advised to receive gamma globulin.

In June the 3 siamangs became ill with chronic lethargy, anorexia, and diarrhea. No liver function tests were done; one of them died on June 2, 1973, but no autopsy was performed.

The 3 siamangs were part of a shipment of 5 that arrived from Singapore at an animal exchange in Michigan on May 5, 1973. Representatives of the animal exchange stated that no personnel had been ill with hepatitis in 1973. Employees routinely receive gamma globulin every 6 months. One siamang from the shipment was sent on May 8 to a New Mexico zoo; no illness occurred in the animal or its handlers. The remaining siamang died of an undiagnosed illness at the exchange on May 24.

(Reported by Stephen Goldberg, M.D., Fellow in Digestive Diseases, Alistair Connell, M.D., Director, Division of Digestive Diseases, and Professor of Medicine, University of Cincinnati College of Medicine; Yvonne Mohlman, M.D., Director, Lead Surveillance Program, Cincinnati Health Department; John H. Ackerman, M.D., Deputy Director, Community Health, Ohio Department of Health; and an EIS Officer.)

Editorial Note

Nonhuman primate-associated hepatitis has occurred in persons who have frequent exposure to young, recently imported primates (*1, 2*). Including those in this report, 198 cases of nonhuman primate-associated hepatitis in humans have been reported in the United States. A variety of nonhuman primate species have been associated with cases of hepatitis. Of 168 cases in which a single species was incriminated, 151 were associated with chimpanzees, 9 with woolly monkeys, 4 with gorillas, and 4 with celebes apes. It appears now that siamangs, close relatives of the gibbon, can be added to this list. No cases have been reported in any country other than the United States.

Recommended measures for preventing spread of disease from these primates to humans include 1) maintaining scrupulous habits of personal hygiene and using protective clothing when in contact with animals or their excreta, 2) limiting the number of persons who have contact with recently imported animals, and 3) administering immune serum globulin prophylaxis to persons with continued, frequent, or long-term exposure to recently imported young animals, especially chimpanzees.

References

1. Center for Disease Control: Hepatitis Surveillance Report No. 34, September 1972
2. Center for Disease Control: Hepatitis Surveillance Report No. 36, September 1973

SALMONELLA BLOCKLEY FOODBORNE DISEASE OUTBREAK – Illinois

From June 9 through June 12, 1973, an outbreak of salmonellosis occurred in Cook County among 9,000 persons attending 190 parties served by a single catering service. Hosts of 130 parties were interviewed; 19 (15%) reported illness in some of their guests (Table 3). Although the total number of persons ill was not determined, 6 persons were known to have been hospitalized. No fatalities were reported.

Detailed histories were obtained on 200 persons, of whom 163 (81.5%) reported illness. The illness was characterized by diarrhea (93.8%), abdominal pain (87.8%), fever (60.8%), vomiting (18.4%), and nausea (16.6%), with many persons complaining of headache and dizziness. The mean incubation period was 18 hours, with a range of 6 to 48 hours. The duration of symptoms was 6 hours to 10 days with a mean of approximately 4 days. Eleven stool samples were obtained for culture and 8 yielded *Salmonella blockley*.

Table 3
Illness Following Parties Catered by a Single Establishment
Illinois, 1973

Date	Meals Served	Parties Served	Hosts Interviewed	Parties with Illness Following	
				No.	%
June 9	4,408	87	60	3	5
June 10	4,342	98	66	13	20
June 11	130	1	1	1	100
June 12	196	4	3	2	67
Totals	9,076	190	130	19	15

The catering service had supplied beef in gravy, chicken, potato salad, cole slaw, a relish tray, buns, and rolls for each party. Differential food-specific attack rates implicated the beef in gravy as the probable vehicle of infection (Table 4). Cultures of 5 samples of beef in gravy yielded *S. blockley*. In addition, *Clostridium perfringens* was isolated from 1 beef sample. No other food items were available for culture.

Investigation of the catering establishment revealed generally good sanitary conditions and no evidence of inadequate cooking temperatures. The caterer was well established and had not been involved in known prior outbreaks. No new personnel, new sources of supply, or new procedures had been employed. Environmental cultures were not taken, nor were cultures of raw materials. All 5 food handlers submitted fecal specimens for culture; 2 were found to be positive for *S. blockley*. None of the food handlers had experienced any recent illness, but all had eaten beef in gravy during the period that the outbreak had occurred.

Foods were received from several different suppliers. Raw beef was received every 3 days and baked until well

(Continued on page 413)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES FOR WEEKS ENDING DECEMBER 8, 1973 AND DECEMBER 9, 1972 (49th WEEK)

AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	CHICKENPOX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post Infectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
	1973	1973	1973	1973	Cum. 1973	1973	1972	1973	1973	1973	1972
UNITED STATES	61	4	2,146	2	182	15	22	3	160	1,030	1,170
NEW ENGLAND	5	–	372	–	3	1	3	–	3	91	81
Maine*	–	–	10	–	–	–	–	–	–	2	17
New Hampshire *	–	–	8	–	–	–	–	–	–	2	8
Vermont	–	–	22	–	–	–	–	–	–	37	1
Massachusetts	2	–	228	–	1	1	2	–	1	32	26
Rhode Island	1	–	37	–	2	–	–	–	–	8	3
Connecticut	2	–	67	–	–	–	1	–	2	10	26
MIDDLE ATLANTIC	14	–	54	–	–	3	3	–	29	128	185
Upstate New York	4	–	–	–	–	–	–	–	5	32	40
New York City	2	–	44	–	–	–	–	–	5	16	27
New Jersey	7	–	NN	–	–	1	1	–	13	36	47
Pennsylvania	1	–	10	–	–	2	2	–	6	44	71
EAST NORTH CENTRAL	8	–	746	1	2	4	6	–	22	112	185
Ohio *	1	–	86	–	1	3	2	–	14	15	57
Indiana*	2	–	53	–	–	–	–	–	–	9	12
Illinois	–	–	–	1	1	1	1	–	–	11	32
Michigan	5	–	180	–	–	–	3	–	7	70	78
Wisconsin	–	–	427	–	–	–	–	–	1	7	6
WEST NORTH CENTRAL	7	–	378	–	7	1	1	–	1	34	25
Minnesota	4	–	37	–	–	–	–	–	1	5	6
Iowa	–	–	209	–	–	–	1	–	–	–	3
Missouri	3	–	2	–	–	1	–	–	–	10	8
North Dakota	–	–	29	–	–	–	–	–	–	–	–
South Dakota	–	–	1	–	7	–	–	–	–	8	5
Nebraska	–	–	14	–	–	–	–	–	–	3	1
Kansas	–	–	86	–	–	–	–	–	–	8	2
SOUTH ATLANTIC	8	1	105	–	9	3	6	–	17	159	236
Delaware	–	–	–	–	–	–	–	–	–	3	–
Maryland	1	–	19	–	–	–	–	–	–	9	10
District of Columbia	–	–	6	–	–	–	–	–	–	1	–
Virginia	4	–	9	–	–	–	–	–	3	9	21
West Virginia	–	–	67	–	–	–	–	–	–	11	11
North Carolina	–	–	NN	–	–	–	–	–	–	21	42
South Carolina	2	–	4	–	–	–	1	–	1	17	21
Georgia*	–	1	–	–	2	–	4	–	–	12	21
Florida	1	–	–	–	7	–	1	–	13	76	110
EAST SOUTH CENTRAL	1	1	64	–	5	–	–	–	21	69	64
Kentucky	–	–	50	–	–	–	–	–	9	13	16
Tennessee	1	1	NN	–	–	–	–	–	11	48	37
Alabama	–	–	13	–	5	–	–	–	1	6	5
Mississippi	–	–	1	–	–	–	–	–	–	2	6
WEST SOUTH CENTRAL	6	–	38	–	18	1	1	–	12	164	92
Arkansas	–	–	–	–	–	1	–	–	–	9	7
Louisiana	2	–	NN	–	1	–	–	–	2	17	9
Oklahoma	2	–	3	–	–	–	–	–	–	14	14
Texas	2	–	35	–	17	–	1	–	10	124	62
MOUNTAIN	–	–	88	1	51	–	–	–	6	50	60
Montana	–	–	32	–	–	–	–	–	–	11	2
Idaho	–	–	–	–	–	–	–	–	–	10	16
Wyoming	–	–	4	–	–	–	–	–	–	–	1
Colorado	–	–	22	–	–	–	–	–	3	12	8
New Mexico	–	–	29	–	27	–	–	–	–	5	15
Arizona	–	–	–	1	24	–	–	–	2	6	14
Utah	–	–	1	–	–	–	–	–	1	6	4
Nevada	–	–	–	–	–	–	–	–	–	–	–
PACIFIC	12	2	301	–	87	2	2	3	49	223	242
Washington	–	–	272	–	76	–	–	–	4	36	44
Oregon	–	–	1	–	4	–	–	1	3	14	35
California	12	2	–	–	5	2	2	2	42	164	152
Alaska	–	–	3	–	2	–	–	–	–	7	–
Hawaii	–	–	25	–	–	–	–	–	–	2	11
Guam *	–	–	–	–	–	–	–	–	–	–	1
Puerto Rico	–	–	5	–	–	–	–	–	2	17	5
Virgin Islands	–	–	–	–	–	–	–	–	–	–	–

* Delayed Reports:
Aseptic meningitis: N.H. 8
Chicken pox: Me. 13, N.H. 50, Guam 4
Diphthera: Ga. 1
Encephalitis, primary: N.H. delete 1
Hepatitis B: Me. 1, Ohio delete 1
Hepatitis A: Me. 7, N.H. 4, Ohio delete 1, Ind. 2 Ga. 5, Guam 3

