



U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE / PUBLIC HEALTH SERVICE HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION  
DATE OF RELEASE: DECEMBER 15, 1972 - ATLANTA, GEORGIA 30333

SURVEILLANCE SUMMARY

RUBELLA - United States, First 39 Weeks, 1972

Through the first 39 weeks of 1972, 21,424 cases of rubella were reported in the United States, a 44% decrease compared with the same period in 1971. There has not been a nationwide epidemic of rubella since 1964, when 448,796 cases occurred, and there has been a downward trend in rubella incidence since 1969, when rubella vaccines were licensed for use (Figure 1).

Seven states - Wisconsin, Kentucky, Colorado, Arizona, New Jersey, Minnesota, and Georgia - reported an increase in the incidence of rubella (cases per 100,000 population under 18 years of age) in the first 39 weeks of 1972 compared with the same period of 1971. The remaining states reported a decrease (Figure 2).

As of August 1972, 29,199,697 doses of rubella vaccine have been distributed through public programs, which were

CONTENTS

Surveillance Summary	
Rubella - United States, First 39 Weeks, 1972	417
International Notes	
Rubella - Czechoslovakia	419
Current Trends	
Influenza - Worldwide, United States	419
Epidemiologic Notes and Reports	
Staphylococcal Food Poisoning - Wisconsin	422
Possible Introduced Malaria - New York State	423
Wound Botulism - Idaho	423

sufficient to immunize 50.4% of the population age 1 through 9 years.

Twenty-five cases of congenital rubella syndrome were reported to CDC in the first 39 weeks of 1972; 42 cases were reported for the comparable period of 1971.

(Reported by the Immunization Branch, State and Community Services Division, CDC.)

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

DISEASE	49th WEEK ENDING		MEDIAN 1967-1971	CUMULATIVE, FIRST 49 WEEKS		
	December 9, 1972	December 11, 1971		1972	1971	MEDIAN 1967-1971
Aseptic meningitis	86	55	74	4,074	4,928	4,194
Brucellosis	4	6	5	177	159	220
Chickenpox	3,753	---	---	130,925	---	---
Diphtheria	4	3	10	112	185	197
Encephalitis, primary:						
Arthropod-borne and unspecified	22	37	29	1,078	1,464	1,464
Encephalitis, post-infectious	9	3	6	261	316	358
Hepatitis, serum (Hepatitis B)	177	200	149	8,435	8,314	5,023
Hepatitis, infectious (Hepatitis A)	1,155	1,162	1,059	51,689	57,246	45,259
Malaria	7	24	51	798	2,762	2,762
Measles (rubeola)	483	536	381	30,170	73,646	44,946
Meningococcal infections, total	36	23	39	1,265	2,079	2,330
Civilian	35	22	39	1,217	1,861	2,054
Military	1	1	1	48	218	218
Mumps	1,520	2,456	---	67,212	116,364	---
Rubella (German measles)	259	326	409	23,889	42,302	47,371
Tetanus	3	3	6	113	110	154
Tuberculosis, new active	611	---	---	31,621	---	---
Tularemia	3	2	2	132	173	157
Typhoid fever	8	7	8	362	400	382
Typhus, tick-borne (Rky. Mt. spotted fever)	2	---	---	518	400	337
Venereal Diseases:†						
Gonorrhea	15,728	13,939	---	714,710	628,448	---
Syphilis, primary and secondary	542	471	---	24,257	22,364	---
Rabies in animals	52	63	61	3,809	3,724	3,197

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	2	Poliomyelitis, total:	23
Botulism:	9	Paralytic:	20
Congenital rubella syndrome:	33	Psittacosis:	33
Leprosy: Calif. - 1:	117	Rabies in man:	1
Leptospirosis:	34	Trichinosis:	77
Plague:	1	Typhus, murine:	14

†Numbers for 1971 are estimated from quarterly reports to the Venereal Disease Branch, CDC

# RUBELLA – Continued Editorial Note

While no major epidemic of rubella is anticipated in the United States during 1972-73, the potential for local outbreaks continues in areas where immunity levels remain

low or immunization programs have not been adequate.

