



Morbidity and Mortality

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INTERNATIONAL NOTES

SMALLPOX - West and Central Africa

During the first 9 weeks of 1969, only 129 cases of smallpox were reported from West and Central Africa and only nine of the 19 countries in this area reported cases.¹ During the comparable period in 1968, a total of 1,063 were reported (Figure 1).

Historically, January and February have marked the annual upsurge of reported smallpox as a result of the gathering momentum of dry season epidemics, but in 1969 during these months, transmission remained at unprecedented low levels. The failure of smallpox to resurge this year reflects efforts of the 19-country coordinated regional smallpox eradication and measles control program being waged by these 19 countries. From January 1967 through February 1969, 70 million of the

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119 million residents of the region were vaccinated against smallpox.

Editorial Comment:

The absence of an increase during the smallpox season in West and Central Africa may be attributed in

(Continued on page 106)

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

DISEASE ¹	13th WEEK ENDED		MEDIAN 1964 - 1968	CUMULATIVE, FIRST 13 WEEKS		
	March 29, 1969	March 30, 1968		1969	1968	MEDIAN 1964 - 1968
Aseptic meningitis	26	28	28	377	355	359
Brucellosis	4	4	5	23	23	49
Diphtheria	6	1	2	38	37	37
Encephalitis, primary:						
Arthropod-borne & unspecified	21	16	26	258	188	307
Encephalitis, post-infectious	6	10	17	64	115	172
Hepatitis, serum	116	89	828	1,303	915	10,883
Hepatitis, infectious	870	900	7	11,884	10,792	75
Malaria	56	56	7	603	587	75
Measles (rubeola)	1,029	880	9,149	6,839	8,016	94,233
Meningococcal infections, total	85	89	89	1,073	1,009	1,009
Civilian	69	78	---	998	917	---
Military	16	11	---	75	92	---
Mumps	2,766	5,163	---	31,141	66,095	---
Poliomyelitis, total	---	---	1	1	14	6
Paralytic	---	---	1	1	14	5
Rubella (German measles)	2,075	1,961	---	13,996	14,263	---
Streptococcal sore throat & scarlet fever	11,599	11,258	11,683	152,354	150,003	150,003
Tetanus	1	1	1	23	26	38
Tularemia	1	1	2	24	18	50
Typhoid fever	---	7	7	47	56	70
Typhus, tick-borne (Rky. Mt. spotted fever)	---	1	---	1	4	6
Rabies in animals	96	94	132	924	966	1,090

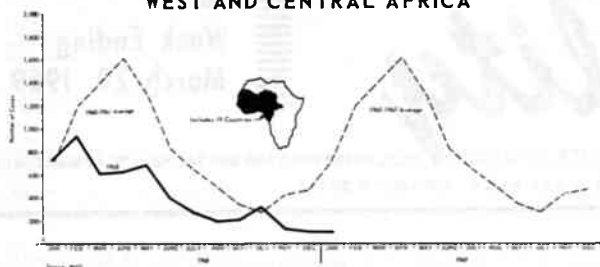
TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	---	Rabies in man:	---
Botulism:	2	Rubella congenital syndrome:	2
Leptospirosis:	11	Trichinosis:*	20
Plague:	---	Typhus, murine:	3
Psittacosis:	6		

*Delayed reports: Trichinosis: Me. 1, N.Y. Ups. delete 1 (1968)

SMALLPOX — (Continued from front page)

FIGURE 1
REPORTED SMALLPOX CASES BY MONTH
1960-67 AVERAGE, 1968 AND 1969
WEST AND CENTRAL AFRICA



large part to a continuing program of intensified surveillance, case investigation, and outbreak control ("eradi-

cation escalation") initiated in September 1968 by the eight countries then experiencing endemic smallpox: Dahomey, Guinea, Mali, Nigeria, Niger, Sierra Leone, Togo, and Upper Volta. The sudden increase in reported smallpox cases in October 1968 denotes a positive effect on reporting efficiency (Figure 1). Through deliberate efforts to search out smallpox cases and to terminate transmission by rapid focal vaccination among contacts, endemic smallpox transmission has ceased in all but three of these countries: Nigeria, Sierra Leone, and Togo.

Reference:

¹World Health Organization *Weekly Epidemiological Record* 44(12):205-211.

SMALLPOX IMPORTATION — Cameroon and Ghana

Since Jan. 1, 1969, smallpox cases have been reported from two West and Central African countries participating in the Smallpox Eradication/Measles Control Program, which have not experienced continuing endemic transmission of the disease within their own borders for sometime.¹ Cameroon, in January, reported seven cases from two departments in the north, Margui-Wandata (2 cases) and Diamare (5 cases), adjacent to the Nigerian border. Ghana reported three cases of smallpox. Neither country, though subject to frequent importations from endemic areas in the past, had reported even sporadic cases of smallpox for several months prior to this.

