



Morbidity and Mortality

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EPIDEMIOLOGIC NOTES AND REPORTS
ONCHOCERCIASIS - Washington, D.C.

In January 1971, two unrelated cases of onchocerciasis were reported in Washington, D.C. The case reports are summarized below.

Case 1: On Jan. 13, 1971, a 36-year-old American geologist was admitted to a local hospital with indurated macules on a swollen right shoulder. His right hand and fingers were also swollen and red, but there was no warmth or tenderness. No rash or subcutaneous nodules were present, and there was no lymphangitis. His white blood cell count was 5,521 with 36 percent eosinophils. The patient's stool and duodenal contents contained no ova or parasites. The intradermal test using *Dirofilaria immitis* as the antigen was positive, as was the serologic indirect hemagglutination (IHA) test for filariasis at 1:640. Day and night examinations of Knott's blood con-

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centrations* were repeatedly negative for microfilariae. A skin snip from his right shoulder was also negative; however, a punch skin biopsy from the shoulder revealed a few *Onchocerca volvulus* microfilariae. The patient was treated with 100 mg of diethylcarbamazine which within 1 hour provoked a marked exacerbation of the right upper extremity swelling and a generalized pruritic maculopapular eruption. These reactions lasted 3 days; the dose of diethylcarbamazine was

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

DISEASE	9th WEEK ENDED		MEDIAN 1966 - 1970	CUMULATIVE, FIRST 9 WEEKS		
	March 6, 1971	March 7, 1970		1971	1970	MEDIAN 1966 - 1970
Aseptic meningitis	63	25	29	500	257	257
Brucellosis	2	5	5	12	21	21
Diphtheria	6	15	2	36	78	25
Encephalitis, primary:						
Arthropod-borne & unspecified	19	21	19	196	179	179
Encephalitis, post-infectious	5	8	13	54	64	73
Hepatitis, serum	152	112	57	1,466	1,087	579
Hepatitis, infectious	1,228	1,237	822	11,113	9,834	7,225
Malaria	39	80	59	634	603	411
Measles (rubeola)	2,048	1,348	1,348	14,350	9,011	9,011
Meningococcal infections, total	76	83	83	535	621	717
Civilian	57	62	62	472	576	659
Military	19	21	13	63	45	46
Mumps	4,229	2,704	- - -	29,787	22,613	- - -
Poliomyelitis, total	-	-	-	3	1	2
Paralytic	-	-	-	2	1	1
Rubella (German measles)	1,529	1,922	1,209	8,576	11,145	7,400
Tetanus	2	2	2	10	11	16
Tularemia	1	-	1	19	11	20
Typhoid fever	7	4	4	48	41	41
Typhus, tick-borne (Rky. Mt. spotted fever)	-	-	-	3	-	3
Rabies in animals	75	86	86	654	555	646

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	-	Psittacosis:	6
Botulism:	-	Rabies in Man:	-
Leprosy: Calif.-1, Tex.-1	26	Rubella congenital syndrome:	5
Leptospirosis: Calif.-1	6	Trichinosis: Conn.-3	18
Plague:	-	Typhus, murine:	-

ONCHOCERCIASIS — (Continued from front page)

then progressively increased up to 600 mg per day for 3 weeks.

From December 1966 to April 1969, the patient had worked in Liberia, West Africa, where he reported having been bitten by *Simulium* flies. From July 1969 to December 1970, he had worked in Goiás State, Brazil. In October 1970, his right shoulder, arm, and hand began to swell. Intermittently associated with this were pruritic "broad white bumps resembling mosquito bites" on the shoulder and upper arm. The patient believes he was bitten by *Simulium* flies in Brazil, more so than in Liberia. He returned to Washington, D.C., on Jan. 7, 1971.

Case 2: On Jan. 11, 1971, a 33-year-old U.S. Foreign Service nurse was admitted to the same hospital as Case 1 with a pruritic papular eruption on the right buttock and thigh. She had 14 percent eosinophils, a positive *Dirofilaria immitis* skin test, and filariasis IHA positive at 1:160. Day and night examinations of Knott's blood concentrations were consistently negative for microfilariae, as were skin snips from the involved areas. Stool and duodenal contents were negative for ova or parasites. There were no subcutaneous nodules, and a punch skin biopsy revealed no microfilariae.

The patient had been stationed in Yaounde, Cameroon, West Africa, from December 1968 to December 1970. Her symptoms first developed in November 1970. Because of her

clinical symptoms, residence in an endemic area, the otherwise unexplained eosinophilia, and the positive skin test and serology for filariasis, a clinical diagnosis of onchocerciasis was made. She was treated with 50 mg of diethylcarbamazine, and within 1 hour edema of the right leg and a generalized pruritic maculopapular eruption developed. These reactions subsided after 3 days, and she was continued on diethylcarbamazine for 3 weeks, with increasing doses up to 450 mg per day.