Elimination of the congenital rubella syndrome remains the major objective of rubella immunization efforts, and while surveillance is incomplete, the reported cases of congenital rubella syndrome have decreased each year since 1969.

Figure 1  
REPORTED CASES OF RUBELLA, BY 4-WEEK PERIODS  
UNITED STATES – 1969-1972

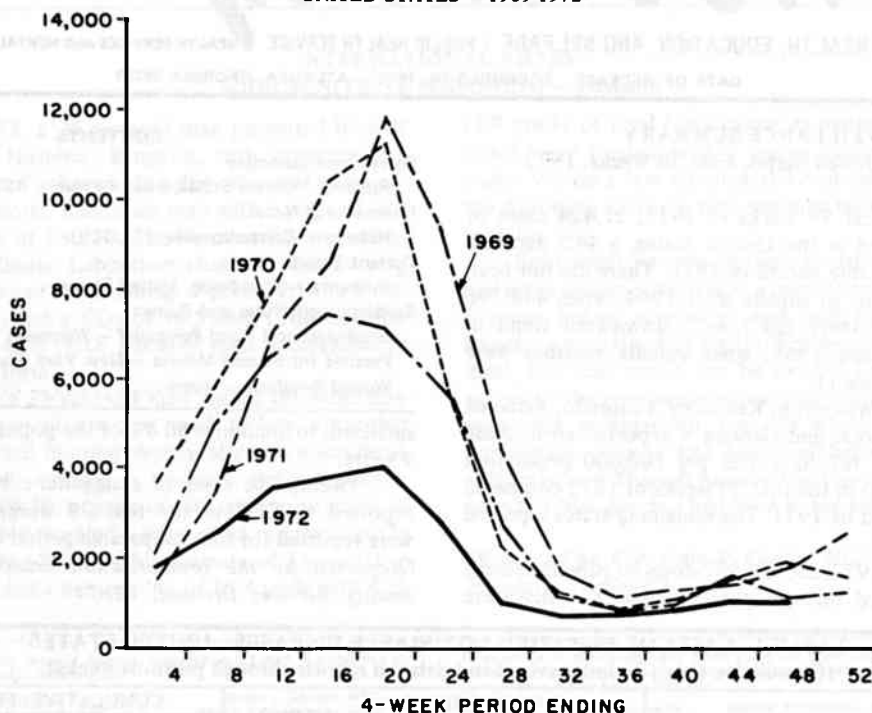
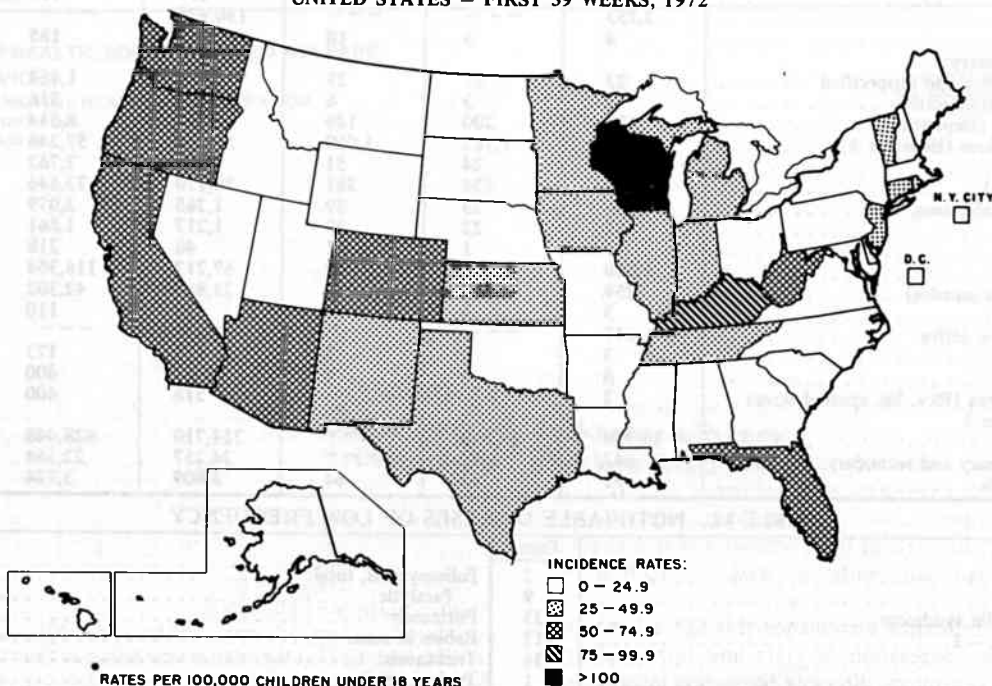