In Cameroon, the source of infection in both outbreaks was traced to Banki, Sardaunna Province, North-Eastern State, Nigeria. Containment measures were immediately initiated and intensive surveillance established in the infected areas. These cases were the first reported in Cameroon since June 1968.

In Ghana, the first case involved a 64-year-old linguist and farmer from the village of Akanteng, Eastern Region

(50 miles northwest of Accra), who developed a rash on December 28, about 10 days after returning home from a meeting in Kibi, 20 miles away and 85 miles from the border of Togo. He was admitted to a hospital on January 1 and immediately isolated. His 11-year-old son, vaccinated unsuccessfully at that time, developed fever and a rash on January 14 and was subsequently isolated. It was not known whether the father or the son, who was supposedly also vaccinated in infancy and again at age 5 years, had vaccination scars. The source of the father's infections was not known although a possibility was neighboring Togo, a country reporting a high incidence of smallpox in 1968. A third case of smallpox was reported on January 31, but no details were provided. These smallpox cases were the first reported from Ghana since July 1968.

Reference:

¹World Health Organization *Weekly Epidemiological Record*, 44 (8):152.

EPIDEMIOLOGIC NOTES AND REPORTS
BOTULISM — Louisville, Kentucky

On March 7, 1969, a 53-year-old man developed symptoms of gastroenteritis. Although symptomatic treatment for "stomach flu" was prescribed, he developed diplopia, ataxia, dysphagia, and difficulty speaking on March 9. He was hospitalized on March 13 with ocular palsy and pharyngeal, lingual, and skeletal muscle weakness but without fever or sensory deficits. The admitting diagnosis was botulism and bivalent (A,B) *Clostridium botulinum* antiserum was administered. After receiving a total of 30,000 units, the patient showed marked clinical improvement and has since been discharged from the hospital.

The only suspicious food in the patient's history was home-canned tomato juice, consumed on March 6. After one swallow, the patient discarded the tomato juice because of its bad taste. The tomato juice was prepared from homegrown ripe tomatoes. After washing, they were cooked, strained, reheated without boiling, and poured while hot into clean, scalded glass jars. A teaspoon of salt was added. After capping, the jars were vigorously boiled for 10 minutes. Of a total of 28 jars prepared in this manner in August 1968, 27 had been consumed without untoward effects.

Laboratory analysis of the patient's serum, prior to

treatment with antiserum, revealed type B, botulinum toxin. None of the incriminated tomato juice was available for analysis.

(Reported by C. Hernandez, M.D., M.P.H., Director, Division of Epidemiology, Kentucky State Department of Health; Thomas Wallace, M.D., Director of Health, Louisville-Jefferson County Health Department; the Anaerobic Bacteriology Laboratory, Bacterial Reference Unit, Laboratory Program, NCDC; and an EIS Officer.)

Editorial Comment:

This is the third outbreak of botulism attributed to ingestion of tomato juice since 1899.¹ The previous two outbreaks involved three cases with no fatalities. In those, the toxin type was not determined (Table 1).

In this case, the slow progression of symptoms, the demonstration of *C. botulinum* toxin in the blood stream approximately 1 week after ingestion of the incriminated vehicle, and the geographic distribution of the outbreak are all consistent with type B, *C. botulinum* toxin.

Table 1

Outbreaks of Botulism Since 1899 Involving Tomato Products

	Number of outbreaks	Cases	Deaths	Place of preparation	Toxin types
Tomatoes	11	29	16	All home-canned	2 type A 1 type B
Tomato juice	3	4	0	All home-canned	1 type B
Tomato relish	1	2	2	Home-canned	Unknown
Tomato catsup	1	2	0	Commercial product	Unknown

Reference:

¹Meyer, K. E., and Eddie, B.: Sixty-Five Years of Human Botulism in the United States and Canada: Epidemiology and Tabulations of Reported Cases 1899 through 1964. George Williams Hooper Foundation, University of California, San Francisco Medical Center, June 1965.

A CASE OF HISTIOCYTOSIS — New Jersey

Recently, a medical problem in which leprosy was considered in the differential diagnosis occurred in a Vietnam veteran. In early October 1968, a 19-year-old American soldier with a maculopapular rash over the arms and lower trunk, fever, and periorbital edema was admitted to a hospital in Vietnam. There a chest X-ray revealed a pleural effusion on the left, but a study of pleural fluid was not diagnostic. A single thick blood smear was positive for *Plasmodium vivax*, and the patient was treated with chloroquine and primaquine; however, fever persisted. In addition, the patient reported taking relatively regular malaria prophylaxis of chloroquine weekly and 25 mg of DDS daily. Scrub typhus was then considered and tetracycline therapy was begun. Neither fever nor rash improved, and the patient was transferred to a military hospital in Japan where the skin lesions were felt to be compatible with leprosy. The patient was then transferred in mid-December to a military hospital in New Jersey.