(Reported by Health Services Administration, Department of Human Resources, District of Columbia; Martin S. Wolfe, M.D., Specialist in Tropical Medicine, Office of Medical Services, Department of State, Washington, D.C.; Daniel H. Connor, M.D., and Ronald C. Neafie, M.S., Geographic Pathology Section, Armed Forces Institute of Pathology, Washington, D.C.)

Editorial Note:

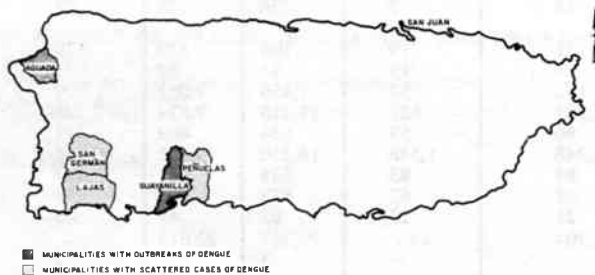
The drug suramin was not used in the treatment of either patient, despite its proven ability to kill adult *Onchocerca*. It was not used because of its potentially severe toxicity, and because both patients' infections were relatively mild. Should symptoms recur in either patient, diethylcarbamazine will be used again before considering the use of suramin.

*This method uses a mixture of 2 ml of whole blood and 10 ml of 2 percent formalin. This solution is centrifuged and decanted. The sediment is then stained and microscopically examined for microfilariae.

DENGUE — Puerto Rico, 1970

There were no confirmed cases of dengue in Puerto Rico in the first half of 1970, but two outbreaks and some scattered cases of dengue have been diagnosed clinically and confirmed serologically since August 1970 (Figure 1).

Figure 1
GEOGRAPHIC DISTRIBUTION OF REPORTED DENGUE CASES
PUERTO RICO — 1970



An outbreak of dengue occurred between August and October in Aguada, a small town in the northwestern corner of Puerto Rico. Sixty-seven cases were officially reported, though an estimated 200-400 may actually have occurred. Most of the patients lived in two remote, rugged, sparsely populated barrios (communities) that were not affected in the 1969 island-wide dengue epidemic. Examination of paired sera from Aguada showed confirmatory rises in hemagglutination inhibiting and/or complement fixing antibody titers. A strain of dengue type 2 virus was isolated from one patient.

Late in September 1970, an outbreak of dengue began in Guayanilla, a town in southern Puerto Rico. The outbreak was largely confined to the town itself and a nearby community. Only six cases were reported, but the disease was diagnosed correctly only as the outbreak was ending in late December. As many as several hundred cases may have occurred. The diagnosis was confirmed serologically, and antibody responses were consistent with dengue type 2 infections.

Scattered cases were serologically confirmed in three towns in southwestern Puerto Rico (Lajas, San Germán, and Peñuelas) between October and December, but no large outbreaks were recognized in these communities. No new cases of dengue have been confirmed so far in 1971, but active surveillance is continuing.

The first reported case of dengue in Puerto Rico occurred in 1915 (1), and dengue-like illness was reported again in 1918 and 1945 (2,3). The first confirmed cases in the island were reported in 1963 when strains of dengue type 3 virus were isolated from Puerto Ricans in an epidemic that swept the Caribbean (4). Another epidemic occurred throughout the Caribbean in 1968-69, and 16,348 cases were reported from Puerto Rico in 1969. Strains of dengue type 2 virus were isolated from patients in this epidemic. The South Region was least affected, with a reported attack rate of only 89 cases per 100,000 population, while the attack rates in the other four regions ranged from 167 per 100,000 in the Northeast, to 1,873 in the North.

Four of the five towns with confirmed dengue in 1970, Peñuelas, Guayanilla, Lajas, and San Germán, are in the

South Region. The fifth town, Aguada, had most of its cases in two isolated barrios that had escaped the epidemic in 1969. Thus, all of the confirmed cases of dengue in 1970 occurred in areas that were minimally affected by the 1969 dengue type 2 epidemic.

Although a few clinically diagnosed cases were reported between the 1963 and 1969 epidemics, this is the first report of serologically confirmed cases with a virus isolation from Puerto Rico in a post-epidemic period.

(Reported by Rafael Correa Coronas, M.D., Auxiliary Secretary of Health for Preventive Medicine Services, Department

of Health, San Juan, Puerto Rico; the Arbovirus Unit, Virology Section, Laboratory Division, CDC; and an EIS Officer.)

References:

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2. Report of the Commissioner of Health of Puerto Rico, 1919
3. Díaz-Rivera RS: A bizarre type of seven-day fever clinically indistinguishable from dengue. *Bol Asoc Med P Rico* 38:75-80, 1946
4. Russell PK, Buescher EL, McCown JM, Ordóñez J: Recovery of dengue viruses from patients during epidemics in Puerto Rico and East Pakistan. *Amer J Trop Med* 15:573-579, 1966

FATAL MALARIA — Texas

On Nov. 4, 1970, a 72-year-old woman from Dallas, Texas, returned home after a 5-week camera safari in South and East Africa. The next day, she experienced myalgia, malaise, and nausea, followed by fever and progressive weakness. She was seen by a physician who diagnosed a respiratory illness and treated her with antibiotics. Her symptoms persisted, however, and on November 10, she had a shaking chill.