Figure 2  
INCIDENCE RATES\* OF REPORTED RUBELLA CASES, BY STATE  
UNITED STATES – FIRST 39 WEEKS, 1972



\*RATES PER 100,000 CHILDREN UNDER 18 YEARS

## INTERNATIONAL NOTES

## RUBELLA — Czechoslovakia

One of the largest epidemics of rubella ever recorded in Europe has recently been experienced in the Czech regions of Bohemia and Moravia. An average of 2,100 cases were reported weekly in January, 9,950 in April, and 5,400 in June. In the eastern part of the country (Slovakia), the morbidity rate remained at comparatively low levels. The outbreak in the Czech region was preceded in 1971 by a distinct pre-epidemic wave, particularly affecting the city of Prague. In Czechoslovakia, there has been a marked increase in the annual incidence of rubella at approximately 5-year intervals—1961, 1966-1967, and now in 1972.

In an immunologic survey performed in September 1971 in the industrial center of the city of Ostrava and in three agricultural districts of Eastern Bohemia, 6% of preschool children examined (up to 5 years of age) and 38% of children 9 years of age were seropositive. In women aged 20-40 years,

a 96-100% seropositivity was found.

In Prague, in the first half of 1972, 14 patients with rubella encephalitis, six with rubella polyarthritis, and two with thrombocytopenic purpura were hospitalized. Between 1957 and 1971, a total of 19 patients with rubella encephalitis were hospitalized. In the present outbreak, no deaths from rubella complications were recorded, and no cases of congenital rubella have been reported.

To facilitate rubella surveillance, district epidemiologists and obstetricians are operating dispensary services for pregnant women exposed to the disease, and training courses for provincial virologists in rubella virology and serology have been implemented. Field trials have been performed with live attenuated rubella vaccines RA 27/3 and Cendehill.

(Reported by the World Health Organization: Weekly Epidemiological Record, Vol. 27, No. 43.)

## CURRENT TRENDS

## INFLUENZA — Worldwide, United States

## WORLDWIDE

In Bulgaria, an influenza A epidemic started in mid-November. The virus is similar to A/England/42/72. Influenza seems to be widespread in England, where 71 strains of influenza A virus, all similar to A/England/42/72, have been isolated.

(Reported by the World Health Organization: Weekly Epidemiological Record, Vol. 47, No. 49.)

## UNITED STATES

Surveillance of influenza for the country by CDC has in the past consisted of 1) telephone surveys to state epidemiologists during the fall and winter season, which provide some assessment of influenza activity, and 2) weekly tabulation of mortality due to pneumonia and influenza from 122 large cities throughout the United States. The former method varies considerably from state to state and is a general assessment of the occurrence of influenza. The second method reflects more accurately the extent and impact of influenza but suffers from a 3- to 4-week lag behind the actual clinical events.

A sensitive and readily available source of information about influenza can be obtained from large, general community hospitals in major cities throughout the country. Studies have shown that when clinical influenza begins in a community, one of the first evidences of occurrence is a marked rise in the number of patients seen in outpatient clinics and emergency rooms of large hospitals. Although many of the patients do not have influenza, the marked increase in total outpatient visits usually closely reflects the appearance of influenza in the community. While all age groups contract influenza to a greater or lesser degree when epidemics occur, young children in both primary and secondary schools are usually the first group to be affected and serve as a good index population for influenza activity. Furthermore, when influenza occurs in the community in substantial numbers, absenteeism from schools and industry occurs nearly simultaneously with increased visits to hospitals and physicians.

To improve influenza surveillance this fall and winter, CDC enlisted the cooperation of state and territorial epidemiologists and laboratory directors to provide information

about 1) emergency room visits to large community hospitals in major cities within their states, 2) school and industrial absenteeism, 3) information regarding the number of specimens submitted for viral isolations, and 4) the number of influenza isolations made by each laboratory.

