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Morbidity and Mortality



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For Week Ending September 1, 1973

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

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EPIDEMIOLOGIC NOTES AND REPORTS
CHOLERA - Texas

On August 25, 1973, a 51-year-old man from the Gulf Coast town of Port Lavaca, Texas, had precipitous onset of profuse watery diarrhea which gradually changed over several hours from brown to clear in color. The stool was neither bloody nor malodorous. The diarrhea was accompanied by nausea, vomiting, mild abdominal pain, and incapacitating cramps which began in the calves and progressed to both thighs. Four hours after the onset of symptoms the man was admitted to a local hospital in shock. His past medical history included chronic low back pain, infrequent angina pectoris, and a subtotal gastrectomy in 1972 for long-standing peptic ulcer disease.

On admission physical examination revealed an apical pulse of 150, respirations of 30, and no obtainable blood pressure. He was afebrile, conscious, and oriented. His abdo-

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men was soft and non-tender; the remainder of the physical examination was unremarkable. Admission laboratory values included hemoglobin 18.1 gm/100 ml, white blood cell count 13,400/mm³, sodium 136 mEq/l, potassium 3.1 mEq/l, carbon dioxide combining power 18 mEq/l, and BUN 40 mg/100 ml.

Initial treatment included intravenous lactated Ringer's solution and intravenous gentamicin. On the afternoon of

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

DISEASE	35th WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 35 WEEKS		
	September 1, 1973	September 2, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	181	147	196	2,655	2,073	2,164
Brucellosis	2	1	3	130	121	137
Chickenpox	213	314	---	144,713	113,669	---
Diphtheria	4	8	3	118	71	108
Encephalitis, primary:						
Arthropod-borne and unspecified	52	37	41	916	652	751
Encephalitis, post-infectious	4	10	7	208	210	275
Hepatitis, serum (Hepatitis B)	168	186	116	5,375	6,188	4,836
Hepatitis, infectious (Hepatitis A)	945	973	973	33,809	36,993	36,994
Malaria	2	9	57	160	673	1,881
Measles (rubeola)	73	99	135	23,951	26,750	26,750
Meningococcal infections, total	13	16	23	1,022	986	1,822
Civilian	13	16	21	998	948	1,638
Military	---	---	1	24	38	184
Mumps	247	287	428	54,810	56,278	74,997
Rubella (German measles)	63	296	219	25,845	20,685	43,349
Tetanus	2	3	2	60	77	77
Tuberculosis, new active	574	702	---	21,182	22,678	---
Tularemia	6	5	5	113	96	97
Typhoid fever	7	10	8	467	234	208
Typhus, tick-borne (Rky. Mt. spotted fever)	21	24	15	510	401	321
Venereal Diseases:						
Gonorrhea	16,829	16,261	---	543,932	490,263	---
Syphilis, primary and secondary	463	448	---	17,416	16,468	---
Rabies in animals	72	65	65	2,506	2,935	2,461

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	1	Poliomyelitis, total:	3
Botulism:	13	Paralytic:	3
Congenital rubella syndrome:	19	Psittacosis: Calif.-1	16
Leprosy: Calif.-1.	86	Rabies in man:	---
Leptospirosis:	22	Trichinosis: Conn.-1, Ill.-1.	66
Plague: *	2	Typhus, murine:	25

*Delayed reports: Plague: N. Mex.-1

CHOLERA – Continued

admission the patient fainted while sitting in bed for a portable chest X-ray. He was examined at that time by a physician who recognized the patient's illness as being compatible with cholera. The patient was given additional intravenous fluids with supplemental potassium and bicarbonate, and tetracycline was prescribed. The patient's condition improved dramatically within 24 hours after admission, and he was discharged in good health 1 week later.

Vibrio cholerae was isolated by the Texas State Health Laboratory from a stool culture obtained on admission. The isolate was subsequently identified as *V. cholerae*, biotype El Tor, serotype Inaba, at the University of Texas and CDC. The case was reported to the World Health Organization.

Epidemiologic investigation revealed that the patient had not left the country since serving in the military in the 1950s and had not been away from home for several months. He had no known contact with persons with a history of recent foreign travel. An extensive search has revealed no additional cases of suspected cholera in the county. Further epidemiologic and laboratory investigations to determine the source of the patient's infection are in progress.

(Reported by Charles E. Sweet, Dr.P.H., Acting Director, Laboratory Services, M. S. Dickerson, M.D., State Epidemi-

ologist, J. E. Peavy, M.D., State Health Officer, Texas State Department of Health; Charles E. Lankford, Ph.D., Professor, Department of Microbiology, University of Texas, Austin; the Enterobacteriology Section, Bacteriology Branch, Bureau of Laboratories, the Bacterial Diseases Branch, Bureau of Epidemiology, CDC; and 3 EIS Officers.)