On November 11, the patient was admitted to a local hospital, febrile and acutely ill. Blood sugar and electrolytes were normal, SGOT was 44 units, BUN 49 mg percent, total bilirubin 3.2 mg percent. A chest X-ray showed mild cardiomegaly. The initial diagnosis was fever of undetermined etiology, and the patient received an antiemetic and analgesics. On November 12, she was afebrile, but when her temperature spiked to 105° F. the next morning, accompanied by a shaking chill, she became comatose. At that time, *Plasmodium falciparum* parasites were seen on a peripheral blood smear. She was treated with quinine hydrochloride, followed by chloroquine phosphate, pyrimethamine, and sulfadiazine. She subsequently experienced hypotension, jaundice, thrombocytopenia, hematemesis, and cyanosis. Consumptive coagu-

lation defect was suspected, and she was treated with dexamethasone, anticoagulants, digitalis, and blood transfusions. Her condition continued to deteriorate, however, and she died on November 14. A review of the peripheral blood smears obtained on admission showed *P. falciparum* trophozoites.

Postmortem examination revealed a swollen brain with moderate uncus herniation. Microscopic examination of the brain showed multiple focal hemorrhages and congested blood vessels which were filled with numerous parasitized red blood cells. There were heavy pigment deposits in the liver and spleen, and the lungs had moderate pulmonary edema.

(Reported by George T. DeVaney, M.D., attending physician, Van Q. Telford, M.D., Pathologist, Presbyterian Hospital, Dallas, Texas; David N. Gilbert, M.D., Fellow in Infectious Disease, Department of Internal Medicine, University of Texas Southwestern Medical School; Hal J. Dewlett, M.D., Director of City of Dallas Public Health Department; R. F. Sowell, Jr., M.D., Medical Consultant, and M. S. Dickerson, M.D., Chief, Communicable Disease Services, Texas State Department of Health.)

SHIGA DYSENTERY — California

On Aug. 7, 1970, a 1½-year-old girl from Los Angeles, California, became ill with fever and convulsions. The next day, she had diarrhea and severe abdominal cramps. On August 11, her stools were noted to be "bloody and slimy," and she was hospitalized. Cultures of stool specimens yielded *Shigella dysenteriae* type 1. The patient recovered uneventfully after treatment with ampicillin and intravenous fluids. While she was in the hospital, her brother also became ill with diarrhea, fever, and cramps, but his symptoms cleared within 24 hours without treatment.

The patient had never been outside of the United States. Her father works in San Diego, and his job includes cleaning toilets. He makes frequent trips to Tijuana, Mexico, and visits the family only on weekends. He had several attacks of diarrhea before his daughter became ill. The patient's babysitter had also been to Mexico, but this was 2 months before the patient's illness.

(Reported by Karl A. Western, M.D., Resident Supervisor, Communicable Disease Unit, Los Angeles County Hospital;

Robert Murray, Epidemiologic Analyst, Ichiro Kamei, M.D., Chief of Communicable Diseases, Los Angeles County Health Department; and an EIS Officer.)

Editorial Note:

This is the second case of indigenous acquisition of Shiga dysentery attributable to the Middle American epidemic. The first was in a 14-year-old girl from New Mexico (MMWR, Vol. 19, No. 38). This is also the second case in which Tijuana was thought to be the source of infection.

This case illustrates the bi-phasic nature of Shiga dysentery. The illness often begins with fever, abdominal pain, and non-bloody diarrhea and may progress to true dysentery characterized by the absence of fever and frequent bloody-mucopurulent stools of small quantity with tenesmus. Ampicillin has proven quite effective in most cases, while tetracycline and chloramphenicol have been ineffective. Without appropriate treatment, the disease can be prolonged and debilitating.

