



Morbidity and Mortality

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

HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

EPIDEMIOLOGIC NOTES AND REPORTS

TRANSFUSION MALARIA - Seattle, Washington

On May 12, 1968, a 54-year-old white American woman entered a hospital in Seattle, Washington, for insertion of an aorto-iliac bypass graft. On May 13, the day of her operation, she received 7 units of whole blood. Her post-operative course was uncomplicated, and she was discharged on May 22. On May 26, she developed low abdominal pain, nausea, vomiting, and fever, and was rehospitalized with a temperature of 104°F. During the next 8 days, she experienced daily temperature spikes up to 105°F. On June 4, numerous trophozoites of *Plasmodium falciparum* were identified on a routine differential blood smear. The patient gave no history of malaria, travel in malarious areas, or usage of commonly shared syringes.

CONTENTS

Epidemiologic Notes and Reports
 Transfusion Malaria - Seattle, Washington 297
 Subhuman Primate-Associated Hepatitis - New Jersey . . 298
 Tuberculosis - Greene County, Alabama 298
 Follow-Up Suspect Wound Botulism - California 304
 Current Trends
 Meningococcal Infections - United States 299
 International Notes
 Quarantine Measures 304

On June 4, the patient received 1 gm of chloroquine phosphate orally, followed by 500 mg on each of the next 6 days. She became afebrile on June 7; blood smears taken at this time revealed only a few trophozoites of *P. falciparum*, and no trophozoites were detected on June 10. Between May 27 and June 14, her hematocrit decreased from
 (Continued on page 298)

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

DISEASE	32nd WEEK ENDED		MEDIAN 1963 - 1967	CUMULATIVE, FIRST 32 WEEKS		
	August 10, 1968	August 12, 1967		1968	1967	MEDIAN 1963 - 1967
Aseptic meningitis	186	102	60	1,587	1,281	1,026
Brucellosis	2	3	8	127	163	163
Diphtheria	1	1	1	100	62	108
Encephalitis, primary:						
Arthropod-borne & unspecified	44	53	---	597	884	---
Encephalitis, post-infectious	7	28	---	333	585	---
Hepatitis, serum	93	42	587	2,584	1,299	24,826
Hepatitis, infectious	840	646	4	26,824	23,535	63
Malaria	30	28	4	1,296	1,213	237,409
Measles (rubeola)	202	222	921	19,038	56,848	1,832
Meningococcal infections, total	29	16	25	1,870	1,571	---
Civilian	27	15	---	1,695	1,462	---
Military	2	1	---	175	109	---
Mumps	714	---	---	121,949	---	---
Poliomyelitis, total	1	1	3	33	21	59
Paralytic	1	1	3	33	18	53
Rubella (German measles)	319	187	---	42,494	39,036	---
Streptococcal sore throat & scarlet fever	4,499	4,710	4,190	283,590	305,796	275,262
Tetanus	3	7	7	88	131	152
Tularemia	---	7	7	123	109	155
Typhoid fever	10	9	10	196	244	244
Typhus, tick-borne (Rky. Mt. spotted fever)	15	19	12	162	187	162
Rabies in animals	64	74	69	2,262	2,814	2,814

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	3	Rabies in man:	---
Botulism:	4	Rubella, Congenital Syndrome:	4
Leptospirosis: Ga.-1, La.-1	21	Trichinosis: N.J.-2, R.I.-1, W. Va.-2	48
Plague:	1	Typhus, murine: Tex.-4	18
Psittacosis: Calif.-1	31		

TRANSFUSION MALARIA — (Continued from front page)

47 to 26 percent and her BUN increased from 9 to 45 mg percent. Both parameters subsequently returned to normal, and the patient was discharged from the hospital in early July.

The donors of the 7 units of blood were contacted, and only one had ever traveled in a malarious area. This man, a 22-year-old American Negro, had served in the U.S. Army in Vietnam from July 29, 1966, until March 31, 1967, when he returned to the United States. While in Vietnam he had taken a combination tablet containing 300 mg chloroquine base and 45 mg primaquine base once weekly in addition to 25 mg diamino-diphenylsulfone (DDS) daily. He continued his chloroquine-primaquine tablets for 6 weeks after returning to the United States. He denied a history of malaria or commonly shared syringes and had experienced no unexplained illnesses except for a 3-day febrile episode in late May 1967 which resolved spontaneously. On May 2, 1968, 13 months after returning from Vietnam, he donated the infected blood. Serum was obtained from this donor on June 14, 1968, and analyzed for the presence of antibodies to malaria by the indirect fluorescent antibody technique; serum dilution end points were 1:80 against *P. falciparum*, 1:40 against *P. ovale*, and 1:20 against both *P. vivax* and *P. malariae*. These values are consistent with a recent *P. falciparum* infection. Also

on June 14, this donor's hemoglobin electrophoresis was normal, but the red cells were deficient in glucose-6-phosphate dehydrogenase. Blood smears obtained from the donor on July 2 were free of malaria parasites; he then underwent a 500 cc phlebotomy and further blood smears were obtained on the next day; again, no malaria parasites were detected.

