CENTER FOR DISEASE CONTROL

Morbidity and Mortality

Vol. 21, No. 43

WEEKLY REPORT

For Week Ending October 28, 1972

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

DATE OF RELEASE: NOVEMBER 3, 1972 – ATLANTA, GEORGIA 30333

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EPIDEMIOLOGIC NOTES AND REPORTS
FOLLOW-UP ON POLIOMYELITIS
Connecticut, New York, Massachusetts, New Hampshire

Type 1 poliovirus has now been confirmed as the etiologic agent by either viral isolation or specific antibody titration in nine of the initial 11 suspect cases of paralytic poliomyelitis from a Christian Science school in Greenwich, Connecticut (MMWR, Vol. 21, No. 42). All cases occurred among previously unvaccinated children 7 to 18 years of age.

The first recognized case developed prodromal symptoms on September 29; the onset date of the last reported case was October 17. Nine of the 11 suspect cases were in 12- to 17-year-old members of football and soccer teams, for an attack rate of 23.7% in the 38 members of both teams. The remaining two cases were in females, 7 and 18 years of age, for an attack rate of 2.2% for the other 92 students in the school. In general, the onset of symptoms among the football players was earlier than among the soccer players, while the two female cases were the last to occur. No further cases of suspect polio have been reported from the New England area.

During the first 3 weeks of October, the peak of the epidemic, 17 students visited the school infirmary complaining of non-specific symptoms compatible with acute viral illness,

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

DISEASE	43rd WEEK ENDING		MEDIAN 1967-1971	CUMULATIVE, FIRST 43 WEEKS		
	October 28, 1972	October 30, 1971		1972	1971	MEDIAN 1967-1971
Aseptic meningitis	140	129	129	3,439	4,424	3,707
Brucellosis	3	3	4	159	139	189
Chickenpox	886	– – –	– – –	117,543	– – –	– – –
Diphtheria	6	3	3	90	150	150
Encephalitis, primary:						
Arthropod-borne and unspecified	37	30	44	908	1,266	1,266
Encephalitis, post-infectious	3	5	5	237	297	339
Hepatitis, serum (Hepatitis B)	159	176	119	7,494	7,161	4,358
Hepatitis, infectious (Hepatitis A)	924	1,049	1,049	45,316	50,138	38,992
Malaria	10	52	52	752	2,585	2,553
Measles (rubeola)	138	381	300	27,812	71,334	41,291
Meningococcal infections, total	18	34	34	1,115	1,923	2,039
Civilian	18	32	25	1,071	1,716	1,826
Military	–	2	2	44	207	207
Mumps	624	1,161	– – –	60,025	104,985	– – –
Rubella (German measles)	184	268	276	22,364	40,660	45,452
Tetanus	2	3	3	98	90	132
Tuberculosis, new active	750	– – –	– – –	27,923	– – –	– – –
Tularemia	1	3	3	110	161	150
Typhoid fever	5	13	13	303	333	326
Typhus, tick-borne (Rky. Mt. spotted fever)	8	5	1	504	387	326
Venereal Diseases:†						
Gonorrhea	15,125	13,989	– – –	620,543	544,814	– – –
Syphilis, primary and secondary	555	471	– – –	20,777	19,538	– – –
Rabies in animals	54	64	46	3,451	3,385	2,881

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	2	Poliomyelitis, total: Conn. – 4, Tex. – 1	15
Botulism:	8	Paralytic: Conn. – 4, Tex. – 1	14
Congenital rubella syndrome:	27	Psittacosis:	30
Leprosy: Calif. – 1, R.I. – 1	102	Rabies in man:	1
Leptospirosis: N.Y.C. – 1, Okla. – 1	32	Trichinosis: Calif. – 1	70
Plague:	1	Typhus, murine:	13

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

POLIOMYELITIS – Continued

compared with five for the preceding 3 weeks, and only two for the same period in 1971. An unidentified virus has been isolated from one asymptomatic student. Laboratory and vaccination data are summarized by state below.

Connecticut

Of the six suspect cases in Connecticut, five have been confirmed as type 1 polio, two by viral isolation and three by specific serology. Serum neutralization antibody titers in the latter three patients were 1:512, 1:128, and 1:128. None of the six have been hospitalized. On October 26, all other students and family contacts were vaccinated with type 1 monovalent oral poliovaccine. In addition, a vaccination campaign was conducted between October 30 and November 1 in which trivalent oral poliovaccine (TOPV) was offered to 110 members of the congregation of a Christian Science Church attended by students from the school.

New York

All three suspect cases now residing in New York have been confirmed as type 1 polio, two by viral isolation and one by serology. In the latter case, an unidentified virus has been isolated from a stool specimen; specific identification is pending. One case required hospitalization, and another has completely recovered. All family members of the three cases have been offered vaccination with TOPV, but no mass immunization campaigns have been conducted.

