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U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

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EPIDEMIOLOGIC NOTES AND REPORTS

VIBRIO PARAHAEMOLYTICUS GASTROENTERITIS
Maryland

On July 5, 1972, 20 out of 26 persons who had attended a July 4th picnic in Anne Arundel County, Maryland, experienced severe abdominal cramping, diarrhea, nausea, and some vomiting. Fifteen people sought medical attention, and two were hospitalized. There were no deaths. The median incubation period was 15 hours (range 8–22 hours), and the median duration of the illness was 3 days (range 2–7 days). Their illness was diagnosed as acute gastroenteritis. Stool specimens from three patients yielded *Vibrio parahaemolyticus* on thiosulfate citrate bile salts (TCBS) medium. Cultures for salmonella, shigella, or enteropathogenic *Escherichia coli* were negative.

Epidemiologic investigation revealed that the primary food served at the picnic was steamed crabs. Two bushels of live crabs were bought from a wholesale market on July 3, 1972. The crabs were steamed at the host's home between 9:00 and 12:00 that evening, stored overnight in the basement in their original baskets without refrigeration, and eaten the following afternoon.

Portions of the remaining crabs, which had been refrigerated since the picnic, were tested and were negative for *V. parahaemolyticus*. A basket in which the crabs were pur-

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

DISEASE	29th WEEK ENDING		MEDIAN 1967-1971	CUMULATIVE, FIRST 29 WEEKS		
	July 22, 1972	July 24, 1971		1972	1971	MEDIAN 1967-1971
Aseptic meningitis	98	173	120	1,209	1,689	1,140
Brucellosis	6	5	5	90	89	119
Chickenpox	1,089	– – –	– – –	110,706	– – –	– – –
Diphtheria	1	2	1	57	92	92
Encephalitis, primary:						
Arthropod-borne and unspecified	25	59	33	472	713	640
Encephalitis, post-infectious	7	12	12	171	234	274
Hepatitis, serum (Hepatitis B)	204	175	100	5,165	4,734	2,867
Hepatitis, infectious (Hepatitis A)	1,049	991	823	30,983	33,851	25,849
Malaria	21	37	37	624	1,936	1,497
Measles (rubeola)	255	561	356	25,769	66,716	37,840
Meningococcal infections, total	19	27	32	877	1,588	1,643
Civilian	17	27	30	842	1,406	1,474
Military	2	–	3	35	182	170
Mumps	665	1,044	– – –	53,822	95,258	– – –
Rubella (German measles)	183	296	393	19,632	36,649	41,357
Tetanus	3	1	3	62	55	74
Tuberculosis, new active	622	– – –	– – –	18,394	– – –	– – –
Tularemia	5	4	5	74	82	82
Typhoid fever	10	3	7	172	163	163
Typhus, tick-borne (Rky. Mt. spotted fever)	31	18	18	244	190	175
Venereal Diseases:†						
Gonorrhea	16,275	14,202	– – –	390,463	347,033	– – –
Syphilis, primary and secondary	522	465	– – –	13,328	13,009	– – –
Rabies in animals	79	72	71	2,469	2,480	2,095

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	–	Poliomyelitis, total:	8
Botulism:	–	Paralytic:	8
Congenital rubella syndrome: Ky. – 1	22	Psittacosis:	21
Leprosy: Calif. – 1, Mich. – 1	67	Rabies in man:	1
Leptospirosis: Calif. – 2	15	Trichinosis: Ill. – 1, N.Y. Ups. – 1	46
Plague:	1	Typhus, murine:	10

†Numbers for 1971 are estimated from quarterly reports to the Venereal Disease Branch, CDC

VIBRIO PARAHAEMOLYTICUS – (Continued)

chased and stored, however, yielded four *V. parahaemolyticus* organisms per square inch of basket tested.

(Reported by J. Howard Beard, M.D., Deputy State Health Officer, Anne Arundel County Health Department; Ronald Nelson, Sanitarian, Division of Food Control, Environmental Health Administration, Arnold Salinger, Head, Environmental Microbiology Field Services and Certification Section, John Molenda, Ph.D., Head, Special Microbiology Studies, and John D. Stafford, M.D., Chief, Division of Communicable Diseases, Preventive Medicine Administration, Maryland State Department of Health.)

Editorial Note

Vibrio parahaemolyticus is one of the leading causes of foodborne diseases in Japan and only recently is beginning to be recognized as an important and ubiquitous enteropathogen in other countries. Contamination of the crabs in this outbreak probably occurred when they were stored overnight in the original baskets at room temperature, thereby permitting replication of the vibrios. The use of TCBS medium and increased awareness of *V. parahaemolyticus* as a cause of foodborne outbreaks have been responsible for the increasing number of reports of this type of food poisoning in two states in this country. Since 1969, Maryland has reported five outbreaks; Washington has reported four.

On July 9, 1972, a 32-year-old woman in Baltimore, Maryland, awakened with abdominal pain and was later admitted to the accident room of a local hospital with weakness, vomiting, diarrhea, and tenesmus. Her temperature was 101°F., she was moderately dehydrated, and she had diffuse abdominal tenderness. Three stools passed in the accident room were bloody.

