



Morbidity and Mortality

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EPIDEMIOLOGIC NOTES AND REPORTS
VIBRIO PARAHAEMOLYTICUS - Louisiana

Between Aug. 26 and 29, 1972, an estimated 600 of 1,200 persons who attended a "shrimp boil" in Covington, Louisiana, became ill with acute gastroenteritis. The illness, which lasted from a few hours to more than a week, was characterized primarily by watery diarrhea and abdominal cramps, with vomiting, headache, fever, and chills reported in about half the cases. The median incubation period was 23 hours (range 5-92 hours) (Figure 1). One person consulted a physician, and 44 took non-prescription medications.

Stool specimens from 10 persons still symptomatic 5 to 6 days after onset of illness were positive for *Vibrio parahaemolyticus*.

Epidemiologic investigation focused on the 60 families of the organization sponsoring the party. Fifty-six of the 60 families were contacted, and 44 had at least one family mem-

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ber who attended the party. Of the 173 persons in these 44 families, 141 attended, and 32 did not. Seventy-two of those who attended became ill, for an attack rate of 50%; none of those who did not attend became ill.

The menu at the party was shrimp, crackers, ketchup, hot sauce, beer, and soda drink. The shrimp had been boiled 5 to 6 hours prior to serving and stored in boxes at ambient temperature. The other items were all in commercially-sealed packages or bottles. Food histories obtained from 141 persons revealed no significant difference in attack rates for those who did or did not eat a certain food item. However, it was

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

DISEASE	40th WEEK ENDING		MEDIAN 1967-1971	CUMULATIVE, FIRST 40 WEEKS		
	October 7, 1972	October 9, 1971		1972	1971	MEDIAN 1967-1971
Aseptic meningitis	146	204	165	2,955	3,964	3,272
Brucellosis	1	4	4	149	128	177
Chickenpox	524	---	---	115,497	---	---
Diphtheria	---	5	11	76	124	134
Encephalitis, primary:						
Arthropod-borne and unspecified	34	48	48	806	1,143	1,143
Encephalitis, post-infectious	5	4	4	229	288	335
Hepatitis, serum (Hepatitis B)	174	165	114	7,031	6,598	4,031
Hepatitis, infectious (Hepatitis A)	1,118	1,337	979	42,204	46,648	35,912
Malaria	7	37	43	723	2,354	2,248
Measles (rubeola)	146	203	189	27,341	70,381	40,132
Meningococcal infections, total	18	21	26	1,064	1,826	1,969
Civilian	18	19	22	1,021	1,630	1,771
Military	---	2	1	43	196	196
Mumps	491	717	---	58,154	101,799	---
Rubella (German measles)	155	227	262	21,579	39,267	44,624
Tetanus	---	3	4	91	86	120
Tuberculosis, new active	582	---	---	25,330	---	---
Tularemia	2	3	3	107	152	140
Typhoid fever	9	13	8	276	292	292
Typhus, tick-borne (Rky. Mt. spotted fever)	12	10	5	474	368	318
Venereal Diseases:†						
Gonorrhea	15,376	13,939	---	573,575	502,997	---
Syphilis, primary and secondary	587	471	---	19,149	18,125	---
Rabies in animals	57	55	55	3,252	3,190	2,730

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

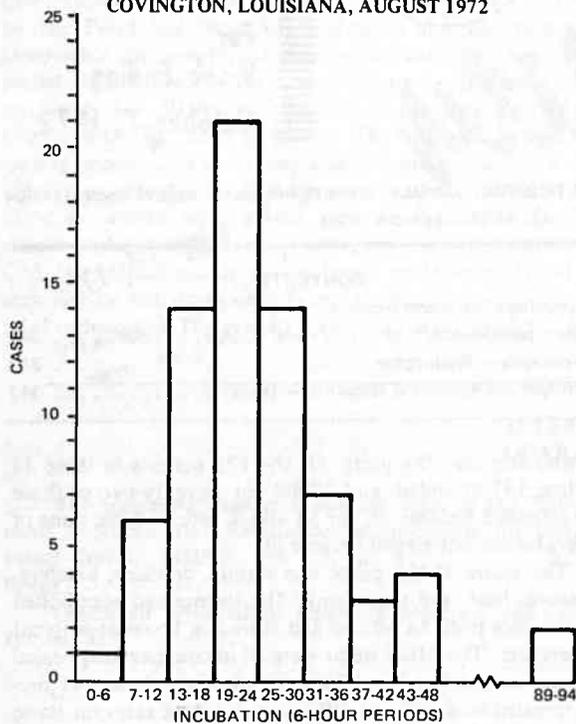
	Cum.		Cum.
Anthrax:	2	Poliomyelitis, total:	10
Botulism:	8	Paralytic:	9
Congenital rubella syndrome: La. - 1	26	Psittacosis:	29
Leprosy: Calif. - 1, Tex. - 1	93	Rabies in man:	1
Leptospirosis: Calif. - 1	30	Trichinosis: N.J. - 2	63
Plague:	1	Typhus, murine:	12

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

VIBRIO PARAHAEMOLYTICUS — Continued

Figure 1

72 CASES OF ACUTE GASTROENTERITIS,
BY INCUBATION PERIOD
COVINGTON, LOUISIANA, AUGUST 1972



noted that all persons who became ill ate shrimp, and that the only two persons who did not eat shrimp remained well. It was also noted that among a "high risk" group, defined as those families who ate simultaneously from the same batch of shrimp and experienced one or more illness, persons eating fewer than 10 shrimp were significantly less likely to be ill than those eating more than 10 ($p < .025$) (Table 1).