Information is currently being sent to the Regional Offices of CDC weekly by 43 states. These data show that as of Dec. 8, 1972, the only civilian outbreak of influenza-like disease was in Baltimore, Maryland, where emergency room visits in the participating hospitals were 30 to 40% higher than expected levels, with the majority of the increase represented by respiratory disease.

Laboratory data received from cooperating state and territorial laboratories of the World Health Organization Influenza Program throughout the country showed that of 279 specimens tested during the week ending Dec. 1, 1972, there were four influenza viral isolations; of 343 serum pairs tested, four showed a fourfold or greater rise in hemagglutination-inhibition or complement-fixation antibody titers to influenza A. Of the viral isolates, three were from Hawaii and were influenza B. The fourth, an influenza A isolate, was reported from the Kansas City Laboratories, Ecological Investigations Program, CDC (Table 1).

Mortality due to all causes and mortality due to pneumonia and influenza, reported from 122 cities, indicates that there is no increase above the epidemic threshold (Figures 3 and 4).

(Text continued on page 422)

Table 1  
Influenza Laboratory Surveillance — United States

Week Ending	Number of Laboratories Participating	Viral Isolation		Paired Sera	
		Number Tested	Number Isolates	Number Tested	Number Positive
11/17/72	14	92	3*	157	0
11/24/72	27	122	2	225	6
12/1/72	36	279	4**	343	1

\*One isolate was influenza B.

\*\*Three isolates were influenza B.

All other strains were influenza A and have been characterized as similar to A/England/42/72 at the International Influenza Center for the Americas, CDC.