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TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED
March 6, 1971 and March 7, 1970 (9th Week)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	DIPH- THERIA	ENCEPHALITIS			HEPATITIS			MALARIA	
				Primary including unsp. cases		Post In- fectious	Serum	Infectious		1971	Cum. 1971
				1971	1970	1971		1971	1970		
UNITED STATES.....	63	2	6	19	21	5	152	1,228	1,237	39	634
NEW ENGLAND.....	1	-	-	1	3	1	8	84	81	-	21
Maine.....	-	-	-	-	-	-	-	9	3	-	1
New Hampshire.....	-	-	-	-	-	-	-	2	15	-	1
Vermont.....	-	-	-	-	-	-	-	10	1	-	1
Massachusetts.....	1	-	-	-	2	-	1	26	40	-	13
Rhode Island.....	-	-	-	-	1	-	2	19	14	-	3
Connecticut.....	-	-	-	1	-	1	5	18	8	-	2
MIDDLE ATLANTIC.....	8	-	-	2	3	-	72	217	242	4	68
New York City.....	3	-	-	-	2	-	46	83	73	-	4
New York, Up-State...	-	-	-	1	-	-	10	28	37	2	14
New Jersey...*	5	-	-	1	1	-	11	43	51	-	33
Pennsylvania.....	-	-	-	-	-	-	5	63	81	2	17
EAST NORTH CENTRAL.....	2	-	-	2	9	-	11	202	202	4	29
Ohio...*	-	-	-	1	3	-	-	57	59	2	7
Indiana.....	-	-	-	-	-	-	-	6	25	-	-
Illinois.....	1	-	-	1	4	-	-	23	40	-	6
Michigan.....	1	-	-	-	2	-	11	116	70	2	9
Wisconsin.....	-	-	-	-	-	-	-	-	8	-	7
WEST NORTH CENTRAL.....	-	1	-	-	-	2	2	76	51	5	57
Minnesota...*	-	-	-	-	-	2	-	7	10	-	5
Iowa...*	-	-	-	-	-	-	-	12	7	-	6
Missouri.....	-	-	-	-	-	-	2	19	15	2	13
North Dakota.....	-	-	-	-	-	-	-	3	-	-	-
South Dakota.....	-	-	-	-	-	-	-	7	-	-	-
Nebraska.....	-	-	-	-	-	-	-	-	2	-	3
Kansas.....	-	1	-	-	-	-	-	28	17	3	30
SOUTH ATLANTIC.....	7	1	-	4	2	2	13	153	148	6	85
Delaware.....	-	-	-	1	-	-	-	1	3	-	-
Maryland.....	-	-	-	1	-	-	5	30	9	1	20
Dist. of Columbia...	-	-	-	-	-	-	-	-	-	-	-
Virginia...*	-	1	-	2	2	-	1	30	13	-	8
West Virginia.....	-	-	-	-	-	-	-	7	8	-	3
North Carolina.....	1	-	-	-	-	-	7	16	23	-	30
South Carolina.....	2	-	-	-	-	-	-	5	10	-	4
Georgia.....	-	-	-	-	-	-	-	11	36	-	6
Florida.....	4	-	-	-	-	2	-	53	46	5	14
EAST SOUTH CENTRAL.....	28	-	1	3	-	-	4	83	81	2	90
Kentucky.....	2	-	-	1	-	-	-	42	37	-	78
Tennessee.....	16	-	-	1	-	-	4	24	24	-	-
Alabama...*	10	-	1	-	-	-	-	14	10	2	12
Mississippi.....	-	-	-	-	-	-	-	3	10	-	-
WEST SOUTH CENTRAL.....	7	-	-	1	-	-	6	109	73	9	120
Arkansas.....	-	-	-	-	-	-	-	2	4	-	4
Louisiana...*	-	-	-	-	-	-	1	11	8	-	12
Oklahoma...*	2	-	-	1	-	-	-	14	8	6	29
Texas.....	5	-	-	-	-	-	5	82	53	3	75
MOUNTAIN.....	-	-	-	-	2	-	6	85	73	2	45
Montana.....	-	-	-	-	2	-	-	5	2	-	1
Idaho.....	-	-	-	-	-	-	-	11	-	-	-
Wyoming.....	-	-	-	-	-	-	1	2	-	-	1
Colorado.....	-	-	-	-	-	-	1	15	33	-	31
New Mexico.....	-	-	-	-	-	-	-	5	12	2	4
Arizona.....	-	-	-	-	-	-	-	19	9	-	6
Utah.....	-	-	-	-	-	-	4	19	5	-	2
Nevada.....	-	-	-	-	-	-	-	9	12	-	-
PACIFIC.....	10	-	5	6	2	-	30	219	286	7	119
Washington.....	-	-	-	-	1	-	-	22	32	-	1
Oregon.....	-	-	-	1	-	-	-	19	26	-	6
California.....	10	-	5	5	1	-	30	163	222	7	93
Alaska.....	-	-	-	-	-	-	-	9	3	-	1
Hawaii.....	-	-	-	-	-	-	-	6	3	-	18
Puerto Rico...*	2	-	-	-	-	-	1	14	24	-	2
Virgin Islands.....	-	-	-	-	-	-	-	-	-	-	-

*Delayed reports: Aseptic meningitis: Okla. 1

Encephalitis, primary: N.J. delete 1 (1970), Okla. 1 (1970)

Hepatitis, serum: N.J. delete 1

Hepatitis, infectious: N.J. delete 7, Ohio delete 3, Va. 1, Ala. 1, La. delete 1, Okla. 3 (1970) 4 (1971), P.R. 3 (1970)