Specimens from two batches of shrimp which had been frozen after the party were tested and yielded *V. parahaemolyticus*.

The plant where the shrimp were boiled was subsequently investigated. All equipment was in good working order, and cultures from the boiling vats, sorting trays, packing boxes, and from samples of freshly boiled shrimp were negative for pathogens. Samples of uncooked shrimp delivered fresh to the plant from Louisiana coastal waters were also tested and were positive for *V. parahaemolyticus*. Results

DIPHTHERIA — Washington

In July and August 1972, three symptomatic patients with diphtheria and five diphtheria carriers, all over 35 years of age, were discovered in Seattle, Washington. The symptomatic cases are summarized below.

Case 1: On July 15, a 42-year-old man had onset of cough and pharyngitis. On July 17, he consulted a physician at a local medical center. Physical examination revealed a temperature of 100°F., necrotic exudate in the right tonsillar fossa, and tender, swollen right cervical lymph nodes. A pharyngeal culture was obtained, and he was given penicillin intramuscularly (IM) and discharged on a 1-week regimen of

Table 1

Incidence of Acute Gastroenteritis, by Amount of Shrimp Consumed by "High Risk" Group — Covington, Louisiana, August 1972

Estimated Amount of Shrimp	Ill	Not Ill	Attack Rate (Percent)
< 10	3	8	27.3
10-20	18	9	66.7
> 20	43	16	73.0

of serotyping of isolates from stool and shrimp specimens are pending.

(Reported by Roy L. Gregory, M.D., Mandeville, Louisiana, Oscar Felsenfeld, M.D., Delta Regional Primate Research Center, Tulane University; Herbert E. Cannon, M.D., Director, Hugh W. Calmes, Sanitarian, St. Tammany Parish Health Unit; Charles T. Caraway, D.V.M., Chief, Epidemiology, George H. Hauser, M.D., Director, Bureau of Laboratories, and Joseph A. D'Alfonso, Food and Drug Division, Louisiana State Department of Health; Morris Fishbein, Ph.D., Food Microbiology Branch, FDA; Napoleon Gunera, M.D., PAHO Fellow; and two EIS Officers.)

Editorial Note

The clinical, epidemiologic, and laboratory features of this outbreak are compatible with *V. parahaemolyticus* gastroenteritis. This is the largest such outbreak in the United States to date. Furthermore, it is the first such outbreak reported from the Gulf Coast region and the first time that shrimp have been implicated as the vehicle for *V. parahaemolyticus* gastroenteritis in the United States.

V. parahaemolyticus has been previously isolated from Gulf Coast shrimp (1) and shown to be able to survive in shrimp at temperatures ranging from -18°C. to 80°C. (2).

In the present episode, it may be speculated that the shrimp were contaminated with small numbers of *V. parahaemolyticus* at the time of delivery to the plant. Some of the bacteria may have survived the cooking process or the cooked shrimp may have been recontaminated from the plant environment while being packed. During the several hours that the shrimp was held at ambient temperature prior to eating, *V. parahaemolyticus*, with a generation time as short as 20 minutes, would have had ample time to proliferate to levels sufficient to cause illness.

References

1. Vanderzant C, Nickelson R, Parker J: Isolation of *Vibrio parahaemolyticus* from Gulf Coast shrimp. *Journal of Milk and Food Technology* 33:161-162, 1970
2. Vanderzant C, Nickelson R: Survival of *Vibrio parahaemolyticus* in shrimp tissue under various environmental conditions. *Appl Microbiol* 23:34-37, 1972

oral penicillin. On July 24, the Seattle-King County Public Health Laboratory reported isolation of toxigenic *Corynebacterium diphtheriae*, *intermedius*, from the throat culture. On July 26, he was visited by health department investigators and found to be asymptomatic; a repeat throat culture was negative. He gave no history of diphtheria immunization and was subsequently given his first tetanus-diphtheria toxoid vaccination, DT (pediatric). Another pharyngeal culture on August 16 was negative, and he has remained asymptomatic.

Case 2: On July 16, a 66-year-old man who was a close contact of Case 1, experienced fever, pharyngitis, and hoarseness.