Massachusetts

The case in Massachusetts has been confirmed as type 1 polio by isolation of virus from stool. He has been hospitalized since October 13 and has demonstrated some recent recovery of both sensation and motor function. Immunization with TOPV has been offered to all Christian Science students in the Lexington Public schools. TOPV was also administered to family contacts and will be made available in clinics on request to anyone with incomplete previous polio vaccination.

New Hampshire

The suspect case in New Hampshire has not yet been confirmed, but laboratory results are pending. The patient has not required hospitalization. His 10-year-old sister, who rides a school bus transporting children to two different public schools has received TOPV. Clinics were held at these schools, and TOPV was offered to all students and other residents of the community.

(Reported by George Kraus, M.D., Director of Health, Greenwich, Connecticut Health Department; James C. Hart, M.D., State Epidemiologist, Connecticut State Department of Health; David Ross, M.D., Deputy Commissioner, Nassau County Health Department; William Mosher, M.D., Commissioner, Erie County Health Department; Alan Hinman, State Epidemiologist, New York State Department of Health; Nicholas J. Fiumara, M.D., State Epidemiologist, Massachusetts State Department of Health; James Starke, M.D., Health Officer, Amherst, New Hampshire; Vladas Kaupas, M.D., State Epidemiologist, Division of Public Health, New Hampshire State Department of Health; and two EIS Officers.)

WOUND BOTULISM – Pennsylvania

On Sept. 12, 1972, a 12-year-old boy from Philadelphia, Pennsylvania, sustained a large hematoma on his left leg after a football game. He was taken to the emergency room of a local hospital where the attending physician found that the skin above the hematoma was intact and recommended heat, analgesia, bed rest, and the use of crutches.

On September 22, after persistent pain and swelling, the patient consulted an orthopedic surgeon who prescribed an oral enzyme product to help dissolve the clot. On September 29, the orthopedic surgeon, after sterilizing the skin with betadine and iodine and anesthetizing with 1% procaine, aspirated the hematoma and obtained a small amount of old clotted blood. A bandage was placed over the puncture site and remained over the wound for 1 or 2 days.

Four days later, the patient complained of weakness and fatigue and subsequently developed diplopia, dysarthria, dysphagia, and difficulty in handling salivary secretions. On October 6, he was taken to the emergency room of the same hospital and was given oral penicillin for presumed streptococcal pharyngitis. The next day, the hematoma spontaneously drained a large volume of serosanguinous fluid.

On October 9, because of persisting neurologic symptoms, the patient was admitted to the same hospital with the tentative diagnosis of myasthenia gravis. On admission, he was afebrile, and his sensorium was clear. Neurologic findings included bilateral paralysis of cranial nerves 3, 4, 6, 7, and 9-12, fixed, dilated, and unequal pupils, and intact deep tendon reflexes. Cerebrospinal fluid examination revealed a normal protein and no cells. The patient was treated with anticholinesterase medications for the next 48 hours with little clinical improvement. On October 11, he suffered a respiratory arrest and was transferred to a nearby university hospital.

On admission, the patient's neurologic status was unchanged except for increasing motor weakness in his neck, arms, and legs. A repeat cerebrospinal fluid specimen was normal. Three Tensilon tests were equivocal, and the diagnosis of Guillain-Barré was considered. The patient was placed in the intensive care unit and given supportive therapy. On October 16, he began to show improvement in his neurologic functions. Nerve conduction studies on October 17 revealed normal conduction time and velocities. The results of repetitive ulnar nerve stimulation were consistent with a diagnosis of botulism.

A culture of material aspirated from the patient's wound on October 12 subsequently grew a *Clostridium* species whose biochemical properties were consistent with *Clostridium botulinum* or *Clostridium sporogones.* Toxin neutralization studies were not performed on this isolate, however, and the culture was discarded. Serum specimens obtained on October 14, 19, and 24, were negative for botulinal toxin. The patient has continued to show neurologic improvement with supportive treatment only.

Investigation of the patient's dietary history prior to onset of his illness revealed that he had not been exposed to home-canned foods and usually ate his meals with his parents. None of the persons who shared the same foods were ill.

(Reported by Robert Slater, M.D., private physician, Philadelphia; Pacifico V. DeJasus, M.D., Assistant Professor, Audrey S. Penn, M.D., Associate Professor, Department of Neurology, and Lawrence Spitz, M.D., Department of Medicine, Hospital of the University of Pennsylvania; Alfred S. Bogucki, M.D., Chief, Division of Epidemiology, Philadelphia Department of Public Health; and two EIS Officers.)