After admission, the patient had almost daily temperature elevations to 101-102°F, but occasionally for several consecutive days was without fever. New skin lesions developed in the involved areas of the lower trunk and arms and progressed to include the face and chest. Several skin biopsies were performed. The slides showed a non-infectious granulomatous process involving the dermis and no acid-fast bacilli. No specific diagnosis was made. A liver biopsy and several bone marrow studies were normal. The peripheral white count was normal to low with a decrease in lymphocytes, and no abnormal cells were seen. Multiple cultures of blood and skin lesions were negative for bacteria and fungi.

The distribution of the skin lesions was not typical of a particular disease, but the general character was compatible with erythema nodosum leprosum as seen in patients

taking DDS. Because the patient had no history of exposure to leprosy in the United States and because his stay in Vietnam was less than the usual incubation period for leprosy, this diagnosis seemed unlikely.

Additional thick skin biopsies revealed prominent proliferation of atypical reticular cells and lymphocytes and histiocytic cells with many mitotic nuclei in the perineural and perivascular areas. Microscopic sections of a lymphoid mass removed from the right axilla showed diffuse infiltration of atypical histiocytes throughout sinusoidal areas, and malignant histiocytosis stage 4B with widespread disease and systemic symptoms was diagnosed. On February 14, the patient was begun on IV cyclophosphamide. Three days later, his fever began to subside, he began to feel better subjectively, and the skin lesions were markedly improved. Recurrent left pleural effusion has occurred. Cyclophosphamide therapy is continuing.

(Reported by Ronald Brostek, Lt. Col., MC, Chief, Medicine Division, and Joseph Smith, Lt. Col., MC, Chief, Preventive Medicine Division, Walston General Hospital, Fort Dix, New Jersey; John Gault, Lt. Col., MC, Preventive Medicine Division, Office of the Surgeon General, Department of the Army; and the Leprosy Surveillance Unit, Bacterial Diseases Branch, Epidemiology Program, NCDC.)

Editorial Comment:

There have been 45 American servicemen who developed leprosy subsequent in time to military service during World War II and the Korean War without known exposure prior to military service. No cases have been reported in servicemen who have served in Vietnam, other than in those who had possible exposure to leprosy either before joining the service or in other parts of the world.