On July 18, he was examined by a private physician who noted a small amount of exudate on the epiglottis and tonsil. He was given 2cc of Lincocin* IM and placed on daily oral tetracycline. By July 24, the patient was improved, but a small amount of exudate remained on the epiglottis, and his daily regimen was changed to oral erythromycin. On July 27, he was visited by health department investigators and vaccinated with DT (pediatric). He gave no history of diphtheria immunization. On August 1, he began a series of seven daily intramuscular injections of penicillin. Nasal and pharyngeal cultures taken July 26, July 31, and August 16 were all negative. On August 27, 6 weeks after the onset of pharyngitis, he experienced generalized weakness, diplopia, and difficulty swallowing and was admitted to the medical center. Examination showed bilateral weakness of cranial nerves IX and X and moderate lower extremity motor weakness. Spinal fluid examination on admission was normal. On August 29, the patient was found dead in bed. An autopsy showed no evidence of myocarditis or aspiration. Results of microscopic examination are still pending.

Case 3: On July 22, a 56-year-old man who was a close contact of Cases 1 and 2, became ill with fever, pharyngitis, and hemoptysis. On July 27, he visited the county health department where examination revealed whitish membranes over both tonsils. Pharyngeal and nasal cultures were obtained and were subsequently positive for *C. diphtheriae*, intermedius. He was admitted to the medical center, where he was placed in strict isolation and given 20,000 units of diphtheria antitoxin and vaccinated with DT (pediatric). Although never confirmed, he reported one previous vaccination in 1946. He received a 10-day course of penicillin IM and had complete clinical recovery.

Investigation of 17 close contacts of these cases was conducted, and all were cultured. Nine of the seventeen lived in the same apartment building; four of the nine were asymp-

*Inclusion of trade names does not imply endorsement by the Public Health Service or the U.S. Department of Health, Education, and Welfare.

tomatic but had positive cultures for *C. diphtheriae*, intermedius. Subsequently, pharyngeal and nasal cultures were obtained from another 25 residents of the building and yielded one more positive culture from an asymptomatic 81-year-old woman. Health department investigators then examined all contacts and residents of the apartment building. In all, 117 people were cultured for *C. diphtheriae*, and 150 persons were vaccinated with DT (pediatric).

Four of the five carriers received daily intramuscular injections of Crysticillin* for 1 week; one received oral erythromycin. All carriers were confined to their rooms until negative cultures were obtained at 48 and 72 hours after cessation of antibiotics.

Further investigation revealed that all three diphtheria cases and two of the carriers had attended a prolonged drinking party in the apartment of the fatal case from June 30 to July 5.

(Reported by Jean G. Spearman, R.N., PHN Epidemiologist, Evelyn L. Tronca, Assistant Director of Laboratories, and E. Mark Nichlos, M.D., Resident in Public Health, Seattle-King County Department of Health; John A. Beare, Acting State Epidemiologist, Washington State Department of Social and Health Services, Health Services Division; and an EIS Officer.)

Editorial Note

Fewer than 7% of the cases of diphtheria reported in the United States from 1959 through 1970 have been in persons over 35 years of age. However, small outbreaks similar to this one have occasionally occurred in lower income urban areas.

In 1972, there have been fewer cases of diphtheria reported in the United States (76) for the period January to October than for any other similar period since diphtheria reporting began. The previous low (116) was in 1965. Even though the number of cases reported annually is at an all time low, review of data from previous years shows the highest diphtheria attack rates are in preschool and elementary school children, suggesting that continuing efforts at routine pediatric immunizations will be required to reduce further the problem of diphtheria.

CHIMPANZEE-ASSOCIATED HEPATITIS — Texas

Between Aug. 31 and Sept. 21, 1972, two outbreaks of chimpanzee-associated hepatitis occurred in Houston, Texas. Each is summarized below.

Outbreak 1: Between Aug. 31 and Sept. 2, 1972, three employees of a Houston, Texas, zoo, a 29-year-old curator, a 55-year-old nursery supervisor, and a 25-year-old zoo keeper, became ill with a viral-like syndrome. By September 8, all three had fever, myalgia, headache, and severe nausea and were admitted to local hospitals.

Laboratory studies revealed marked elevation of SGOT, LDH, bilirubin, and alkaline phosphatase values; tests for the hepatitis-B antigen were negative in all three. All were diagnosed as having hepatitis-A.

Epidemiologic investigation revealed that a new 10-month-old chimpanzee had arrived at the zoo on August 3. The animal appeared well, except for a mild upper respiratory infection, and was placed in a quarantine cage in the zoo nursery. All three ill employees had direct or indirect contact with the chimpanzee in the month prior to onset of symptoms: the curator cared for the animal at his home for 2 days

after its arrival in Houston, the nursery supervisor frequently exercised the animal at the zoo, and the zoo keeper, who had no direct contact, laundered the soiled blankets and diapers from the ape's cage.

Further investigation revealed that the chimpanzee had been captured in Sierra Leone, Africa, and was exported with six other chimpanzees to a dealer in Brandenton, Florida, on July 4, 1972. On approximately August 23, the dealer became ill with fever, lethargy, anorexia, and nausea. He consulted a private physician on September 2 and was diagnosed as having hepatitis-A.