Editorial Note

The illness in this patient was most consistent with the diagnosis of botulism. The isolation of a *Clostridium* species from the wound with biochemical properties of *C. botulinum* and the repetitive stimulation studies of the ulnar nerve support the diagnosis. The negative serum bioassays do not exclude the diagnosis, since the earliest specimen was obtained 11 days after onset of symptoms and 7 days after the hematoma spontaneously drained. Since the wound was reportedly closed until it was aspirated 5 days prior to the onset of symptoms, the mechanism by which *Clostridia* entered the wound is not clear.

The diagnosis of botulism should be considered in any patient who developes acute symmetrical descending motor paralysis with clear sensorium, normal sensory examination, and normal cerebrospinal fluid. Eight cases of wound botulism, six of which were fatal, have been reported in the United States since 1951. Six have been cited in the literature *(1,2,3)* (MMWR, Vol. 17, No. 22, Vol. 20, Nos. 20 and 50). The mean incubation period between the occurrence of the wound and the onset of neurologic symptoms has been 7 days with a range of 4 to 14 days.

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2. Hampson CR: Case of probable botulism due to wound infection. J Bact 61:647, 1951
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INTERNATIONAL NOTES
INFLUENZA – United Kingdom, Chile, New Zealand, Fiji

United Kingdom

On Oct. 16, 1972, an influenza outbreak began in southern England in a school of 400 girls, 12 to 18 years of age. As of October 23, a total of 35 pupils scattered throughout the school had been affected by the disease, which has been clinically mild. Strains of virus A have been isolated.

In London, the World Influenza Centre reported that the strain A/Bangkok/2/72, isolated during the recent epidemic in Bangkok and its surroundings, has been found to contain hemagglutinin and neuraminidase antigens closely related to those of the variant A/England/42/72 (H3N2).

Chile

In Santiago Province, an epidemic of influenza associated with virus A reached its peak at the end of September and was reported to be decreasing as of October 8. The epidemic was fairly extensive in the city of Santiago.

New Zealand

In Wellington, the influenza A epidemic, which started in early September, reached its peak about mid-September, and had halted by the end of the month.

Fiji

In the Suva area, the incidence of upper respiratory tract infections increased in the second week of August, reaching epidemic proportions in the city by the middle of the month. An epidemic in the Lautoka area started soon after that in Suva. Cases were also recorded in the Yasawa islands of Lautoka, and a high morbidity was reported from the Lomaiviti group. The weekly incidence of reported cases of influenza-like illness for the entire Fiji island chain for the week ending September 2 was 3,335, compared with 1,256 for the week ending August 26, and 436 for the previous week. Serologic tests of 13 paired sera have shown significant rises in antibody titers to virus A.

(Reported by the World Health Organization: Weekly Epidemiological Record, *Vol. 47, Nos. 42 and 43.)*

EPIDEMIOLOGIC NOTES AND REPORTS
HOSPITAL-ASSOCIATED HEPATITIS-B – Minnesota

Between Jan. 1, 1969, and Aug. 31, 1972, 74 cases of viral hepatitis, including one fatal case, occurred in personnel of a Minnesota hospital with approximately 2,700 full-time employees. Early symptoms of illness included arthritis or arthralgias (59%) and rash (38%). Most illnesses were characterized by jaundice as evidenced by bilirubin levels of at least 3 mg% in 83% of the cases. Of 52 ill individuals whose sera were tested for the hepatitis-B antigen (HBAg) by agar gel diffusion, 37 (71%) has positive tests. None of the ill employees gave a history of parenteral drug abuse or blood transfusions; only two reported hepatitis contact outside the hospital.

Epidemiologic investigation revealed that 65 of the 74 cases were associated with either the hemodialysis-transplant ward (33 cases) or the clinical laboratories (32 cases); attack