Editorial Note

This is the first case of confirmed cholera, with the exception of laboratory-acquired illness, reported in the United States since 1911. The patient's subtotal gastrectomy and presumed secondary achlorhydria probably rendered him unusually susceptible to infection with this acid-sensitive organism. The absence of secondary cases reflects the minimal potential for spread of cholera in areas with safe food and water supplies, such as those commonly encountered in the United States.

This case of *V. cholerae*, serotype Inaba, infection is unrelated to the current extension of the 12-year-old pandemic of El Tor cholera to Italy caused by the organism of the Ogawa serotype.

Because more than 10 days have passed since hospitalization of this single case, the area where he resides is not a cholera-infected area under the provisions of international health regulations.

HEPATITIS-B IN AN ONCOLOGY UNIT – Maryland

In March and April 1973, 6 (6.5%) of 92 staff members on an oncology unit became ill with clinical hepatitis: 2 medical students, a physician's assistant, a head nurse, a porter, and an animal caretaker in the laboratory area (Figure 1); all were positive for the hepatitis-B antigen (HBAG). There was no increase in hepatitis-B among the patients. Attack rates were higher for those staff members who worked in the patient care area of the unit (10.4%) than for those who worked in the laboratory area (3.6%).

Because of the temporal and spatial clustering of cases, a common source of infection in the unit was suspected. None of the ill individuals gave a history of intravenous drug abuse or transfusion. Only 1 had a history of accidental needle puncture in the 6 months preceding the onset of illness. There was no overt case of acute hepatitis-B to whom all of the ill staff members had been exposed; however, 9 of the patients on the unit were known carriers of HBAG, and 5 of the 6 ill staff members had had extensive contact with 1 of these 9 patients.

This patient, an 18-year-old man who had acute lymphoblastic leukemia, was first noted to convert from hepatitis-B antibody (HBAb)-positive to HBAG-positive on

July 11, 1972, following an intensive course of chemotherapy. He developed unusually high titers of HBAG (1:256,000 by passive hemagglutination inhibition). On August 20 and September 12, 1972, 2 nurses who cared for this patient became ill with hepatitis-B. The patient was discharged and spent most of the fall at home; he was readmitted to the unit on November 26, 1972. On January 1, 1973, the patient's mother became ill with hepatitis-B. Her son died on February 23. The outbreak on the unit followed in March and April.

The sixth case, the animal caretaker, denied contact with the suspect patient. Despite intensive investigation, the source of this staff member's illness could not be defined. No subsequent cases have been reported since the time of the investigation.

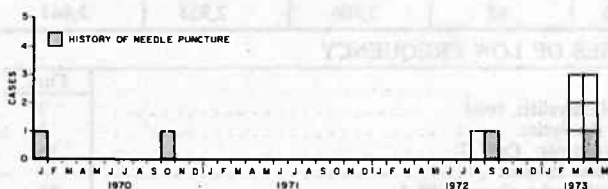
Recommendations included: 1) expansion of the present surveillance system of staff members to include bimonthly testing for SGOT, HBAG, and HBAb; 2) the suggestion that HBAb-positive staff members care for antigen-positive patients since antibody positivity implies previous exposure and immunity to hepatitis-B; 3) a reemphasis of blood and needle precautions, especially during the care of the HBAG-positive patients on chemotherapy.

(Reported by Jack R. Wands, M.D., Chief Resident, Charles C. J. Carpenter, M.D., Physician-in-Chief, Baltimore City Hospitals; Thomas T. Davis, M.D., Fellow, Albert H. Owens, Jr., Director, Oncology Research Unit, Johns Hopkins Medical Center-Baltimore City Hospitals; John D. Stafford, M.D., State Epidemiologist, Maryland State Department of Health; and 2 EIS Officers.)

Editorial Note

Three points of this outbreak are noteworthy. First, only 2 of the 9 ill individuals (including the 2 nurses in 1972 and