Of the other six chimpanzees in the shipment, one died of a paralytic illness in Florida, and the other five were shipped to a private zoo in Laguna Hills, California. One of the five died of a diarrheal illness shortly after arrival at the zoo, but postmortem examination did not reveal any gross abnormality except a slightly enlarged liver. Of the other four chimpanzees, two had a transient illness characterized by lethargy. The chimpanzees were examined, and SGOT

(Continued on page 348)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING OCTOBER 7, 1972 AND OCTOBER 9, 1971 (40th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
						1972	1971			1972	1972
UNITED STATES	146	1	524	-	76	34	48	5	174	1,118	1,337
NEW ENGLAND	12	-	67	-	-	2	5	1	9	74	84
Maine*	-	-	1	-	-	-	-	-	-	3	10
New Hampshire	2	-	6	-	-	-	-	-	1	9	3
Vermont	-	-	5	-	-	-	-	-	-	1	8
Massachusetts	7	-	16	-	-	2	4	-	-	30	29
Rhode Island	3	-	10	-	-	-	-	-	3	7	5
Connecticut	-	-	29	-	-	-	1	1	5	24	29
MIDDLE ATLANTIC	27	-	32	-	3	2	5	-	58	166	241
Upstate New York	15	-	-	-	1	-	4	-	5	32	49
New York City	10	-	32	-	2	-	-	-	30	44	66
New Jersey*	1	-	NN	-	-	-	-	-	10	50	72
Pennsylvania	1	-	-	-	-	2	1	-	13	40	54
EAST NORTH CENTRAL	24	-	175	-	4	16	20	-	27	216	148
Ohio*	2	-	19	-	-	7	6	-	2	54	34
Indiana	-	-	18	-	-	1	11	-	-	6	8
Illinois	5	-	-	-	3	6	-	-	5	52	42
Michigan	17	-	37	-	1	-	1	-	19	98	57
Wisconsin	-	-	101	-	-	2	2	-	1	6	7
WEST NORTH CENTRAL	14	-	54	-	9	5	4	-	5	57	24
Minnesota*	11	-	-	-	-	-	-	-	-	3	7
Iowa	-	-	40	-	-	1	1	-	1	14	5
Missouri	3	-	-	-	-	1	-	-	-	6	8
North Dakota	-	-	9	-	-	-	-	-	-	2	-
South Dakota	-	-	-	-	6	-	-	-	-	4	-
Nebraska	-	-	5	-	3	-	-	-	-	5	1
Kansas	-	-	-	-	-	3	3	-	4	23	3
SOUTH ATLANTIC	12	-	55	-	10	2	1	-	22	135	208
Delaware	-	-	-	-	-	-	-	-	-	-	1
Maryland	4	-	1	-	1	-	-	-	4	20	35
District of Columbia	-	-	-	-	-	1	-	-	-	1	3
Virginia	4	-	1	-	-	1	-	-	2	10	23
West Virginia	1	-	53	-	-	-	-	-	-	5	10
North Carolina	-	-	NN	-	-	-	-	-	2	12	46
South Carolina	-	-	-	-	1	-	-	-	1	2	11
Georgia	-	-	-	-	3	-	-	-	-	9	17
Florida	3	-	-	-	5	-	1	-	13	76	62
EAST SOUTH CENTRAL	6	-	3	-	6	1	6	-	6	79	67
Kentucky	-	-	2	-	-	-	-	-	1	26	19
Tennessee	1	-	NN	-	-	1	2	-	2	33	32
Alabama*	2	-	-	-	6	-	2	-	1	14	10
Mississippi	3	-	1	-	-	-	2	-	2	6	6
WEST SOUTH CENTRAL	16	-	52	-	31	-	3	1	17	91	136
Arkansas	-	-	-	-	-	-	1	-	-	4	12
Louisiana*	3	-	NN	-	4	-	1	-	3	11	23
Oklahoma	2	-	1	-	-	-	1	-	-	4	26
Texas	11	-	51	-	27	-	-	1	14	72	75
MOUNTAIN	1	1	50	-	5	-	-	-	3	67	72
Montana	-	-	4	-	-	-	-	-	-	8	8
Idaho	-	-	-	-	2	-	-	-	-	6	3
Wyoming	-	-	5	-	-	-	-	-	-	1	-
Colorado*	-	-	18	-	-	-	-	-	2	24	19
New Mexico	-	-	2	-	1	-	-	-	1	2	12
Arizona	1	1	9	-	2	-	-	-	-	16	16
Utah	-	-	12	-	-	-	-	-	-	5	3
Nevada	-	-	-	-	-	-	-	-	-	5	11
PACIFIC	34	-	36	-	8	6	4	3	27	233	357
Washington	-	-	29	-	6	-	-	-	1	37	38
Oregon	4	-	-	-	1	-	2	2	2	33	24
California	30	-	-	-	1	6	2	1	19	152	278
Alaska	-	-	1	-	-	-	-	-	5	-	3
Hawaii	-	-	6	-	-	-	-	-	-	11	14
Guam	-	-	8	-	-	-	-	-	-	-	-
Puerto Rico*	-	-	14	-	-	-	-	-	1	28	32
Virgin Islands	-	-	-	-	-	-	-	-	-	-	-