(Reported by Donald R. Peterson, M.D., M.P.H., Epidemiologist, Seattle-King County Department of Public Health, Seattle, Washington.)

Editorial Comment

The persistence of asymptomatic *P. falciparum* infection in the responsible donor for a minimum of 13 months suggests that he had acquired significant immunity to his infection. However, since the patient had never traveled in malarious areas prior to his arrival in Vietnam and since he had no history of clinical malaria attacks, the acquisition of such immunity is difficult to explain. It is conceivable that despite the schizonticidal effects of his suppressive therapy, the strain of *P. falciparum* which caused his infection was able to persist in his peripheral blood at densities sufficient to stimulate immunity but insufficient to cause symptoms.

SUBHUMAN PRIMATE-ASSOCIATED HEPATITIS — New Jersey

Between April 1 and June 1, 1968, five animal handlers, who cared for approximately 50 subhuman primates caged as pets in an area of a private home in Toms River, New Jersey, developed hepatitis. The onsets of illness were April 1, 3, 5, May 29, and June 1. All patients were males from 17 to 33 years of age, and all experienced nausea, upper abdominal discomfort, vomiting, fever, and jaundice. Bilirubin determinations ranged from 3.2 to 8.2 mg percent and SGOT's from 51 to 590. Three patients were hospitalized; there were no deaths. None of the patients gave a history of contact with a jaundiced person or ingestion of raw shellfish during the 2 months prior to their illness, and all denied transfusions of blood and the self administration of parenteral drugs during the 6 months prior to onset of illness.

The three animal handlers who had onsets of illness during the first week in April had begun work at the home from 2 to 6 months before becoming ill, and they left their employment 1 to 3 days after their illness began. The other two animal handlers each began work 1 month prior to developing hepatitis. One of these, however, worked only 4 days, May 1-4; he developed hepatitis on June 1. Neither of these two men had been employed during the onsets of illness of the first three cases.

The five patients had been responsible for cleaning the cages of the primates and feeding the animals. Their duties required them to come into close physical contact with the animals, and all five had been either bitten or scratched on the hands or forearms by the primates. Although seven other persons also had close contact with the animals, they reported no illness. Transaminase determinations performed on June 13 on these seven persons were normal.

Between April and June 1, 1968, the collection of primates in the home included six woolly monkeys, five spider monkeys, 19 capuchins, 17 ringtail monkeys, two Celebes apes, and two black siamangs. There have never been any chimpanzees on the premises. Of the animals in the home, 23 were acquired after January 1, 1968, and 19 of these were under 1 year of age. No cases of jaundice had occurred in the animals or in the employees of the two animal firms which supplied the primates acquired since January.

(Reported by Ronald Altman, M.D., Acting Director, Division of Preventable Diseases, and Paul Marzinsky, Senior Field Representative, New Jersey State Department of Health; and two EIS Officers.)

TUBERCULOSIS — Greene County, Alabama

In December 1967, a 51-year-old fifth grade teacher in Greene County, Alabama, developed fever, night sweats, weakness, anorexia, weight loss (11 lbs in 1 month), and

a productive cough. On January 27, 1968, she was hospitalized with hemoptysis. A tuberculin test at that time was negative; however, a chest X-ray was suggestive of

tuberculosis and a direct sputum smear was positive for acid fast bacilli. She was transferred to the district tuberculosis hospital where cultures were positive for *Mycobacterium tuberculosis* and radiologic studies demonstrated far advanced pulmonary tuberculosis.

Since the woman had had a negative X-ray on July 20, 1966, in Dallas, Texas, another X-ray was not required when she was employed by the Greene County school system in September 1966. She had been well until October 1966 when following the death of her mother, she had a "nervous breakdown" and temporarily stopped teaching. In October 1967, she noted the onset of cough with a "rattling" in the left anterior chest and consulted a physician. A tuberculin test was negative, and a chest X-ray was not taken. She was treated for her symptoms and improved. In November 1967, during routine school tuberculin testing, the woman had a test reaction of 5 mm induration. This test was considered of doubtful significance and there was no follow-up. Upon review in January 1968, the X-ray taken in July 1966 was still considered negative.

The patient lived alone and gave no history of contact with a known or suspected tuberculosis case. Following the diagnosis of her case, 15 friends and relatives were tuberculin tested; six had positive reactions, and all six had negative chest X-rays. In the school where the woman taught, all available students and adults who had not had a previous positive tuberculin test were tested and 34 had positive reactions (Table 1). All 41 students in the patient's fifth grade class were tested and 20 (48.8 percent) were positive; four of these 20 positives had been previously tested in November 1967 and had negative reactions. Of the 40 students in the other fifth grade in the school, 28 were tested and only one was positive. Of the 34 persons with positive reactions, two were hospitalized with

active primary tuberculosis — one was a student in the patient's room and the other was a third grade student in a room across the hall. Three others were considered inactive primaries and two had chest X-rays suggestive of tuberculosis. These five as well as the other 27 persons

Table 1
Results of Tuberculin Testing in the Patient's School
Greene County, Alabama — February 1968

Grade	Number Positive	Number Negative	Total	Percent Positive
1	0	85	85	0
2	0	84	84	0
3	1	89	90	1.1
4	5	60	65	7.7
5	21	48	69	30.4
6	0	82	82	0
7	1	54	55	1.8
8	0	44	44	0
9	0	47	47	0
10	1	75	76	1.3
11	3	65	68	4.4
12	2	53	55	3.6
Total	34	786	820	4.1

with positive tuberculin tests and negative X-rays were treated with isoniazid.