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES FOR WEEKS ENDING DECEMBER 8, 1973 AND DECEMBER 9, 1972 (49th WEEK) – Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES	1	231	255	26,013	30,270	35	1,289	1,265	1,642	65,492	173	27,479
NEW ENGLAND	–	17	22	7,577	4,201	1	52	56	216	4,291	8	3,712
Maine *	–	–	–	70	253	–	1	4	6	452	–	72
New Hampshire*	–	–	9	970	768	–	7	3	8	228	–	383
Vermont	–	2	–	120	128	–	3	–	–	274	1	48
Massachusetts *	–	7	6	3,964	1,093	1	15	25	64	1,188	4	2,081
Rhode Island	–	1	7	639	526	–	3	12	46	750	2	227
Connecticut	–	7	–	1,814	1,433	–	23	12	92	1,399	1	901
MIDDLE ATLANTIC	–	38	51	2,789	1,150	7	180	156	138	7,905	12	4,296
Upstate New York	–	19	1	821	168	3	65	36	NN	NN	–	472
New York City	–	3	6	943	417	–	36	43	16	4,713	4	495
New Jersey	–	5	43	626	499	4	45	30	20	1,629	6	3,022
Pennsylvania	–	11	1	399	66	–	34	47	102	1,563	2	307
EAST NORTH CENTRAL	–	31	80	8,999	12,041	5	177	190	392	16,681	31	6,372
Ohio	–	5	5	313	295	–	74	74	85	3,040	1	705
Indiana	–	3	13	702	1,343	–	6	14	67	1,643	8	1,004
Illinois	–	17	28	2,158	4,374	–	28	40	64	2,751	4	1,046
Michigan	–	6	16	4,504	2,281	4	52	54	109	4,684	13	1,953
Wisconsin	–	–	18	1,322	3,748	1	17	8	67	4,563	5	1,662
WEST NORTH CENTRAL	–	8	1	463	1,287	–	92	89	219	5,640	3	1,240
Minnesota	–	2	–	24	23	–	12	25	5	103	2	224
Iowa	–	1	–	281	960	–	22	6	155	3,550	1	207
Missouri	–	1	–	55	170	–	34	26	12	771	–	273
North Dakota	–	1	–	67	60	–	3	–	–	76	–	277
South Dakota	–	–	1	3	12	–	5	2	–	20	–	23
Nebraska	–	1	–	6	23	–	7	10	2	182	–	141
Kansas	–	2	–	27	39	–	9	20	45	938	–	95
SOUTH ATLANTIC	–	36	8	1,316	2,309	6	217	276	115	7,429	30	2,322
Delaware	–	–	–	10	54	–	2	1	–	280	–	15
Maryland	–	7	–	14	15	1	30	39	4	685	–	11
District of Columbia	–	2	–	8	2	–	4	11	5	156	–	3
Virginia	–	8	3	429	76	2	45	61	18	766	3	636
West Virginia	–	–	1	230	302	–	6	8	46	2,592	–	341
North Carolina	–	7	–	4	38	1	43	34	NN	NN	–	202
South Carolina	–	1	1	77	217	–	13	25	5	372	1	88
Georgia *	–	3	–	153	195	–	23	22	–	32	–	12
Florida	–	8	3	391	1,410	2	51	75	37	2,546	26	1,014
EAST SOUTH CENTRAL	–	14	5	635	1,080	5	122	98	213	5,490	23	1,466
Kentucky	–	9	4	398	540	4	46	30	94	1,667	–	418
Tennessee	–	–	–	165	195	1	45	32	94	2,604	16	609
Alabama	–	5	1	14	154	–	18	20	18	735	2	207
Mississippi *	–	–	–	58	191	–	13	16	7	484	5	232
WEST SOUTH CENTRAL	–	13	6	749	1,698	4	203	156	88	4,570	5	1,518
Arkansas	–	–	2	74	13	–	14	13	1	406	–	115
Louisiana	–	2	2	89	109	1	50	48	23	116	1	100
Oklahoma	–	2	–	66	10	–	32	12	4	476	–	182
Texas	–	9	2	520	1,566	3	107	83	60	3,572	4	1,121
MOUNTAIN	–	9	34	1,024	1,961	–	37	32	34	2,731	16	2,440
Montana	–	1	32	292	18	–	9	6	3	279	1	518
Idaho	–	1	–	256	153	–	4	8	1	121	–	45
Wyoming	–	–	–	81	51	–	1	1	3	436	–	7
Colorado	–	2	–	109	538	–	11	6	23	573	11	1,567
New Mexico	–	2	2	135	134	–	3	3	4	1,016	3	212
Arizona	–	2	–	21	907	–	5	1	–	140	1	7
Utah	–	1	–	129	159	–	2	6	–	157	–	80
Nevada	–	–	–	1	1	–	2	1	–	9	–	4
PACIFIC	1	65	48	2,461	4,543	7	209	212	227	10,755	45	4,113
Washington	–	4	27	1,107	996	–	21	20	53	1,823	7	744
Oregon	–	4	–	461	175	–	17	14	54	2,001	2	821
California	1	54	21	808	3,261	7	163	166	80	5,739	36	2,503
Alaska	–	2	–	65	13	–	8	9	39	915	–	19
Hawaii	–	1	–	20	98	–	–	3	1	277	–	26
Guam *	–	–	–	52	16	–	–	13	–	33	–	14
Puerto Rico	–	–	14	1,996	1,010	3	11	4	11	879	–	38
Virgin Islands	–	–	–	7	3	–	–	2	–	32	–	2

* Delayed Reports: Measles: Me.-1, N.H.-1, Mass. delete 4, Ga.-1, Miss. delete 1
Mumps: Me.-22, N.H.-5, Guam-2
Rubella: N.H.-2