(Continued on page 372)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES FOR WEEKS ENDING OCTOBER 28, 1972 AND OCTOBER 30, 1971 (43rd 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	140	3	886	6	90	37	30	3	159	924	1,049
NEW ENGLAND	5	1	115	–	–	–	2	–	7	51	86
Maine*	–	–	1	–	–	–	–	–	–	2	18
New Hampshire	1	–	11	–	–	–	–	–	1	10	4
Vermont	–	–	–	–	–	–	–	–	–	4	9
Massachusetts	1	–	21	–	–	–	2	–	–	17	33
Rhode Island	–	–	44	–	–	–	–	–	2	8	10
Connecticut	3	1	38	–	–	–	–	–	4	10	12
MIDDLE ATLANTIC	21	–	20	–	3	–	3	–	44	141	125
Upstate New York	12	–	–	–	1	–	3	–	3	26	39
New York City	4	–	20	–	2	–	–	–	13	22	31
New Jersey	–	–	NN	–	–	–	–	–	16	47	36
Pennsylvania	5	–	–	–	–	–	–	–	12	46	19
EAST NORTH CENTRAL	17	1	306	–	4	17	11	–	26	168	184
Ohio	6	–	24	–	–	12	6	–	15	49	35
Indiana	1	–	20	–	–	1	–	–	1	10	12
Illinois	2	–	–	–	3	1	3	–	–	36	71
Michigan	8	–	80	–	1	2	–	–	8	66	58
Wisconsin	–	1	182	–	–	1	2	–	2	7	8
WEST NORTH CENTRAL	7	–	177	–	9	1	2	–	2	29	33
Minnesota	6	–	21	–	–	–	–	–	–	7	7
Iowa	–	–	114	–	–	–	1	–	–	4	2
Missouri	1	–	1	–	–	1	–	–	–	11	6
North Dakota	–	–	23	–	–	–	–	–	–	1	–
South Dakota	–	–	–	–	6	–	–	–	–	2	15
Nebraska	–	–	–	–	3	–	–	–	–	–	–
Kansas	–	–	18	–	–	–	1	–	2	4	3
SOUTH ATLANTIC	28	–	63	–	10	4	2	–	16	131	160
Delaware	–	–	7	–	–	–	1	–	–	5	1
Maryland	–	–	7	–	1	–	–	–	2	7	22
District of Columbia	–	–	1	–	–	–	–	–	–	1	–
Virginia	8	–	7	–	–	2	–	–	5	17	22
West Virginia	2	–	41	–	–	–	1	–	–	4	10
North Carolina	10	–	NN	–	–	1	–	–	6	24	47
South Carolina	–	–	–	–	1	–	–	–	–	24	5
Georgia	–	–	–	–	3	–	–	–	–	14	22
Florida	8	–	–	–	5	1	–	–	3	35	31
EAST SOUTH CENTRAL	17	–	16	–	7	2	1	–	10	56	58
Kentucky	1	–	15	–	–	–	–	–	–	18	27
Tennessee	2	–	NN	–	–	1	–	–	3	26	20
Alabama	13	–	1	–	7	–	–	–	5	9	7
Mississippi	1	–	–	–	–	1	1	–	2	3	4
WEST SOUTH CENTRAL	11	1	47	–	38	2	3	–	9	84	101
Arkansas	3	–	1	–	–	–	–	–	–	6	1
Louisiana	4	–	NN	–	5	–	–	–	1	9	30
Oklahoma	3	1	–	–	–	–	3	–	1	18	11
Texas	1	–	46	–	33	2	–	–	7	51	59
MOUNTAIN	–	–	77	–	5	1	3	–	1	53	58
Montana	–	–	3	–	–	1	–	–	–	7	1
Idaho	–	–	–	–	2	–	–	–	–	4	18
Wyoming	–	–	8	–	–	–	–	–	–	6	–
Colorado	–	–	34	–	–	–	3	–	1	14	9
New Mexico	–	–	2	–	1	–	–	–	–	4	9
Arizona	–	–	26	–	2	–	–	–	–	15	16
Utah	–	–	4	–	–	–	–	–	–	3	5
Nevada	–	–	–	–	–	–	–	–	–	–	–
PACIFIC	34	–	65	6	14	10	3	3	44	211	244
Washington	3	–	61	6	12	3	1	–	–	14	28
Oregon	3	–	–	–	1	2	–	1	6	26	32
California	28	–	–	–	1	5	2	2	38	158	180
Alaska	–	–	–	–	–	–	–	–	–	–	2
Hawaii	–	–	4	–	–	–	–	–	–	13	2
Guam	–	–	6	–	–	–	---	–	–	–	---
Puerto Rico	–	–	4	–	–	–	–	–	1	18	24
Virgin Islands	–	–	–	–	–	–	–	–	–	–	–

*Delayed reports: Chickenpox: Me. 8, Alaska 2, Guam 6
Hepatitis B: Alaska 1
Hepatitis A: Me. 4