Malaria: Minn. 2, Iowa 2, Okla. 3

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED

March 6, 1971 and March 7, 1970 (9th Week) - Continued

AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		POLIOMYELITIS		
	Cumulative			Cumulative				Cum.	Total	Paralytic	
	1971	1971	1970	1971	1971	1970	1971	1971	1971	1971	Cum. 1971
UNITED STATES.....	2,048	14,350	9,011	76	535	621	4,229	29,787	-	-	2
NEW ENGLAND.....	91	457	124	3	29	29	154	1,989	-	-	-
Maine...*	36	256	-	-	5	-	9	365	-	-	-
New Hampshire.....	-	16	9	-	1	3	8	199	-	-	-
Vermont.....	-	3	1	-	-	3	-	-	-	-	-
Massachusetts.....	41	141	76	2	12	10	34	497	-	-	-
Rhode Island.....	-	8	12	-	2	3	31	500	-	-	-
Connecticut.....	14	33	26	1	9	10	72	428	-	-	-
MIDDLE ATLANTIC.....	272	1,617	1,408	5	66	99	249	2,207	-	-	-
New York City.....	113	953	198	-	11	26	26	321	-	-	-
New York, Up-State...	12	171	56	2	22	20	NN	NN	-	-	-
New Jersey...*	12	91	647	-	13	28	98	685	-	-	-
Pennsylvania.....	135	402	507	3	20	25	125	1,201	-	-	-
EAST NORTH CENTRAL.....	478	2,681	2,166	13	56	83	1,847	11,751	-	-	-
Ohio...*	85	1,106	676	5	21	42	252	2,175	-	-	-
Indiana.....	103	148	94	-	4	8	324	1,625	-	-	-
Illinois.....	173	771	1,075	5	14	16	195	1,060	-	-	-
Michigan.....	46	175	169	3	14	15	578	2,977	-	-	-
Wisconsin.....	71	481	152	-	3	2	498	3,914	-	-	-
WEST NORTH CENTRAL.....	159	839	1,136	10	54	28	393	1,754	-	-	-
Minnesota.....	9	30	4	1	8	4	107	318	-	-	-
Iowa.....	78	272	24	-	2	3	255	1,014	-	-	-
Missouri.....	44	368	187	8	21	21	12	92	-	-	-
North Dakota.....	17	56	45	-	1	-	9	129	-	-	-
South Dakota.....	9	69	36	-	3	-	6	91	-	-	-
Nebraska...*	-	8	801	1	5	-	4	20	-	-	-
Kansas.....	2	36	39	-	14	-	-	90	-	-	-
SOUTH ATLANTIC.....	156	1,633	1,230	13	70	138	272	2,216	-	-	-
Delaware.....	2	8	96	-	-	2	2	46	-	-	-
Maryland.....	4	22	198	2	9	11	16	244	-	-	-
Dist. of Columbia...	1	3	238	-	1	1	3	41	-	-	-
Virginia.....	29	591	232	3	7	8	30	293	-	-	-
West Virginia...*	18	92	56	-	2	1	111	643	-	-	-
North Carolina.....	65	483	151	-	11	29	NN	NN	-	-	-
South Carolina.....	21	204	59	2	6	6	41	244	-	-	-
Georgia.....	-	19	2	3	9	24	-	1	-	-	-
Florida.....	16	211	198	3	25	56	69	704	-	-	-
EAST SOUTH CENTRAL.....	194	2,472	118	6	37	38	267	2,445	-	-	-
Kentucky.....	71	1,037	68	1	8	12	63	869	-	-	-
Tennessee.....	29	207	25	3	15	18	159	1,184	-	-	-
Alabama...*	81	478	12	1	9	5	42	358	-	-	-
Mississippi.....	13	750	13	1	5	3	3	34	-	-	-
WEST SOUTH CENTRAL.....	513	3,487	1,991	4	45	102	319	2,001	-	-	1
Arkansas.....	6	32	11	-	1	9	-	16	-	-	-
Louisiana...*	-	392	8	-	16	24	-	13	-	-	-
Oklahoma.....	43	401	61	1	5	8	12	57	-	-	-
Texas.....	464	2,662	1,911	3	23	61	307	1,915	-	-	1
MOUNTAIN.....	83	489	371	1	16	7	219	1,221	-	-	-
Montana...*	18	120	9	-	-	-	16	172	-	-	-
Idaho.....	6	65	5	-	-	-	6	89	-	-	-
Wyoming.....	2	7	-	-	-	-	-	47	-	-	-
Colorado.....	29	103	9	-	4	3	36	305	-	-	-
New Mexico.....	21	110	62	-	-	-	36	157	-	-	-
Arizona.....	5	60	278	-	6	2	116	395	-	-	-
Utah.....	2	24	4	1	5	2	9	56	-	-	-
Nevada.....	-	-	4	-	1	-	-	-	-	-	-
PACIFIC.....	102	675	467	21	162	97	509	4,203	-	-	1
Washington.....	23	176	35	1	6	14	220	2,134	-	-	-
Oregon.....	2	66	70	1	12	8	55	428	-	-	1
California.....	77	413	340	19	142	74	196	1,390	-	-	-
Alaska.....	-	7	1	-	-	-	-	29	-	-	-
Hawaii.....	-	13	21	-	2	1	38	222	-	-	-
Puerto Rico.....	3	41	471	-	-	2	23	167	-	-	-
Virgin Islands.....	-	2	3	-	-	-	-	-	-	-	-