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED
MARCH 29, 1969 AND MARCH 30, 1968 (13th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	DIPHThERIA	ENCEPHALITIS		Post- Infectious	HEPATITIS		MALARIA		
				Primary including unsp. cases			Serum	Infectious			
	1969	1969	1969	1969	1968	1969	1969	1969	1968	1969	Cum. 1969
UNITED STATES...	26	4	6	21	16	6	116	870	900	56	603
NEW ENGLAND.....	-	-	-	3	4	-	11	66	34	4	31
Maine.*.....	-	-	-	-	-	-	-	3	1	-	-
New Hampshire.....	-	-	-	-	-	-	-	7	1	-	2
Vermont.....	-	-	-	-	-	-	-	2	-	-	-
Massachusetts.....	-	-	-	-	4	-	10	22	17	3	25
Rhode Island.....	-	-	-	-	-	-	1	16	6	-	-
Connecticut.....	-	-	-	3	-	-	-	16	9	1	4
MIDDLE ATLANTIC.....	5	-	-	5	4	2	60	164	124	15	67
New York City.....	3	-	-	4	3	-	35	50	41	-	4
New York, up-State.....	-	-	-	-	-	1	2	30	23	-	13
New Jersey.*.....	2	-	-	1	-	-	16	32	19	15	26
Pennsylvania.....	-	-	-	-	1	1	7	52	41	-	24
EAST NORTH CENTRAL...	3	-	-	7	4	-	6	129	130	4	40
Ohio.....	-	-	-	4	1	-	1	40	47	1	4
Indiana.*.....	-	-	-	-	3	-	-	3	6	-	3
Illinois.....	1	-	-	-	-	-	2	28	39	3	19
Michigan.....	2	-	-	3	-	-	3	50	31	-	13
Wisconsin.....	-	-	-	-	-	-	-	8	7	-	1
WEST NORTH CENTRAL...	1	-	-	-	-	-	1	32	38	3	43
Minnesota.....	-	-	-	-	-	-	-	12	8	-	3
Iowa.....	-	-	-	-	-	-	-	3	10	-	4
Missouri.....	1	-	-	-	-	-	1	9	11	1	11
North Dakota.....	-	-	-	-	-	-	-	2	-	1	2
South Dakota.....	-	-	-	-	-	-	-	3	1	-	-
Nebraska.....	-	-	-	-	-	-	-	-	4	-	3
Kansas.....	-	-	-	-	-	-	-	3	4	1	20
SOUTH ATLANTIC.....	1	4	-	-	2	-	3	125	103	8	197
Delaware.....	-	-	-	-	-	-	-	1	3	-	1
Maryland..*.....	-	-	-	-	1	-	-	18	14	-	5
Dist. of Columbia..	-	-	-	-	-	-	1	2	1	-	-
Virginia.....	1	4	-	-	1	-	-	8	12	-	10
West Virginia.....	-	-	-	-	-	-	-	1	3	-	-
North Carolina.....	-	-	-	-	-	-	1	9	10	7	100
South Carolina.*...	-	-	-	-	-	-	-	3	2	1	18
Georgia.....	-	-	-	-	-	-	-	41	42	-	50
Florida.....	-	-	-	-	-	-	1	42	16	-	13
EAST SOUTH CENTRAL...	2	-	1	1	-	1	-	31	80	-	22
Kentucky.....	-	-	-	-	-	-	-	9	16	-	17
Tennessee.....	-	-	-	1	-	1	-	15	43	-	-
Alabama.....	-	-	-	-	-	-	-	3	13	-	5
Mississippi.....	2	-	1	-	-	-	-	4	8	-	-
WEST SOUTH CENTRAL...	2	-	3	-	-	2	1	62	74	4	18
Arkansas.....	-	-	-	-	-	-	-	-	1	-	4
Louisiana.....	-	-	3	-	-	-	1	14	15	4	12
Oklahoma.*.....	-	-	-	-	-	1	-	7	10	-	2
Texas.....	2	-	-	-	-	1	-	41	48	-	-
MOUNTAIN.....	-	-	2	1	-	-	1	39	62	2	42
Montana.....	-	-	-	-	-	-	-	3	9	-	-
Idaho.....	-	-	-	-	-	-	-	-	4	-	1
Wyoming.....	-	-	-	-	-	-	-	7	1	-	-
Colorado.....	-	-	-	1	-	-	-	1	22	2	38
New Mexico.....	-	-	-	-	-	-	1	5	3	-	2
Arizona.....	-	-	2	-	-	-	-	13	13	-	1
Utah.....	-	-	-	-	-	-	-	10	9	-	-
Nevada.....	-	-	-	-	-	-	-	-	1	-	-
PACIFIC.....	12	-	-	4	2	1	33	222	255	16	143
Washington.....	3	-	-	1	-	-	-	14	21	1	5
Oregon.....	-	-	-	-	-	-	-	8	14	-	5
California.....	7	-	-	3	2	1	33	194	220	15	122
Alaska.....	-	-	-	-	-	-	-	5	-	-	-
Hawaii.....	2	-	-	-	-	-	-	1	-	-	11
Puerto Rico.*.....	-	-	-	-	-	-	-	79	17	1	1

*Delayed reports: Aseptic meningitis: Md. 1

Encephalitis, primary: Okla. 1

Hepatitis, serum: N.J. delete 4

Hepatitis, infectious: Me. 10, N.J. delete 58, Ind. delete 1, Md. 13 (1969) 1 (1968), S.C. delete 1, Okla. 3, P.R. 1

Malaria: N.J. delete 6

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDED
MARCH 29, 1969 AND MARCH 30, 1968 (13th WEEK) - CONTINUED

AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS	POLIOMYELITIS			RUBELLA
		Cumulative			Cumulative			Total	Paralytic		
	1969	1969	1968	1969	1969	1968	1969	1969	1969	Cum. 1969	1969
UNITED STATES...	1,029	6,839	8,016	85	1,073	1,009	2,766	-	-	1	2,075
NEW ENGLAND.....	49	305	308	1	31	50	293	-	-	-	170
Maine.*.....	-	2	10	-	1	2	26	-	-	-	2
New Hampshire.....	10	70	48	-	-	6	1	-	-	-	10
Vermont.....	-	1	-	-	-	1	25	-	-	-	16
Massachusetts*	15	61	123	1	16	24	123	-	-	-	55
Rhode Island.....	6	9	1	-	3	4	24	-	-	-	3
Connecticut.....	18	162	126	-	11	13	94	-	-	-	84
MIDDLE ATLANTIC.....	319	2,022	1,091	9	131	148	244	-	-	-	103
New York City*....	254	1,401	255	2	28	28	95	-	-	-	36
New York, Up-State.	29	202	561	-	19	18	NN	-	-	-	20
New Jersey.*.....	25	226	221	6	46	58	149	-	-	-	25
Pennsylvania.....	11	193	54	1	38	44	NN	-	-	-	22
EAST NORTH CENTRAL...	77	767	1,936	7	125	107	547	-	-	-	532
Ohio.....	15	90	146	4	39	26	67	-	-	-	27
Indiana.*.....	27	220	316	-	20	16	50	-	-	-	116
Illinois.....	8	144	818	2	21	27	44	-	-	-	27
Michigan.....	1	79	121	1	37	29	184	-	-	-	217
Wisconsin.....	26	234	535	-	8	9	202	-	-	-	145
WEST NORTH CENTRAL...	29	220	197	4	57	45	230	-	-	-	62
Minnesota.....	-	1	6	-	9	10	69	-	-	-	7
Iowa.....	29	134	39	1	8	3	122	-	-	-	39
Missouri.....	-	11	58	1	22	9	5	-	-	-	1
North Dakota.....	-	5	60	-	-	2	34	-	-	-	10
South Dakota.....	-	-	3	-	-	4	NN	-	-	-	-
Nebraska.....	-	69	24	-	6	4	-	-	-	-	4
Kansas.....	-	-	7	2	12	13	-	-	-	-	1
SOUTH ATLANTIC.....	154	1,162	711	10	199	222	287	-	-	-	306
Delaware.....	43	65	5	-	3	2	-	-	-	-	5
Maryland.*.....	-	11	40	-	18	15	19	-	-	-	33
Dist. of Columbia..	-	-	4	-	3	8	-	-	-	-	1
Virginia.....	70	460	139	-	29	15	34	-	-	-	73
West Virginia.....	13	114	132	2	10	6	97	-	-	-	109
North Carolina.....	6	91	185	1	29	50	NN	-	-	-	-
South Carolina*....	2	50	8	4	32	41	24	-	-	-	20
Georgia.....	-	1	3	-	28	40	-	-	-	-	-
Florida.....	20	370	195	3	47	45	113	-	-	-	65
EAST SOUTH CENTRAL...	1	45	197	5	54	81	70	-	-	-	111
Kentucky.....	1	19	59	2	15	29	7	-	-	-	12
Tennessee.....	-	11	40	2	25	24	60	-	-	-	68
Alabama.....	-	-	39	-	8	14	3	-	-	-	27
Mississippi.....	-	15	59	1	6	14	-	-	-	-	4
WEST SOUTH CENTRAL...	244	1,713	1,980	16	150	210	357	-	-	1	297
Arkansas.....	-	2	-	2	17	12	-	-	-	-	-
Louisiana.....	43	51	1	1	38	52	6	-	-	-	1
Oklahoma.....	1	105	97	1	9	42	48	-	-	-	128
Texas.....	200	1,555	1,882	12	86	104	303	-	-	1	168
MOUNTAIN.....	29	163	377	1	28	13	144	-	-	-	76
Montana.....	-	3	54	1	3	1	20	-	-	-	-
Idaho.....	7	36	11	-	5	2	5	-	-	-	3
Wyoming.....	-	-	34	-	-	-	-	-	-	-	2
Colorado.....	4	19	148	-	6	7	17	-	-	-	51
New Mexico.....	9	57	40	-	5	-	6	-	-	-	5
Arizona.....	9	46	86	-	6	1	90	-	-	-	11
Utah.....	-	1	2	-	1	-	6	-	-	-	4
Nevada.....	-	1	2	-	2	2	-	-	-	-	-
PACIFIC.....	127	442	1,219	32	298	133	594	-	-	-	418
Washington.....	7	34	319	12	36	23	174	-	-	-	118
Oregon.....	62	99	254	1	8	13	26	-	-	-	23
California.....	58	294	623	17	244	88	371	-	-	-	252
Alaska.....	-	13	-	2	4	-	10	-	-	-	3
Hawaii.....	-	2	23	-	6	9	13	-	-	-	22
Puerto Rico.....	18	154	143	3	6	16	12	-	-	-	2

*Delayed reports: Measles: Mass. delete 5, N.J. delete 1, Ind. delete 64, Md. 3, S.C. delete 1
Meningococcal infections: Ind. delete 1, Md. 2
Mumps: Me. 4, Md. 13
Poliomyelitis, paralytic: N.Y.C. 1 (1968)
Rubella: Me. 2, Ind. 64, Md. 37

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDED
MARCH 29, 1969 AND MARCH 30, 1968 (13th WEEK) - CONTINUED

