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WEEKLY REPORT

For Week Ending August 8, 1970

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EPIDEMIOLOGIC NOTES AND REPORTS

BOTULISM, TYPE A, IN A FAMILY – Libertyville, Illinois

On the morning of August 4 a 49-year-old man and his 22-year-old daughter noted the onset of blurred vision, photophobia, dizziness, and slurred speech. Later in the day, they noticed diplopia, and generalized weakness, predominantly of the upper extremities. That evening they were hospitalized in Libertyville, Illinois. Twenty-four hours later, the 43-year-old wife and 10-year-old son experienced blurred vision and dysphagia and were hospitalized. Soon after hospitalization, all four developed nausea and vomiting without abdominal pain or diarrhea; all complained of dry mouth. On admission the father and daughter showed symmetrical ophthalmoplegia, ptosis, dysphonia, and motor weakness. The mother and son were found to be less affected. All four patients were afebrile on admission and had remarkably clear sensorium. The remainder of the physical examination including sensory examination and deep tendon reflexes was entirely normal. Over the first 12 hours of hospitalization, all four patients required tracheostomy for respiratory support.

Botulism was suspected almost immediately, and trivalent antitoxin was administered early on the morning of

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

DISEASE	31st WEEK ENDED		MEDIAN	CUMULATIVE, FIRST 31 WEEKS		
	August 8, 1970	August 2, 1969	1965 - 1969	1970	1969	MEDIAN 1965 - 1969
Aseptic meningitis	173	76	76	1,658	1,174	1,174
Brucellosis	1	7	7	122	137	137
Diphtheria	–	3	1	192	87	89
Encephalitis, primary:						
Arthropod-borne & unspecified	37	43	41	719	620	831
Encephalitis, post-infectious	5	14	13	286	204	483
Hepatitis, serum	152	95	705	4,242	3,062	24,146
Hepatitis, infectious	1,092	964		33,111	27,656	
Malaria	41	85	36	2,032	1,633	1,185
Measles (rubeola)	292	228	288	38,558	19,536	56,626
Meningococcal infections, total	26	42	40	1,709	2,208	2,167
Civilian	26	40	36	1,535	2,008	1,988
Military	–	2	–	174	200	179
Mumps	826	726	---	72,571	65,312	---
Poliomyelitis, total	1	2	2	18	8	35
Paralytic	1	2	2	18	8	30
Rubella (German measles)	328	344	---	48,121	47,331	---
Tetanus	4	5	5	68	84	98
Tularemia	6	1	2	82	87	102
Typhoid fever	11	5	10	159	161	206
Typhus, tick-borne (Rky. Mt. spotted fever)	19	19	15	220	277	168
Rabies in animals	42	52	70	1,874	2,210	2,602

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	1	Psittacosis:	21
Botulism:	5	Rabies in Man:	–
Leprosy: Cal.-1, Hawaii-1, Tex.-1	80	Rubella congenital syndrome:	43
Leptospirosis:	21	Trichinosis: Conn.-1, Utah-1, Va.-1	62
Plague:	6	Typhus, murine: Tex.-3	27

BOTULISM – *(Continued from front page)*

August 4. Additionally, guanidine was given starting August 5. No improvement was noted over the next 48 hours, and on August 7 the patients were transferred to the University of Wisconsin Hospital for further supportive care. As of August 12 the condition of the four patients has remained unimproved but stable.

Epidemiologic investigation revealed that on August 3 the four affected family members had had a dinner of spaghetti and meatballs. The bottled tomato meatball sauce had been purchased on June 12 in Pennsylvania. It was prepared in the kitchen of a small restaurant for limited distribution to customers. Two unaffected members of the family had consumed everything the family had eaten except these meatballs with sauce. All remaining samples from the same lot as that purchased by the family were located by the Food and Drug Administration. No other cases of botulism attributable to this source have been reported.

With the mouse-serum toxin neutralization test, pretreatment sera from the four patients were positive for *Clostridium botulinum* type A. Post-treatment sera as well as all remaining food specimens were negative for toxin. *(Reported by Norman J. Rose, M.D., Chief, Bureau of Epidemiology, Illinois Department of Public Health; J. L. Sims, M.D., Professor of Medicine, University of Wisconsin; S. Ninio, M.D., Private Physician, Libertyville; Michael Cherington, M.D., Division of Neurology, University of Colorado; Kenneth Lennington, Food and Drug Administration; the Anaerobic Laboratory, Laboratory Division, CDC; and an EIS Officer.)*

INDUCED MALARIA – North Carolina

On June 24 and July 2, 1970, a 20-year-old serviceman stationed at Fort Bragg, North Carolina, presented himself at sick call with complaints of fever, chills, sweating, left upper quadrant tenderness, and abdominal cramps. The diagnosis of gastroenteritis was made on both occasions, and he returned to his quarters. On July 22 he was admitted to the post hospital with essentially the same complaints as before; 5 days after admission parasites of *Plasmodium falciparum* were found on a routine peripheral blood smear.