*Delayed reports: Measles: Me. 6, Mass. delete 5, N.J. add 1 (1970) delete 1 (1971), Ohio delete 1, W. Va. delete 6, La. delete 2
Meningococcal infections: Ala. 1
Mumps: Me. 3, Nebr. 1, Mont. 66

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TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED

March 6, 1971 and March 7, 1970 (9th Week) - Continued

AREA	RUBELLA		TETANUS		TULAREMIA		TYPHOID FEVER		TYPHUS FEVER TICK-BORNE (Rky. Mt. Spotted)		RABIES IN ANIMALS	
	1971	Cum. 1971	1971	Cum. 1971	1971	Cum. 1971	1971	Cum. 1971	1971	Cum. 1971	1971	Cum. 1971
UNITED STATES.....	1,529	8,576	2	10	1	19	7	48	-	3	75	654
NEW ENGLAND.....	53	313	-	-	-	-	-	1	-	-	5	35
Maine.....	9	78	-	-	-	-	-	-	-	-	5	30
New Hampshire.....	-	4	-	-	-	-	-	-	-	-	-	-
Vermont.....	2	8	-	-	-	-	-	-	-	-	-	5
Massachusetts.....	32	152	-	-	-	-	-	1	-	-	-	-
Rhode Island.....	4	21	-	-	-	-	-	-	-	-	-	-
Connecticut.....	6	50	-	-	-	-	-	-	-	-	-	-
MIDDLE ATLANTIC.....	102	451	2	4	-	-	1	5	-	-	3	43
New York City.....	10	72	2	4	-	-	-	3	-	-	-	-
New York, Up-State..	28	96	-	-	-	-	-	1	-	-	3	42
New Jersey.....	24	83	-	-	-	-	-	-	-	-	-	-
Pennsylvania.....	40	200	-	-	-	-	1	1	-	-	-	1
EAST NORTH CENTRAL.....	288	1,703	-	-	-	1	-	3	-	-	5	46
Ohio.....	31	270	-	-	-	1	-	2	-	-	1	8
Indiana.....	62	397	-	-	-	-	-	-	-	-	-	2
Illinois.....	53	247	-	-	-	-	-	-	-	-	1	12
Michigan.....	79	511	-	-	-	-	-	1	-	-	2	10
Wisconsin.....	63	278	-	-	-	-	-	-	-	-	1	14
WEST NORTH CENTRAL.....	49	425	-	-	-	1	-	-	-	-	8	156
Minnesota.....	4	48	-	-	-	-	-	-	-	-	-	29
Iowa.....	38	158	-	-	-	-	-	-	-	-	1	56
Missouri.....	3	105	-	-	-	1	-	-	-	-	1	32
North Dakota.....	-	23	-	-	-	-	-	-	-	-	5	29
South Dakota.....	-	14	-	-	-	-	-	-	-	-	-	-
Nebraska.....	4	17	-	-	-	-	-	-	-	-	-	-
Kansas.....	-	60	-	-	-	-	-	-	-	-	1	10
SOUTH ATLANTIC.....	48	683	-	4	-	12	-	13	-	1	12	83
Delaware.....	-	3	-	-	-	-	-	1	-	-	-	-
Maryland.....	9	22	-	-	-	3	-	3	-	-	-	-
Dist. of Columbia..	-	1	-	-	-	-	-	-	-	-	-	-
Virginia.....	4	68	-	-	-	5	-	1	-	-	2	19
West Virginia.....	13	95	-	-	-	-	-	1	-	-	6	41
North Carolina.....	2	9	-	-	-	4	-	1	-	1	-	-
South Carolina.....	4	130	-	-	-	-	-	-	-	-	-	-
Georgia.....	-	-	-	-	-	-	-	1	-	-	2	12
Florida.....	16	355	-	4	-	-	-	5	-	-	2	11
EAST SOUTH CENTRAL.....	112	700	-	2	-	4	1	5	-	1	11	82
Kentucky.....	42	350	-	-	-	2	1	2	-	-	7	45
Tennessee.....	65	270	-	1	-	2	-	1	-	-	1	20
Alabama.....	5	39	-	1	-	-	3	2	-	-	3	17
Mississippi.....	-	41	-	-	-	-	-	-	-	1	-	-
WEST SOUTH CENTRAL.....	384	1,253	-	-	-	-	2	5	-	1	20	129
Arkansas.....	2	11	-	-	-	-	-	-	-	-	-	12
Louisiana.....	-	35	-	-	-	-	1	3	-	-	1	6
Oklahoma.....	1	25	-	-	-	-	-	-	1	-	12	66
Texas.....	381	1,182	-	-	-	-	1	2	-	-	7	45
MOUNTAIN.....	26	834	-	-	1	1	-	2	-	-	-	1
Montana.....	4	30	-	-	1	1	-	-	-	-	-	-
Idaho.....	1	15	-	-	-	-	-	-	-	-	-	-
Wyoming.....	-	550	-	-	-	-	-	-	-	-	-	-
Colorado.....	5	97	-	-	-	-	-	-	-	-	-	-
New Mexico.....	4	43	-	-	-	-	-	-	-	-	-	-
Arizona.....	11	83	-	-	-	-	-	2	-	-	-	1
Utah.....	1	16	-	-	-	-	-	-	-	-	-	-
Nevada.....	-	-	-	-	-	-	-	-	-	-	-	-
PACIFIC.....	467	2,214	-	-	-	-	3	14	-	-	11	79
Washington.....	45	388	-	-	-	-	-	-	-	-	-	-
Oregon.....	38	177	-	-	-	-	-	-	-	-	-	-
California.....	373	1,568	-	-	-	-	3	14	-	-	9	56
Alaska.....	7	23	-	-	-	-	-	-	-	-	2	23
Hawaii.....	4	58	-	-	-	-	-	-	-	-	-	-
Puerto Rico.....	-	-	-	-	-	-	-	-	-	-	-	10
Virgin Islands.....	-	-	-	-	-	-	-	-	-	-	-	-