Figure 1
HEPATITIS-B CASES IN ONCOLOGY UNIT STAFF
BY MONTH OF ONSET
BALTIMORE CITY HOSPITALS – 1970-1973



(Continued on page 299)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING SEPTEMBER 1, 1973 AND SEPTEMBER 2, 1972 (35th 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)	
						1973	1972			1973	1973
UNITED STATES	181	2	213	4	118	52	37	4	168	945	973
NEW ENGLAND	15	-	30	-	3	4	2	-	6	81	84
Maine*	-	-	-	-	-	-	-	-	-	4	12
New Hampshire*	1	-	-	-	-	1	-	-	-	5	10
Vermont	-	-	-	-	-	-	-	-	-	4	3
Massachusetts	8	-	14	-	1	2	2	-	4	36	34
Rhode Island	6	-	6	-	2	-	-	-	-	15	3
Connecticut	-	-	10	-	-	1	-	-	2	17	22
MIDDLE ATLANTIC	22	-	11	-	-	2	1	1	34	105	196
Upstate New York	9	-	1	-	-	1	-	-	11	28	22
New York City	1	-	10	-	-	-	-	-	7	13	57
New Jersey*	8	-	NN	-	-	-	-	-	4	19	72
Pennsylvania	4	-	-	-	-	1	1	1	12	45	45
EAST NORTH CENTRAL	61	-	81	-	-	22	11	-	26	192	104
Ohio	28	-	7	-	-	13	3	-	9	36	8
Indiana*	-	-	8	-	-	-	-	-	-	9	18
Illinois	1	-	-	-	-	1	1	-	2	49	34
Michigan	31	-	11	-	-	8	7	-	14	94	42
Wisconsin	1	-	55	-	-	-	-	-	1	4	2
WEST NORTH CENTRAL	3	1	1	-	7	4	4	-	3	23	23
Minnesota	-	-	-	-	-	-	1	-	-	-	-
Iowa	-	-	-	-	-	-	1	-	1	-	5
Missouri	3	1	-	-	-	4	2	-	1	7	7
North Dakota*	-	-	1	-	-	-	-	-	1	-	1
South Dakota	-	-	-	-	7	-	-	-	-	5	1
Nebraska	-	-	-	-	-	-	-	-	-	1	1
Kansas	-	-	-	-	-	-	-	-	-	10	8
SOUTH ATLANTIC	13	1	25	-	-	7	2	-	9	150	174
Delaware	-	-	1	-	-	-	-	-	-	4	1
Maryland	-	-	2	-	-	-	1	-	1	12	25
District of Columbia	-	-	-	-	-	-	-	-	-	1	2
Virginia	1	-	1	-	-	-	-	-	-	4	26
West Virginia	2	-	18	-	-	2	-	-	-	4	6
North Carolina	4	-	NN	-	-	2	-	-	6	37	29
South Carolina	-	-	-	-	-	-	-	-	-	4	11
Georgia	-	1	3	-	-	-	-	-	-	27	11
Florida	6	-	-	-	-	3	1	-	2	57	63
EAST SOUTH CENTRAL	12	-	6	-	-	4	6	-	7	76	42
Kentucky	-	-	6	-	-	-	5	-	2	26	-
Tennessee	5	-	NN	-	-	4	-	-	2	43	31
Alabama	6	-	-	-	-	-	-	-	-	-	3
Mississippi	1	-	-	-	-	-	1	-	3	7	8
WEST SOUTH CENTRAL	19	-	36	3	14	5	2	1	10	124	123
Arkansas*	-	-	-	-	-	-	-	-	-	2	14
Louisiana	2	-	NN	-	-	-	-	-	2	11	31
Oklahoma	10	-	4	-	-	3	-	-	3	17	10
Texas	7	-	32	3	14	2	2	1	5	94	88
MOUNTAIN	1	-	9	-	14	-	-	-	3	24	23
Montana	-	-	3	-	-	-	-	-	-	3	1
Idaho	-	-	-	-	-	-	-	-	-	4	5
Wyoming*	-	-	-	-	-	-	-	-	-	1	-
Colorado	-	-	6	-	-	-	-	-	-	8	6
New Mexico	-	-	-	-	6	-	-	-	1	4	-
Arizona*	-	-	-	-	8	-	-	-	-	-	3
Utah	1	-	-	-	-	-	-	-	2	4	8
Nevada	-	-	-	-	-	-	-	-	-	-	-
PACIFIC	35	-	14	1	80	4	9	2	70	170	204
Washington	10	-	12	1	72	-	-	-	-	17	19
Oregon	2	-	1	-	3	-	-	-	1	24	26
California*	23	-	-	-	3	4	9	2	66	125	148
Alaska	-	-	1	-	2	-	-	-	3	4	-
Hawaii	---	---	---	---	-	---	-	---	---	---	11
Guam*	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico	-	-	7	-	-	-	-	-	-	18	7
Virgin Islands	-	-	-	-	-	-	-	-	-	1	-

*Delayed reports: Aseptic Meningitis: N.H. 3, Calif. 35, Guam 1
Chickenpox: Me. 1, Guam 4
Encephalitis, primary: N. Dak. 2

Hepatitis B: N.J. delete 1, Ariz. 1, Guam 2
Hepatitis A: Me. 3, N.J. delete 1, Ind. delete 1, Ark. 4,
Wyo. 4, Ariz. 15, Guam 7

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TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING SEPTEMBER 1, 1973 AND SEPTEMBER 2, 1972 (35th WEEK) - Continued