Laboratory studies revealed a white blood cell count of 27,600 with a marked shift to the left. There were numerous polymorphonuclear leukocytes in the stool. Sigmoidoscopic examination revealed multiple shallow ulcerations in the sigmoid colon. Three days later, stool cultures grew *Vibrio parahaemolyticus* on thiosulfate citrate bile salts medium. She was treated with intravenous fluids only and made an uneventful recovery.

On July 8, at 5:00 p.m., the patient had eaten five crabs steamed by a neighbor. One of the crabs "tasted bad". At 10:00, she ate three more crabs and gave "tastes" to her children. Her husband ate none of these crabs. Neither the husband nor the children became ill.

(Reported by Mary Charleson, M.D., Assistant Resident in Medicine, Johns Hopkins Hospital, Baltimore, Maryland; John Molenda, Ph.D., Head, Special Microbiology Studies, and John D. Stafford, M.D., Chief, Division of Communicable Diseases, Preventive Medicine Administration, Maryland State Department of Health.)

Editorial Note

This isolated case is unrelated to the outbreak reported above. Clinical and laboratory evidence of involvement of the distal bowel, manifested by fever, tenesmus, blood in the stool, ulceration of the sigmoid, and marked leukocytosis suggest that the pathogenesis of *V. parahaemolyticus* infection may be primarily due to mucosal invasion analogous to shigellosis. Because of these symptoms, this illness is often misdiagnosed as dysentery due to shigella infection *(1)*. If it is assumed that the infection was acquired from the crabs eaten at 5:00 p.m. the day before her illness, the incubation period would be 14 hours. This incubation period and the clinical manifestations are consistent with previous reports in the literature *(2)*.

References

1. Aiso K, Matsuno M: The outbreaks of enteritis-type food poisoning due to fish in Japan and its causative bacteria. Jap J Microbiol 5:337, 1961

2. Thatcher FS, Clark DS (eds): Microorganisms in Foods: Their Significance and Methods of Enumeration. Toronto, Univ of Toronto Press, 1968, pp 14-15

INTERNATIONAL NOTES

FOLLOW-UP ON TYPHOID FEVER – Mexico

In mid-January 1972, an outbreak of typhoid fever and other salmonelloses was reported in the State of Hidalgo and Mexico City, Mexico (MMWR, Vol. 21, No. 21). A total of 778 cases were reported in Hidalgo, of which 739 cases were confirmed as typhoid fever (Table 1). Mexico City reported a total of 1,515 cases; *Salmonella typhi* was isolated in 176 cases and in 1,000 cases the Widal reaction was positive to the H and O antigens. Subsequently, the Federal District reported a total of 853 additional cases in which *S. typhi* was isolated and another 150 cases in which the reaction to agglutination tests was positive. An increased number of reported cases of typhoid fever was also noted in the States of Puebla and Tlaxcala. The peak of the outbreak was reached in March in Hidalgo and in April in the Federal District, Puebla, and Tlaxcala.

The largest number of cases occurred in the age-group 5–14 years in Hidalgo and Tlaxcala, while in Mexico City, those 15–24 years were mainly involved. Both sexes were approximately equally affected. The clinical picture was typical of the disease, with a high percent of cases having intestinal perforations.

Table 1
Distribution of Confirmed Cases of Typhoid Fever in Four States of Mexico, by Month – 1972

States	Number of Cases by Month					Total
	January	February	March	April	May*	
Federal District	8	13	238	415	179	853
Hidalgo	2	44	334	289	80	739
Puebla	29	11	12	200	42	294
Tlaxcala	1	2	7	34	17	61

*Through May 20, 1972

In Hidalgo, the cities of Pachuca (pop. 96,441) and Tilancingo (pop. 38,045) were primarily affected, reporting 720 and 624 cases, respectively. *S. typhi* was isolated in a total of 44 patients; of these, 24 occurred in Pachuca and 20 in Tulancingo. The Widal reaction was positive in 261 cases in

Pachuca and in 220 cases in Tulancingo. In other areas of the state, 75 cases were observed with a clinical picture comparable to typhoid fever, including a positive Widal reaction. Of the 44 isolations of *S. typhi*, 20 strains were resistant to chloramphenicol. The majority of resistant strains occurred in the hospitalized cases. A total of 129 deaths were attributed to this outbreak; of these, 29 occurred in Pachuca.

In Mexico City, the strains of *S. typhi* from 24 patients were found to be resistant to chloramphenicol. As in Hidalgo, the resistant strains have come mostly from hospitalized patients. The majority of the patients were treated in clinics and health centers and responded to treatment by chloramphenicol, although in both states it appears that many of the patients infected with resistant strains responded poorly to therapy with chloramphenicol, necessitating the use of other antibiotics, principally ampicillin. Thirty-nine deaths could be confirmed as due to typhoid fever, although 54 deaths were attributed to the disease. Strains resistant to chloramphenicol were not found in Tlaxcala, and the outbreak was confined to the City of Apizaco.