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES FOR WEEKS ENDING DECEMBER 8, 1973 AND DECEMBER 9, 1972 (49th WEEK) – Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULAREMIA	TYPHOID FEVER		TYPHUS FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
									GONORRHEA	SYPHILIS (Pri. & Sec.)		
	Cumulative 1973	1973	Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	1973	1973	1973	Cum. 1973
UNITED STATES	85	624	29,458	155	6	610	1	626	17,680	419	52	3,191
NEW ENGLAND	2	37	1,110	–	3	20	–	3	284	2	–	114
Maine *	–	3	105	–	–	–	–	–	37	–	–	61
New Hampshire	–	1	54	–	–	–	–	–	25	–	–	37
Vermont	–	1	30	–	–	–	–	–	–	–	–	3
Massachusetts	–	26	590	–	3	17	–	2	–	–	–	6
Rhode Island	1	–	90	–	–	–	–	–	28	–	–	1
Connecticut	1	6	241	–	–	3	–	1	194	2	–	6
MIDDLE ATLANTIC	7	85	5,684	–	1	66	1	38	2,741	80	1	53
Upstate New York	1	12	997	–	–	10	–	13	330	1	–	26
New York City	3	38	2,102	–	1	26	–	4	1,026	54	–	–
New Jersey	2	15	1,014	–	–	20	–	5	651	17	–	–
Pennsylvania	1	20	1,571	–	–	10	1	16	734	8	1	27
EAST NORTH CENTRAL	13	122	4,375	3	–	49	–	19	2,370	36	10	311
Ohio *	3	36	1,301	–	–	20	–	14	1,039	14	6	38
Indiana	4	14	559	–	–	1	–	–	196	4	–	53
Illinois	3	43	1,355	1	–	11	–	5	129	5	–	72
Michigan	1	29	1,083	2	–	13	–	–	701	11	–	11
Wisconsin	2	–	77	–	–	4	–	–	305	12	4	137
WEST NORTH CENTRAL	7	39	1,228	22	–	27	–	25	871	5	10	998
Minnesota	–	–	146	–	–	7	–	2	205	3	1	375
Iowa *	–	5	124	–	–	–	–	7	2	–	3	203
Missouri	6	27	597	21	–	12	–	9	282	2	–	90
North Dakota	1	–	37	–	–	–	–	–	14	–	3	148
South Dakota	–	2	85	–	–	1	–	1	35	–	–	81
Nebraska	–	3	79	–	–	1	–	2	66	–	1	7
Kansas *	–	2	160	1	–	6	–	4	267	–	2	94
SOUTH ATLANTIC	18	112	5,846	19	–	252	–	307	4,135	137	7	289
Delaware	–	5	92	–	–	1	–	8	72	2	–	5
Maryland	–	12	646	6	–	9	–	14	317	17	–	15
District of Columbia	–	6	284	–	–	1	–	–	357	10	–	–
Virginia	3	15	782	6	–	3	–	61	297	6	4	92
West Virginia	1	11	295	–	–	11	–	4	50	–	1	24
North Carolina	–	16	927	2	–	5	–	141	437	9	–	14
South Carolina	2	–	462	–	–	6	–	32	856	46	–	6
Georgia	2	22	932	3	–	3	–	46	803	22	1	91
Florida	10	25	1,426	2	–	213	–	1	946	25	1	42
EAST SOUTH CENTRAL	9	53	2,696	10	–	44	–	112	1,777	21	4	397
Kentucky	1	8	610	1	–	11	–	–	255	1	3	209
Tennessee	5	25	838	7	–	16	–	52	621	11	1	145
Alabama	3	13	752	–	–	10	–	28	452	7	–	42
Mississippi	–	7	496	2	–	7	–	32	449	2	–	1
WEST SOUTH CENTRAL	15	69	3,087	91	–	26	–	106	2,322	54	7	560
Arkansas	1	13	375	62	–	5	–	20	216	3	–	116
Louisiana	4	4	441	1	–	6	–	–	668	7	–	51
Oklahoma	4	10	265	21	–	2	–	75	186	3	3	157
Texas	6	42	2,006	7	–	13	–	11	1,252	41	4	236
MOUNTAIN	–	31	999	8	–	14	–	8	737	8	1	56
Montana	–	4	56	–	–	–	–	1	88	–	–	10
Idaho	–	–	32	1	–	1	–	2	57	–	–	–
Wyoming	–	–	28	2	–	1	–	1	15	1	–	–
Colorado	–	15	209	–	–	2	–	1	266	1	–	–
New Mexico	–	3	206	2	–	4	–	3	64	2	–	7
Arizona	–	9	362	–	–	6	–	–	175	4	1	36
Utah	–	–	47	2	–	–	–	–	52	–	–	3
Nevada	–	–	59	1	–	–	–	–	20	–	–	–
PACIFIC	14	76	4,433	2	2	112	–	8	2,443	76	12	413
Washington	3	10	339	1	–	7	–	5	206	8	–	9
Oregon	–	4	237	–	–	2	–	2	193	2	–	8
California	11	55	3,490	1	2	98	–	1	1,919	66	12	388
Alaska	–	–	103	–	–	4	–	–	74	–	–	8
Hawaii	–	7	264	–	–	1	–	–	51	–	–	–
Guam *	–	–	39	–	–	–	–	–	–	–	–	–
Puerto Rico	9	7	478	--	–	11	–	–	87	10	–	53
Virgin Islands	–	–	2	–	–	–	–	–	6	–	–	–

* Delayed Reports: TB: Ohio delete 1, Kans. delete 2, Guam 3
Gonorrhea: Iowa 286, Guam 7
Syphilis: Me. 3