AREA	MALARIA		MEASLES (Rubella)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES	2	160	73	23,951	26,750	13	1,022	986	247	54,810	63	25,845
NEW ENGLAND	-	12	6	7,368	3,100	-	46	41	21	2,819	7	3,624
Maine *	-	-	-	64	244	-	1	3	-	324	-	68
New Hampshire*	-	-	-	857	229	-	6	3	1	188	-	375
Vermont	-	2	-	118	125	-	3	-	-	244	2	46
Massachusetts	-	6	5	3,925	689	-	12	19	9	824	1	2,040
Rhode Island	-	-	-	603	523	-	3	10	4	332	-	212
Connecticut	-	4	1	1,801	1,290	-	21	6	7	907	4	883
MIDDLE ATLANTIC	1	25	10	2,429	986	4	140	120	36	7,172	9	4,172
Upstate New York	-	13	3	795	125	-	48	32	NN	NN	-	417
New York City	-	2	4	888	319	2	29	37	23	4,496	4	462
New Jersey	-	4	3	401	484	1	33	24	7	1,489	5	3,004
Pennsylvania	1	6	-	345	58	1	30	27	6	1,187	-	289
EAST NORTH CENTRAL	-	21	30	8,450	10,972	1	127	144	27	14,107	16	5,902
Ohio	-	4	1	280	244	-	55	57	3	2,665	2	684
Indiana	-	3	9	629	1,236	-	4	11	9	1,177	4	933
Illinois	-	11	7	2,044	4,082	-	24	31	2	2,383	-	936
Michigan	-	3	8	4,353	1,976	1	39	39	7	3,893	8	1,823
Wisconsin	-	-	5	1,144	3,434	-	5	6	6	3,989	2	1,526
WEST NORTH CENTRAL	-	7	3	439	938	-	79	70	5	4,591	3	1,205
Minnesota	-	1	-	19	20	-	7	21	1	80	-	221
Iowa	-	1	-	277	652	-	19	2	-	2,792	-	187
Missouri	-	1	3	52	163	-	32	20	3	671	2	263
North Dakota	-	1	-	58	52	-	3	-	-	66	-	276
South Dakota	-	-	-	-	6	-	4	2	-	18	-	23
Nebraska	-	1	-	6	18	-	7	9	1	128	1	140
Kansas	-	2	-	27	27	-	7	16	-	836	-	95
SOUTH ATLANTIC	1	24	6	1,196	2,135	1	170	222	41	6,460	5	2,084
Delaware	-	-	-	8	49	-	-	1	-	264	-	13
Maryland	-	3	-	12	15	-	23	34	2	627	-	10
District of Columbia	-	1	-	5	2	-	4	9	1	105	-	3
Virginia	-	5	-	414	60	-	31	49	7	687	-	620
West Virginia	-	-	4	199	270	-	2	7	13	2,231	3	287
North Carolina	1	7	-	4	33	1	37	27	NN	NN	-	201
South Carolina	-	1	-	58	214	-	12	20	-	352	-	84
Georgia	-	3	2	151	166	-	21	15	2	31	-	12
Florida	-	4	-	345	1,326	-	40	60	16	2,163	2	854
EAST SOUTH CENTRAL	-	6	3	598	1,039	-	91	79	34	4,492	8	1,298
Kentucky	-	1	-	367	521	-	32	25	6	1,313	1	390
Tennessee	-	-	-	165	191	-	37	28	22	2,074	6	519
Alabama	-	5	-	9	145	-	15	16	6	648	-	186
Mississippi	-	-	3	57	182	-	7	10	-	457	1	203
WEST SOUTH CENTRAL	-	9	7	653	1,462	4	162	123	28	3,641	4	1,435
Arkansas	-	-	-	69	13	-	13	9	1	353	-	112
Louisiana	-	2	-	84	84	2	36	36	-	77	-	99
Oklahoma	-	1	-	53	10	1	29	6	1	430	-	177
Texas	-	6	7	447	1,355	1	84	72	26	2,781	4	1,047
MOUNTAIN	-	9	2	593	1,808	-	31	20	10	2,434	-	2,365
Montana	-	1	-	16	15	-	6	4	3	232	-	502
Idaho	-	-	-	252	74	-	4	5	-	110	-	35
Wyoming	-	-	-	80	51	-	-	1	-	420	-	6
Colorado	-	2	-	105	520	-	11	4	4	437	-	1,541
New Mexico	-	2	2	120	119	-	3	2	3	961	-	191
Arizona *	-	4	-	17	874	-	3	1	-	140	-	18
Utah	-	-	-	2	155	-	2	2	-	126	-	69
Nevada	-	-	-	1	-	-	2	1	-	8	-	3
PACIFIC	-	47	6	2,225	4,310	3	176	167	45	9,094	11	3,760
Washington	-	3	2	1,010	977	1	18	15	-	1,409	1	660
Oregon	-	3	-	454	130	-	12	13	11	1,686	2	783
California	-	38	4	677	3,095	2	140	129	30	5,054	8	2,282
Alaska	-	2	-	65	12	-	6	7	4	691	-	9
Hawaii	---	1	---	19	96	---	-	3	---	254	---	26
Guam *	-	-	-	48	10	-	-	11	-	18	-	12
Puerto Rico	-	-	19	1,781	624	-	8	4	13	683	-	26
Virgin Islands	-	-	-	1	2	-	-	2	-	22	-	2

*Delayed reports: Measles: Ariz. 1, Guam 22
Mumps: Me. 6, N.H. 1, Guam 1
Rubella: N.H. 20, Ariz. 1, Guam 4