A predominance of cases was seen in groups of people living in low socio-economic conditions with a low standard of environmental hygiene. Fecal contamination was detected in the water systems of both Pachuca and Tulancingo as well as in foods (mainly green vegetables and ice cream). Repeated tests of the potable water system in Mexico City have demonstrated its purity. In the houses of some of the patients, however, fecal contamination was found in the water supply for domestic use.

Public health measures in both states include active reporting, diagnosis, and surveillance of cases and contacts, and control of potable water systems, food handlers, and sanitation, as well as health education programs. Physicians have been informed of the existence of strains resistant to chloramphenicol, and ampicillin or other drugs are used when necessary.

(Reported by the World Health Organization: Weekly Epidemiological Record, *Vol. 47, No. 28, July 14, 1972.)*

SUMMARY OF REPORTED CASES OF INFECTIOUS SYPHILIS

CASES OF PRIMARY AND SECONDARY SYPHILIS: By Reporting Areas June 1971 and June 1972 – Provisional Data

Reporting Area	June		Cumulative Jan. – June	
	1972	1971	1972	1971
NEW ENGLAND	57	49	437	308
Maine	1	2	14	6
New Hampshire	1	1	5	3
Vermont	1	1	11	2
Massachusetts	29	23	243	155
Rhode Island	5	6	21	24
Connecticut	20	16	143	118
MIDDLE ATLANTIC	557	454	2,905	2,883
Upstate New York	24	49	215	239
New York City	436	285	2,034	1,932
Pa. (Excl. Phila.)	9	13	84	75
Philadelphia	21	15	156	96
New Jersey	67	92	416	541
EAST NORTH CENTRAL	166	228	1,283	1,312
Ohio	21	41	165	250
Indiana	13	25	99	163
Downstate Illinois	7	14	76	71
Chicago	63	83	521	420
Michigan	60	59	401	374
Wisconsin	2	6	21	34
WEST NORTH CENTRAL	26	33	136	224
Minnesota	5	3	19	31
Iowa	6	4	22	8
Missouri	7	14	64	129
North Dakota	–	3	–	5
South Dakota	–	1	1	6
Nebraska	5	2	11	15
Kansas	3	6	19	30
SOUTH ATLANTIC	563	455	3,120	2,759
Delaware	3	2	32	19
Maryland	88	46	478	276
District of Columbia	61	40	400	274
Virginia	47	36	217	191
West Virginia	–	2	13	16
North Carolina	55	33	277	229
South Carolina	32	38	246	153
Georgia	114	135	665	715
Florida	163	123	792	886

Reporting Area	June		Cumulative Jan. – June	
	1972	1971	1972	1971
EAST SOUTH CENTRAL	129	105	687	569
Kentucky	36	25	131	162
Tennessee	34	34	255	167
Alabama	19	12	91	79
Mississippi	40	34	210	161
WEST SOUTH CENTRAL	248	291	1,537	1,930
Arkansas	12	29	113	140
Louisiana	90	56	446	332
Oklahoma	12	8	52	44
Texas	134	198	926	1,414
MOUNTAIN	39	62	250	287
Montana	3	–	4	–
Idaho	–	2	3	2
Wyoming	–	–	8	1
Colorado	8	7	30	31
New Mexico	5	19	57	68
Arizona	15	19	104	107
Utah	2	4	13	13
Nevada	6	11	31	65
PACIFIC	301	313	1,740	1,583
Washington	10	20	63	76
Oregon	2	–	23	7
California	286	290	1,631	1,475
Alaska	–	1	9	19
Hawaii	3	2		6
U.S. TOTAL	2,086	1,990	12,095	11,855
TERRITORIES	52	71	429	429
Puerto Rico	47	69	384	417
Virgin Islands	5	2	45	12

Note: Cumulative Totals include revised and delayed reports through previous months.

EPIDEMIOLOGIC NOTES AND REPORTS
CARBON MONOXIDE POISONING – California

On April 26, 1972, a woman vacationing with her 62-year-old husband in their mountain cabin near Georgetown, California, experienced nausea and vomiting and then fainted. When she awoke, she was aware that her husband was trying to help her, but she fainted again. When she regained consciousness a second time, she found her husband dead. The wife subsequently recovered without specific treatment and

(Continued on page 252)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES FOR WEEKS ENDING JULY 22, 1972 AND JULY 24, 1971 (29th WEEK)

AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	CHICKENPOX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post Infectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
	1972	1972	1972	1972	Cum. 1972	1972	1971	1972	1972	1972	1971
UNITED STATES	98	6	1,089	1	57	25	59	7	204	1,049	991
NEW ENGLAND	2	–	202	–	–	3	3	2	18	85	68
Maine *	–	–	3	–	–	–	–	2	–	1	6
New Hampshire	–	–	1	–	–	–	–	–	11	8	3
Vermont	–	–	–	–	–	–	–	–	–	5	5
Massachusetts	1	–	102	–	–	3	1	–	1	46	28
Rhode Island	1	–	42	–	–	–	–	–	1	10	3
Connecticut	–	–	54	–	–	–	2	–	5	15	23
MIDDLE ATLANTIC	2	–	80	–	2	–	1	–	62	94	167
Upstate New York	1	–	–	–	1	–	–	–	22	30	39
New York City	1	–	80	–	1	–	–	–	18	21	24
New Jersey *	–	–	NN	–	–	–	1	–	22	43	65
Pennsylvania	---	---	---	---	–	---	–	---	---	---	39
EAST NORTH CENTRAL	14	–	424	1	4	8	15	–	27	170	172
Ohio	4	–	2	–	–	1	8	–	2	24	38
Indiana	–	–	33	–	–	1	–	–	–	7	12
Illinois	3	–	–	1	3	2	2	–	5	55	35
Michigan	7	–	65	–	1	4	4	–	19	80	79
Wisconsin	–	–	324	–	–	–	1	–	1	4	8
WEST NORTH CENTRAL	3	1	14	–	9	1	3	1	14	80	44
Minnesota	3	1	1	–	–	–	–	–	–	7	3
Iowa	–	–	9	–	–	1	–	–	2	3	7
Missouri *	–	–	3	–	–	–	–	–	8	55	18
North Dakota	–	–	1	–	–	–	–	–	–	–	3
South Dakota	–	–	–	–	6	–	–	–	–	3	–
Nebraska	–	–	–	–	3	–	1	–	–	–	1
Kansas	–	–	–	–	–	–	2	1	4	12	12
SOUTH ATLANTIC	24	5	156	–	9	3	14	–	19	172	133
Delaware	–	–	2	–	–	–	–	–	–	1	–
Maryland	6	–	29	–	1	–	1	–	4	15	24
District of Columbia	–	–	7	–	–	–	–	–	1	2	–
Virginia	8	4	20	–	–	–	2	–	3	17	19
West Virginia	–	–	86	–	–	–	2	–	–	7	6
North Carolina	5	–	NN	–	–	2	1	–	3	55	22
South Carolina	–	–	12	–	1	1	–	–	1	10	10
Georgia	–	1	–	–	2	–	–	–	–	20	5
Florida	5	–	–	–	5	–	8	–	7	45	47
EAST SOUTH CENTRAL	3	–	44	–	2	–	1	–	5	45	58
Kentucky	–	–	39	–	–	–	–	–	1	20	19
Tennessee	1	–	NN	–	–	–	1	–	–	19	34
Alabama	2	–	5	–	2	–	–	–	3	4	2
Mississippi	–	–	–	–	–	–	–	–	1	2	3
WEST SOUTH CENTRAL	24	–	32	–	23	4	18	1	9	123	102
Arkansas	1	–	–	–	–	–	–	–	–	6	6
Louisiana	1	–	NN	–	4	2	–	–	2	15	13
Oklahoma	1	–	2	–	–	1	–	–	–	14	18
Texas	21	–	30	–	19	1	18	1	7	88	65
MOUNTAIN	1	–	81	–	5	–	–	–	7	46	36
Montana	–	–	2	–	–	–	–	–	–	2	5
Idaho	1	–	–	–	2	–	–	–	–	11	10
Wyoming	–	–	–	–	–	–	–	–	–	–	–
Colorado	–	–	31	–	–	–	–	–	5	10	7
New Mexico	–	–	18	–	1	–	–	–	1	9	1
Arizona	–	–	24	–	2	–	–	–	–	10	11
Utah	–	–	5	–	–	–	–	–	1	4	2
Nevada	–	–	1	–	–	–	–	–	–	–	–
PACIFIC	25	–	56	–	3	6	4	3	43	234	211
Washington	–	–	11	–	2	2	–	–	2	25	12
Oregon	–	–	–	–	–	–	–	–	1	29	13
California	23	–	–	–	1	4	3	3	40	173	180
Alaska	2	–	1	–	–	–	1	–	–	–	–
Hawaii	–	–	44	–	–	–	–	–	–	7	6
Guam	–	–	–	–	–	–	---	–	–	–	---
Puerto Rico	–	–	5	–	–	–	–	–	1	12	21
Virgin Islands	–	–	–	–	–	–	–	–	–	–	1

*Delayed reports: Chickenpox: Me. 7
Hepatitis B: Me. 1, N.J. delete 1
Hepatitis A: Me. 6, Mo. 41