Week No. 49

TABLE IV. DEATHS IN 121 UNITED STATES CITIES FOR WEEK ENDING DECEMBER 8, 1973

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

Area	All Causes			Pneumonia and Influenza	Area	All Causes			Pneumonia and Influenza
	All Ages	65 years and over	Under 1 year	All Ages		All Ages	65 years and over	Under 1 year	All Ages
NEW ENGLAND	697	470	14	39	SOUTH ATLANTIC	1,454	755	113	54
Boston, Mass.	193	105	5	11	Atlanta, Ga.	167	84	6	3
Bridgeport, Conn.	38	29	–	2	Baltimore, Md.	288	166	4	8
Cambridge, Mass.	24	17	–	7	Charlotte, N. C.	51	22	2	–
Fall River, Mass.	28	20	–	2	Jacksonville, Fla.	93	46	7	1
Hartford, Conn.	63	41	2	2	Miami, Fla.	104	58	2	4
Lowell, Mass.	33	22	–	4	Norfolk, Va.	65	37	2	4
Lynn, Mass.	26	17	–	1	Richmond, Va.	91	47	12	7
New Bedford, Mass.	22	16	–	–	Savannah, Ga.	40	21	–	1
New Haven, Conn.	60	41	3	1	St. Petersburg, Fla.	106	84	2	10
Providence, R. I.	50	42	–	5	Tampa, Fla.	67	30	2	6
Somerville, Mass.	11	10	1	2	Washington, D. C.	332	135	71	7
Springfield, Mass.	46	33	1	1	Wilmington, Del.	50	25	3	3
Waterbury, Conn.	46	32	1	–					
Worcester, Mass.	57	45	1	1	EAST SOUTH CENTRAL	731	391	33	25
					Birmingham, Ala.	147	73	8	–
MIDDLE ATLANTIC	3,258	1,942	112	117	Chattanooga, Tenn.	61	35	2	5
Albany, N. Y.	55	31	3	4	Knoxville, Tenn.	49	27	–	–
Allentown, Pa.	27	18	1	1	Louisville, Ky.	123	67	4	10
Buffalo, N. Y.	134	85	4	5	Memphis, Tenn.	176	96	12	2
Camden, N. J.	45	24	1	2	Mobile, Ala.	45	22	1	1
Elizabeth, N. J.	28	18	1	–	Montgomery, Ala.	28	18	1	1
Erie, Pa.	39	26	1	4	Nashville, Tenn.	102	53	5	6
Jersey City, N. J.	53	34	–	1					
Newark, N. J.	70	30	9	3	WEST SOUTH CENTRAL	1,229	678	61	38
New York City, N. Y. †	1,591	947	56	58	Austin, Tex.	49	28	5	4
Paterson, N. J.	42	23	2	2	Baton Rouge, La.	37	21	1	1
Philadelphia, Pa.	597	350	21	8	Corpus Christi, Tex.	43	29	1	–
Pittsburgh, Pa.	184	102	4	10	Dallas, Tex.	176	95	11	6
Reading, Pa.	33	26	–	2	El Paso, Tex.	52	28	1	3
Rochester, N. Y.	113	64	4	4	Fort Worth, Tex.	66	42	3	3
Schenectady, N. Y.	21	12	1	1	Houston, Tex.	306	147	21	9
Scranton, Pa.	27	18	–	–	Little Rock, Ark.	58	26	6	2
Syracuse, N. Y.	88	51	2	1	New Orleans, La.	156	84	5	4
Trenton, N. J.	35	24	2	4	San Antonio, Tex.	131	76	5	1
Utica, N. Y.	28	23	–	3	Shreveport, La.	59	40	–	3
Yonkers, N. Y.	48	36	–	4	Tulsa, Okla.	96	62	2	2
EAST NORTH CENTRAL	2,458	1,462	99	71	MOUNTAIN	532	305	31	28
Akron, Ohio	58	38	4	–	Albuquerque, N. Mex.	58	30	2	12
Canton, Ohio	33	22	3	2	Colorado Springs, Colo.	22	12	2	2
Chicago, Ill.	622	330	38	21	Denver, Colo.	124	69	16	3
Cincinnati, Ohio	162	97	7	3	Las Vegas, Nev.	19	6	–	–
Cleveland, Ohio	207	114	7	4	Ogden, Utah	20	13	–	1
Columbus, Ohio	129	84	2	1	Phoenix, Ariz.	132	78	5	2
Dayton, Ohio	119	87	2	3	Pueblo, Colo.	25	18	2	7
Detroit, Mich.	329	192	3	9	Salt Lake City, Utah	66	44	4	–
Evansville, Ind.	50	32	4	1	Tucson, Ariz.	66	35	–	1
Fort Wayne, Ind.	52	36	2	8					
Gary, Ind.	17	7	1	1	PACIFIC	1,823	1,148	54	45
Grand Rapids, Mich.	57	44	1	3	Berkeley, Calif.	29	18	1	1
Indianapolis, Ind.	159	76	9	1	Fresno, Calif.	55	35	3	–
Madison, Wis.	35	23	2	4	Glendale, Calif.	32	22	–	–
Milwaukee, Wis.	118	81	–	2	Honolulu, Hawaii *	58	33	4	1
Peoria, Ill.	51	37	6	–	Long Beach, Calif.	120	72	3	1
Rockford, Ill.	41	22	3	3	Los Angeles, Calif.	590	361	20	16
South Bend, Ind.	50	36	–	–	Oakland, Calif.	81	51	3	–
Toledo, Ohio	115	72	3	2	Pasadena, Calif.	36	29	–	–
Youngstown, Ohio	54	32	2	3	Portland, Oreg.	135	92	2	3
					Sacramento, Calif.	66	38	5	2
WEST NORTH CENTRAL	742	454	32	24	San Diego, Calif.	130	85	1	2
Des Moines, Iowa	62	40	–	1	San Francisco, Calif.	180	99	5	5
Duluth, Minn.	27	19	–	1	San Jose, Calif.	76	56	4	3
Kansas City, Kans.	41	20	2	3	Seattle, Wash.	141	95	2	1
Kansas City, Mo.	115	72	2	2	Spokane, Wash.	54	36	–	5
Lincoln, Nebr.	30	20	2	1	Tacoma, Wash.	40	26	1	5
Minneapolis, Minn.	72	44	3	3					
Omaha, Nebr.	79	39	8	3	Total	12,924	7,605	549	441
St. Louis, Mo.	198	118	11	3	Expected Number	12,687	7,506	465	439
St. Paul, Minn.	58	45	2	–	Cumulative Total (includes reported corrections for previous weeks)	622,224	365,971	23,389	24,458
Wichita, Kans.	60	37	2	7					

† Delayed reports for week ending December, 1973
* Estimate based on average percent of divisional total

SALMONELLA – Continued

Table 4
Food-Specific Attack Rates for Guests at Catered Parties
Illinois, 1973

Food Item	No. Who Ate Food				No. Who Did Not Eat Food			
	Ill	Not Ill	Total	Attack Rate (%)	Ill	Not Ill	Total	Attack Rate (%)
Beef in gravy	158	19	177	89	5	18	23	22*
Chicken	124	33	157	79	40	3	43	93
Potato salad	112	21	133	84	51	16	67	76
Cole slaw	104	23	127	82	59	14	73	81
Relish tray	88	23	111	79	75	14	89	84
Buns and rolls	81	14	95	85	82	23	105	78

*$x^2 = 57.2$, $p < 0.000001$

done according to a recipe for "Italian style" beef in gravy. The beef was then sliced on a board reserved for that purpose. Gravy made from the same beef was prepared on the premises and stored in large plastic containers. Raw chicken was received pre-cut and then deep fried. Meals were delivered in unrefrigerated trucks. Atmospheric temperatures on June 9-12 ranged from 63°F to 94°F.