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING SEPTEMBER 1, 1973 AND SEPTEMBER 2, 1972 (35th WEEK) - Continued

AREA	TETANUS		TUBERCULOSIS (New Active)		TULA- REMLIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
	Cumulative 1973	1973	Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973	
									1973	1973			
UNITED STATES	60	574	21,182	113	7	467	21	510	16,829	463	72	2,506	
NEW ENGLAND	2	28	768	-	-	9	-	1	318	2	-	99	
Maine	-	2	61	-	-	-	-	-	23	1	-	55	
New Hampshire	-	-	42	-	-	-	-	-	15	-	-	35	
Vermont	-	-	22	-	-	-	-	-	13	-	-	3	
Massachusetts	-	21	410	-	-	9	-	1	-	-	-	5	
Rhode Island	1	3	60	-	-	-	-	-	28	-	-	-	
Connecticut	1	2	173	-	-	-	-	-	239	1	-	1	
MIDDLE ATLANTIC	7	120	4,136	-	-	43	2	30	2,210	78	-	33	
Upstate New York	1	23	737	-	-	6	-	13	450	13	-	14	
New York City	3	36	1,546	-	-	15	-	4	891	43	-	-	
New Jersey	2	23	729	-	-	13	-	5	334	18	-	-	
Pennsylvania	1	38	1,124	-	-	9	2	8	535	4	-	19	
EAST NORTH CENTRAL	10	85	3,218	3	2	27	-	19	1,870	22	6	245	
Ohio	3	22	949	-	1	11	-	14	504	5	-	29	
Indiana	1	11	423	-	-	-	-	-	171	3	1	51	
Illinois	3	23	960	1	-	6	-	5	353	6	-	64	
Michigan	1	29	809	2	1	8	-	-	650	7	-	5	
Wisconsin	2	-	77	-	-	2	-	-	192	1	5	96	
WEST NORTH CENTRAL	5	25	859	12	-	21	2	18	968	5	20	796	
Minnesota	-	1	104	-	-	4	-	-	232	1	7	282	
Iowa	-	-	89	-	-	-	-	7	32	-	5	161	
Missouri	4	11	396	11	-	12	-	7	330	1	4	78	
North Dakota	1	1	30	-	-	-	-	-	4	-	2	129	
South Dakota	-	3	63	-	-	1	-	-	21	-	-	77	
Nebraska	-	4	59	-	-	1	-	2	229	3	-	3	
Kansas	-	5	118	1	-	3	2	2	120	-	2	66	
SOUTH ATLANTIC	12	118	4,213	9	-	232	11	259	4,741	208	13	214	
Delaware	-	6	61	-	-	-	-	7	75	1	-	3	
Maryland	-	10	451	-	-	6	2	12	345	8	2	13	
District of Columbia	-	8	194	-	-	-	-	-	330	15	-	-	
Virginia	2	8	547	3	-	3	2	53	549	71	4	63	
West Virginia	-	3	198	-	-	2	1	4	82	-	1	20	
North Carolina*	-	29	695	1	-	5	5	117	1,066	17	-	1	
South Carolina*	1	4	346	-	-	4	-	29	310	22	-	5	
Georgia	2	17	695	3	-	1	1	36	804	17	3	72	
Florida*	7	33	1,026	2	-	211	-	1	1,180	57	3	37	
EAST SOUTH CENTRAL	7	37	1,899	10	1	29	5	78	1,305	28	6	358	
Kentucky*	1	10	447	1	1	4	-	-	205	6	5	195	
Tennessee	4	3	582	7	-	9	3	39	538	11	1	123	
Alabama	2	8	512	-	-	10	2	12	281	4	-	39	
Mississippi	-	16	358	2	-	6	-	27	281	7	-	1	
WEST SOUTH CENTRAL	10	68	2,140	75	1	21	1	89	1,971	34	15	452	
Arkansas	-	12	261	53	-	3	-	15	54	-	8	99	
Louisiana*	3	3	341	-	-	6	-	-	551	10	3	36	
Oklahoma	4	2	183	17	-	2	1	67	311	4	1	137	
Texas	3	51	1,355	5	1	10	-	7	1,055	20	3	180	
MOUNTAIN	-	23	694	3	-	8	-	8	503	26	1	34	
Montana*	-	-	33	-	-	-	-	1	39	1	-	9	
Idaho	-	-	26	-	-	-	-	2	1	2	-	-	
Wyoming*	-	1	19	-	-	1	-	1	11	-	-	-	
Colorado	-	-	120	-	-	1	-	1	110	7	-	-	
New Mexico	-	-	146	1	-	2	-	3	67	2	-	4	
Arizona	-	14	273	-	-	4	-	-	193	8	-	20	
Utah	-	6	33	2	-	-	-	-	51	2	1	1	
Nevada	-	2	44	-	-	-	-	-	31	4	-	-	
PACIFIC	7	70	3,255	1	3	77	-	8	2,943	60	11	275	
Washington	2	7	260	-	-	6	-	5	392	-	1	6	
Oregon	1	9	176	-	-	2	-	2	236	1	-	7	
California	4	54	2,559	1	3	67	-	1	2,290	59	10	254	
Alaska	-	-	67	-	-	1	-	-	25	-	-	8	
Hawaii	-	---	193	-	---	1	---	---	---	---	---	-	
Guam*	-	-	31	-	-	-	-	-	-	-	-	-	
Puerto Rico	4	17	328	-	-	7	-	-	108	14	-	36	
Virgin Islands	-	1	2	-	-	-	-	-	2	1	-	-	