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING JULY 22, 1972 AND JULY 24, 1971 (29th WEEK) – Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1972	Cum. 1972	1972	Cumulative		1972	Cumulative		1972	Cum. 1972	1972	Cum. 1972
				1972	1971		1972	1971				
UNITED STATES	21	624	255	25,769	66,716	19	877	1,588	665	53,822	183	19,632
NEW ENGLAND	1	16	37	2,985	3,349	–	36	69	24	2,279	7	918
Maine	–	1	1	238	1,445	–	3	8	–	254	–	65
New Hampshire	–	3	3	227	194	–	3	10	2	179	–	32
Vermont	–	–	–	120	109	–	–	–	–	111	–	68
Massachusetts	1	6	17	630	232	–	17	28	9	550	2	423
Rhode Island	–	–	2	519	237	–	10	3	4	365	1	88
Connecticut	–	6	14	1,251	1,132	–	3	20	9	820	4	242
MIDDLE ATLANTIC	–	47	15	887	7,301	2	107	208	54	2,794	10	1,810
Upstate New York	–	9	–	123	614	2	27	59	NN	NN	2	227
New York City	–	7	10	227	3,639	–	35	41	49	1,463	5	185
New Jersey	–	15	5	484	1,173	–	20	48	5	687	3	1,154
Pennsylvania	---	16	---	53	1,875	---	25	60	---	644	---	244
EAST NORTH CENTRAL	3	62	113	10,640	14,719	3	116	177	181	14,861	63	5,307
Ohio	–	9	1	226	3,917	2	46	54	2	2,100	2	375
Indiana	–	1	11	1,206	2,646	–	11	13	10	944	15	622
Illinois	1	24	34	3,937	2,853	–	25	51	14	2,644	6	994
Michigan	1	25	34	1,934	2,164	1	30	49	64	2,578	13	1,224
Wisconsin	1	3	33	3,337	3,139	–	4	10	91	6,595	27	2,092
WEST NORTH CENTRAL	1	43	5	918	6,721	1	66	122	36	8,179	4	1,247
Minnesota	1	5	1	19	52	1	17	20	2	669	1	488
Iowa	–	3	2	646	2,230	–	2	9	12	5,657	–	378
Missouri	–	12	–	158	2,585	–	20	44	12	479	3	107
North Dakota	–	1	2	51	228	–	–	5	8	315	–	21
South Dakota	–	4	–	5	211	–	2	5	2	117	–	12
Nebraska	–	3	–	18	62	–	9	14	–	244	–	50
Kansas	–	15	–	21	1,353	–	16	25	–	698	–	191
SOUTH ATLANTIC	11	96	10	2,038	7,174	5	199	281	71	4,979	16	1,480
Delaware	–	–	–	48	34	–	1	2	4	77	–	7
Maryland	3	8	–	15	522	–	33	43	7	291	3	45
District of Columbia	3	5	–	2	15	1	9	10	1	19	–	6
Virginia	–	4	–	58	1,420	1	44	26	21	1,059	2	67
West Virginia	–	1	4	249	483	–	6	7	16	2,256	4	369
North Carolina	2	35	–	29	1,902	–	25	48	NN	NN	–	27
South Carolina	–	10	3	214	890	1	19	20	1	163	–	50
Georgia	2	22	–	153	201	–	6	23	6	20	–	56
Florida	1	11	3	1,270	1,707	2	56	102	15	1,094	7	853
EAST SOUTH CENTRAL	–	157	10	1,014	8,065	2	74	135	53	2,838	18	1,452
Kentucky	–	138	7	514	3,859	1	23	37	9	441	6	815
Tennessee	–	–	3	191	997	–	28	51	31	1,806	9	484
Alabama	–	15	–	129	1,799	1	15	28	13	482	3	42
Mississippi	–	4	–	180	1,410	–	8	19	–	109	–	111
WEST SOUTH CENTRAL	–	67	19	1,382	12,201	3	110	139	54	4,501	15	1,396
Arkansas	–	5	–	13	775	–	9	5	2	159	–	29
Louisiana	–	5	–	82	1,664	–	34	47	1	283	1	85
Oklahoma	–	4	–	9	745	–	6	7	–	155	–	33
Texas	–	53	19	1,278	9,017	3	61	80	51	3,904	14	1,249
MOUNTAIN	1	42	13	1,716	3,104	1	15	48	40	2,786	12	1,028
Montana	–	2	–	12	904	–	2	6	7	166	–	28
Idaho	–	3	1	20	264	–	4	7	1	195	–	25
Wyoming	–	1	–	51	84	–	1	2	–	218	–	8
Colorado	–	27	4	510	803	1	3	7	5	725	3	514
New Mexico	–	1	2	108	331	–	1	3	5	550	3	85
Arizona	1	6	6	862	388	–	1	8	19	758	5	340
Utah	–	2	–	153	323	–	2	12	3	129	1	25
Nevada	–	–	–	–	7	–	1	3	–	45	–	3
PACIFIC	4	94	33	4,189	4,082	2	154	409	152	10,605	38	4,994
Washington	–	–	5	970	956	–	11	23	17	3,542	–	817
Oregon	1	11	5	108	366	1	13	29	35	1,414	10	347
California	3	72	20	3,006	2,395	1	122	351	88	5,317	28	3,764
Alaska	–	2	–	11	52	–	5	–	–	94	–	19
Hawaii	–	9	3	94	313	–	3	6	12	238	–	47
Guam	–	2	–	4	---	–	11	---	–	2	–	6
Puerto Rico	–	3	3	527	406	–	4	4	17	679	–	16
Virgin Islands	–	–	–	1	13	–	2	–	1	129	–	3

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING JULY 22, 1972 AND JULY 24, 1971 (29th WEEK) – Continued