The patient entered the Army on May 13, 1969, at Fort Knox, Kentucky. He was transferred to Fort Benning, Georgia, on August 21, 1969, and then to Fort Bragg on October 13, 1969. On June 10 and 11, 1970, he participated in exercises at Fort Campbell and Fort Knox, Kentucky. He had never traveled to Vietnam or to any other malarious area, and he had never received a blood transfusion.

Upon questioning, the patient admitted illicit use of heroin intravenously during the past 6 months. He stated, however, that he had never shared needles with companions who also used heroin. At the time of this report, eight of his contacts who use drugs parenterally have been identified. Four have been interviewed, and two gave a history of malaria while in Vietnam in 1968. One of these two and one of the other two interviewed had a peripheral blood smear negative for malaria parasites and negative when tested for three species of malaria with the indirect fluorescent antibody (IFA) test. Investigation of contacts is continuing.

The patient donated two units of blood 2 days preceding his first sick call visit. The first unit was sold to a commercial blood bank on June 22 in Fayetteville, North Carolina, which then shipped the blood to its branch office in New York City on June 23. On July 2 the blood was given to a patient who was being treated for a fractured hip. The recipient has had no unexplained febrile illness since receiving the blood, but his physician was alerted to the possibility of transfusion malaria. The IFA test on his serum was negative. The second unit was donated to the Army on June 23 and sent to Vietnam; the proper military authorities were notified.

(Reported by Capt. Robert M. Giller, MC USA, Assistant Preventive Medicine Chief, and Capt. Darwin Palmer, Entomologist, Fort Bragg, North Carolina; Martin P. Hines, D.V.M., Director, Division of Epidemiology, North Carolina State Board of Health; and the Malaria Surveillance Unit, CDC.)

Editorial Comment:

Falciparum malaria in a person who had not traveled to an endemic region suggested the probability that this case of malaria was accidentally induced by either sharing of syringes or blood transfusion. Introduced malaria remains a remote possibility, because since 1952 nine introductions of malaria have occurred in the United States. All nine were due to *P. vivax*. The period from the time of the patient's visit to Kentucky to the onset of symptoms, however, coincides with the typical incubation period for falciparum malaria. The appropriate preventive medicine offices were contacted at both of the Kentucky Army bases where the patient had visited. No suspect introduced cases of malaria have been recognized, and at Fort Campbell entomologic services reported no anopheline captures in June in the area of the patient's activity.

Malaria Terminology *(1,2)*

1. Autochthonous
   a. Indigenous – malaria acquired by mosquito transmission in an area where malaria is a regular occurrence.
   b. Introduced – malaria acquired by mosquito transmission from an imported case in an area where malaria is not a regular occurrence.
2. Imported
   Malaria acquired outside of a specific area.
3. Induced
   Malaria acquired through artificial means, i.e., blood transfusion, common syringes, or malariotherapy.

References:

1. Terminology of Malaria and of Malaria Eradication. Geneva, World Health Organization, 1963, p 32
2. WHO Expert Committee on Malaria – Tenth Report. WHO Techn Rep Ser No. 272, p 34

HEPATITIS – Virginia

An extensive epidemic of infectious hepatitis began in April 1970 at a large hospital for mentally retarded persons in Lynchburg, Virginia. As of August 6, 242 of the 3,600 hospital residents and one of the 1,500 employees had developed hepatitis (Figure 1). Persons in 46 of the 86 wards have been affected.

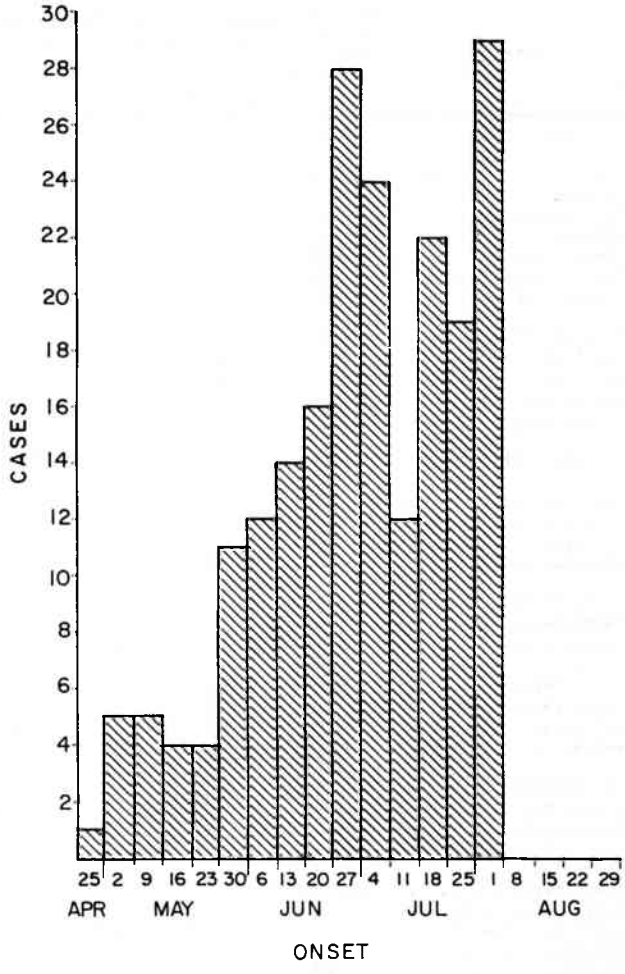
Wards with the highest arrack rates were those housing severely mentally retarded ambulatory adolescents. The overall attack rate in these wards was 140 cases per 1,000 persons, with attack rates in some wards as high as 560 cases per 1,000. SGPT determinations done in selected wards showed significant enzyme elevations in 85 percent of all occupants. Wards with mildly retarded persons had an overall attack rate of 23 cases per 1,000. Most cases of hepatitis in these wards were in persons who had assisted in the care of severely retarded individuals. The major method of spread was by person-to-person contact, with mildly retarded patient-employees playing an important role in spreading infection from ward to ward.