*Delayed reports: TB: N.C. delete 2, Ky. delete 2, Guam 3
RMSF: S.C. 1
Gonorrhea: La. delete 1, Wyo. 13, Guam 69

Syphilis: Fla. 36, Guam 1
Rabies: La. delete 1, Mont. 9

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING SEPTEMBER 1, 1973

Week No.
35

(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	718	452	32	30	SOUTH ATLANTIC	1,080	590	37	51
Boston, Mass.	218	120	15	17	Atlanta, Ga.	136	73	6	7
Bridgeport, Conn.	50	34	1	1	Baltimore, Md.	225	116	6	7
Cambridge, Mass.	29	21	3	4	Charlotte, N. C.	55	23	3	1
Fall River, Mass.	36	31	1	1	Jacksonville, Fla.	68	33	1	1
Hartford, Conn.	59	36	1	2	Miami, Fla.	121	63	5	4
Lowell, Mass.	25	17	1	2	Norfolk, Va.	67	37	4	7
Lynn, Mass.	18	12	1	—	Richmond, Va.	75	40	7	4
New Bedford, Mass.	24	19	1	—	Savannah, Ga.	40	24	1	4
New Haven, Conn.	56	32	4	1	St. Petersburg, Fla.	58	46	—	3
Providence, R. I.	52	34	1	3	Tampa, Fla.	72	33	2	5
Somerville, Mass.	10	8	—	—	Washington, D. C.	117	73	2	5
Springfield, Mass.	50	30	2	—	Wilmington, Del.	46	29	—	3
Waterbury, Conn.	30	19	1	—	EAST SOUTH CENTRAL	659	363	25	22
Worcester, Mass.	61	39	—	—	Birmingham, Ala.	105	54	8	2
MIDDLE ATLANTIC	2,820	1,740	86	130	Chattanooga, Tenn.	47	23	—	3
Albany, N. Y.	53	29	3	1	Knoxville, Tenn.	45	26	—	6
Allentown, Pa.	29	23	—	2	Louisville, Ky.	97	56	3	—
Buffalo, N. Y.	132	83	3	12	Memphis, Tenn.	158	74	8	1
Camden, N. J.	33	22	2	2	Mobile, Ala.	64	40	—	2
Elizabeth, N. J.	30	19	—	1	Montgomery, Ala.	36	23	2	3
Erie, Pa.	47	30	—	4	Nashville, Tenn.	107	67	4	5
Jersey City, N. J.	60	41	1	2	WEST SOUTH CENTRAL	1,392	756	77	40
Newark, N. J.	61	36	4	3	Austin, Tex.	54	36	1	4
New York City, N. Y. †	1,454	885	52	51	Baton Rouge, La.	49	26	4	1
Paterson, N. J.	48	27	2	2	Corpus Christi, Tex.	39	22	1	—
Philadelphia, Pa.	298	175	11	24	Dallas, Tex.	191	96	12	2
Pittsburgh, Pa.	177	102	3	7	El Paso, Tex.	60	30	5	4
Reading, Pa.	43	35	—	2	Fort Worth, Tex.	118	67	9	4
Rochester, N. Y.	116	82	4	7	Houston, Tex.	276	139	13	3
Schenectady, N. Y.	21	11	—	—	Little Rock, Ark.	68	38	2	3
Scranton, Pa.	23	18	—	—	New Orleans, La.	162	83	11	4
Syracuse, N. Y.	79	52	1	3	Oklahoma City, Okla. *	97	57	5	2
Trenton, N. J.	57	32	—	3	San Antonio, Tex.	162	91	9	3
Utica, N. Y.	20	15	—	1	Shreveport, La.	59	31	4	4
Yonkers, N. Y.	39	23	—	3	Tulsa, Okla.	57	40	1	6
EAST NORTH CENTRAL	2,441	1,390	82	75	MOUNTAIN	500	280	18	16
Akron, Ohio	66	41	4	—	Albuquerque, N. Mex.	36	15	—	5
Canton, Ohio	40	21	—	3	Colorado Springs, Colo.	37	24	—	1
Chicago, Ill.	625	342	23	5	Denver, Colo.	107	61	3	5
Cincinnati, Ohio	157	92	2	4	Las Vegas, Nev.	45	22	2	—
Cleveland, Ohio	182	101	2	2	Ogden, Utah	16	8	—	2
Columbus, Ohio	138	77	7	4	Phoenix, Ariz.	106	57	6	1
Dayton, Ohio	105	63	5	5	Pueblo, Colo.	26	15	—	—
Detroit, Mich.	328	170	9	7	Salt Lake City, Utah	69	45	4	2
Evansville, Ind.	39	29	—	5	Tucson, Ariz.	58	33	3	—
Fort Wayne, Ind.	59	38	2	4	PACIFIC	1,559	982	47	35
Gary, Ind.	29	14	2	—	Berkeley, Calif.	27	21	—	1
Grand Rapids, Mich.	49	28	1	10	Fresno, Calif.	51	23	2	—
Indianapolis, Ind.	139	82	10	3	Glendale, Calif.	37	30	—	—
Madison, Wis.	38	20	3	9	Honolulu, Hawaii	36	18	4	2
Milwaukee, Wis.	145	93	2	4	Long Beach, Calif.	109	62	1	1
Peoria, Ill.	37	22	5	3	Los Angeles, Calif.	499	323	13	13
Rockford, Ill.	51	28	2	1	Oakland, Calif.	67	46	2	—
South Bend, Ind.	41	26	1	2	Pasadena, Calif.	28	23	2	1
Toledo, Ohio	108	61	2	2	Portland, Oreg.	108	69	3	—
Youngstown, Ohio	65	42	—	2	Sacramento, Calif.	48	28	3	1
WEST NORTH CENTRAL	810	485	58	23	San Diego, Calif.	105	67	4	—
Des Moines, Iowa	64	37	3	—	San Francisco, Calif.	167	102	4	6
Duluth, Minn.	29	18	1	3	San Jose, Calif.	43	26	—	—
Kansas City, Kans.	28	13	2	2	Seattle, Wash.	139	79	8	5
Kansas City, Mo.	114	74	6	—	Spokane, Wash.	53	36	1	3
Lincoln, Nebr.	24	17	1	1	Tacoma, Wash.	42	29	—	2
Minneapolis, Minn.	111	69	10	1	Total	11,979	7,038	462	422
Omaha, Nebr.	85	42	12	—	Expected Number	12,070	6,816	547	391
St. Louis, Mo.	206	109	16	7	Cumulative Total (includes reported corrections for previous weeks)	453,471	266,818	16,915	18,518
St. Paul, Minn.	76	54	4	1					
Wichita, Kans.	73	52	3	8					