**Figure 3**  
**MORTALITY IN 122 UNITED STATES CITIES**

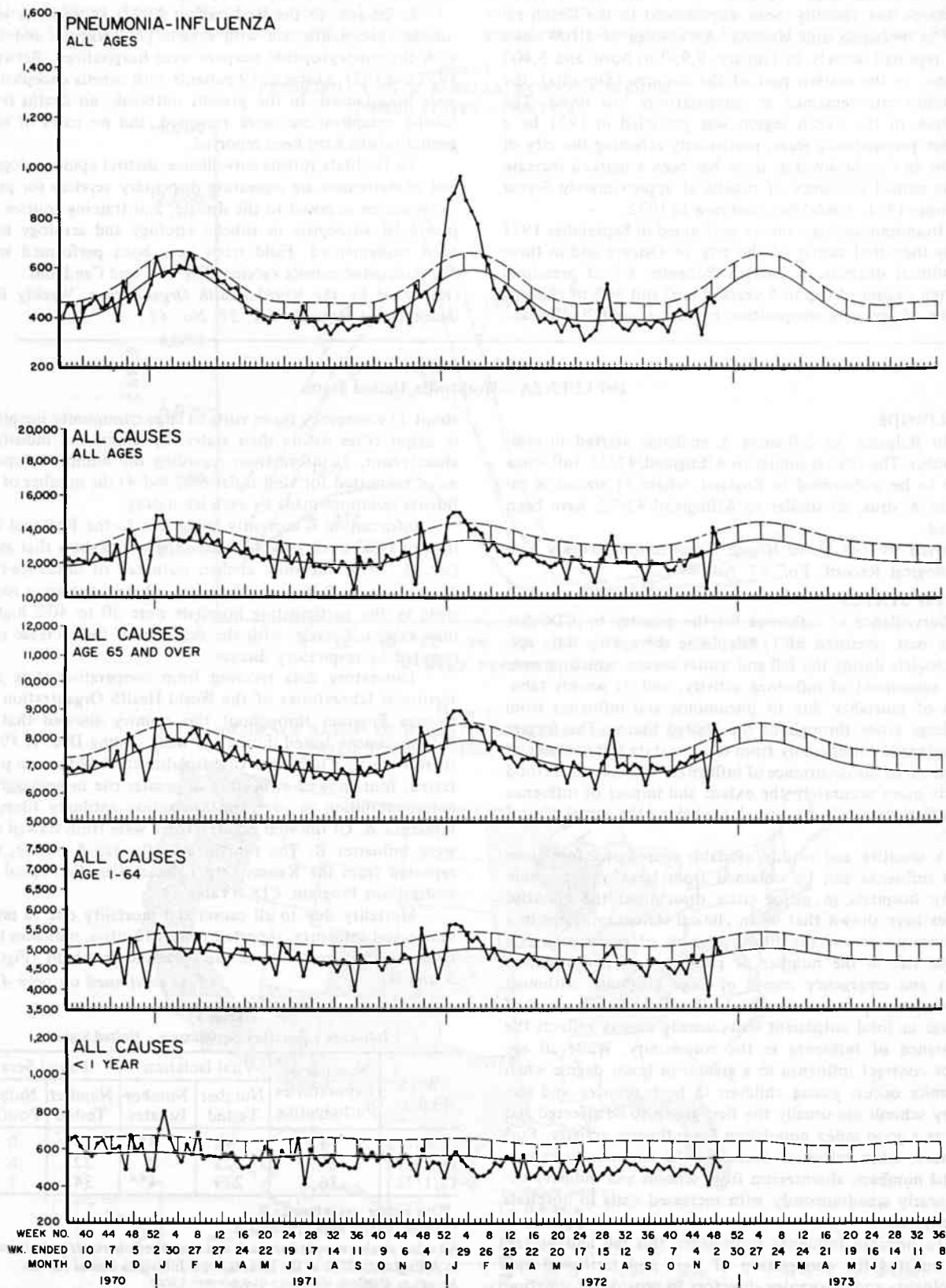
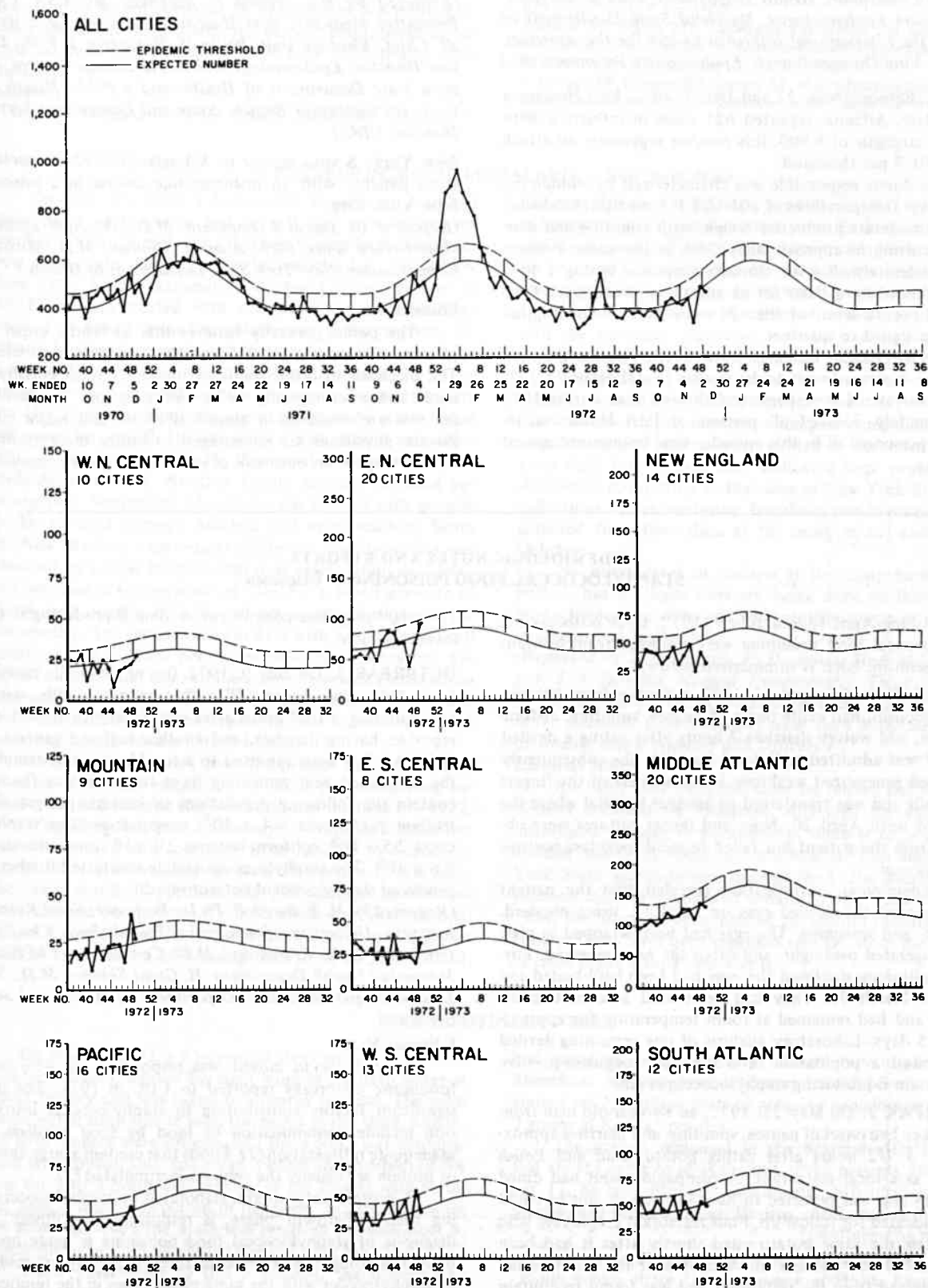