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING OCTOBER 28, 1972 AND OCTOBER 30, 1971 (43rd WEEK) – Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1972	Cum. 1972	1972	Cumulative 1972	Cumulative 1971	1972	Cumulative 1972	Cumulative 1971	1972	Cum. 1972	1972	Cum. 1972
UNITED STATES	10	752	138	27,812	71,334	18	1,115	1,923	624	60,025	184	22,364
NEW ENGLAND	3	27	21	3,300	3,470	1	47	91	52	2,570	8	1,000
Maine *	–	2	1	245	1,469	–	4	8	5	292	–	75
New Hampshire	1	4	4	339	211	–	3	20	1	188	–	32
Vermont	–	1	–	128	118	–	–	–	–	132	–	70
Massachusetts	2	10	14	762	248	–	21	33	6	610	3	467
Rhode Island	–	1	–	524	238	–	12	3	4	395	1	91
Connecticut	–	9	2	1,302	1,186	1	7	27	36	953	4	265
MIDDLE ATLANTIC	2	70	11	1,060	7,587	–	135	260	62	3,505	7	1,911
Upstate New York	1	17	1	129	684	–	32	79	NN	NN	–	243
New York City	1	16	6	371	3,786	–	40	55	27	2,009	4	241
New Jersey	–	19	3	497	1,197	–	26	57	11	742	–	1,161
Pennsylvania	–	18	1	63	1,920	–	37	69	24	754	3	266
EAST NORTH CENTRAL	4	82	34	11,281	15,745	6	163	220	125	16,234	39	5,764
Ohio	4	18	–	257	4,016	2	63	72	3	2,224	2	410
Indiana	–	1	7	1,277	2,754	–	12	16	4	1,053	6	720
Illinois	–	30	7	4,167	3,031	2	36	60	11	2,818	9	1,050
Michigan	–	30	10	2,038	2,427	1	44	57	51	2,886	10	1,315
Wisconsin	–	3	10	3,542	3,517	1	8	15	56	7,253	12	2,269
WEST NORTH CENTRAL	–	47	4	985	6,936	2	78	138	56	8,701	2	1,293
Minnesota	–	7	–	22	55	–	24	24	–	690	1	495
Iowa	–	3	4	689	2,361	–	5	12	53	5,983	1	399
Missouri	–	12	–	164	2,604	2	22	47	3	546	–	112
North Dakota	–	1	–	53	238	–	–	6	–	389	–	31
South Dakota	–	4	–	7	218	–	2	6	–	119	–	12
Nebraska	–	3	–	23	66	–	9	15	–	271	–	53
Kansas	–	17	–	27	1,394	–	16	28	–	703	–	191
SOUTH ATLANTIC	–	116	23	2,227	8,638	1	251	340	67	5,631	11	2,282
Delaware	–	–	–	51	42	–	1	2	1	105	1	8
Maryland	–	9	–	15	551	–	37	49	5	392	–	51
District of Columbia	–	5	–	2	15	–	11	13	–	23	–	6
Virginia	–	9	4	66	1,602	1	56	40	7	1,171	2	72
West Virginia	–	2	3	285	533	–	8	11	42	2,463	5	412
North Carolina	–	39	–	37	1,938	–	30	57	NN	NN	1	31
South Carolina	–	12	–	216	916	–	20	20	–	178	–	50
Georgia	–	26	9	182	1,128	–	18	24	–	24	–	58
Florida	–	14	7	1,373	1,913	–	70	124	12	1,275	2	1,594
EAST SOUTH CENTRAL	–	165	3	1,066	8,356	1	87	176	21	3,099	6	1,566
Kentucky	–	144	–	535	3,961	–	28	53	2	471	–	872
Tennessee	–	–	–	193	1,023	–	28	67	14	1,973	5	533
Alabama	–	17	3	153	1,901	–	17	30	5	536	1	49
Mississippi	–	4	–	185	1,471	1	14	26	–	119	–	112
WEST SOUTH CENTRAL	–	80	22	1,566	12,589	–	134	165	71	5,147	9	1,602
Arkansas	–	5	–	13	778	–	9	5	–	167	–	35
Louisiana	–	6	4	94	1,699	–	41	62	1	323	–	94
Oklahoma	–	6	–	10	756	–	8	7	1	161	–	38
Texas	–	63	18	1,449	9,356	–	76	91	69	4,496	9	1,435
MOUNTAIN	–	49	7	1,914	3,394	2	27	57	11	3,097	8	1,126
Montana	–	2	–	16	925	–	3	6	5	194	1	34
Idaho	–	3	4	148	272	–	8	11	1	211	1	33
Wyoming	–	1	–	51	85	–	1	2	–	250	–	8
Colorado	–	31	1	532	836	–	5	7	2	762	1	523
New Mexico	–	3	–	126	396	–	3	4	3	618	1	107
Arizona	–	7	2	885	541	–	1	8	–	877	4	384
Utah	–	2	–	155	332	2	5	16	–	138	–	34
Nevada	–	–	–	1	7	–	1	3	–	47	–	3
PACIFIC	1	116	13	4,413	4,619	5	193	476	159	12,041	94	5,820
Washington	–	1	3	982	1,062	1	17	28	51	3,759	10	855
Oregon	–	11	–	133	375	–	14	39	49	1,694	7	403
California	1	89	10	3,187	2,679	4	151	400	51	6,158	77	4,483
Alaska *	–	3	–	13	55	–	8	1	8	142	–	22
Hawaii	–	12	–	98	448	–	3	8	–	288	–	57
Guam	–	2	–	16	---	–	13	---	2	10	–	12
Puerto Rico	–	5	50	785	553	–	4	10	5	871	1	30
Virgin Islands	–	–	–	3	17	–	2	–	–	130	–	3