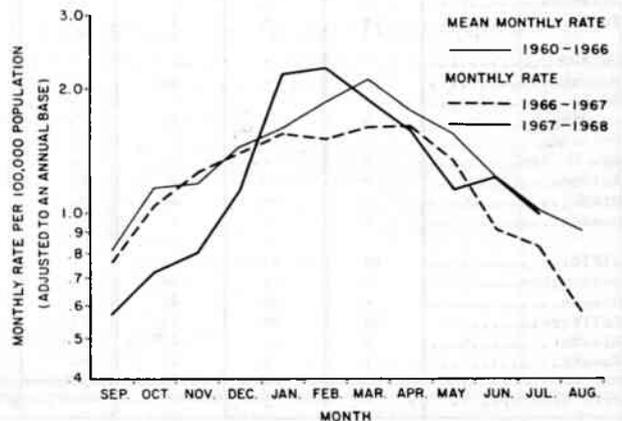
(Reported by Frederick S. Wolfe, M.D., Director, Division of Tuberculosis Control, Bureau of Preventable Diseases, Alabama Department of Public Health; Sidney J. Williams, M.D., Health Officer, Greene County; Tuberculosis Program, NCDC; and an EIS Officer.)

CURRENT TRENDS
MENINGOCOCCAL INFECTIONS — United States

The monthly incidence of meningococcal infections in the United States for May, June, and July 1968 remained below the mean monthly rate for the period 1960-1966 (Figure 1). For the first 6 months of 1968 a total of 1,661 meningococcal infections were reported in the United States compared with 1,405 reported for the first 6 months of 1967. The Middle Atlantic, South Atlantic, and West South Central divisions reported the largest increases in reported infections compared with the previous year (Table 2). Military cases accounted for 9.8 percent of the 6-month total (163 of 1,661) in 1968 compared with 7.4 percent of the total (104 of 1,405) for the similar period in 1967.

Of 355 meningococcal isolates received by NCDC between January 1 and June 30, 1968, for serogrouping and sulfadiazine sensitivity testing, 157 or 44.2 percent were identified as Serogroup B, 143 or 40.3 percent as Serogroup C, 20 or 5.6 percent as either Serogroup X, Y, or Z, and the remainder were not typed.

Figure 1
MONTHLY INCIDENCE OF MENINGOCOCCAL INFECTION — UNITED STATES, 1960-1968



(Continued on page 304)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
 FOR WEEKS ENDED
 -- AUGUST 10, 1968 AND AUGUST 12, 1967 (32nd WEEK) --