Figure 4  
PNEUMONIA-INFLUENZA DEATHS IN 122 UNITED STATES CITIES





**INFLUENZA — Continued**

(Reported by Yasushi Togo, M.D., *University of Maryland School of Medicine*; Robert D. Farber, M.D., *Commissioner of Health, Baltimore Health Department*; John D. Stafford, M.D., *State Epidemiologist, Maryland State Department of Health*; the *International Influenza Center for the Americas*, and the *Viral Diseases Branch, Epidemiology Program, CDC*.)

**Arizona:** Between Nov. 27 and Dec. 7, 1972, Fort Huachuca Army Base, Arizona, reported 621 cases of influenza. With a troop strength of 6,800, this number represents an attack rate of 91.3 per thousand.

The illness responsible was characterized by sudden onset of fever (temperatures of 101-102°F.), myalgia, headache, mild to moderate productive cough, with vomiting and diarrhea occurring in approximately 25% of the cases. Patients were moderately ill with clinical symptoms lasting 2 to 3 days followed by malaise for an additional 2 to 3 days. One-hundred-twenty-seven of the 621 cases were either hospitalized or assigned to quarters.

Twelve throat washings from 14 ill persons grew an influenza A virus, found to be similar to A/England/42/72.

A survey of base personnel showed that during 1972 approximately 33% of all persons at Fort Huachuca, including personnel ill in this episode, were immunized against influenza.

Physicians in nearby communities, reported that the number of patients with influenza-like disease is not exceeding the expected seasonal number.

(Reported by Maj. Jerome F. Beekman, MC USA, Chief, Preventive Medicine, Fort Huachuca, Arizona; Dora Woodall, Chief, Virology Unit, Philip M. Hotchkiss, D.V.M., Division Director, Epidemiology and Acute Disease Control, Arizona State Department of Health; and a Public Health Advisor, Immunization Branch, State and Community Services Division, CDC.)

**New York:** A virus similar to A/England/42/72 was isolated from patients with an influenza-like disease in a prison in New York City.

(Reported by Pascal J. Imperato, M.D., Principal Epidemiologist, New York City, Alan R. Hinman, M.D., Assistant Commissioner, New York State Department of Health.)

**Editorial Note**

The public generally believes that all febrile upper respiratory disease is the "flu" and that it occurs each winter. The diagnosis of influenza in a community must initially be made either serologically or by viral isolation. The facilities for this are available in almost all states and major cities. Private physicians are encouraged to utilize these facilities, if they suspect an outbreak of influenza in their community.

### EPIDEMIOLOGIC NOTES AND REPORTS

#### STAPHYLOCOCCAL FOOD POISONING — Wisconsin

Between April 13 and July 9, 1972, three outbreaks of staphylococcal food poisoning were reported from Milwaukee, Wisconsin. Each is summarized below.