*Delayed reports: Mumps: Alaska 28
Rubella: Me. 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES FOR WEEKS ENDING OCTOBER 28, 1972 AND OCTOBER 30, 1971 (43rd 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	2	750	1	110	5	303	8	504	15,125	555	54	3,451
NEW ENGLAND	–	27	–	–	–	15	–	2	458	7	4	103
Maine	–	4	–	–	–	–	–	–	16	–	4	80
New Hampshire	–	–	–	–	–	2	–	–	37	–	–	3
Vermont	–	1	–	–	–	–	–	–	2	–	–	9
Massachusetts	–	19	–	–	–	11	–	2	248	6	–	4
Rhode Island	–	3	–	–	–	–	–	–	27	–	–	2
Connecticut	–	–	–	–	–	2	–	–	128	1	–	5
MIDDLE ATLANTIC	1	156	–	1	1	51	1	36	2,063	113	–	89
Upstate New York	–	23	–	–	–	15	–	6	289	2	–	41
New York City	1	46	–	–	–	27	–	2	1,056	80	–	–
New Jersey	–	50	–	1	–	5	1	14	167	21	–	–
Pennsylvania	–	37	–	–	1	4	–	14	551	10	–	48
EAST NORTH CENTRAL	–	140	–	1	–	22	–	27	2,144	24	6	345
Ohio*	–	32	–	1	–	7	–	23	490	6	–	97
Indiana	–	22	–	–	–	–	–	–	195	4	–	69
Illinois	–	57	–	–	–	6	–	3	785	1	–	54
Michigan	–	26	–	–	–	7	–	–	473	6	–	8
Wisconsin	–	3	–	–	–	2	–	1	201	7	6	117
WEST NORTH CENTRAL	–	6	–	26	–	8	1	20	1,024	8	16	959
Minnesota	–	1	–	–	–	1	–	–	273	1	4	222
Iowa	–	1	–	–	–	–	–	2	153	2	6	279
Missouri	–	–	–	21	–	3	1	11	320	2	–	84
North Dakota	–	–	–	–	–	–	–	–	32	–	1	125
South Dakota	–	–	–	1	–	–	–	4	27	1	1	113
Nebraska	–	1	–	1	–	1	–	–	134	–	–	16
Kansas	–	3	–	3	–	3	–	3	85	2	4	120
SOUTH ATLANTIC	–	145	–	10	3	39	4	253	3,012	205	5	352
Delaware	–	1	–	–	–	–	–	1	56	1	–	2
Maryland	–	17	–	1	1	9	–	31	343	4	–	17
District of Columbia	–	–	–	–	–	3	–	1	368	21	–	–
Virginia*	–	9	–	7	1	11	1	56	519	65	–	95
West Virginia	–	9	–	–	–	1	–	3	32	3	1	53
North Carolina	–	20	–	–	–	–	3	118	178	11	–	3
South Carolina	–	24	–	–	1	2	–	20	352	44	–	13
Georgia	–	28	–	1	–	3	–	22	519	23	3	97
Florida	–	37	–	1	–	10	–	1	645	33	1	72
EAST SOUTH CENTRAL	–	68	–	8	–	37	1	96	1,022	34	6	569
Kentucky*	–	14	–	–	–	11	–	4	209	12	4	223
Tennessee	–	17	–	7	–	11	1	60	226	3	1	284
Alabama	–	22	–	1	–	10	–	17	232	3	1	59
Mississippi	–	15	–	–	–	5	–	15	355	16	–	3
WEST SOUTH CENTRAL	–	62	1	50	–	39	–	59	2,374	73	11	701
Arkansas	–	7	–	28	–	12	–	14	663	3	1	99
Louisiana*	–	9	–	4	–	7	–	–	271	16	2	39
Oklahoma	–	4	1	11	–	3	–	34	209	10	–	267
Texas	–	42	–	7	–	17	–	11	1,231	44	8	296
MOUNTAIN	–	63	–	10	–	10	–	9	442	9	2	91
Montana	–	5	–	1	–	–	–	2	31	–	–	7
Idaho	–	3	–	–	–	–	–	6	44	–	–	–
Wyoming	–	–	–	–	–	–	–	–	4	1	–	1
Colorado	–	22	–	1	–	1	–	–	128	2	–	–
New Mexico	–	22	–	–	–	1	–	–	116	5	1	23
Arizona	–	6	–	2	–	6	–	–	98	1	1	51
Utah	–	5	–	6	–	2	–	1	21	–	–	7
Nevada	–	–	–	–	–	–	–	–	–	–	–	2
PACIFIC	1	83	–	4	1	82	1	2	2,586	82	4	242
Washington	–	10	–	–	–	2	–	1	315	1	–	–
Oregon	–	1	–	1	–	–	1	1	202	–	1	4
California	1	64	–	2	1	77	–	–	1,990	77	3	230
Alaska *	–	4	–	1	–	–	–	–	47	3	–	8
Hawaii	–	4	–	–	–	3	–	–	32	1	–	–
Guam*	–	–	–	–	–	–	–	–	7	–	–	–
Puerto Rico	–	16	–	–	–	7	–	–	65	23	3	45
Virgin Islands	–	–	–	–	–	–	–	–	6	3	–	–