Australia antigen determinations by Agar gel (Ouchterloney) and complement fixation were done on sera from more than 700 hospital residents and on 49 similar sera obtained in 1967. The frequency of Australia antigen was identical in both groups of sera (8 percent) suggesting that the current epidemic is not related to Australia antigen. In addition, no evidence was found to suggest that the presence of Australia antigen afforded protection against hepatitis.

Gamma globulin in the usual recommended dosage was given in each of 20 wards at the time the first clinical case appeared in that ward. In wards housing mildly retarded patients no cases occurred after gamma globulin was given. In some wards housing severely retarded individuals, however, as many as 50 clinical cases occurred in the 4 weeks following gamma globulin administration. This suggests either that the gamma globulin was given too late or that the dosage used was inadequate to protect against the large amount of virus these persons may have received.

(Reported by Dr. H. E. Gillespie, Director, Bureau of Epidemiology, Virginia State Department of Health; Dr. Malcolm Tenney, Jr., Health Director, Waynesboro Health Department, Waynesboro, Virginia; Dr. Benedict Nyler, Director, Lynchburg State School; Dr. E. Matthew, Dr. D. Dietzman, Dr. D. Madden, and Dr. J. L. Sever, Section on Infectious Diseases, Perinatal Research Branch, National Institute of Neurological Diseases and Stroke; and a team from CDC.)

Figure 1
HEPATITIS CASES AT A HOSPITAL BY WEEK OF ONSET
LYNCHBURG, VIRGINIA – APRIL 25-AUGUST 29, 1970



OUTBREAK OF INFECTIOUS HEPATITIS – Maui, Hawaii

An outbreak of infectious hepatitis has been occurring among a group of young persons living on the island of Maui, Hawaii. The first cases were identified during a follow-up investigation conducted on June 8-9 for a previous shigella outbreak. The first case probably occurred in late March in a young woman living in Makena Beach in a commune on the southwest end of Maui. A second case occurred in late April, and nine cases (three confirmed, six suspect) occurred in May. During June, eight more confirmed cases and three suspect cases were reported, and between July 1 and 25, 10 confirmed cases and three suspect cases were identified.

Of the 35 cases (23 confirmed and 12 suspect), four were in local residents, young men ages 18-25 years who had prolonged intimate contact with the commune residents. In all instances they had eaten food and drunk water with the commune group. Histories for all 35 patients included: exposure to someone ill with infectious hepatitis approximately 3 to 4 weeks before onset of symptoms except for the index case; abrupt onset of fever, nausea, and abdominal discomfort; and a negative or equivocal history of drug abuse within the preceding 6-12 months. SGOT elevations were documented in all hospitalized cases.

The cases were clustered primarily in three areas: Makena Beach on the southwestern tip of the island, the "Banana Patch" area in the north central portion of the island near the coast, and Kula area located halfway up the

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TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED AUGUST 8, 1970 AND AUGUST 2, 1969 (31st WEEK)

AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	DIPHTHERIA	ENCEPHALITIS			HEPATITIS			MALARIA	
				Primary including unsp. cases		Post Infectious	Serum	Infectious			
	1970	1970	1970	1970	1969	1970	1970	1970	1969	1970	Cum. 1970
UNITED STATES	173	1	–	37	43	5	152	1,092	964	41	2032
NEW ENGLAND	3	–	–	2	3	–	7	61	94	–	57
Maine	1	–	–	–	–	–	–	5	11	–	5
New Hampshire	–	–	–	–	–	–	–	4	1	–	3
Vermont	–	–	–	–	–	–	–	2	2	–	3
Massachusetts	2	–	–	–	–	–	–	19	48	–	30
Rhode Island	–	–	–	1	2	–	2	11	16	–	8
Connecticut	–	–	–	1	1	–	5	20	16	–	8
MIDDLE ATLANTIC	14	–	–	5	9	–	45	217	188	8	229
New York City	–	–	–	–	3	–	20	66	71	–	26
New York, Up-State	–	–	–	1	–	–	–	29	26	–	63
New Jersey.*	14	–	–	1	4	–	14	67	51	–	61
Pennsylvania	–	–	–	3	2	–	11	55	40	8	79
EAST NORTH CENTRAL	19	1	–	11	3	2	35	196	133	4	113
Ohio	1	–	–	5	3	2	7	33	27	1	23
Indiana	1	1	–	–	–	–	1	1	6	–	11
Illinois	1	–	–	–	–	–	11	56	44	–	30
Michigan	10	–	–	6	–	–	16	87	49	3	49
Wisconsin	6	–	–	–	–	–	–	19	7	–	–
WEST NORTH CENTRAL	4	–	–	4	3	–	6	35	29	12	170
Minnesota	4	–	–	–	–	–	3	3	5	1	19
Iowa	–	–	–	1	1	–	–	6	14	–	17
Missouri	–	–	–	1	–	–	1	16	5	–	17
North Dakota	–	–	–	–	2	–	–	–	1	1	2
South Dakota	–	–	–	–	–	–	–	–	–	–	2
Nebraska	–	–	–	–	–	–	–	2	–	–	2
Kansas	–	–	–	2	–	–	2	8	4	10	111
SOUTH ATLANTIC	44	–	–	8	3	3	13	113	116	7	386
Delaware	–	–	–	–	–	–	1	6	1	–	2
Maryland.*	3	–	–	–	–	–	2	14	35	1	39
Dist. of Columbia	14	–	–	–	–	–	–	2	–	–	2
Virginia	2	–	–	–	–	–	1	15	6	2	50
West Virginia	4	–	–	–	–	–	–	7	14	–	6
North Carolina.*	2	–	–	1	–	–	1	5	16	2	156
South Carolina	1	–	–	1	2	–	2	4	6	–	31
Georgia	–	–	–	–	–	–	–	10	7	–	62
Florida	18	–	–	6	1	3	6	50	31	2	38
EAST SOUTH CENTRAL	5	–	–	1	5	–	–	45	61	2	146
Kentucky	1	–	–	–	–	–	–	16	20	1	120
Tennessee	2	–	–	1	2	–	–	13	21	–	–
Alabama	2	–	–	–	–	–	–	12	8	1	16
Mississippi	–	–	–	–	3	–	–	4	12	–	10
WEST SOUTH CENTRAL	15	–	–	–	3	–	1	81	88	6	378
Arkansas	–	–	–	–	–	–	–	4	8	–	8
Louisiana	6	–	–	–	2	–	–	8	14	–	23
Oklahoma.*	8	–	–	–	–	–	–	10	3	2	65
Texas	1	–	–	–	1	–	1	59	63	4	282
MOUNTAIN	4	–	–	–	1	–	4	73	57	–	158
Montana	–	–	–	–	–	–	–	3	8	–	8
Idaho	–	–	–	–	–	–	–	–	1	–	3
Wyoming	–	–	–	–	–	–	–	2	1	–	–
Colorado	–	–	–	–	1	–	–	23	13	–	133
New Mexico	4	–	–	–	–	–	1	5	10	–	5
Arizona	–	–	–	–	–	–	–	17	13	–	6
Utah	–	–	–	–	–	–	2	12	7	–	3
Nevada	–	–	–	–	–	–	1	11	4	–	–
PACIFIC	65	–	–	6	13	–	41	271	198	2	395
Washington	2	–	–	–	–	–	1	45	22	–	33
Oregon	–	–	–	–	–	–	1	13	14	–	14
California	59	–	–	5	13	–	39	203	162	2	255
Alaska	4	–	–	–	–	–	–	–	–	–	–
Hawaii	–	–	–	1	–	–	–	10	–	–	93
Puerto Rico†	–	–	–	–	–	–	2	21	13	–	7
Virgin Islands	–	–	–	–	–	–	–	–	–	–	–

*Delayed Reports: Brucellosis: Okla. 1
Hepatitis, Serum: P.R. 1
Hepatitis, Infectious: N.J. Delete 1, Md. Delete 163, N.C. Delete 2, P.R. 3
Malaria: Okla. 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED

AUGUST 8, 1970 AND AUGUST 2, 1969 (31st WEEK) — CONTINUED

AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		POLIOMYELITIS		
		Cumulative			Cumulative			Cum.	Total	Paralytic	
	1970	1970	1969	1970	1970	1969	1970	1970	1970	1970	Cum. 1970
UNITED STATES.....	292	38,558	19,536	26	1,709	2,208	826	72,571	1	1	18
NEW ENGLAND.....	11	869	1,058	1	74	74	70	8,683	–	–	–
Maine.....	–	197	7	–	3	6	7	665	–	–	–
New Hampshire.....	1	50	237	–	7	2	1	316	–	–	–
Vermont.....	–	8	3	–	6	–	5	580	–	–	–
Massachusetts*.....	8	414	197	1	33	31	37	2,740	–	–	–
Rhode Island.....	–	118	22	–	5	8	4	1,436	–	–	–
Connecticut.....	2	82	592	–	20	27	16	2,946	–	–	–
MIDDLE ATLANTIC.....	48	4,717	7,297	4	301	353	80	7,282	–	–	–
New York City.....	18	836	4,821	–	74	71	53	2,600	–	–	–
New York, Up-State...	2	252	582	2	59	60	NN	NN	–	–	–
New Jersey.....	12	1,681	850	–	114	145	14	2,043	–	–	–
Pennsylvania.....	16	1,948	1,044	2	54	77	13	2,639	–	–	–
EAST NORTH CENTRAL.....	74	9,547	2,032	3	194	301	215	19,212	–	–	2
Ohio.....	20	3,749	359	–	77	115	51	3,469	–	–	–
Indiana.....	3	266	465	1	19	34	15	1,721	–	–	–
Illinois.....	17	3,019	452	1	43	41	18	1,683	–	–	–
Michigan.....	19	1,634	221	–	46	92	22	4,775	–	–	1
Wisconsin.....	15	879	535	1	9	19	109	7,564	–	–	1
WEST NORTH CENTRAL.....	1	3,787	507	3	89	116	10	3,675	–	–	1
Minnesota.....	–	37	5	1	13	25	–	341	–	–	–
Iowa.*.....	–	1,096	325	1	12	15	2	2,264	–	–	–
Missouri.....	–	1,250	22	–	51	51	1	255	–	–	1
North Dakota.....	1	316	10	–	3	–	7	267	–	–	–
South Dakota.....	–	91	3	–	–	1	–	36	–	–	–
Nebraska.....	–	924	135	–	5	9	–	376	–	–	–
Kansas.....	–	73	7	1	5	15	–	136	–	–	–
SOUTH ATLANTIC.....	48	7,049	2,424	5	352	392	174	8,299	–	–	1
Delaware.....	1	258	373	–	3	8	11	284	–	–	–
Maryland.....	3	1,374	65	–	33	35	3	873	–	–	–
Dist. of Columbia....	1	343	–	–	3	8	1	183	–	–	–
Virginia.....	9	1,962	881	2	37	49	29	1,922	–	–	–
West Virginia.....	14	303	177	1	8	18	18	1,999	–	–	1
North Carolina.....	9	839	307	2	73	67	NN	NN	–	–	–
South Carolina.....	8	558	108	–	44	54	29	812	–	–	–
Georgia.....	–	13	1	–	30	69	–	–	–	–	–
Florida.....	3	1,399	512	–	121	84	83	2,226	–	–	–
EAST SOUTH CENTRAL.....	32	1,261	105	1	131	139	42	4,193	–	–	–
Kentucky.....	27	717	61	–	45	49	15	1,516	–	–	–
Tennessee.....	3	367	17	1	57	52	20	2,393	–	–	–
Alabama.....	2	89	4	–	21	23	7	238	–	–	–
Mississippi.....	–	88	23	–	8	15	–	46	–	–	–
WEST SOUTH CENTRAL.....	35	7,380	4,337	–	231	297	77	6,977	1	1	14
Arkansas.....	–	30	16	–	19	29	1	117	–	–	–
Louisiana.....	–	92	120	–	59	79	–	25	–	–	–
Oklahoma.....	2	440	136	–	19	29	–	2,390	–	–	–
Texas.....	33	6,818	4,065	–	134	160	76	4,445	1	1	14
MOUNTAIN.....	8	1,462	790	–	35	40	36	3,246	–	–	–
Montana.....	3	52	16	–	1	7	14	674	–	–	–
Idaho.....	–	32	88	–	5	6	1	87	–	–	–
Wyoming.....	–	11	–	–	1	–	1	31	–	–	–
Colorado.....	–	168	136	–	12	7	1	1,040	–	–	–
New Mexico.....	4	188	236	–	–	6	10	633	–	–	–
Arizona.....	1	958	306	–	14	10	8	659	–	–	–
Utah.....	–	32	7	–	2	2	1	122	–	–	–
Nevada.....	–	21	1	–	–	2	–	–	–	–	–
PACIFIC.....	35	2,486	986	9	302	496	122	11,004	–	–	–
Washington.....	15	514	58	2	41	51	27	4,174	–	–	–
Oregon.....	1	223	197	1	23	12	14	948	–	–	–
California.....	13	1,432	688	6	236	412	55	4,484	–	–	–
Alaska.....	1	136	8	–	–	11	2	377	–	–	–
Hawaii.....	5	181	35	–	2	10	24	1,021	–	–	–
Puerto Rico.....	1	869	1,323	–	4	17	4	672	–	–	–
Virgin Islands.....	–	6	36	–	1	–	–	1	–	–	–