The caterer voluntarily suspended service while new equipment was obtained and procedures reviewed.

Salmonella blockley had not been commonly reported from the Chicago area. A retrospective study of recent cases showed that on May 5 this serotype was isolated from a girl who had attended a party served by the caterer involved in this outbreak, but no attempt to identify the source of her infection had been made.

(Reported by John B. Hall, M.D., M.P.H., Director, Colette M. Rasmussen, M.D., M.P.H., Chief, Division of Preventive Medicine, Dominic Lupo, Registered Sanitarian, and Francis E. Lochner, Public Health Advisor, Cook County Department of Public Health; Louise Brown, Chief, Diagnostic Services, Public Health Laboratory, Emmett Shaughnessy, Environmental Health Inspector, Division of Food and Drugs, Carl W. Langkop, M.S.P.H., Executive Field Epidemiologist, and Byron J. Francis, M.D., State Epidemiologist, Illinois Department of Public Health.)

MEASLES–Montana

Between July and November 26, 1973, 331 cases of measles occurred in Butte, Montana (Figure 3); 75% were in school-age children. All cases were clinically compatible with measles, the majority manifesting the typical picture of a 2-4 day prodrome of lethargy, fever, cough, coryza, and conjunctivitis followed by a maculopapular rash lasting at least 4 days. An estimated 35-40 children were hospitalized. There were 19 complicated cases, including 11 cases of pneumonia, 7 of otitis, and 1 of encephalitis but no deaths. One case was confirmed serologically.

Twenty-seven ill children had a history of previous measles vaccination which was substantiated by detailed questioning of the parents or by a written record in the parents' possession; 5 of these had received the vaccine before they were 1 year of age. Seventeen children had equivocal histories of vaccination, and 287 had no history of previous vaccination.

The index case was in a 9-year-old boy who had moved from Idaho to Montana with his family on June 30, 1973. His mother knew of no source for her son's illness, and the Idaho State Health Department received no reports of measles from the area of the state where the family had lived. The child became symptomatic on July 8, and over the next 6 weeks his 5 siblings also became ill. On approximately September 1, 1973, the first case outside the index family occurred in a 6-year-old boy living in the same 4-dwelling apartment house as the index case. The first hospitalized patient, who became ill on September 9, also lived in the apartment house. During the next 10-day period no cases occurred, but there was a rapid increase in cases thereafter, from 29 in the following 10-day period to more than 80 in each of the subsequent 3 10-day periods.

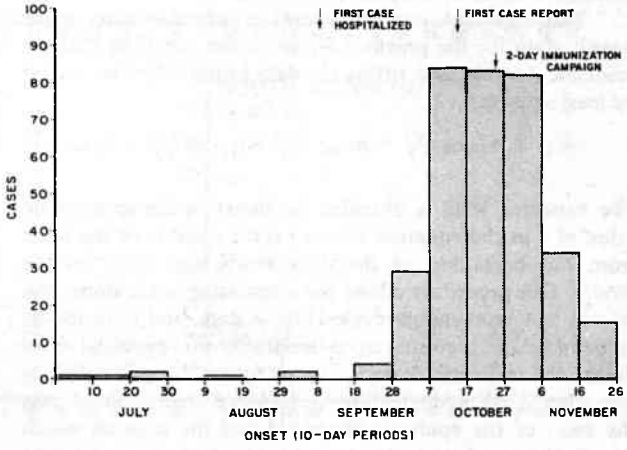
Cases were clustered in the northwest quadrant of the city. Three of the 4 schools with highest attack rates were located there, and all were close to the index case's apartment house.

On October 16, the first case reports were received by the State Health Department and on October 25 and 26, a mass vaccination campaign was carried out among preschoolers and in all elementary schools in Butte. A total of 2,912 children were vaccinated, including 342 preschoolers. Two weeks later, the number of cases began to decline, with 34 and 15 occurring in the subsequent 2 10-day periods.

The last mass measles vaccination program in Butte was held in 1967, when 4,360 children, 1-5 years of age, received vaccine. Since then, private physicians and City-County Health Department clinics, held periodically, have provided vaccinations. In August 1973 a survey of 2-year-olds, with 65% responding, showed a measles immunity level of 74%. A survey of first-graders in 1972, with an undetermined response rate, showed a 55% immunity level.

(Reported by Fernand Duchesneau, M.D., Health Officer, Butte-Silver Bow City-County Health Departments; M. Richard Nelson, Field Representative, Don Pratt, Immunization Project Advisor, Martin D. Skinner, M.D., State Epidemiologist, Montana Department of Health and Environmental Sciences; and an EIS Officer.)