AREA	ASEPTIC MENINGITIS		BRUCELLOSIS	DIPHTHERIA	ENCEPHALITIS			HEPATITIS			MALARIA
	1968	1967			Primary including unsp. cases	Post-Infectious	Serum	Infectious			
								1968	1967	1968	
UNITED STATES...	186	102	2	1	44	53	7	93	840	646	30
NEW ENGLAND.....	6	1	-	-	-	-	-	4	36	28	-
Maine.*.....	-	1	-	-	-	-	-	-	-	1	-
New Hampshire.....	-	-	-	-	-	-	-	-	1	1	-
Vermont.....	-	-	-	-	-	-	-	-	4	-	-
Massachusetts.....	3	-	-	-	-	-	-	-	16	16	-
Rhode Island.....	3	-	-	-	-	-	-	-	4	4	-
Connecticut.....	-	-	-	-	-	-	-	4	11	6	-
MIDDLE ATLANTIC.....	23	6	-	-	6	5	-	34	148	73	1
New York City.....	8	1	-	-	-	2	-	18	48	5	-
New York, up-State.	3	1	-	-	1	-	-	4	39	19	-
New Jersey.....	9	3	-	-	2	1	-	12	38	28	-
Pennsylvania.*.....	3	1	-	-	3	2	-	-	23	21	1
EAST NORTH CENTRAL...	37	9	-	-	13	22	2	4	129	74	1
Ohio.....	30	1	-	-	10	19	-	2	46	14	-
Indiana.....	1	-	-	-	-	2	1	-	13	5	-
Illinois.....	1	3	-	-	3	1	-	1	26	17	-
Michigan.....	5	5	-	-	-	-	1	1	39	34	1
Wisconsin.....	-	-	-	-	-	-	-	-	5	4	-
WEST NORTH CENTRAL...	4	-	-	-	-	-	1	1	50	33	5
Minnesota.....	2	-	-	-	-	-	1	1	20	2	-
Iowa.....	1	-	-	-	-	-	-	-	4	3	-
Missouri.....	1	-	-	-	-	-	-	-	9	22	-
North Dakota.....	-	-	-	-	-	-	-	-	2	-	-
South Dakota.....	-	-	-	-	-	-	-	-	4	-	-
Nebraska.....	-	-	-	-	-	-	-	-	4	1	-
Kansas.....	-	-	-	-	-	-	-	-	7	5	5
SOUTH ATLANTIC.....	33	22	-	1	5	10	-	5	46	92	7
Delaware.....	1	-	-	-	-	-	-	-	4	1	-
Maryland.....	-	19	-	-	-	1	-	4	1	16	1
Dist. of Columbia..	-	-	-	-	-	-	-	-	-	2	-
Virginia.....	29	1	-	-	3	1	-	-	6	13	1
West Virginia.....	1	-	-	-	1	3	-	-	1	6	-
North Carolina.....	-	2	-	-	-	1	-	-	14	8	5
South Carolina.....	-	-	-	1	-	-	-	-	1	2	-
Georgia.*.....	-	-	-	-	-	-	-	-	9	19	-
Florida.....	2	-	-	-	1	4	-	1	10	25	-
EAST SOUTH CENTRAL...	2	11	-	-	1	4	-	1	42	32	-
Kentucky.....	1	2	-	-	-	-	-	-	15	9	-
Tennessee.....	1	1	-	-	1	4	-	-	17	18	-
Alabama.....	-	-	-	-	-	-	-	1	3	5	-
Mississippi.....	-	8	-	-	-	-	-	-	7	-	-
WEST SOUTH CENTRAL...	23	11	2	-	5	3	-	1	84	81	-
Arkansas.....	-	1	-	-	-	1	-	-	6	4	-
Louisiana.....	7	2	1	-	5	1	-	1	12	15	-
Oklahoma.....	-	2	-	-	-	1	-	-	8	4	-
Texas.....	16	6	1	-	-	-	-	-	58	58	-
MOUNTAIN.....	-	-	-	-	3	1	-	1	34	28	8
Montana.....	-	-	-	-	-	-	-	-	7	1	-
Idaho.....	-	-	-	-	-	-	-	-	1	7	-
Wyoming.....	-	-	-	-	-	-	-	-	1	1	-
Colorado.....	-	-	-	-	3	1	-	1	13	-	8
New Mexico.....	-	-	-	-	-	-	-	-	4	3	-
Arizona.....	-	-	-	-	-	-	-	-	4	14	-
Utah.....	-	-	-	-	-	-	-	-	4	2	-
Nevada.....	-	-	-	-	-	-	-	-	-	-	-
PACIFIC.....	58	42	-	-	11	8	4	42	271	205	8
Washington.....	1	1	-	-	-	-	-	-	29	15	-
Oregon.....	-	4	-	-	-	1	-	2	10	14	-
California.....	55	28	-	-	10	7	4	40	229	175	5
Alaska.....	1	-	-	-	1	-	-	-	1	-	-
Hawaii.....	1	9	-	-	-	-	-	-	2	1	3
Puerto Rico.....	-	1	-	-	-	-	-	-	16	16	-

* Delayed reports: Encephalitis, primary: Me. 1
 Encephalitis, post-infectious: Pa. delete 1
 Hepatitis, infectious: Me. 2, Ga. 31

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDED
AUGUST 10, 1968 AND AUGUST 12, 1967 (32nd WEEK) - CONTINUED

AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS	POLIOMYELITIS			RUBELLA	
	1968	Cumulative		1968	Cumulative			1968	Total	Paralytic		
		1968	1967		1968	1967				1968		Cum. 1968
UNITED STATES...	202	19,038	56,848	29	1,870	1,571	714	1	1	33	319	
NEW ENGLAND.....	7	1,141	822	2	94	65	82	-	-	1	48	
Maine.*.....	-	35	234	-	6	3	1	-	-	-	3	
New Hampshire.....	-	141	74	-	7	2	2	-	-	-	-	
Vermont.....	-	2	34	-	1	1	6	-	-	-	2	
Massachusetts.....	4	364	330	1	42	32	48	-	-	1	32	
Rhode Island.....	-	5	62	-	7	4	8	-	-	-	7	
Connecticut.....	3	594	88	1	31	23	17	-	-	-	4	
MIDDLE ATLANTIC.....	82	3,855	2,204	9	338	256	69	-	-	-	43	
New York City.....	50	1,900	436	-	68	46	67	-	-	-	22	
New York, Up-State.....	22	1,206	557	3	58	61	NN	-	-	-	21	
New Jersey.....	7	608	480	4	122	91	2	-	-	-	-	
Pennsylvania.*.....	3	141	731	2	90	58	NN	-	-	-	-	
EAST NORTH CENTRAL...	28	3,676	5,237	6	227	210	148	-	-	1	49	
Ohio.....	1	288	1,130	2	62	71	12	-	-	-	10	
Indiana.....	-	643	587	1	29	22	16	-	-	-	4	
Illinois.....	5	1,347	927	-	51	52	9	-	-	1	3	
Michigan.....	2	256	902	3	65	50	20	-	-	-	17	
Wisconsin.....	20	1,142	1,691	-	20	15	91	-	-	-	15	
WEST NORTH CENTRAL...	5	377	2,820	3	100	67	10	-	-	1	12	
Minnesota.....	-	15	131	1	23	16	2	-	-	-	1	
Iowa.....	-	96	744	-	6	13	8	-	-	-	6	
Missouri.....	-	81	332	1	32	13	-	-	-	1	3	
North Dakota.....	3	131	845	-	3	1	-	-	-	-	2	
South Dakota.....	-	4	52	-	5	6	NN	-	-	-	-	
Nebraska.....	2	40	623	-	6	12	-	-	-	-	-	
Kansas.....	-	10	93	1	25	6	-	-	-	-	-	
SOUTH ATLANTIC.....	20	1,471	6,790	3	380	303	60	-	-	1	40	
Delaware.....	-	15	43	1	8	6	9	-	-	-	2	
Maryland.....	-	94	149	-	28	37	6	-	-	-	1	
Dist. of Columbia..	-	6	22	-	14	10	-	-	-	-	-	
Virginia.....	3	296	2,167	-	30	37	2	-	-	-	3	
West Virginia.....	8	279	1,362	-	9	21	24	-	-	-	24	
North Carolina.....	-	282	842	1	75	66	NN	-	-	1	-	
South Carolina.*...	-	12	507	-	56	29	-	-	-	-	-	
Georgia.....	-	4	32	-	73	44	-	-	-	-	-	
Florida.....	9	483	1,666	1	87	53	19	-	-	-	10	
EAST SOUTH CENTRAL...	3	486	5,104	1	160	123	38	-	-	1	18	
Kentucky.*.....	-	103	1,316	-	64	34	8	-	-	1	3	
Tennessee.....	1	58	1,813	-	51	51	24	-	-	-	14	
Alabama.....	1	93	1,316	-	24	25	5	-	-	-	1	
Mississippi.....	1	232	659	1	21	13	1	-	-	-	-	
WEST SOUTH CENTRAL...	28	4,634	17,102	-	297	212	103	1	1	18	23	
Arkansas.....	-	3	1,404	-	20	28	1	-	-	-	-	
Louisiana.....	-	2	151	-	84	83	-	-	-	-	-	
Oklahoma.....	-	111	3,325	-	49	16	2	-	-	1	-	
Texas.....	28	4,518	12,222	-	144	85	100	1	1	17	23	
MOUNTAIN.....	8	971	4,578	-	29	27	40	-	-	-	37	
Montana.....	-	67	277	-	3	-	-	-	-	-	-	
Idaho.....	-	20	375	-	11	1	3	-	-	-	-	
Wyoming.....	-	51	180	-	-	1	-	-	-	-	-	
Colorado.....	2	494	1,539	-	10	12	10	-	-	-	17	
New Mexico.....	4	92	576	-	-	3	8	-	-	-	6	
Arizona.....	2	221	1,005	-	1	4	19	-	-	-	14	
Utah.....	-	21	357	-	1	4	-	-	-	-	-	
Nevada.....	-	5	269	-	3	2	-	-	-	-	-	
PACIFIC.....	21	2,427	12,191	5	245	308	164	-	-	10	49	
Washington.....	-	515	5,414	-	37	27	18	-	-	1	-	
Oregon.....	5	488	1,563	1	19	25	23	-	-	-	7	
California.....	16	1,387	4,919	4	176	243	101	-	-	9	28	
Alaska.....	-	2	133	-	2	9	10	-	-	-	11	
Hawaii.....	-	35	162	-	11	4	12	-	-	-	3	
Puerto Rico.....	9	383	2,087	-	19	12	16	-	-	-	2	

* Delayed reports: Measles: Pa. delete 2, S. C. delete 1, Ky. delete 76
Rubella: Me. 2, S. C. 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDED
AUGUST 10, 1968 AND AUGUST 12, 1967 (32nd WEEK) - CONTINUED