*Delayed Reports: Measles: Mass. Delete 11, Iowa 46

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED

AUGUST 8, 1970 AND AUGUST 2, 1969 (31st WEEK) — CONTINUED

AREA	RUBELLA		TETANUS		TULAREMIA		TYPHOID FEVER		TYPHUS FEVER TICK-BORNE (Rky. Mt. Spotted)		RABIES IN ANIMALS	
	1970	Cum. 1970	1970	Cum. 1970	1970	Cum. 1970	1970	Cum. 1970	1970	Cum. 1970	1970	Cum. 1970
UNITED STATES.....	328	48,121	4	68	6	82	11	159	19	220	42	1,874
NEW ENGLAND.....	23	2,338	–	3	1	1	1	6	–	–	–	66
Maine.....	1	380	–	–	–	–	–	–	–	–	–	23
New Hampshire.....	–	150	–	–	–	–	–	–	–	–	–	–
Vermont.....	–	49	–	–	–	–	–	–	–	–	–	39
Massachusetts.....	15	1,124	–	2	1	1	1	4	–	–	–	1
Rhode Island.....	2	90	–	–	–	–	–	–	–	–	–	1
Connecticut.....	5	545	–	1	–	–	–	2	–	–	–	2
MIDDLE ATLANTIC.....	36	3,872	1	6	–	1	1	39	1	9	1	176
New York City.....	20	562	1	3	–	–	–	11	–	–	–	–
New York, Up-State..	9	399	–	–	–	1	–	13	1	5	1	165
New Jersey.....	4	845	–	2	–	–	1	7	–	2	–	–
Pennsylvania.....	3	2,066	–	1	–	–	–	8	–	2	–	11
EAST NORTH CENTRAL....	60	9,965	–	13	–	18	2	24	–	2	8	146
Ohio.....	4	1,995	–	1	–	2	–	10	–	2	2	41
Indiana.....	8	1,763	–	5	–	13	–	1	–	–	1	12
Illinois.....	2	1,674	–	3	–	2	1	4	–	–	–	47
Michigan.....	27	2,562	–	4	–	–	1	8	–	–	2	14
Wisconsin.....	19	1,971	–	–	–	1	–	1	–	–	3	32
WEST NORTH CENTRAL....	4	3,232	–	4	1	17	–	5	–	2	10	356
Minnesota.....	–	116	–	1	–	–	–	1	–	–	4	68
Iowa.....	1	1,991	–	1	–	–	–	1	–	–	1	64
Missouri.....	–	400	–	1	1	14	–	1	–	2	1	64
North Dakota.....	3	128	–	–	–	1	–	–	–	–	–	25
South Dakota.....	–	1	–	1	–	1	–	–	–	–	–	60
Nebraska.....	–	541	–	–	–	–	–	2	–	–	–	6
Kansas.....	–	55	–	–	–	1	–	–	–	–	4	69
SOUTH ATLANTIC.....	31	6,115	1	16	1	9	2	24	14	154	7	385
Delaware.....	–	41	–	–	–	–	–	–	–	4	–	–
Maryland.....	2	311	–	–	–	–	–	6	2	11	–	1
Dist. of Columbia...	1	19	–	1	–	–	–	–	–	–	–	–
Virginia.*.....	2	677	–	1	–	1	2	4	3	42	2	172
West Virginia.....	16	1,236	–	–	–	–	–	–	1	5	3	94
North Carolina.....	–	38	–	2	–	4	–	2	3	55	–	1
South Carolina.....	2	619	–	1	–	–	–	–	1	29	–	–
Georgia.....	–	–	–	1	1	3	–	7	4	8	2	65
Florida.....	8	3,174	1	10	–	1	–	5	–	–	–	52
EAST SOUTH CENTRAL....	14	2,511	1	5	1	3	2	11	3	25	5	147
Kentucky.....	2	895	1	1	–	1	–	1	1	3	1	83
Tennessee.....	11	1,279	–	1	1	2	1	6	1	14	1	42
Alabama.....	1	259	–	3	–	–	1	4	1	5	3	22
Mississippi.....	–	78	–	–	–	–	–	–	–	3	–	–
WEST SOUTH CENTRAL....	54	8,539	1	12	2	23	–	11	1	21	5	338
Arkansas.....	–	34	–	3	1	10	–	2	–	5	1	60
Louisiana.....	–	147	1	3	1	3	–	1	–	–	1	52
Oklahoma.....	–	807	–	–	–	7	–	–	1	14	1	68
Texas.....	54	7,551	–	6	–	3	–	8	–	2	2	158
MOUNTAIN.....	11	1,906	–	–	–	5	1	9	–	6	1	56
Montana.....	3	314	–	–	–	–	–	1	–	1	–	1
Idaho.....	–	175	–	–	–	–	–	–	–	2	–	–
Wyoming.....	–	133	–	–	–	–	–	–	–	1	1	2
Colorado.....	2	382	–	–	–	–	–	2	–	2	–	30
New Mexico.....	1	199	–	–	–	–	–	5	–	–	–	9
Arizona.....	4	543	–	–	–	–	–	–	–	–	–	11
Utah.....	1	160	–	–	–	5	1	1	–	–	–	–
Nevada.....	–	–	–	–	–	–	–	–	–	–	–	3
PACIFIC.....	95	9,643	–	9	–	5	2	30	–	1	5	204
Washington.....	10	4,584	–	2	–	2	–	4	–	–	1	3
Oregon.....	11	807	–	3	–	–	–	–	–	–	–	1
California.....	72	3,956	–	4	–	3	2	23	–	1	4	200
Alaska.....	–	94	–	–	–	–	–	2	–	–	–	–
Hawaii.....	2	202	–	–	–	–	–	1	–	–	–	–
Puerto Rico.....	–	26	–	5	–	–	–	3	–	–	3	35
Virgin Islands.....	–	–	–	–	–	–	–	–	–	–	–	–