AREA	TETANUS	TB (New Active)	TULAREMIA		TYPHOID FEVER		TYPHUS FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
									GONORRHEA	SYPHILIS (Pri. & Sec.)		
	1972	1972	1972	Cum. 1972	1972	Cum. 1972	1972	Cum. 1972	1972	1972	1972	Cum. 1972
UNITED STATES	3	622	5	74	10	172	31	244	16,275	522	79	2,469
NEW ENGLAND	–	24	–	–	3	10	–	–	569	8	–	76
Maine	–	1	–	–	–	–	–	–	8	–	–	61
New Hampshire	–	–	–	–	–	1	–	–	16	–	–	2
Vermont	–	1	–	–	–	–	–	–	12	–	–	8
Massachusetts	–	17	–	–	3	7	–	–	390	3	–	2
Rhode Island	–	2	–	–	–	–	–	–	41	1	–	1
Connecticut	–	3	–	–	–	2	–	–	102	4	–	2
MIDDLE ATLANTIC	–	66	–	1	1	32	–	15	2,356	84	2	53
Upstate New York	–	16	–	–	1	11	–	4	757	7	2	25
New York City	–	34	–	–	–	17	–	1	1,300	59	–	–
New Jersey	–	16	–	1	–	3	–	6	299	18	–	–
Pennsylvania	---	---	---	–	---	1	---	4	---	---	---	28
EAST NORTH CENTRAL	–	67	–	1	1	14	–	14	1,614	33	6	246
Ohio	–	12	–	1	–	5	–	14	625	4	–	70
Indiana	–	16	–	–	–	–	–	–	250	4	1	57
Illinois	–	19	–	–	1	3	–	–	142	–	1	45
Michigan	–	17	–	–	–	5	–	–	456	25	–	4
Wisconsin	–	3	–	–	–	1	–	–	141	–	4	70
WEST NORTH CENTRAL	–	42	1	17	–	4	2	10	831	5	29	681
Minnesota	–	4	–	–	–	–	–	–	205	3	6	146
Iowa	–	2	–	–	–	–	–	1	161	–	6	213
Missouri	–	31	–	14	–	3	1	6	210	2	4	58
North Dakota	–	–	–	–	–	–	–	–	18	–	1	92
South Dakota	–	1	–	1	–	–	1	2	31	–	1	76
Nebraska	–	3	–	1	–	–	–	–	91	–	–	8
Kansas	–	1	1	1	–	1	–	1	115	–	11	88
SOUTH ATLANTIC	1	123	1	9	–	21	19	140	4,556	174	5	212
Delaware	–	1	–	–	–	–	–	1	29	2	–	–
Maryland	–	14	1	1	–	5	2	25	332	5	–	5
District of Columbia	–	10	–	–	–	2	–	–	280	15	–	–
Virginia	–	19	–	6	–	7	2	32	448	44	1	56
West Virginia	–	5	–	–	–	1	1	2	40	–	2	44
North Carolina *	–	27	–	–	–	–	10	56	436	6	1	1
South Carolina	–	–	–	–	–	–	1	12	1,434	28	–	8
Georgia	–	14	–	1	–	1	3	12	857	23	1	60
Florida	1	33	–	1	–	5	–	–	700	51	–	38
EAST SOUTH CENTRAL	–	78	2	5	–	17	7	36	1,098	33	11	481
Kentucky	–	5	–	–	–	4	–	1	165	11	8	189
Tennessee	–	22	2	4	–	6	4	27	510	6	3	245
Alabama	–	38	–	1	–	2	1	3	52	7	–	46
Mississippi	–	13	–	–	–	5	2	5	371	9	–	1
WEST SOUTH CENTRAL	1	94	1	34	1	24	3	26	1,806	77	16	517
Arkansas	–	6	–	20	1	9	–	3	99	3	1	72
Louisiana *	–	17	–	2	–	4	–	–	313	23	–	26
Oklahoma	–	11	–	8	–	1	2	20	208	4	5	217
Texas	1	60	1	4	–	10	1	3	1,186	47	10	202
MOUNTAIN	1	33	–	5	–	5	–	3	643	20	–	50
Montana	–	1	–	–	–	–	–	1	40	1	–	–
Idaho	–	1	–	–	–	–	–	2	45	–	–	–
Wyoming	–	–	–	–	–	–	–	–	24	3	–	1
Colorado *	–	8	–	1	–	–	–	–	189	–	–	–
New Mexico	–	6	–	–	–	1	–	–	132	1	–	15
Arizona *	–	17	–	2	–	2	–	–	107	7	–	32
Utah	1	–	–	2	–	2	–	–	49	–	–	1
Nevada *	–	–	–	–	–	–	–	–	57	8	–	1
PACIFIC	–	95	–	2	4	45	–	–	2,802	88	10	153
Washington	–	5	–	–	–	2	–	–	196	6	–	–
Oregon	–	7	–	1	–	–	–	–	228	4	–	–
California	–	80	–	–	4	40	–	–	2,301	69	10	146
Alaska	–	–	–	1	–	–	–	–	29	9	–	7
Hawaii	–	3	–	–	–	3	–	–	48	–	–	–
Guam	–	–	–	–	–	–	–	–	–	–	–	–
Puerto Rico	–	7	–	–	–	5	–	–	35	7	2	36
Virgin Islands	–	–	–	–	–	–	–	–	6	2	–	–