Figure 3
MEASLES CASES BY 10-DAY PERIOD OF ONSET
BUTTE, MONTANA – JULY 1, 1973–NOVEMBER 26, 1973



MEASLES – Continued

Editorial Note

The delay in reporting manifested in this epidemic is cause for concern. The initial case report was received by the State Health Department 3 1/2 months after the first case and 1 month after the first hospitalized case. Approximately 320 cases (97%) occurred 2 weeks or longer after the first hospitalized case and were, at least theoretically, preventable. The cost to the community and to individuals could have been reduced if an epidemic control program had been instituted prior to the bulk of cases occurring in late September and throughout October.

CURRENT TRENDS

INFLUENZA – United States, 1973

Influenza occurs each year in the United States, but the extent and the geographical distribution of the disease vary. This year influenza will most likely be caused by type A and type B viruses. The type A virus will be similar to the prototype A/England/42/72 (H3N2) which caused last year's outbreak, while the type B virus may be the previously prevalent strain similar to B/Massachusetts/1/71, one of the "intermediate" strains, or the new B/Hong Kong/5/72 strain. Most influenza cases will probably be caused by the A/England/42/72 virus rather than by the type B strains.

This year with the cooperation of the state epidemiologists, CDC is continuing the surveillance program begun in 1972. Each week data on emergency room admissions and school and industrial absenteeism are reported from more than 100 cities and provide the basis for a rapid, current assessment of disease activity throughout the country. To date, all surveillance indices have remained at the normal seasonal levels suggesting that little or no influenza is present. Furthermore, each week over 60 World Health Organization cooperating laboratories report influenza virus isolations and serologically confirmed cases of influenza. So far, 1 serologically confirmed case of influenza B has been reported from California; there have been no virologically confirmed cases.

In addition, mortality data are relayed each week from 121 cities throughout the United States (see Table 4, p. 412). Pneumonia-influenza deaths for the period September 1971 – November 1973 are plotted in Figure 4. On each graph the solid black line represents the expected number of deaths. The expected mortality is determined by using data from the prior 4-year period to predict the weekly mortality level for the current year (*1, 2, 3*). The method works well in general because the same seasonal pattern is observed each year, the same peaks are observed in years when there is not much influenza activity, and the same nadirs are observed almost every year. The only factor that must be taken into account is a general upward or downward trend in mortality that might occur over a period of years.

The expected mortality level is calculated by using weekly data for the previous 4-year period, omitting data for epidemic periods, and fitting the data to the following model by least squares:

$$\hat{y} = u + rt + A_1 \cos\frac{2\pi t}{52} + B_1 \sin\frac{2\pi t}{52} + A_2 \cos\frac{4\pi t}{52} + B_2 \sin\frac{4\pi t}{52}$$

The expected level is obtained by inserting the appropriate value of t in the equation where t is the number of the week from the beginning of the data which was fitted to the model. This procedure allows for a general mean, a slope, and annual and semi-annual cycles in the data, and omission of epidemic data prevents an inflation of the expected level during the influenza season. Except for resulting in a slightly smoother curve and yielding a standard error which forms the basis of the epidemic threshold and the scale on which the graphs are drawn, the procedure is almost equivalent to averaging the deaths for corresponding weeks over the curve-fitting period and using the average as the expected for the next year.

The error mean square for each curve is obtained by summing the squares of the differences in observed and expected values over the curve-fitting period, omitting the data during epidemic periods, and dividing by the appropriate degrees of freedom. The square root of this is the standard error of the curve fit and is the basis for the epidemic threshold, defined as 1.65 standard errors above the expected. Experience has shown that the deviations between observed and expected values are normally distributed in most instances. Thus, the probability that one observation will exceed the threshold is .05, and the probability that two successive ones will exceed the threshold is approximately $(.05)^2$.

The reported numbers of deaths are shown as dots drawn by line segments. The solid line for each mortality category is the expected number of deaths. The dashed line is the epidemic threshold, the criterion for recognition of significant deviations in excess of the expected number. The charts are drawn to a scale that allows the distance between the expected and threshold levels to be constant for every curve. This device allows one to compare the influenza activity between regions by glancing at the regional chart. Although the vertical labels are different, comparison of the absolute distance on the chart between observed and threshold levels between regions shows whether the mortality is significantly higher in one region than another. This is accomplished by allowing 0.3 inches on the original full size chart to represent 1.65 standard errors of measurement for each graph that is drawn.

This year the "curve fit" is not ideal as most points fall above the expected level. However, past influenza epidemics have been heralded not by small increases above the expected level but by large increases above the epidemic threshold. The points above the expected but below the epidemic threshold should be interpreted as representing a normal, nonepidemic pattern.