AREA	STREPTOCOCCAL SORE THROAT & SCARLET FEVER	TETANUS		TULAREMIA		TYPHOID FEVER		TYPHUS FEVER TICK-BORNE (Rky. Mt. Spotted)		RABIES IN ANIMALS	
	1969	1969	Cum. 1969	1969	Cum. 1969	1969	Cum. 1969	1969	Cum. 1969	1969	Cum. 1969
UNITED STATES...	11,599	1	23	1	24	-	47	-	1	96	924
NEW ENGLAND.....	1,975	-	-	-	-	-	-	-	-	-	2
Maine.*.....	32	-	-	-	-	-	-	-	-	-	1
New Hampshire.....	22	-	-	-	-	-	-	-	-	-	-
Vermont.....	13	-	-	-	-	-	-	-	-	-	1
Massachusetts.....	276	-	-	-	-	-	-	-	-	-	-
Rhode Island.....	113	-	-	-	-	-	-	-	-	-	-
Connecticut.....	1,519	-	-	-	-	-	-	-	-	-	-
MIDDLE ATLANTIC.....	623	-	4	-	1	-	7	-	-	8	22
New York City.....	30	-	2	-	1	-	5	-	-	-	-
New York, Up-State.....	406	-	2	-	-	-	1	-	-	8	22
New Jersey.....	NN	-	-	-	-	-	-	-	-	-	-
Pennsylvania.....	187	-	-	-	-	-	1	-	-	-	-
EAST NORTH CENTRAL...	1,117	-	3	-	2	-	3	-	-	6	41
Ohio.....	284	-	-	-	-	-	2	-	-	-	7
Indiana.....	198	-	-	-	1	-	-	-	-	3	9
Illinois.....	193	-	1	-	1	-	-	-	-	3	8
Michigan.....	218	-	2	-	-	-	1	-	-	-	1
Wisconsin.....	224	-	-	-	-	-	-	-	-	-	16
WEST NORTH CENTRAL...	270	-	1	-	3	-	-	-	-	22	165
Minnesota.....	19	-	-	-	-	-	-	-	-	4	46
Iowa.....	57	-	-	-	-	-	-	-	-	-	26
Missouri.....	9	-	-	-	3	-	-	-	-	14	62
North Dakota.....	69	-	-	-	-	-	-	-	-	1	22
South Dakota.....	23	-	-	-	-	-	-	-	-	-	-
Nebraska.....	66	-	-	-	-	-	-	-	-	1	1
Kansas.*.....	27	-	1	-	-	-	-	-	-	2	8
SOUTH ATLANTIC.....	1,458	-	6	-	10	-	5	-	-	21	297
Delaware.....	12	-	-	-	-	-	-	-	-	-	-
Maryland.*.....	332	-	-	-	-	-	1	-	-	-	-
Dist. of Columbia..	1	-	2	-	-	-	-	-	-	-	-
Virginia.*.....	493	-	-	-	-	-	-	-	-	9	192
West Virginia.....	242	-	-	-	2	-	-	-	-	5	40
North Carolina.....	33	-	1	-	4	-	1	-	-	-	1
South Carolina.*...	78	-	1	-	-	-	1	-	-	-	-
Georgia.....	13	-	-	-	-	-	1	-	-	-	18
Florida.....	254	-	2	-	4	-	1	-	-	7	46
EAST SOUTH CENTRAL...	1,691	1	2	1	4	-	7	-	1	16	171
Kentucky.....	234	1	2	-	-	-	-	-	-	11	102
Tennessee.....	1,334	-	-	1	4	-	6	-	1	3	55
Alabama.....	47	-	-	-	-	-	-	-	-	2	14
Mississippi.....	76	-	-	-	-	-	1	-	-	-	-
WEST SOUTH CENTRAL...	845	-	3	-	2	-	7	-	-	18	118
Arkansas.....	17	-	-	-	-	-	4	-	-	4	8
Louisiana.....	14	-	2	-	-	-	-	-	-	1	7
Oklahoma.....	44	-	1	-	2	-	-	-	-	2	18
Texas.....	770	-	-	-	-	-	3	-	-	11	85
MOUNTAIN.....	2,281	-	-	-	2	-	10	-	-	2	27
Montana.....	39	-	-	-	-	-	-	-	-	-	-
Idaho.....	84	-	-	-	-	-	-	-	-	-	-
Wyoming.....	225	-	-	-	-	-	5	-	-	2	10
Colorado.....	1,590	-	-	-	-	-	1	-	-	-	2
New Mexico.....	71	-	-	-	1	-	2	-	-	-	7
Arizona.....	121	-	-	-	-	-	1	-	-	-	5
Utah.....	151	-	-	-	1	-	-	-	-	-	-
Nevada.....	-	-	-	-	-	-	1	-	-	-	3
PACIFIC.....	1,339	-	4	-	-	-	8	-	-	3	81
Washington.....	347	-	-	-	-	-	-	-	-	-	-
Oregon.....	75	-	-	-	-	-	-	-	-	-	-
California.....	775	-	4	-	-	-	8	-	-	3	81
Alaska.....	91	-	-	-	-	-	-	-	-	-	-
Hawaii.....	51	-	-	-	-	-	-	-	-	-	-
Puerto Rico.....	3	-	1	-	-	1	3	-	-	-	5