*Delayed reports: Tuberculosis: N.C. delete 1
Tularemia: Colo. delete 1
Gonorrhea: La. delete 2, Nev. 191
Syphilis: La. delete 1, Colo. delete 1, Nev. 5
Rabies in animals: Ariz. 1

Week No. 29

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING JULY 22, 1972

(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	737	456	27	38	SOUTH ATLANTIC	1,161	608	43	46
Boston, Mass.	223	131	12	17	Atlanta, Ga.	154	66	8	5
Bridgeport, Conn.	49	32	3	2	Baltimore, Md.	222	121	7	3
Cambridge, Mass.	32	26	2	4	Charlotte, N. C.	53	30	2	1
Fall River, Mass.	29	17	1	–	Jacksonville, Fla.	102	52	5	2
Hartford, Conn.	50	28	1	–	Miami, Fla.	93	49	3	–
Lowell, Mass.	30	19	–	1	Norfolk, Va.	56	32	3	7
Lynn, Mass.	24	18	–	2	Richmond, Va.	72	40	1	4
New Bedford, Mass.	36	22	–	1	Savannah, Ga.	57	24	2	3
New Haven, Conn.	43	29	4	–	St. Petersburg, Fla.	87	66	1	7
Providence, R. I.	71	38	2	3	Tampa, Fla.	70	35	3	6
Somerville, Mass.	5	2	–	1	Washington, D. C.	136	61	7	3
Springfield, Mass.	51	32	–	6	Wilmington, Del.	59	32	1	5
Waterbury, Conn.	42	27	–	–					
Worcester, Mass.	52	35	2	1	EAST SOUTH CENTRAL	659	340	24	32
					Birmingham, Ala.	123	55	–	2
MIDDLE ATLANTIC	3,381	2,053	108	122	Chattanooga, Tenn.	45	21	3	5
Albany, N. Y.	61	38	5	–	Knoxville, Tenn.	41	25	1	–
Allentown, Pa.	29	22	–	6	Louisville, Ky.	104	63	3	6
Buffalo, N. Y.	134	76	5	6	Memphis, Tenn.	141	79	6	3
Camden, N. J.	43	30	1	3	Mobile, Ala.	60	33	4	2
Elizabeth, N. J.	37	26	–	1	Montgomery, Ala.	37	18	1	3
Erie, Pa.	38	16	4	–	Nashville, Tenn.	108	46	6	11
Jersey City, N. J.	85	57	4	5					
Newark, N. J.	61	25	2	2	WEST SOUTH CENTRAL	1,135	587	60	24
New York City, N. Y. **	1,704	1,041	48	59	Austin, Tex.	42	25	2	3
Paterson, N. J.	57	33	3	4	Baton Rouge, La.	40	26	–	3
Philadelphia, Pa.	494	279	16	5	Corpus Christi, Tex.	32	17	2	–
Pittsburgh, Pa.	156	93	6	9	Dallas, Tex.	145	70	11	–
Reading, Pa.	45	32	–	1	El Paso, Tex.	52	29	3	4
Rochester, N. Y.	131	90	2	9	Fort Worth, Tex.	74	40	6	–
Schenectady, N. Y.	33	19	4	2	Houston, Tex.	215	102	15	1
Scranton, Pa.	61	43	1	3	Little Rock, Ark.	47	25	2	1
Syracuse, N. Y.	92	53	5	1	New Orleans, La.	140	74	2	4
Trenton, N. J.	50	31	1	2	Oklahoma City, Okla.**	81	45	4	1
Utica, N. Y.	26	18	–	1	San Antonio, Tex.	134	63	9	3
Yonkers, N. Y.	44	31	1	3	Shreveport, La.	80	36	4	1
					Tulsa, Okla.	53	35	–	3
EAST NORTH CENTRAL	2,699	1,544	114	85					
Akron, Ohio	62	42	2	–	MOUNTAIN	484	268	32	14
Canton, Ohio	36	25	2	–	Albuquerque, N. Mex.	50	19	4	1
Chicago, Ill.	711	388	33	17	Colorado Springs, Colo.	33	18	2	5
Cincinnati, Ohio	186	102	3	5	Denver, Colo.	136	76	13	4
Cleveland, Ohio	208	119	9	1	Ogden, Utah	16	10	–	1
Columbus, Ohio	145	87	9	6	Phoenix, Ariz.	92	58	5	1
Dayton, Ohio	101	56	2	3	Pueblo, Colo.	23	13	–	2
Detroit, Mich.	363	199	15	13	Salt Lake City, Utah	62	40	4	–
Evansville, Ind.	41	27	1	3	Tucson, Ariz.	72	34	4	–
Flint, Mich.**	54	29	4	2					
Fort Wayne, Ind.	49	33	2	2	PACIFIC	1,736	1,055	56	45
Gary, Ind.	28	18	–	1	Berkeley, Calif.	20	13	–	2
Grand Rapids, Mich.	63	32	5	7	Fresno, Calif.	52	28	2	1
Indianapolis, Ind.	166	96	10	2	Glendale, Calif.	34	19	–	–
Madison, Wis.	44	24	3	5	Honolulu, Hawaii	47	28	2	2
Milwaukee, Wis.	129	74	4	2	Long Beach, Calif.	115	61	2	4
Peoria, Ill.	45	24	6	2	Los Angeles, Calif.	568	352	21	11
Rockford, Ill.	30	16	2	3	Oakland, Calif.	97	64	8	2
South Bend, Ind.	56	32	2	3	Pasadena, Calif.	29	21	2	1
Toledo, Ohio	124	85	–	6	Portland, Oreg.	122	75	6	1
Youngstown, Ohio	58	36	–	2	Sacramento, Calif.	76	43	4	1
					San Diego, Calif.	95	55	2	1
WEST NORTH CENTRAL	796	497	41	21	San Francisco, Calif.	190	108	2	2
Des Moines, Iowa	55	36	2	4	San Jose, Calif.	60	42	–	3
Duluth, Minn.	10	5	–	–	Seattle, Wash.	136	88	3	6
Kansas City, Kans.	42	25	3	2	Spokane, Wash.	60	36	1	2
Kansas City, Mo.	126	91	6	–	Tacoma, Wash.	35	22	1	6
Lincoln, Nebr.	24	18	–	4					
Minneapolis, Minn.	97	54	6	1	Total	12,788	7,408	505	427
Omaha, Nebr.	81	48	7	1					
St. Louis, Mo.	221	135	7	8	Expected Number	12,302	6,919	572	410
St. Paul, Minn.	73	47	5	–					
Wichita, Kans.	67	38	5	1	Cumulative Total (includes reported corrections for previous weeks)	373,971	218,273	14,687	15,521
Las Vegas, Nev.*	16	10	–	1					