*Delayed reports: Brucellosis: Colo. 3

Chickenpox: P.R. 6

Encephalitis, primary: Minn. 1, Ala. 2

Hepatitis B: Ala. 5

Hepatitis A: Me. 1, N.J. delete 1, Ohio delete 1, Minn. 1, Ala. 9, La. delete 2

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING OCTOBER 7, 1972 AND OCTOBER 9, 1971 (40th 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	7	723	146	27,341	70,381	18	1,064	1,826	491	58,154	155	21,579
NEW ENGLAND	1	24	7	3,187	3,447	-	43	83	12	2,446	5	975
Maine	-	2	-	244	1,466	-	3	8	-	285	1	72
New Hampshire	-	3	2	267	211	-	3	16	-	185	-	32
Vermont	-	1	-	128	117	-	-	-	2	113	-	69
Massachusetts*	1	8	5	726	241	-	21	32	1	585	3	455
Rhode Island	-	1	-	524	238	-	10	3	1	384	-	89
Connecticut	-	9	-	1,298	1,174	-	6	24	8	894	1	258
MIDDLE ATLANTIC	2	61	15	1,038	7,549	3	130	253	47	3,347	6	1,895
Upstate New York	2	15	-	127	669	-	32	75	NN	NN	1	242
New York City	-	12	10	359	3,768	1	39	55	35	1,916	3	235
New Jersey	-	18	5	492	1,197	1	25	55	3	717	-	1,158
Pennsylvania	-	16	-	60	1,915	1	34	68	9	714	2	260
EAST NORTH CENTRAL	-	76	48	11,135	15,507	3	153	206	83	15,828	32	5,641
Ohio	-	13	3	254	3,997	-	61	65	7	2,201	2	399
Indiana	-	1	15	1,260	2,745	-	11	14	7	1,033	6	704
Illinois	-	29	11	4,134	3,004	1	33	59	19	2,765	2	1,030
Michigan	-	30	8	2,001	2,354	1	41	54	18	2,758	8	1,290
Wisconsin	-	3	11	3,486	3,407	1	7	14	32	7,071	14	2,218
WEST NORTH CENTRAL	-	47	12	967	6,857	-	74	133	61	8,487	5	1,281
Minnesota*	-	7	1	22	55	-	23	22	-	679	2	492
Iowa	-	3	6	672	2,289	-	4	10	56	5,822	1	395
Missouri	-	12	-	164	2,603	-	20	46	5	543	-	111
North Dakota	-	1	-	52	237	-	-	6	-	352	2	28
South Dakota	-	4	-	7	217	-	2	6	-	119	-	12
Nebraska	-	3	5	23	66	-	9	15	-	269	-	52
Kansas	-	17	-	27	1,390	-	16	28	-	703	-	191
SOUTH ATLANTIC	2	112	4	2,176	8,489	2	240	323	47	5,468	12	2,041
Delaware	-	-	-	51	39	-	1	2	2	100	-	7
Maryland	1	9	-	15	541	-	36	49	7	375	2	48
District of Columbia	-	5	-	2	15	-	10	13	-	22	-	6
Virginia	1	8	1	61	1,593	-	49	37	7	1,154	1	69
West Virginia	-	2	-	278	515	-	8	9	15	2,382	4	403
North Carolina	-	39	-	34	1,935	1	30	56	NN	NN	2	30
South Carolina	-	12	-	216	907	-	20	20	-	178	-	50
Georgia	-	25	-	169	1,105	-	18	23	-	23	-	58
Florida	-	12	3	1,350	1,839	1	68	114	16	1,234	3	1,370
EAST SOUTH CENTRAL	-	165	2	1,051	8,267	2	83	163	15	3,041	16	1,554
Kentucky	-	144	2	525	3,936	1	27	45	4	469	10	870
Tennessee	-	-	-	193	1,020	-	28	66	8	1,941	6	524
Alabama	-	17	-	149	1,881	-	16	29	1	516	-	48
Mississippi	-	4	-	184	1,430	1	12	23	2	115	-	112
WEST SOUTH CENTRAL	-	79	24	1,525	12,501	7	134	155	55	4,944	10	1,547
Arkansas	-	5	-	13	778	-	9	5	-	161	-	35
Louisiana	-	6	2	89	1,674	2	41	55	1	317	1	92
Oklahoma	-	6	-	10	756	2	8	7	-	159	-	36
Texas	-	62	22	1,413	9,293	3	76	88	54	4,307	9	1,384
MOUNTAIN	1	47	10	1,882	3,269	1	23	55	41	2,989	7	1,104
Montana	-	2	-	16	925	-	3	6	2	182	1	33
Idaho	-	3	8	127	271	1	7	10	10	206	-	30
Wyoming	-	1	-	51	85	-	1	2	6	225	-	8
Colorado	1	30	-	527	833	-	5	7	6	753	2	520
New Mexico	-	2	-	122	388	-	3	4	6	590	-	104
Arizona	-	7	2	883	428	-	1	8	11	848	2	372
Utah	-	2	-	155	332	-	2	15	-	138	2	34
Nevada	-	-	-	1	7	-	1	3	-	47	-	3
PACIFIC	1	112	24	4,380	4,495	-	184	455	130	11,604	62	5,541
Washington	-	1	1	978	1,035	-	16	26	19	3,669	3	837
Oregon	-	11	-	133	375	-	14	34	26	1,593	7	386
California	1	85	23	3,158	2,628	-	143	387	80	5,952	52	4,241
Alaska	-	3	-	13	55	-	8	-	1	106	-	22
Hawaii	-	12	-	98	402	-	3	8	4	284	-	55
Guam	-	2	1	16	---	1	13	---	-	8	-	12
Puerto Rico	-	5	12	715	537	-	4	9	13	849	-	29
Virgin Islands	-	-	-	3	17	-	2	-	-	130	-	3