† Delayed report for week ending Aug. 25, 1973

* Estimate based on average percent of divisional total

HEPATITIS-B — Continued

the patient's mother) admitted to a history of accidental needle puncture. Although inapparent parenteral exposure is the most likely explanation, this hypothesis fails to explain the mode of transmission for the animal caretaker and the patient's mother. Consequently, nonparenteral spread of hepatitis-B must be strongly considered (1). Second, there is evidence that patients on chemotherapy develop high titers of HBAG and may convert from HBAb-positive to HBAG-positive (2). Third, although the presence of HBAb is associated with immunity, 1 recent study (3) noted that a small percentage of antibody-positive individuals became ill with

hepatitis-B following exposure to HBAG-positive blood. It was not clear why antibody failed to confer immunity in this group; reinfection with a different subtype of HBAG or ineffective antibody neutralization were cited as possible reasons.

References

1. Bryan JA, Carr HE, Gregg MB: An outbreak of non-parenterally transmitted hepatitis-B. *JAMA* 223:279-283, 1973
2. Wands JR, Roll J, Chura C, et al: Serial studies of hepatitis-associated antigen and antibody in patients receiving chemotherapy for myeloproliferative and lymphoproliferative disorders. *J Clin Invest* 52(6):87a, 1973 (abstract)
3. Barker LF, Peterson MR, Shulman NR, et al: Antibody responses in viral hepatitis, type B. *JAMA* 223:1005-1008, 1973

FATAL FALCIPARUM MALARIA — Massachusetts, Georgia

Massachusetts

On January 9, 1973, one day after arriving in the United States from Nairobi, Kenya, a previously healthy 65-year-old woman experienced fatigue and malaise, which progressed 2 days later to fever, non-productive cough, and myalgia. When seen in a private physician's office on January 13, her physical examination was unremarkable. She was thought to have influenza since epidemic influenza was then present in the community. On the night of January 14, she collapsed and was taken to a local hospital but died soon after. Both a peripheral smear and pathologic study of many tissues revealed a high concentration of ring forms of *Plasmodium falciparum*. Autopsy also revealed a completely atrophic spleen weighing less than 10 gm.

The patient had traveled in Kenya from December 17 to January 7, 1973, and had made several trips to bush areas in the southern and western parts of the country. From December 23 to 29 she camped out and had heavy mosquito exposure. All members of her party took pyrimethamine prophylaxis (25 mg orally once a week), but it is not known if the patient took the drug regularly.

(Reported by David L. Singer, M.D., Lexington, Massachusetts; and an EIS Officer.)