* Delayed Reports: RMSF: Va. 1

Week No. 31

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDED AUGUST 8, 1970

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

Area	All Causes: All Ages	All Causes: 65 years and over	Pneumonia and Influenza All Ages	Under 1 year All Causes
NEW ENGLAND:	716	442	64	28
Boston, Mass.	227	123	20	8
Bridgeport, Conn.	38	24	6	2
Cambridge, Mass.	28	21	8	1
Fall River, Mass.	29	21	2	1
Hartford, Conn.	62	35	2	4
Lowell, Mass.	31	19	3	1
Lynn, Mass.	16	15	–	–
New Bedford, Mass.	31	23	2	1
New Haven, Conn.	57	29	2	4
Providence, R. I.	52	29	6	3
Somerville, Mass.	9	7	–	1
Springfield, Mass.	46	36	4	2
Waterbury, Conn.	36	26	1	–
Worcester, Mass.	54	34	8	–
MIDDLE ATLANTIC:	3,206	1,887	119	122
Albany, N. Y.	47	23	1	3
Allentown, Pa.	31	21	1	1
Buffalo, N. Y.	126	68	2	4
Camden, N. J.	37	18	–	1
Elizabeth, N. J.	26	9	2	2
Erie, Pa.	37	24	5	–
Jersey City, N. J.	61	47	4	1
Newark, N. J.	92	44	2	5
New York City, N. Y.†	1,592	946	61	66
Paterson, N. J.	44	25	3	–
Philadelphia, Pa.	494	291	12	14
Pittsburgh, Pa.	212	96	13	16
Reading, Pa.	52	35	1	–
Rochester, N. Y.	126	77	–	2
Schenectady, N. Y.	19	13	2	–
Scranton, Pa.	38	25	–	–
Syracuse, N. Y.	79	55	–	4
Trenton, N. J.	29	20	2	2
Utica, N. Y.	30	22	4	1
Yonkers, N. Y.	34	28	4	–
EAST NORTH CENTRAL:	2,345	1,330	75	115
Akron, Ohio	49	25	–	3
Canton, Ohio	42	24	1	5
Chicago, Ill.	678	382	24	24
Cincinnati, Ohio	123	76	2	5
Cleveland, Ohio	162	84	4	6
Columbus, Ohio	132	78	–	6
Dayton, Ohio	66	35	2	4
Detroit, Mich.	352	205	7	14
Evansville, Ind.	39	27	1	1
Flint, Mich.	42	20	1	6
Fort Wayne, Ind.	28	13	1	–
Gary, Ind.	35	20	5	2
Grand Rapids, Mich.	56	37	7	3
Indianapolis, Ind.	145	70	2	15
Madison, Wis.	41	20	10	4
Milwaukee, Wis.	112	69	–	2
Peoria, Ill.	29	17	–	3
Rockford, Ill.	31	17	4	2
South Bend, Ind.	26	18	1	–
Toledo, Ohio	101	59	3	5
Youngstown, Ohio	56	34	–	5
WEST NORTH CENTRAL:	885	565	23	54
Des Moines, Iowa	81	50	3	4
Duluth, Minn.	39	25	2	4
Kansas City, Kans.	37	21	3	4
Kansas City, Mo.	168	109	3	10
Lincoln, Nebr.	34	28	1	1
Minneapolis, Minn.	96	68	4	10
Omaha, Nebr.	60	38	1	4
St. Louis, Mo.	242	154	3	10
St. Paul, Minn.	81	47	1	6
Wichita, Kans.	47	25	2	1
Las Vegas, Nev.*	25	6	1	2