*Delayed reports: Measles: Mass. delete 7
Meningococcal infections: Minn. 2

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TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING OCTOBER 7, 1972 AND OCTOBER 9, 1971 (40th WEEK) - Continued

AREA	TETANUS	TB (New Active)	TULAREMIA		TYPHOID FEVER		TYPHUS FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
									GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1972	Cum. 1972
UNITED STATES	-	582	2	107	9	276	12	474	15,376	587	57	3,252
NEW ENGLAND	-	20	-	-	-	13	-	2	412	17	1	96
Maine*	-	1	-	-	-	-	-	-	44	2	1	75
New Hampshire	-	-	-	-	-	2	-	-	-	-	-	3
Vermont	-	1	-	-	-	-	-	-	1	1	-	9
Massachusetts	-	12	-	-	-	9	-	2	149	6	-	3
Rhode Island	-	2	-	-	-	-	-	-	35	1	-	2
Connecticut	-	4	-	-	-	2	-	-	183	7	-	4
MIDDLE ATLANTIC	-	118	-	1	4	47	3	32	2,278	151	5	86
Upstate New York	-	23	-	-	-	14	-	6	285	11	1	41
New York City	-	74	-	-	3	26	1	2	1,023	76	-	-
New Jersey	-	21	-	1	1	4	2	12	367	12	-	-
Pennsylvania	-	-	-	-	-	3	-	12	603	52	4	45
EAST NORTH CENTRAL	-	113	-	1	-	19	2	25	1,629	43	5	330
Ohio*	-	37	-	1	-	6	2	21	659	6	-	93
Indiana	-	9	-	-	-	-	-	-	60	-	-	68
Illinois*	-	49	-	-	-	6	-	3	75	4	1	52
Michigan	-	17	-	-	-	6	-	-	611	22	-	8
Wisconsin	-	1	-	-	-	1	-	1	224	11	4	109
WEST NORTH CENTRAL	-	34	1	26	-	7	-	18	842	2	8	887
Minnesota	-	2	-	-	-	1	-	-	155	1	4	211
Iowa	-	3	-	-	-	-	-	2	94	-	1	268
Missouri*	-	21	1	21	-	3	-	9	300	-	1	79
North Dakota	-	-	-	-	-	-	-	-	8	-	2	122
South Dakota	-	-	-	1	-	-	-	4	49	-	-	77
Nebraska	-	6	-	1	-	-	-	-	35	-	-	15
Kansas	-	2	-	3	-	3	-	3	201	1	-	115
SOUTH ATLANTIC	-	123	-	10	1	33	2	245	3,404	167	16	330
Delaware	-	1	-	-	-	-	-	1	38	2	-	2
Maryland	-	15	-	1	1	8	-	30	291	15	-	17
District of Columbia	-	6	-	-	-	3	-	1	453	29	-	-
Virginia	-	19	-	7	-	8	-	55	369	47	6	93
West Virginia	-	7	-	-	-	1	-	3	32	4	-	51
North Carolina	-	13	-	-	-	-	1	112	626	27	1	3
South Carolina	-	-	-	-	-	1	-	20	444	7	-	12
Georgia	-	15	-	1	-	3	1	22	378	4	5	84
Florida	-	47	-	1	-	9	-	1	773	32	4	68
EAST SOUTH CENTRAL	-	59	-	8	-	36	-	92	1,614	44	2	551
Kentucky	-	12	-	-	-	10	-	4	178	17	-	214
Tennessee	-	20	-	7	-	11	-	57	699	13	2	281
Alabama	-	19	-	1	-	10	-	17	545	7	-	53
Mississippi	-	8	-	-	-	5	-	14	192	7	-	3
WEST SOUTH CENTRAL	-	15	1	48	-	38	5	53	1,498	64	11	662
Arkansas	-	12	-	27	-	12	1	11	111	2	2	95
Louisiana*	-	-	-	4	-	6	-	-	382	17	1	35
Oklahoma	-	3	-	10	-	3	2	33	99	3	4	255
Texas	-	-	1	7	-	17	2	9	906	42	4	277
MOUNTAIN	-	18	-	10	1	9	-	6	581	3	3	84
Montana	-	3	-	1	-	-	-	2	40	-	-	7
Idaho	-	-	-	-	-	-	-	3	30	-	-	-
Wyoming	-	1	-	-	-	-	-	-	13	-	-	1
Colorado*	-	-	-	1	-	1	-	-	193	-	-	-
New Mexico	-	7	-	-	-	1	-	-	86	2	2	21
Arizona*	-	7	-	2	1	5	-	-	189	1	-	47
Utah	-	-	-	6	-	2	-	1	16	-	1	7
Nevada	-	-	-	-	-	-	-	-	14	-	-	1
PACIFIC	-	82	-	3	3	74	-	1	3,118	96	6	226
Washington	-	7	-	-	-	2	-	1	316	7	-	-
Oregon	-	4	-	1	-	-	-	-	238	-	-	3
California	-	62	-	1	3	69	-	-	2,489	86	6	215
Alaska	-	-	-	1	-	-	-	-	39	3	-	8
Hawaii	-	9	-	-	-	3	-	-	36	-	-	-
Guam	-	-	-	-	-	-	-	-	4	-	-	-
Puerto Rico*	1	13	-	-	-	7	-	-	39	8	1	41
Virgin Islands	-	-	-	-	-	-	-	-	-	-	-	-