AREA	STREPTOCOCCAL SORE THROAT & SCARLET FEVER	TETANUS		TULAREMIA		TYPHOID		TYPHUS FEVER TICK-BORNE (Rky. Mt. Spotted)		RABIES IN ANIMALS	
		1968	Cum. 1968	1968	Cum. 1968	1968	Cum. 1968	1968	Cum. 1968	1968	Cum. 1968
UNITED STATES...	4,499	3	88	-	123	10	196	15	162	64	2,262
NEW ENGLAND.....	585	-	2	-	46	2	7	-	-	2	68
Maine.*.....	11	-	-	-	-	-	-	-	-	2	53
New Hampshire.....	12	-	-	-	-	-	1	-	-	-	2
Vermont.....	66	-	-	-	46	-	-	-	-	-	10
Massachusetts.....	99	-	1	-	-	1	3	-	-	-	2
Rhode Island.....	30	-	-	-	-	-	-	-	-	-	-
Connecticut.....	367	-	1	-	-	1	3	-	-	-	1
MIDDLE ATLANTIC.....	150	-	12	-	7	1	20	1	14	5	31
New York City.....	1	-	6	-	-	1	9	-	-	-	-
New York, Up-State.....	148	-	4	-	7	-	3	1	2	5	24
New Jersey.....	NN	-	-	-	-	-	5	-	6	-	-
Pennsylvania.....	1	-	2	-	-	-	3	-	6	-	7
EAST NORTH CENTRAL...	251	-	8	-	8	-	26	-	6	10	210
Ohio.....	45	-	-	-	1	-	12	-	4	7	84
Indiana.....	43	-	1	-	1	-	3	-	-	2	70
Illinois.....	46	-	5	-	5	-	10	-	2	1	25
Michigan.....	74	-	2	-	1	-	-	-	-	-	10
Wisconsin.....	43	-	-	-	-	-	1	-	-	-	21
WEST NORTH CENTRAL...	220	-	4	-	9	-	8	-	4	9	559
Minnesota.....	22	-	1	-	-	-	-	-	-	5	164
Iowa.....	43	-	1	-	-	-	1	-	1	-	91
Missouri.....	17	-	2	-	7	-	3	-	1	1	81
North Dakota.*.....	76	-	-	-	-	-	-	-	-	-	88
South Dakota.....	4	-	-	-	1	-	1	-	1	-	79
Nebraska.....	58	-	-	-	-	-	3	-	1	1	25
Kansas.....	-	-	-	-	1	-	-	-	-	2	31
SOUTH ATLANTIC.....	389	2	19	-	8	-	43	10	87	8	243
Delaware.....	2	-	-	-	-	-	-	-	-	-	-
Maryland.....	59	1	2	-	-	-	9	3	10	-	5
Dist. of Columbia*.....	-	-	2	-	-	-	2	-	-	-	1
Virginia.....	117	-	4	-	1	-	8	3	31	1	92
West Virginia.....	72	-	1	-	-	-	-	-	-	-	31
North Carolina.....	2	-	2	-	2	-	2	2	27	-	9
South Carolina.....	2	1	2	-	-	-	-	2	6	-	-
Georgia.....	3	-	-	-	3	-	11	-	11	2	38
Florida.....	132	-	6	-	2	-	11	-	2	5	67
EAST SOUTH CENTRAL...	834	-	10	-	6	1	24	2	29	14	506
Kentucky.....	18	-	1	-	1	-	5	-	6	5	248
Tennessee.....	640	-	3	-	4	-	13	2	19	9	236
Alabama.....	106	-	3	-	-	-	-	-	3	-	21
Mississippi.....	70	-	3	-	1	1	6	-	1	-	1
WEST SOUTH CENTRAL...	490	1	18	-	32	5	26	2	16	6	388
Arkansas.....	6	-	4	-	6	-	4	-	1	1	45
Louisiana.....	16	1	7	-	6	-	3	-	-	1	35
Oklahoma.....	3	-	-	-	8	3	9	1	8	1	114
Texas.....	465	-	7	-	12	2	10	1	7	3	194
MOUNTAIN.....	993	-	-	-	6	-	12	-	5	1	59
Montana.....	12	-	-	-	-	-	-	-	-	-	-
Idaho.....	123	-	-	-	-	-	-	-	1	-	-
Wyoming.....	14	-	-	-	1	-	1	-	-	-	3
Colorado.....	676	-	-	-	3	-	2	-	4	-	3
New Mexico.....	111	-	-	-	-	-	6	-	-	-	23
Arizona.*.....	25	-	-	-	-	-	3	-	-	1	30
Utah.....	32	-	-	-	2	-	-	-	-	-	-
Nevada.....	-	-	-	-	-	-	-	-	-	-	-
PACIFIC.....	587	-	15	-	1	1	30	-	1	9	198
Washington.....	41	-	1	-	-	-	2	-	-	1	1
Oregon.....	59	-	1	-	1	-	4	-	-	1	5
California.....	378	-	13	-	-	1	24	-	1	7	192
Alaska.....	20	-	-	-	-	-	-	-	-	-	-
Hawaii.....	89	-	-	-	-	-	-	-	-	-	-
Puerto Rico.....	7	-	6	-	-	-	1	-	-	-	17

* Delayed reports: SST: Me. 5
Typhoid: Ariz. 1
Rabies in animals: N.D. 6, D.C. 1

Week No.