*Delayed reports: Rubella: Nebr. 2
Rabies in animals: Alaska 12 (1970) 21 (1971)

Morbidity and Mortality Weekly Report

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Week No. 9 TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDED March 6, 1971

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

Area	All Causes		Pneumonia and Influenza All Ages	Under 1 year All Causes	Area	All Causes		Pneumonia and Influenza All Ages	Under 1 year All Causes
	All Ages	65 years and over				All Ages	65 years and over		
NEW ENGLAND:	727	476	60	26	SOUTH ATLANTIC:	1,201	697	63	42
Boston, Mass.-----	211	126	20	6	Atlanta, Ga.-----	125	59	10	10
Bridgeport, Conn.-----	53	45	10	1	Baltimore, Md.-----	212	115	8	7
Cambridge, Mass.-----	30	23	8	1	Charlotte, N. C.-----	53	28	—	4
Fall River, Mass.-----	41	26	1	2	Jacksonville, Fla.-----	76	46	10	6
Hartford, Conn.-----	63	34	5	6	Miami, Fla.-----	128	74	1	—
Lowell, Mass.-----	23	14	—	1	Norfolk, Va.-----	55	28	—	2
Lynn, Mass.-----	17	13	3	—	Richmond, Va.-----	91	51	9	2
New Bedford, Mass.-----	32	24	2	1	Savannah, Ga.-----	40	24	5	—
New Haven, Conn.-----	54	32	2	4	St. Petersburg, Fla.-----	101	97	6	—
Providence, R. I.-----	50	30	—	2	Tampa, Fla.-----	88	56	5	4
Somerville, Mass.-----	7	2	—	—	Washington, D. C.-----	196	90	7	6
Springfield, Mass.-----	49	40	7	—	Wilmington, Del.-----	36	29	2	1
Waterbury, Conn.-----	34	26	—	—					
Worcester, Mass.-----	63	41	2	2	EAST SOUTH CENTRAL:	722	387	39	31
MIDDLE ATLANTIC:	3,629	2,232	185	135	Birmingham, Ala.-----	105	60	—	4
Albany, N. Y.-----	48	25	2	1	Chattanooga, Tenn.-----	49	21	7	4
Allentown, Pa.-----	36	28	4	—	Knoxville, Tenn.-----	51	32	7	—
Buffalo, N. Y.-----	165	100	6	8	Louisville, Ky.-----	149	86	13	5
Camden, N. J.-----	35	20	2	3	Memphis, Tenn.-----	137	75	2	6
Elizabeth, N. J.-----	41	20	—	3	Mobile, Ala.-----	66	29	3	4
Erie, Pa.-----	44	29	3	3	Montgomery, Ala.-----	60	36	7	3
Jersey City, N. J.-----	73	64	6	1	Nashville, Tenn.-----	105	48	—	5
Newark, N. J.-----	66	34	8	4	WEST SOUTH CENTRAL:	1,278	689	56	58
New York City, N. Y. I-----	1,882	1,142	100	73	Austin, Tex.-----	35	14	5	1
Paterson, N. J.-----	54	33	8	—	Baton Rouge, La.-----	60	30	—	2
Philadelphia, Pa.-----	591	369	8	16	Corpus Christi, Tex.-----	43	16	—	4
Pittsburgh, Pa.-----	195	111	13	10	Dallas, Tex.-----	186	83	4	13
Reading, Pa.-----	46	27	2	2	El Paso, Tex.-----	54	34	1	8
Rochester, N. Y.-----	132	88	10	3	Fort Worth, Tex.-----	90	51	5	7
Schenectady, N. Y.-----	28	19	5	1	Houston, Tex.-----	252	131	7	1
Scranton, Pa.-----	41	25	2	1	Little Rock, Ark.-----	49	26	5	3
Syracuse, N. Y.-----	59	40	1	5	New Orleans, La.-----	161	95	7	3
Trenton, N. J.-----	46	23	3	—	Oklahoma City, Okla.-----	86	54	5	3
Utica, N. Y.-----	21	16	1	1	San Antonio, Tex.-----	129	78	4	6
Yonkers, N. Y.-----	26	19	1	—	Shreveport, La.-----	64	32	9	5
					Tulsa, Okla.-----	69	45	4	2
EAST NORTH CENTRAL:	2,741	1,589	84	132	MOUNTAIN:	534	328	14	19
Akron, Ohio-----	71	43	—	3	Albuquerque, N. Mex.-----	49	29	4	2
Canton, Ohio-----	36	20	5	4	Colorado Springs, Colo.-----	28	15	1	2
Chicago, Ill.-----	728	415	21	32	Denver, Colo.-----	111	75	2	4
Cincinnati, Ohio-----	178	116	4	10	Ogden, Utah-----	32	23	2	—
Cleveland, Ohio-----	197	97	3	17	Phoenix, Ariz.-----	136	75	—	5
Columbus, Ohio-----	188	107	—	13	Pueblo, Colo.-----	19	15	2	—
Dayton, Ohio-----	109	66	2	8	Salt Lake City, Utah-----	76	47	—	6
Detroit, Mich.-----	367	186	14	9	Tucson, Ariz.-----	83	49	3	—
Evansville, Ind.-----	26	21	1	—	PACIFIC:	1,647	963	38	73
Flint, Mich.-----	56	26	—	7	Berkeley, Calif.-----	26	17	—	—
Fort Wayne, Ind.-----	55	31	3	8	Fresno, Calif.-----	47	30	3	1
Gary, Ind.-----	54	30	4	3	Glendale, Calif.-----	30	23	1	1
Grand Rapids, Mich.-----	54	39	6	2	Honolulu, Hawaii-----	54	23	1	2
Indianapolis, Ind.-----	153	89	3	6	Long Beach, Calif.-----	100	60	3	3
Madison, Wis.-----	40	24	2	1	Los Angeles, Calif.-----	540	313	16	22
Milwaukee, Wis.-----	118	81	—	—	Oakland, Calif.-----	70	36	3	2
Peoria, Ill.-----	28	18	—	—	Pasadena, Calif.-----	43	28	1	1
Rockford, Ill.-----	38	18	2	2	Portland, Oreg.-----	141	87	3	12
South Bend, Ind.-----	42	26	6	2	Sacramento, Calif.-----	63	36	1	3
Toledo, Ohio-----	133	91	6	3	San Diego, Calif.-----	112	57	2	7
Youngstown, Ohio-----	70	45	2	2	San Francisco, Calif.-----	172	99	1	7
WEST NORTH CENTRAL:	900	557	40	40	San Jose, Calif.-----	36	21	3	—
Des Moines, Iowa-----	72	49	7	1	Seattle, Wash.-----	127	78	—	10
Duluth, Minn.-----	22	18	3	—	Spokane, Wash.-----	46	28	—	—
Kansas City, Kans.-----	33	16	4	2	Tacoma, Wash.-----	40	27	—	2
Kansas City, Mo.-----	141	100	6	3					
Lincoln, Nebr.-----	24	17	3	—	Total	13,379	7,918	579	556
Minneapolis, Minn.-----	100	61	1	5	Expected Number	13,503	7,915	561	546
Omaha, Nebr.-----	90	58	—	2	Cumulative Total (includes reported corrections for previous weeks)	126,703	74,328	5,369	5,771
St. Louis, Mo.-----	245	138	8	13					
St. Paul, Minn.-----	91	53	3	8					
Wichita, Kans.-----	82	47	5	6					
Las Vegas, Nev.*	19	14	—	1					