*Delayed reports: TB: Me. 1, Ohio delete 2, Ill. 47, P.R. 13
Typhoid: Mo. delete 1, Colo. 1
Gonorrhea: La. delete 1, P.R. 42

Syphilis: La. delete 2, P.R. 18
Rabies in animals: Ariz. 2

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TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING OCTOBER 7, 1972

Week No.
40

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

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	668	391	22	40	SOUTH ATLANTIC	1,137	586	52	54
Boston, Mass.	190	101	5	17	Atlanta, Ga.	172	88	4	6
Bridgeport, Conn.	48	29	5	1	Baltimore, Md.	227	115	14	3
Cambridge, Mass.	21	14	-	3	Charlotte, N. C.	62	30	1	-
Fall River, Mass.	21	14	-	1	Jacksonville, Fla.	55	28	2	1
Hartford, Conn.	65	30	2	1	Miami, Fla.	106	57	5	7
Lowell, Mass.	24	11	2	1	Norfolk, Va.	49	20	1	4
Lynn, Mass.	23	18	-	2	Richmond, Va.	83	45	10	8
New Bedford, Mass.	34	23	-	-	Savannah, Ga.	47	25	2	6
New Haven, Conn.	57	33	3	3	St. Petersburg, Fla.	83	58	1	5
Providence, R. I.	54	32	1	3	Tampa, Fla.	72	34	1	8
Somerville, Mass.	9	4	-	1	Washington, D. C.	126	58	6	5
Springfield, Mass.	37	22	1	3	Wilmington, Del.	55	28	5	1
Waterbury, Conn.	23	17	1	1					
Worcester, Mass.	62	43	2	3	EAST SOUTH CENTRAL	651	350	38	30
					Birmingham, Ala.	116	49	9	2
MIDDLE ATLANTIC	2,732	1,623	82	105	Chattanooga, Tenn.	48	28	4	4
Albany, N. Y.	34	27	-	1	Knoxville, Tenn.	42	29	2	2
Allentown, Pa.	20	11	-	-	Louisville, Ky.	112	66	10	7
Buffalo, N. Y.*	123	71	5	3	Memphis, Tenn.	123	65	2	2
Camden, N. J.	38	21	3	2	Mobile, Ala.	56	26	2	2
Elizabeth, N. J.	25	15	1	1	Montgomery, Ala.	57	36	2	5
Erie, Pa.	52	32	4	6	Nashville, Tenn.	97	51	7	6
Jersey City, N. J.	46	29	2	3					
Newark, N. J.	55	27	2	3	WEST SOUTH CENTRAL	1,101	558	54	28
New York City, N. Y. †	1,354	793	37	45	Austin, Tex.	38	19	1	2
Paterson, N. J.	36	23	-	4	Baton Rouge, La.	49	30	2	1
Philadelphia, Pa.	394	230	13	8	Corpus Christi, Tex.	26	18	1	1
Pittsburgh, Pa.	201	104	8	11	Dallas, Tex.	152	74	10	3
Reading, Pa.	34	22	1	-	El Paso, Tex.	36	14	6	-
Rochester, N. Y.	117	83	5	8	Fort Worth, Tex.	59	35	3	2
Schenectady, N. Y.	26	16	-	-	Houston, Tex.	226	116	7	5
Scranton, Pa.	31	19	-	5	Little Rock, Ark.	58	28	1	2
Syracuse, N. Y.	45	31	-	-	New Orleans, La.	151	69	9	1
Trenton, N. J.	39	25	1	2	Oklahoma City, Okla. *	78	43	4	1
Utica, N. Y.	31	23	-	2	San Antonio, Tex.	109	41	8	2
Yonkers, N. Y.	31	21	-	1	Shreveport, La.	76	41	2	2
					Tulsa, Okla.	43	30	-	6
EAST NORTH CENTRAL	2,432	1,367	112	66	MOUNTAIN	515	296	26	22
Akron, Ohio	65	38	4	-	Albuquerque, N. Mex.	50	30	3	5
Canton, Ohio	30	19	1	-	Colorado Springs, Colo.	34	19	1	5
Chicago, Ill.	658	369	38	18	Denver, Colo.	123	74	8	2
Cincinnati, Ohio	148	79	6	5	Las Vegas, Nev.	18	11	-	1
Cleveland, Ohio	210	102	7	8	Ogden, Utah	23	12	1	2
Columbus, Ohio	141	65	11	4	Phoenix, Ariz.	110	56	4	2
Dayton, Ohio	90	48	3	-	Pueblo, Colo.	23	16	3	2
Detroit, Mich.	325	171	15	4	Salt Lake City, Utah	70	42	2	1
Evansville, Ind.	33	24	-	-	Tucson, Ariz.	64	36	4	2
Fort Wayne, Ind.	29	16	-	1					
Gary, Ind.	26	11	-	6	PACIFIC	1,528	910	67	25
Grand Rapids, Mich.	45	31	3	6	Berkeley, Calif.	14	11	-	-
Indianapolis, Ind.	148	87	7	5	Fresno, Calif.	50	27	3	1
Madison, Wis.	49	21	2	7	Glendale, Calif.	25	18	-	-
Milwaukee, Wis.	136	93	3	1	Honolulu, Hawaii	59	32	2	1
Peoria, Ill.	47	30	2	-	Long Beach, Calif.	92	59	2	10
Rockford, Ill.	33	19	4	2	Los Angeles, Calif.	501	304	20	-
South Bend, Ind.	24	17	-	2	Oakland, Calif.	75	32	5	-
Toledo, Ohio	118	73	3	2	Pasadena, Calif.	37	30	1	2
Youngstown, Ohio	77	54	3	1	Portland, Ore.	148	97	7	-
					Sacramento, Calif.	57	32	3	-
WEST NORTH CENTRAL	776	470	40	12	San Diego, Calif.	104	49	10	1
Des Moines, Iowa	53	39	-	-	San Francisco, Calif.	139	76	5	3
Duluth, Minn.	23	13	-	1	San Jose, Calif.	55	35	2	2
Kansas City, Kans.	33	15	4	-	Seattle, Wash.	98	66	1	-
Kansas City, Mo.	130	79	8	-	Spokane, Wash.	35	19	4	2
Lincoln, Nebr.	34	27	2	2	Tacoma, Wash.	39	23	2	3
Minneapolis, Minn.	98	62	5	2					
Omaha, Nebr.	78	43	7	-	Total	11,540	6,551	493	382
St. Louis, Mo.	206	117	10	4	Expected Number	12,124	6,871	555	395
St. Paul, Minn.	71	47	1	1	Cumulative Total (includes reported corrections for previous weeks)	507,587	295,186	20,105	19,829
Wichita, Kans.	50	28	3	2					