*Delayed reports: SST: Me. 10, Kans. 350, Md. 487, Va. 163, S.C. 1

Week No.
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TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDED MARCH 29, 1969

(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:	736	436	31	28	SOUTH ATLANTIC:	1,265	665	52	45
Boston, Mass.-----	257	148	6	13	Atlanta, Ga.-----	126	62	4	8
Bridgeport, Conn.-----	55	29	5	1	Baltimore, Md.-----	248	128	7	11
Cambridge, Mass.-----	27	18	5	1	Charlotte, N. C.-----	62	30	1	1
Fall River, Mass.-----	33	17	-	1	Jacksonville, Fla.-----	92	44	-	1
Hartford, Conn.-----	52	28	1	3	Miami, Fla.-----	117	51	2	5
Lowell, Mass.-----	20	12	-	1	Norfolk, Va.-----	61	32	5	-
Lynn, Mass.-----	11	6	1	-	Richmond, Va.-----	82	47	2	9
New Bedford, Mass.-----	20	13	-	-	Savannah, Ga.-----	60	23	4	2
New Haven, Conn.-----	57	37	1	3	St. Petersburg, Fla.-----	97	75	8	2
Providence, R. I.-----	72	45	5	2	Tampa, Fla.-----	68	46	6	-
Somerville, Mass.-----	12	8	1	-	Washington, D. C.-----	197	100	12	4
Springfield, Mass.-----	40	21	2	1	Wilmington, Del.-----	55	27	1	2
Waterbury, Conn.-----	35	25	-	2	EAST SOUTH CENTRAL:	717	399	38	25
Worcester, Mass.-----	45	29	4	-	Birmingham, Ala.-----	107	63	5	5
MIDDLE ATLANTIC:	3,492	2,087	140	154	Chattanooga, Tenn.-----	49	23	3	1
Albany, N. Y.-----	54	31	2	4	Knoxville, Tenn.-----	28	17	-	1
Allentown, Pa.-----	38	19	-	2	Louisville, Ky.-----	152	94	15	6
Buffalo, N. Y.-----	164	115	3	8	Memphis, Tenn.-----	169	79	6	7
Camden, N. J.-----	44	28	1	-	Mobile, Ala.-----	45	22	2	-
Elizabeth, N. J.-----	32	16	-	1	Montgomery, Ala.-----	45	28	3	1
Erie, Pa.-----	43	25	6	3	Nashville, Tenn.-----	122	73	4	4
Jersey City, N. J.-----	74	46	15	2	WEST SOUTH CENTRAL:	1,330	714	60	77
Newark, N. J.-----	110	40	3	34	Austin, Tex.-----	53	36	7	1
New York City, N. Y.-----	1,627	977	54	53	Baton Rouge, La.-----	56	28	3	4
Paterson, N. J.-----	33	22	2	2	Corpus Christi, Tex.-----	28	10	-	5
Philadelphia, Pa.-----	600	345	7	20	Dallas, Tex.-----	173	93	3	14
Pittsburgh, Pa.-----	245	134	12	8	El Paso, Tex.-----	48	24	3	6
Reading, Pa.-----	54	46	5	-	Fort Worth, Tex.-----	92	59	4	3
Rochester, N. Y.-----	123	87	13	5	Houston, Tex.-----	234	112	3	16
Schenectady, N. Y.-----	26	16	4	1	Little Rock, Ark.-----	68	29	5	2
Scranton, Pa.-----	35	24	4	-	New Orleans, La.-----	161	86	7	4
Syracuse, N. Y.-----	86	56	4	6	Oklahoma City, Okla.-----	89	44	4	5
Trenton, N. J.-----	48	27	1	3	San Antonio, Tex.-----	146	82	3	13
Utica, N. Y.-----	33	21	3	1	Shreveport, La.-----	67	39	6	2
Yonkers, N. Y.-----	23	12	1	1	Tulsa, Okla.-----	115	72	12	2
EAST NORTH CENTRAL:	2,826	1,653	117	129	MOUNTAIN:	479	261	33	38
Akron, Ohio-----	76	46	-	3	Albuquerque, N. Mex.-----	41	15	5	3
Canton, Ohio-----	30	16	-	-	Colorado Springs, Colo.-----	35	20	9	6
Chicago, Ill.-----	822	467	25	32	Denver, Colo.-----	140	76	9	16
Cincinnati, Ohio-----	175	102	8	16	Ogden, Utah-----	23	11	1	3
Cleveland, Ohio-----	209	116	8	3	Phoenix, Ariz.-----	101	57	1	6
Columbus, Ohio-----	134	86	4	11	Pueblo, Colo.-----	21	12	4	-
Dayton, Ohio-----	79	54	3	3	Salt Lake City, Utah-----	44	27	1	2
Detroit, Mich.-----	353	204	13	16	Tucson, Ariz.-----	74	43	3	2
Evansville, Ind.-----	43	29	4	1	PACIFIC:	1,765	1,089	56	67
Flint, Mich.-----	59	18	3	7	Berkeley, Calif.-----	20	18	1	-
Fort Wayne, Ind.-----	51	29	4	6	Fresno, Calif.-----	50	21	2	3
Gary, Ind.-----	42	19	4	5	Glendale, Calif.-----	39	28	1	-
Grand Rapids, Mich.-----	81	53	8	3	Honolulu, Hawaii-----	45	23	2	3
Indianapolis, Ind.-----	142	84	6	6	Long Beach, Calif.-----	78	46	4	3
Madison, Wis.-----	34	21	5	2	Los Angeles, Calif.-----	589	364	16	23
Milwaukee, Wis.-----	154	102	2	7	Oakland, Calif.-----	84	50	3	6
Peoria, Ill.-----	56	33	-	2	Pasadena, Calif.-----	38	29	-	1
Rockford, Ill.-----	42	27	4	3	Portland, Oreg.-----	152	105	5	3
South Bend, Ind.-----	56	27	8	1	Sacramento, Calif.-----	55	34	-	2
Toledo, Ohio-----	135	85	5	2	San Diego, Calif.-----	109	72	3	6
Youngstown, Ohio-----	53	35	3	-	San Francisco, Calif.-----	184	101	5	4
WEST NORTH CENTRAL:	816	531	27	30	San Jose, Calif.-----	43	30	1	1
Des Moines, Iowa-----	64	48	4	2	Seattle, Wash.-----	175	101	9	8
Duluth, Minn.-----	17	13	4	-	Spokane, Wash.-----	41	22	3	3
Kansas City, Kans.-----	32	23	1	3	Tacoma, Wash.-----	63	45	1	1
Kansas City, Mo.-----	120	71	-	5	Total	13,426	7,835	554	593
Lincoln, Nebr.-----	38	27	1	1	Cumulative Totals including reported corrections for previous weeks				
Minneapolis, Minn.-----	97	61	2	2	All Causes, All Ages-----	186,970			
Omaha, Nebr.-----	96	66	1	2	All Causes, Age 65 and over-----	108,604			
St. Louis, Mo.-----	255	150	7	11	Pneumonia and Influenza, All Ages-----	12,144			
St. Paul, Minn.-----	56	43	2	4	All Causes, Under 1 Year of Age-----	8,376			
Wichita, Kans.-----	41	29	5	-					