**OUTBREAK 1:** On April 13, 1972, a woman from Milwaukee, Wisconsin, had acute onset of nausea, vomiting, abdominal pain, and watery diarrhea 2 hours after eating a deviled egg and was admitted to a local hospital. She subsequently developed generalized weakness and numbness of the fingers and hands and was transferred to another hospital where she remained until April 20. Nose and throat cultures were obtained from the patient but failed to yield coagulase-positive staphylococci.

Epidemiologic investigation revealed that the patient had prepared the deviled eggs on April 12, using mustard, ketchup, and seasoning. The eggs had been wrapped in plastic, refrigerated overnight, and eaten the next morning. Further questioning disclosed the eggs had been hard-boiled and dyed on March 31. They had been used as a centerpiece display and had remained at room temperature for approximately 5 days. Laboratory analysis of one remaining deviled egg showed a population of  $3.5 \times 10^7$  coagulase-positive enterotoxin B-producing staphylococci per gm.

**OUTBREAK 2:** On May 25, 1972, an 84-year-old man from Milwaukee had onset of nausea, vomiting, and diarrhea approximately 3 1/2 hours after eating potato salad and Polish sausage at a local restaurant. A companion who had dined with him also was reported to have become ill, but he could not be located for follow-up. Four restaurant employees who had eaten the same potato salad shortly after it had been prepared did not become ill. A sample of the potato salad was collected from the restaurant and was found to contain

$1.7 \times 10^6$  coagulase-positive enterotoxin B-producing staphylococci per gm.

**OUTBREAK 3:** On July 9, 1972, five of six family members from Milwaukee became ill with weakness, chills, nausea, and vomiting 3 to 4 hours after eating barbecued beef. One reported having diarrhea, and another suffered general collapse. All five were admitted to a local hospital. A sample of the barbecued beef remaining from the meal was found to contain the following populations of bacteria per gm: *Clostridium perfringens*  $6.4 \times 10^5$ ; coagulase-positive staphylococci  $2.5 \times 10^8$ ; coliform bacteria  $2.0 \times 10^7$ ; and enterococci  $3.6 \times 10^6$ . The staphylococcus isolate was tested further and produced staphylococcus enterotoxin B.

(Reported by M. S. Bergdoll, Ph.D., Professor, Food Research Institute, University of Wisconsin; Paul J. Pace, Chief Bacteriologist, E. R. Krumbiegel, M.D., Commissioner of Health, Milwaukee Health Department; H. Grant Skinner, M.D., State Epidemiologist, Wisconsin Department of Health and Social Services.)

**Editorial Note**

*Staphylococcus aureus* was responsible for 45% of all foodborne outbreaks reported to CDC in 1971. The most significant factors contributing to staphylococcal intoxication include contamination of food by food handlers and inadequate refrigeration (1). Foods that contain a large amount of protein are usually the vehicles incriminated (2).

A protein enterotoxin, elaborated by staphylococci during their log-growth phase, is responsible for illness. The diagnosis of staphylococcal food poisoning is made on the basis of a compatible clinical picture, frequently by isolation of staphylococci with the same phage types in the implicated

food and the feces and vomitus of ill individuals, and most definitively by identification of enterotoxin in the implicated food. Many techniques have been recently established for identification of enterotoxin (3). Enterotoxin A is most commonly associated with foodborne disease; enterotoxin B, isolated in these three incidents, has only occasionally been implicated (4).

#### References

1. Bryan F: Emerging foodborne diseases. Factors that contribute to

outbreaks and their control. *Journal of Milk and Food Technology* 35:632-639, 1972

2. Hodge B: Control of staphylococcal food poisoning. *Public Health Rep* 75:355-361, 4 Apr 1960

3. Minor TE, Marth EH: *Staphylococcus aureus* and staphylococcal food intoxication. A review. II. Enterotoxins and epidemiology. *Journal of Milk and Food Technology*, 35:21-29, 1972

4. Casman EP, Bennett RW, Dorsey AE, *et al*: Identification of a fourth staphylococcal enterotoxin, Enterotoxin D. *J Bacteriol* 94:1875-1882, 1967