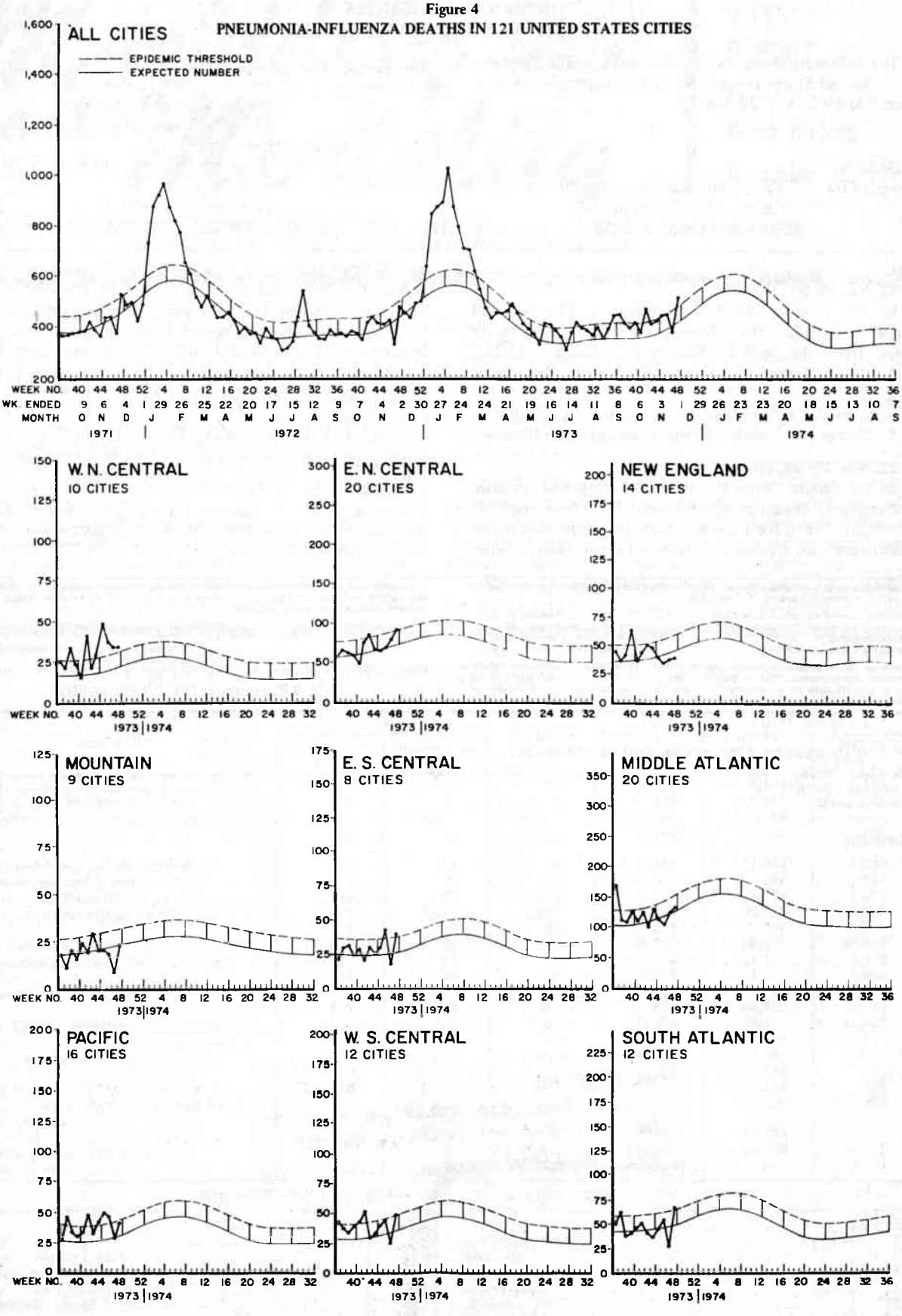
Although the observed number of deaths for week 48 exceeds the epidemic threshold, this represents delayed reporting over the Thanksgiving holiday. Therefore, at present, no influenza activity in the United States has been detected using both morbidity and mortality surveillance indices.

(Reported by the Statistical Services Activity, and the Viral Diseases Branch, Bureau of Epidemiology, CDC.)

References

1. Collins SD, Lehmann J: Excess deaths from influenza and pneumonia and from important chronic diseases during epidemic periods, 1918-51, Public Health Monogr 10 (PHS Publication 213), US Government Printing Office, Washington, DC, 1953
2. Serfling RE: Methods for current statistical analysis of excess pneumonia-influenza deaths. Public Health Rep 78:494-506, 1963
3. Serfling RE: The current mortality chart. Morbidity and Mortality Weekly Rep 14(1):8-11, 1965

Figure 4
PNEUMONIA-INFLUENZA DEATHS IN 121 UNITED STATES CITIES



INTERNATIONAL NOTES
QUARANTINE MEASURES

The following changes should be made in the "Supplement – United States Designated Yellow Fever Vaccination Centers," MMWR, Vol. 22, No. 32:

LOUISIANA

Morgan City	Family Medical Center 70380 Change Clinic hours to: Tues. and Fri., 1:30-2:30 p.m.

VIRGINIA

Fairfax	Joseph Willard Health Center Fairfax County Health Dept. 3750 Old Lee Highway Fee charged Clinic hours: Tues. and Wed., 9:30-10:30 a.m. Telephone: 703-691-2651 (NEW CENTER)

Errata

Vol. 22, No. 48, pp. 398, 404

In the articles "Shellfish Poisoning – Florida" and "Dengue – Florida," the following name was inadvertently omitted from the credits: Nathan J. Schneider, Ph.D., M.P.H., Chief, Bureau of Laboratories, Florida Division of Health.

Also, in the article "Dengue – Florida," paragraph 2, line 5, change the symbol from < to >1:640 dilutions.

Vol. 22, Nos. 47, 48, pp. 395, 404

In the article "Viral Hepatitis in Young Women after Ear Piercing – Washington," Editorial Note, paragraph 2, line 7, delete: **98°C for 1 minute.** This correction should also be substituted for the second erratum on page 404. Studies by Krugman et al (*1*) in which aliquots of serum pools containing the MS-1 and MS-2 strains of hepatitis virus were heated at 98°C for 1 minute were performed on 1:10 dilutions of the serum. The heated MS-1 strain was neither infectious nor immunogenic in subsequent experiments. Heating the MS-2 strain reportedly modified infectivity but not antigenicity. Since no data are available as to the effects on infectivity and antigenicity of heating **undiluted** aliquots of the MS-1 and MS-2 strains at 98°C for 1 minute, one cannot assume that this treatment is an effective method of sterilization.

Reference

1. Krugman S, Giles JP, Hammond J: Hepatitis virus: effect of heat on the infectivity and antigenicity of the MS-1 and MS-2 strains. J Infect Dis 122:432-436, 1970

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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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