*Delayed reports: TB: Ohio delete 2, Ky. delete 1, Guam 3
RMSF: Va. delete 1
Gonorrhea: Alaska 55, Guam 17
Syphilis: Alaska 3
Rabies in animals: La. 1

Week No. 43

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING OCTOBER 28, 1972

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

Area	All Causes			Pneumonia and Influenza
	All Ages	65 years and over	Under 1 year	All Ages
NEW ENGLAND	729	434	33	47
Boston, Mass.	222	128	9	20
Bridgeport, Conn.	36	14	–	4
Cambridge, Mass.	54	34	4	10
Fall River, Mass.	26	18	1	1
Hartford, Conn.	53	36	2	1
Lowell, Mass.	28	18	2	–
Lynn, Mass.	24	15	–	–
New Bedford, Mass.	24	14	1	–
New Haven, Conn.	51	29	4	1
Providence, R. I.	71	35	6	4
Somerville, Mass.	18	14	1	1
Springfield, Mass.	45	29	3	2
Waterbury, Conn.	23	16	–	–
Worcester, Mass.	54	34	–	3
MIDDLE ATLANTIC	3,087	1,883	95	117
Albany, N. Y.	55	26	3	–
Allentown, Pa.	25	20	3	2
Buffalo, N. Y.	146	89	8	12
Camden, N. J.	41	28	2	1
Elizabeth, N. J.	44	28	–	3
Erie, Pa.	42	24	3	2
Jersey City, N. J.	72	48	1	4
Newark, N. J.	84	51	3	5
New York City, N. Y. †	1,534	943	33	49
Paterson, N. J.	52	35	–	3
Philadelphia, Pa.	401	225	18	9
Pittsburgh, Pa.	178	96	7	9
Reading, Pa.	48	35	–	1
Rochester, N. Y.	116	84	1	4
Schenectady, N. Y.	29	20	1	–
Scranton, Pa.	43	30	1	1
Syracuse, N. Y.	68	34	6	1
Trenton, N. J.	42	19	5	2
Utica, N. Y.	23	16	–	–
Yonkers, N. Y.	44	32	–	9
EAST NORTH CENTRAL	2,596	1,557	109	87
Akron, Ohio	61	44	1	–
Canton, Ohio	32	10	–	–
Chicago, Ill.	784	453	37	29
Cincinnati, Ohio	142	83	8	2
Cleveland, Ohio	187	109	7	5
Columbus, Ohio	135	82	4	5
Dayton, Ohio	100	62	3	3
Detroit, Mich.	339	192	19	9
Evansville, Ind.	45	29	3	3
Fort Wayne, Ind.	41	31	1	3
Gary, Ind.	29	18	–	–
Grand Rapids, Mich.	64	40	1	4
Indianapolis, Ind.	152	80	7	3
Madison, Wis.	61	35	2	3
Milwaukee, Wis.	138	96	3	6
Peoria, Ill.	38	22	3	3
Rockford, Ill.	41	23	4	4
South Bend, Ind.	49	41	–	3
Toledo, Ohio	98	67	4	2
Youngstown, Ohio	60	40	2	–
WEST NORTH CENTRAL	796	509	29	24
Des Moines, Iowa	51	34	–	1
Duluth, Minn.	26	22	–	–
Kansas City, Kans.	52	28	4	2
Kansas City, Mo.	120	74	2	1
Lincoln, Nebr.	27	16	–	2
Minneapolis, Minn.	87	52	4	4
Omaha, Nebr.	85	55	9	1
St. Louis, Mo.	218	146	5	6
St. Paul, Minn.	73	48	2	2
Wichita, Kans.	57	34	3	5
SOUTH ATLANTIC	1,154	631	53	58
Atlanta, Ga.	92	51	6	4
Baltimore, Md.	258	150	8	7
Charlotte, N. C.	55	19	4	–
Jacksonville, Fla.	92	40	1	2
Miami, Fla.	71	32	5	6
Norfolk, Va.	70	38	2	9
Richmond, Va.	102	60	1	11
Savannah, Ga.	43	26	2	2
St. Petersburg, Fla.	88	70	–	3
Tampa, Fla.	67	35	4	6
Washington, D. C.	173	85	19	4
Wilmington, Del.	43	25	1	4
EAST SOUTH CENTRAL	569	330	23	19
Birmingham, Ala.	75	37	6	3
Chattanooga, Tenn.	54	31	2	3
Knoxville, Tenn.	43	31	–	2
Louisville, Ky.	85	52	7	4
Memphis, Tenn.	129	73	2	–
Mobile, Ala.	63	29	4	2
Montgomery, Ala.	18	13	–	2
Nashville, Tenn.	102	64	2	3
WEST SOUTH CENTRAL	1,177	632	69	46
Austin, Tex.	52	33	4	5
Baton Rouge, La.	33	14	2	1
Corpus Christi, Tex.	42	24	2	–
Dallas, Tex.	151	72	10	3
El Paso, Tex.	31	23	–	–
Fort Worth, Tex.	87	42	2	4
Houston, Tex.	193	87	23	6
Little Rock, Ark.	62	27	2	3
New Orleans, La.	151	84	8	5
Oklahoma City, Okla.*	84	49	5	2
San Antonio, Tex.	131	82	5	2
Shreveport, La.	74	46	1	6
Tulsa, Okla.	86	49	5	9
MOUNTAIN	448	252	12	14
Albuquerque, N. Mex.	43	21	1	5
Colorado Springs, Colo.	26	14	–	2
Denver, Colo.	98	56	3	2
Las Vegas, Nev.	17	8	–	–
Ogden, Utah	16	7	–	2
Phoenix, Ariz.	108	61	3	–
Pueblo, Colo.	13	9	1	1
Salt Lake City, Utah	67	42	3	1
Tucson, Ariz.	60	34	1	1
PACIFIC	1,402	851	53	27
Berkeley, Calif.	19	15	–	–
Fresno, Calif.	53	30	3	1
Glendale, Calif.	24	20	–	–
Honolulu, Hawaii	41	21	2	1
Long Beach, Calif.	89	57	–	1
Los Angeles, Calif.	361	217	16	8
Oakland, Calif.	80	52	5	1
Pasadena, Calif.	35	27	–	–
Portland, Oreg.	95	51	2	2
Sacramento, Calif.	70	39	–	1
San Diego, Calif.	78	44	4	1
San Francisco, Calif.	176	105	14	4
San Jose, Calif.	61	38	1	2
Seattle, Wash.	128	76	3	2
Spokane, Wash.	52	37	2	3
Tacoma, Wash.	40	22	1	–
Total	11,958	7,079	476	439
Expected Number	12,348	7,051	555	410
Cumulative Total (includes reported corrections for previous weeks)	543,802	316,384	21,541	21,037