*Estimate based on average percent of divisional total
 †Delayed report for week ending Sept. 30, 1972

HEPATITIS – Continued

levels were within the normal range. To date, no employees at the California zoo have been ill. All animal handlers were given pre-exposure immune serum globulin prophylaxis as required by California wild animal importation regulations.

All employees at the Houston zoo who were in direct contact with the new chimpanzee or its feces were given immune serum globulin, and the ape was isolated in a quarantine cage pending investigation. An examination of other zoo employees who had a mild gastrointestinal illness failed to uncover any additional cases of hepatitis.

Outbreak 2: In mid-September 1972, a physician from Houston, Texas, and his 3-year-old niece and 12-year-old nephew from Lafayette, Louisiana, became ill with weakness, anorexia, nausea, and jaundice. Laboratory studies on the physician revealed marked elevation of SGOT, bilirubin, and alkaline phosphatase values. The niece and nephew had ictero-test positive urine and elevated bilirubin values. The diagnosis for all patients was hepatitis-A.

Epidemiologic investigation revealed that the physician had bought a 10-month-old chimpanzee from a breeding compound in Center Hill, Florida, on July 26, 1972. The animal

was kept in a cyclone fence cage in the physician's yard but was often taken out to play. From August 12 to 13, the physician was visited by his relatives from Louisiana. While in Houston, the niece and nephew were in direct contact with the pet chimpanzee. The nephew helped clean the chimpanzee's cage, and the niece was seen playing with the pet and then sucking her fingers.

Further investigation revealed that the chimpanzee was shipped with two others from Sierra Leone, Africa, to Florida. Of the other two chimpanzees, one is in a Jacksonville zoo, and one is at the Center Hill breeding compound. No illness in these two chimpanzees, and no human illness associated with them has been reported.

(Reported by M. S. Dickerson, State Epidemiologist, Texas State Department of Health; F. Soifer, D.V.M., zoo veterinarian, Herman Park Zoo, Houston, Texas; A. G. Randall, M.D., Director, and R. A. MacLean, Director, Communicable Disease Division, City of Houston Health Department; Edmond, V. Bayer, D.V.M., Veterinary Section, Ronald R. Roberto, M.D., Bureau of Communicable Disease Control, California State Department of Public Health; and an EIS Officer.)

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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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