GASTROENTERITIS — Glenwood Springs, Colorado

On Jan. 29, 1969, an outbreak of gastroenteritis occurred among skiers in Glenwood Springs, Colorado. Questionnaires were sent to a group of 70 skiers; of the 49 returning them, 36 reported illness for an attack rate of 73 percent. They developed nausea (100 percent), vomiting (95 percent), diarrhea (61 percent), fever (55 percent), and cramps (39 percent) 18 to 72 hours after visiting this skiing area. No pathogens were identified from stool cultures from eight persons with diarrhea.

Food histories listing all items served at the ski area cafeteria suggested an increased incidence of illness among persons drinking water or soft drinks made at the cafeteria; however, this was not considered statistically significant. Four persons who became ill on February 1 had had only a soft drink. Water used at the cafeteria came from one of two wells and all soft drinks were made at the cafeteria from commercial syrup, bottled CO₂, and well water. The water supply was tested regularly and was found acceptable on January 20. However, samples collected on January 29 were severely contaminated with coliform organisms as were repeat samples collected for confirmation. Investigation found that a sewer line was broken, discharging raw sewage on the ground approximately 25 feet from the cafeteria's primary well and that the chlorinator used to treat the well water as it entered the storage tank was also broken. Use of the well was discontinued and the chlorinator was repaired.

(Reported by Cecil S. Mollohan, M.D., M.P.H., Chief, Section of Epidemiology, and R. W. Leidholdt, P.E., Water Supply Specialist, Public Health Engineering Section, Colorado State Department of Public Health; Dean J. Pelly, M.D., Health Officer, Garfield County Health Department; and an EIS Officer.)

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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 AT CLOSE OF BUSINESS ON FRIDAY; COMPILED DATA ON A NATIONAL BASIS ARE OFFICIALLY RELEASED TO THE PUBLIC ON THE SUCCEEDING FRIDAY.

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