**Estimate based on average percent of divisional total

*Mortality data are being collected from Las Vegas, Nev., for possible inclusion in this table, however, for statistical reasons, these data will be listed only and not included in the total, expected number, or cumulative total, until 5 years of data are collected.

CARBON MONOXIDE POISONING – Continued

with no sequelae.

On the evening of April 26, the couple had eaten commercially-canned beef stew, heated and mixed with commercially-canned corn, green beans, and tomato sauce. The diagnosis of botulism was initially considered; however, laboratory tests of the remaining beef stew and corn and of serum from the deceased were negative for botulism.

The husband had been under treatment for heart disease but had no other known illnesses. Postmortem examination revealed cutaneous discoloration and unusually pink body tissues. A markedly narrowed coronary artery and an area of apparently fresh hemorrhage were noted. A heart blood sample was then tested for carbon monoxide (CO) by the CV recording spectrophotometric method. A level of 65% was found, indicating that CO poisoning was a contributing cause of death. The stress of hypoxia may have induced a myocardial infarction.

Epidemiologic investigation revealed that the couple had previously used the cabin only in the summer and had either slept outside or with the doors and windows open for ventilation. On this occasion, however, the doors and windows were kept closed because of cold weather. A lantern, an old oil heater, an unvented gas refrigerator, and a well-vented gas water heater were in the cabin. The water heater was empty and had not been used. The other appliances were started, with the doors and windows closed, to simulate conditions of April 26. After the refrigerator was turned on, an odor of gas was immediately noticed. After 30 minutes, the CO level in the air was 1,000 ppm, and 15 minutes later, the level was between 1,200 and 1,300 ppm. The threshold limit value for human toxicity is 50 ppm. Steps to remedy the hazard were subsequently taken.

(Reported by Donald J. Rosenthal, M.D., private physician, San Carlos, California; Donald W. Jones, M.D., pathologist, Placerville, California; Ronald Duncan, R.S., Roy Crosby, Laboratory Director, Dalton Engelberg, M.D., Director, El Dorado County Health Department; James M. Bodie, M.D., Medical Epidemiologist, F. Rumney, Laboratory Director, San Mateo County Health Department; Richard W. Emmons, M.D., Medical Epidemiologist, Viral and Rickettsial Disease Laboratory and Bureau of Communicable Disease Control, T. Midura, Ph.D., Research Microbiologist, and Ronald Wood, Ph.D., Chief, Microbial Diseases Laboratory, California State Department of Public Health.)

ERRATA

Vol. 21, No. 28, p. 239

In the article "Gastroenteritis Suspected as Cholera – Curaçao," correct the second sentence in paragraph 5 to read: "These colonies produced gas on TSI slants and gave a negative string test *(2, 3)*."

ACIP Recommendations, Supplement to MMWR, Vol. 21, No. 25

In the section "Immune Serum Globulin for Protection Against Viral Hepatitis," page 9, correct the dose volume in the footnote as indicated in bold print: "*Some agencies have used up to **0.05 ml/lb** each 4–6 months rather than the 5 ml for adults recommended here."

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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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