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDED AUGUST 10, 1968

32

(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:	672	416	31	29	SOUTH ATLANTIC:	1,167	581	42	74
Boston, Mass.-----	210	129	15	10	Atlanta, Ga.-----	148	66	3	13
Bridgeport, Conn.-----	30	16	-	3	Baltimore, Md.-----	229	120	2	7
Cambridge, Mass.-----	22	15	-	1	Charlotte, N. C.-----	50	21	2	3
Fall River, Mass.-----	25	13	2	3	Jacksonville, Fla.-----	67	34	2	4
Hartford, Conn.-----	51	32	2	3	Miami, Fla.-----	81	41	9	3
Lowell, Mass.-----	39	23	-	1	Norfolk, Va.-----	69	25	2	2
Lynn, Mass.-----	25	16	1	1	Richmond, Va.-----	79	37	1	10
New Bedford, Mass.-----	33	22	1	1	Savannah, Ga.-----	35	21	4	4
New Haven, Conn.-----	53	38	-	2	St. Petersburg, Fla.---	74	56	5	3
Providence, R. I.-----	54	34	5	2	Tampa, Fla.-----	79	50	6	4
Somerville, Mass.-----	17	9	3	-	Washington, D. C.-----	224	92	4	16
Springfield, Mass.-----	49	30	1	1	Wilmington, Del.-----	32	18	2	5
Waterbury, Conn.-----	21	13	-	1	EAST SOUTH CENTRAL:	591	296	21	46
Worcester, Mass.-----	43	26	1	-	Birmingham, Ala.-----	78	37	-	3
MIDDLE ATLANTIC:	3,073	1,785	122	127	Chattanooga, Tenn.-----	56	29	3	5
Albany, N. Y.-----	54	31	-	5	Knoxville, Tenn.-----	41	27	2	1
Allentown, Pa.-----	27	16	4	1	Louisville, Ky.-----	107	62	8	16
Buffalo, N. Y.-----	136	72	2	10	Memphis, Tenn.-----	138	63	-	8
Camden, N. J.-----	35	26	1	-	Mobile, Ala.-----	45	20	-	3
Elizabeth, N. J.-----	40	21	-	1	Montgomery, Ala.-----	40	16	2	5
Erie, Pa.-----	52	30	4	3	Nashville, Tenn.-----	86	42	6	5
Jersey City, N. J.-----	48	36	6	3	WEST SOUTH CENTRAL:	1,087	573	40	66
Newark, N. J.-----	62	27	2	2	Austin, Tex.-----	29	13	1	2
New York City, N. Y.--	1,506	870	65	52	Baton Rouge, La.-----	47	28	-	3
Paterson, N. J.-----	32	21	1	-	Corpus Christi, Tex.---	25	15	-	1
Philadelphia, Pa.-----	503	288	9	22	Dallas, Tex.-----	141	72	3	6
Pittsburgh, Pa.-----	160	86	5	8	El Paso, Tex.-----	50	22	1	7
Reading, Pa.-----	66	45	3	1	Fort Worth, Tex.-----	72	39	1	3
Rochester, N. Y.-----	122	74	8	8	Houston, Tex.-----	178	79	2	11
Schenectady, N. Y.-----	26	18	1	-	Little Rock, Ark.-----	66	40	5	4
Scranton, Pa.-----	31	21	4	1	New Orleans, La.-----	180	88	11	13
Syracuse, N. Y.-----	75	48	1	4	Oklahoma City, Okla.---	76	46	5	4
Trenton, N. J.-----	38	18	-	2	San Antonio, Tex.-----	107	68	4	5
Utica, N. Y.-----	28	17	5	1	Shreveport, La.-----	61	33	3	5
Yonkers, N. Y.-----	32	20	1	3	Tulsa, Okla.-----	55	30	4	2
EAST NORTH CENTRAL:	2,527	1,370	67	131	MOUNTAIN:	445	247	19	26
Akron, Ohio-----	59	34	-	4	Albuquerque, N. Mex.---	50	20	3	4
Canton, Ohio-----	28	15	-	1	Colorado Springs, Colo.	24	17	-	1
Chicago, Ill.-----	741	366	23	50	Denver, Colo.-----	119	65	3	9
Cincinnati, Ohio-----	158	95	5	7	Ogden, Utah-----	10	7	2	-
Cleveland, Ohio-----	196	86	-	10	Phoenix, Ariz.-----	90	49	3	2
Columbus, Ohio-----	123	68	2	5	Pueblo, Colo.-----	30	22	3	-
Dayton, Ohio-----	97	55	2	4	Salt Lake City, Utah---	62	38	-	5
Detroit, Mich.-----	329	183	4	9	Tucson, Ariz.-----	60	29	5	5
Evansville, Ind.-----	42	28	3	2	PACIFIC:	1,551	914	20	59
Flint, Mich.-----	48	25	-	5	Berkeley, Calif.-----	20	16	-	-
Fort Wayne, Ind.-----	49	26	5	2	Fresno, Calif.-----	48	23	2	3
Gary, Ind.-----	23	11	2	1	Glendale, Calif.-----	31	22	-	-
Grand Rapids, Mich.---	59	38	7	4	Honolulu, Hawaii-----	44	23	2	3
Indianapolis, Ind.---	154	77	3	8	Long Beach, Calif.---	88	58	-	2
Madison, Wis.-----	56	27	7	3	Los Angeles, Calif.---	475	273	4	16
Milwaukee, Wis.-----	131	78	1	1	Oakland, Calif.-----	75	46	2	6
Peoria, Ill.-----	38	17	-	5	Pasadena, Calif.-----	30	19	-	-
Rockford, Ill.-----	24	19	-	1	Portland, Oreg.-----	121	76	1	5
South Bend, Ind.-----	27	19	1	2	Sacramento, Calif.---	59	36	-	-
Toledo, Ohio-----	104	76	2	4	San Diego, Calif.-----	90	49	2	5
Youngstown, Ohio-----	41	27	-	3	San Francisco, Calif.--	200	107	2	8
WEST NORTH CENTRAL:	745	460	22	24	San Jose, Calif.-----	33	19	-	1
Des Moines, Iowa-----	56	33	1	2	Seattle, Wash.-----	152	92	5	6
Duluth, Minn.-----	32	20	2	1	Spokane, Wash.-----	47	30	-	1
Kansas City, Kans.---	29	12	3	1	Tacoma, Wash.-----	38	25	-	3
Kansas City, Mo.-----	125	76	4	3	Total	11,858	6,642	384	582
Lincoln, Nebr.-----	23	19	-	-	Cumulative Totals				
Minneapolis, Minn.---	104	69	2	4	Including reported corrections for previous weeks				
Omaha, Nebr.-----	78	47	1	4	All Causes, All Ages -----	412,893			
St. Louis, Mo.-----	199	123	3	5	All Causes, Age 65 and over-----	239,020			
St. Paul, Minn.-----	56	35	1	1	Pneumonia and Influenza, All Ages-----	17,278			
Wichita, Kans.-----	43	26	5	3	All Causes, Under 1 Year of Age-----	19,207			