†Delayed report for week ending Oct. 21, 1972

*Estimate based on average percent of divisional total

HEPATITIS – Continued

rates for employees in these two areas were 7.6 and 2.6 cases per 1,000 employee months, respectively. The attack rate for personnel in the rest of the hospital was less than 0.1 cases per 1,000 employee months.

The hemodialysis-transplant ward, the inpatient facility for the hospital's renal transplantation program, frequently admitted renal patients with hepatitis or HBAg positivity. Prior to their illnesses, thirty-three of the ill employees had contact with renal patients. The attack rate for employees who performed dialysis (15.5 cases per 1,000 employee months) was greater than that for personnel who cared for patients on the transplant ward (4.1 cases per 1,000 employee months). Fourteen of the 33 hemodialysis-transplant-associated cases occurred in medical personnel, primarily surgeons, who were not employees of the hemodialysis-transplant ward but all of whom dealt with renal patients prior to their illnesses.

The 32 laboratory-associated cases included 24 full-time employees of the clinical laboratories, six medical technology students, and two technicians from a surgery research laboratory. No cases occurred in laboratory personnel who did not routinely handle blood specimens. Among the personnel who did blood tests, the attack rates were significantly higher in laboratories where over 10% of the blood tested came from hemodialysis-transplant patients (5.9 cases per 1,000 employee months) than in laboratories where less than 10% of the blood tested came from such patients (0.4 cases per 1,000 employee months). Furthermore, the two ill technicians from the surgery research laboratory worked primarily with blood specimens from renal patients prior to their illnesses.

(Reported by John M. Matsen, M.D., Associate Professor of Laboratory Medicine and Pediatrics, University of Minnesota Hospitals; D. S. Fleming, M.D., State Epidemiologist, Minnesota State Department of Health; and three EIS Officers.)

Editorial Note

Hospital-associated viral hepatitis in employees of this hospital was primarily hepatitis-B, as evidenced by the presence of the hepatitis-B antigen in the majority of cases. The personnel at greatest risk either worked with renal patients on the hemodialysis-transplant ward or performed blood tests in the clinical laboratories. The factor common to both dialysis-transplant and laboratory-associated cases was exposure to blood from renal patients. The highest attack rates were in those individuals most heavily exposed to blood from these patients. Whether inapparent parenteral inoculation, ingestion of blood, or inhalation of blood aerosols was the main route of infection could not be determined.

The Morbidity and Mortality Weekly Report, circulation 28,000, is published by the Center for Disease Control, Atlanta, Ga.

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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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Morbidity and Mortality Weekly Report
Atlanta, Georgia 30333

DHEW Publication No. (HSM) 73-8017

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