Area	All Causes: All Ages	All Causes: 65 years and over	Pneumonia and Influenza All Ages	Under 1 year All Causes
SOUTH ATLANTIC:	1,213	660	37	63
Atlanta, Ga.	129	73	4	4
Baltimore, Md.	266	155	2	9
Charlotte, N. C.	47	18	–	6
Jacksonville, Fla.	109	55	4	9
Miami, Fla.	129	81	1	5
Norfolk, Va.	33	14	5	3
Richmond, Va.	86	40	4	4
Savannah, Ga.	26	11	1	1
St. Petersburg, Fla.	78	66	3	–
Tampa, Fla.	56	33	5	6
Washington, D. C.	211	92	7	12
Wilmington, Del.	43	22	1	4
EAST SOUTH CENTRAL:	593	318	31	24
Birmingham, Ala.	94	50	1	4
Chattanooga, Tenn.	39	25	2	1
Knoxville, Tenn.	45	30	3	1
Louisville, Ky.	114	60	12	5
Memphis, Tenn.	132	69	5	5
Mobile, Ala.	57	26	5	–
Montgomery, Ala.	34	18	2	2
Nashville, Tenn.	78	40	1	6
WEST SOUTH CENTRAL:	1,187	582	35	113
Austin, Tex.	35	16	1	1
Baton Rouge, La.	51	21	3	16
Corpus Christi, Tex. ††	30	15	1	3
Dallas, Tex.	169	73	1	16
El Paso, Tex.	60	20	2	11
Fort Worth, Tex.	66	34	1	4
Houston, Tex.	225	96	6	17
Little Rock, Ark.	55	23	–	4
New Orleans, La.	162	89	4	14
Oklahoma City, Okla.	89	57	–	6
San Antonio, Tex.	116	55	3	11
Shreveport, La.	57	35	6	4
Tulsa, Okla.	72	48	7	6
MOUNTAIN:	395	236	20	26
Albuquerque, N. Mex.	27	15	4	–
Colorado Springs, Colo.	30	17	5	1
Denver, Colo.	109	67	4	4
Ogden, Utah	17	9	–	–
Phoenix, Ariz.	80	51	2	7
Pueblo, Colo.	23	16	–	1
Salt Lake City, Utah	60	35	2	6
Tucson, Ariz.	49	26	3	7
PACIFIC:	1,457	868	22	62
Berkeley, Calif.	18	13	–	2
Fresno, Calif.	36	20	1	2
Glendale, Calif.	26	18	–	1
Honolulu, Hawaii	50	24	–	4
Long Beach, Calif.	71	43	–	4
Los Angeles, Calif.	428	260	6	16
Oakland, Calif.	66	42	1	2
Pasadena, Calif.	36	20	1	–
Portland, Oreg.	139	86	3	4
Sacramento, Calif.	50	26	1	2
San Diego, Calif.	82	50	–	4
San Francisco, Calif.	199	112	5	5
San Jose, Calif.	43	33	–	1
Seattle, Wash.	134	72	1	12
Spokane, Wash.	44	25	3	1
Tacoma, Wash.	35	24	–	2
Total	11,997	6,888	426	607
Expected Number	12,011	6,849	338	497
Cumulative Total (includes reported corrections for previous weeks)	406,722	232,725	16,520	19,067

*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.

† Delayed report for week ended August 1, 1970
†† Estimate - based on average percent of divisional total

INFECTIOUS HEPATITIS – *(Continued from page 307)*

northwestern slope of Mount Haleakala. Gamma globulin was administered to contacts of cases. Thus far the outbreak seems confined for the most part, although occasional cases have continued to occur. Shigella dysentery continues to be endemic among the commune residents.

(Reported by Ira. D. Hirshy, M.D., Commissioner of Health, and Lloyd C. Guthrie, M.D., Chief, Epidemiology Branch, Hawaii Department of Health.)

COCCIDIOIDOMYCOSIS – Northern California

During a 5-week period beginning June 16, 1970, approximately 35 of 100 archaeology students who were excavating ruins 9 miles northeast of Chico, California, in Sierra Nevada foothills developed coccidioidomycosis. Most of the 100 participants (more than 85) were from New York City. After 2 weeks of digging, several students became ill with fever, shaking chills, night sweats, malaise, myalgia, cough, chest pain, and rash. By the last week of the summer session, an epidemic was apparent.

On July 17 all participants were invited to the student health center at Chico State College for histories, chest x-rays, skin tests, and serologic tests. About 70 were interviewed; 25 had positive evidence of coccidioidomycosis by either skin testing or serology. Of these, 23 were from New York City and of these, 21 were ill. In 30, chest x-rays gave evidence for infiltrative disease and/or hilar adenopathy. Two were hospitalized locally.

Since the conclusion of the summer session on July 18, suspect cases have been reported from students who returned to New York and Connecticut. Investigation is continuing to determine the extent of disease among participants.

Prior to this outbreak, coccidioidomycosis had never been reported this far north in California.

(Reported by S. Cowdrey, M.D., Director, and A. Michel, M.D., Physician, Student Health Center, Chico State College; I. A. Heindl, M.D., Health Officer, and B. Kellogg, M.D., Laboratory Director, Butte County Health Department; D. Pappagianis, M.D., Professor and Chairman, Department of Microbiology, University of California Medical School at Davis; R. Wood, Ph.D., Chief, Microbial Diseases Laboratory, and S. B. Werner, M.D., Medical Epidemiologist, Bureau of Communicable Disease Control, California State Department of Public Health.)

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