MENINGOCOCCAL - (Continued from page 299)

Table 2
Reported Meningococcal Infections
United States
January through June 1968 and 1967

Division	Jan. - June 1968	Jan. - June 1967
	Total	Total
New England	87	57
Middle Atlantic	286	219
East North Central	198	179
West North Central	86	63
South Atlantic	344	270
East South Central	144	117
West South Central	274	199
Mountain	25	25
Pacific	217	276
Total United States	1,661	1,405

(Reported by the Bacterial Diseases Section and Statistics Section, Epidemiology Program, and the Bacterial Serology Unit and Bacterial Reference Unit, Bacteriology Section, Laboratory Program, NCDC.)

EPIDEMIOLOGIC NOTES AND REPORTS
FOLLOW-UP SUSPECT WOUND BOTULISM - California

The 44-year-old farm laborer who developed a clinical syndrome suggestive of botulism following a compound fracture (MMWR, Vol. 17, No. 22) has gradually improved. He is fully ambulatory with residual mild muscle weakness. Attempts to isolate *Clostridium botulinum* from the wound were unsuccessful, and toxin could not be demonstrated in this patient's serum. The case has been reported as wound botulism.

(Reported by Philip K. Condit, M.D., M.P.H., Chief, Bureau of Communicable Diseases, California State Department of Public Health; William Defries, M.D., Health Officer, Fresno County Health Department; Fresno General Hospital; and an EIS Officer.)

INTERNATIONAL NOTES
QUARANTINE MEASURES

Additional Immunization Information for International Travel, 1967-68 edition, Public Health Service Publication No. 384

The following information change should be made in Section 6.

Page 85

Under District of Columbia: Washington, USPHS Out-Patient Clinic, Clinic Hours,

Delete: Tuesday, Thursday, and Friday 3:00 p.m., Registration, 2:45 p.m.

Insert: Monday, Tuesday, Thursday, and Friday 2:00 p.m., Registration, 1:45 p.m.

THE MORBIDITY AND MORTALITY WEEKLY REPORT, WITH A CIRCULATION OF 17,000, IS PUBLISHED AT THE NATIONAL COMMUNICABLE DISEASE CENTER, ATLANTA, GEORGIA.

DIRECTOR, NATIONAL COMMUNICABLE DISEASE CENTER
 CHIEF, EPIDEMIOLOGY PROGRAM
 ACTING CHIEF, STATISTICS SECTION
 EDITOR

DAVID J. SENCER, M.D.
 A.D. LANGMUIR, M.D.
 IDA L. SHERMAN, M.S.
 MICHAEL B. GREGG, M.D.

IN ADDITION TO THE ESTABLISHED PROCEDURES FOR REPORTING MORBIDITY AND MORTALITY, THE NATIONAL COMMUNICABLE DISEASE CENTER WELCOMES ACCOUNTS OF INTERESTING OUTBREAKS OR CASE INVESTIGATIONS WHICH ARE OF CURRENT INTEREST TO HEALTH OFFICIALS AND WHICH ARE DIRECTLY RELATED TO THE CONTROL OF COMMUNICABLE DISEASES. SUCH COMMUNICATIONS SHOULD BE ADDRESSED TO:

NATIONAL COMMUNICABLE DISEASE CENTER
 ATLANTA, GEORGIA 30333
 ATTN: THE EDITOR
 MORBIDITY AND MORTALITY WEEKLY REPORT

NOTE: THE DATA IN THIS REPORT ARE PROVISIONAL AND ARE BASED ON WEEKLY TELEGRAMS TO THE NCDC BY THE INDIVIDUAL STATE HEALTH DEPARTMENTS. THE REPORTING WEEK CONCLUDES ON SATURDAY; COMPILED DATA ON A NATIONAL BASIS ARE RELEASED ON THE SUCCEEDING FRIDAY.

LIBRARY 1-7
 46
 664
 COMMUNICABLE DISEASE CENTER

U.S. DEPARTMENT OF
 HEALTH, EDUCATION, AND WELFARE
 PUBLIC HEALTH SERVICE
 HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION
 NATIONAL
 COMMUNICABLE DISEASE CENTER
 ATLANTA, GEORGIA 30333
 OFFICIAL BUSINESS

POSTAGE AND FEES PAID
 U. S. DEPARTMENT OF H. E. W.