*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.

INTERNATIONAL NOTES
QUARANTINE MEASURES

*Changes in the "Supplement - Vaccination Certificate
Requirements for International Travel,"
MMWR, Vol. 19, No. 21*

In the present outbreak of cholera *el tor*, the vaccination requirements of countries have frequently been modified according to the evolution of the situation. Most of the require-

ments listed below are provisional, but they complete the information given in Vaccination Certificate Requirements for International Travel.

Additional Cholera Vaccination Requirements

Turkey

And from Iran, Syria, United Arab Republic.*

Union of Soviet Socialist Republics

And from Ethiopia, Guinea, Israel, Jordan, Iraq, Kenya, Kuwait, Lebanon, Libya, Saudi Arabia, Sudan, Syria, Tunisia, United Arab Republic, United Republic of Tanzania, Upper Volta.*

United Arab Republic

And from Brunei, Guinea, Hong Kong, Macao, Malaysia.*

Venezuela

And from Guinea, Iran, Iraq, United Arab Republic.*

Yemen, Southern

And from Iran, Iraq, Jordan, Lebanon, Syria, Turkey, United Arab Republic, USSR.*

Yugoslavia

And from Guinea, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Saudi Arabia, Syria, Tunisia, Turkey, United Arab Republic.*

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Director, Center for Disease Control
Director, Epidemiology Program, CDC
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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.

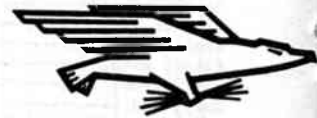
In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks for case investigations of current interest to health officials.

Address all correspondence to

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