Georgia

In August 1973, while traveling in Zaire, a previously healthy 20-year-old woman from Atlanta, Georgia, began to feel sick and depressed. She arrived in Atlanta on August 11 and on August 13 returned to work where she was noted to be pale, weak, and thin. She complained of hot flashes and diarrhea with mucus. On August 14, she had to be brought home from work because of illness, and on the night of August 15 she fainted. After recovering consciousness, she was disoriented, pale, and short of breath. She then lapsed into a coma. She was taken to the emergency room of a local hospital but was pronounced dead on arrival.

The patient had departed for her 4-week trip on July 7, traveling directly to Kinshasa and then on to Katanga. She remained in Katanga until August 5 when she flew back to Kinshasa and then on August 8 left on a direct flight to New York.

At no time did she take antimalarial drugs or consult a physician. It is not known whether she had fever during her illness, but there was no history of drug abuse, recent blood transfusion, or previous malaria.

At postmortem examination, there was no rash. Jaundice was present, and there were old ecchymoses but no fresh hemorrhages. There was hepatosplenomegaly, and the lungs were edematous. Examination of histopathologic sections is pending. Thick and thin smears of peripheral blood examined at CDC revealed heavy parasitemia with *P. falciparum*.

(Reported by Saleh A. Zaki, M.D., Fulton County Medical Examiner; J. F. Hackney, M.D., District Director of Public Health, Fulton County Health Department; John E. McCroan, Ph.D., State Epidemiologist, Georgia Department of Human Resources; the General Parasitology Branch, Bureau of Laboratories, the Parasitic Diseases Branch, Bureau of Epidemiology, CDC.)

Editorial Note

Between 1963 and 1972, 42 fatal cases of malaria were reported in the United States; 37 were caused by *P. falciparum*. The death rate for falciparum malaria cases reported to CDC has been only 0.2% for patients treated in military or Veteran's Administration hospitals compared with 5.7% for patients treated in civilian facilities. This difference in death rates is due, in part, to delay in diagnosis of malaria in non-military institutions: for fatal civilian cases a median of 4 days elapsed between date of admission and diagnosis, whereas the median for military cases was less than 1 day.

Malaria transmission occurs in most areas of Kenya and Zaire (1). Both patients were in malarious areas; one took no chemoprophylaxis, the other took pyrimethamine. Resistance to pyrimethamine has been reported for both falciparum and vivax malaria and has been documented in East Africa. In addition, the presence of an atrophic spleen may have contributed to the rapid death of the patient from Massachusetts since lack of a functioning spleen is considered to substantially reduce host resistance to both *P. falciparum* and *P. vivax*.

These cases illustrate that falciparum malaria can present with an acute, fulminating course and can be seen at anytime in nonmalarious areas like the United States. Diagnosis of the diseases requires a high index of suspicion and a careful travel history from every patient presenting with fever of unknown origin.

Reference

1. World Health Organization. *Weekly Epidemiological Record* 48(3):25-45, 1973

INTERNATIONAL NOTES
CHOLERA - Italy

On August 29, 1973, Italian officials notified the World Health Organization (WHO) of an outbreak of cholera in 2 localities south of Naples. The responsible organism was *Vibrio cholerae*, biotype El Tor, serotype Ogawa.

As of September 5, 1973, 60 confirmed cases of cholera from the Naples area and 10 confirmed cases from the vicinity of Bari have been reported to WHO, with a total of 4 deaths. Only 2 provinces, Naples and Bari, are considered to have been infected areas, and, as a result of control measures taken there, there has been a marked decrease in the number of new cases. The possibility remains that persons infected in these areas will be detected or diagnosed in other towns, but transmission outside the uninfected areas has not been confirmed. Epidemiologic investigation by local authorities has tended to support the thesis that infected imported mussels were the origin of the outbreak.

(Reported by the World Health Organization, Weekly Epidemiological Record, Vol. 48, Nos. 35 and 36, 1973.)

Editorial Note

Cholera vaccination is not required for anyone entering the United States from abroad. Cholera vaccination is recommended for travelers to cholera-infected areas to facilitate their subsequent travel to other countries, which may require

presentation of a validated vaccination certificate. A validated certificate for a single primary or booster dose within the past 6 months satisfies international health regulations. Some countries may initiate more stringent requirements, such as evidence of a complete primary series. The list of currently infected areas includes:

Angola	Mauritania
Bangladesh	Niger
Cameroon	Nigeria
Ghana	Philippines
India	Senegal
Indonesia	Thailand
Italy	Tunisia
Khmer Republic	Upper Volta
Liberia	Vietnam (Republic of)
Malaysia	

Erratum, Vol. 22, No. 33, p. 280

In "Table III. Cases of Specified Notifiable Diseases: United States," the years under the headings MALARIA, MEASLES (Rubeola), MENINGOCOCCAL INFECTIONS, TOTAL, MUMPS, and RUBELLA were printed incorrectly. The year 1973 should be substituted for every 1972, and the year 1972 should be substituted for every 1971.

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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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