### POSSIBLE INTRODUCED MALARIA — New York State

On Aug. 27, 1972, a 22-year-old Yugoslavian man had acute onset of headache and fever 1 day after leaving his summer job as counselor at a children's camp in southeastern New York State. The next day, he visited a hospital in New York City, where examination disclosed a temperature of 104°F. He was treated with oral penicillin, and his fever resolved. A blood smear for malaria was read as negative. On August 30, fever recurred, and he was given tetracycline. He remained febrile but traveled to Connecticut where, on September 1, he consulted another physician; his temperature was 105°F. A monospot test was negative, and a white blood cell count was 6,000. He was treated with aspirin and ampicillin and became afebrile. He then went to California where headache continued. Another febrile episode occurred approximately September 12, and he was treated with penicillin. He traveled through Arizona, and upon reaching Santa Fe, New Mexico, experienced chills and confusion and was admitted to a local hospital. Physical examination on admission revealed a temperature of 103°F., a blood pressure of 90/64, and a pulse of 110, but no hepatosplenomegaly or adenopathy. The hematocrit was 41% with a white blood cell count of 6,900 (35% polymorphonuclear leukocytes). On the second hospital day, a blood smear showed *Plasmodium falciparum* parasites, and therapy with quinine, pyrimethamine, and sulfadiazine was begun. He was afebrile within 24 hours and asymptomatic within 1 week.

Numerous interviews with the patient and his contacts failed to reveal any suggestion of illicit parenteral drug exposure. He had entered the United States on June 24, 1972, from Yugoslavia but gave no history of travel to a malarious area. He worked as a counselor from June 26 to August 26 except for a brief vacation in New Hampshire in late July. The camp enrolled approximately 300 campers in two sessions and had 36 counselors, 12 of which were international visitors. Epidemiologic investigation at the camp revealed that another counselor, a 24-year-old man from the Ivory Coast,

had reported to the infirmary on July 7, 1972, complaining of headache, chills, and abdominal pain. His liver was palpable, and the diagnosis of malaria was suspected but not confirmed. He recovered the following day. Although a physical examination performed in the Ivory Coast prior to entering the United States made no mention of malaria, the counselor told the infirmary physician that he had had the disease and later described his current illness as a relapse of malaria.

Populations of mosquitoes at the camp were consistently high throughout July. On the same day that the possible index case had his relapse, numerous campers complained of mosquito bites, and several were treated in the infirmary. Previous light trap records have indicated large populations of *Anopheles* mosquitoes in that area of New York State. Large collections of overwintering *Anopheles quadrimaculatus* were gathered from the cabins at the camp in the early part of October.

No other cases of malaria at the camp have been reported, but serologic tests are being done on those persons who attended the camp and had suspicious signs or symptoms in August and September.

(Reported by J. L. Benach, Ph.D., Senior Medical Entomologist, J. J. Howard, Medical Entomologist, Thomas F. Bast, Ph.D., Associate Medical Entomologist, and Alan R. Hinman, M.D., Assistant Commissioner, New York State Department of Health; and a team of EIS Officers.)

#### Editorial Note

It is likely that these two cases are related and that transmission occurred via mosquito. Although the diagnosis of introduced malaria is presumptive, there is no evidence of another source or route of transmission. This area of New York State was malarious through the 1920s, but there have been no cases of introduced malaria in New York State since 1944. No other introductions of *falciparum* malaria into the United States have been reported to CDC since investigation of cases began after World War II.

### WOUND BOTULISM — Idaho

On Nov. 6, 1972, a 43-year-old Mexican-American from Blackfoot, Idaho, injured his right hand in a potato sorter at a local factory and was taken to a nearby hospital. The palm was lacerated from side to side, the bones in the third, fourth, and fifth fingers were broken, and the wound was contaminated with grease, soil, and rocks. Following irrigation of the hand for 2 to 3 hours and pinning of the fingers with Steinman pins, a drain was placed in the palm, and the laceration was sewn up. When the drain was removed on November 8, serosanguineous fluid was noted coming from the drain.

Three years prior to this admission, the patient had received one tetanus toxoid booster after an injury, but he

had never received a primary tetanus immunization series. Therefore, he was given a tetanus toxoid booster and was started on 2.4 million units of procaine penicillin per day and 2 grams of Keflex\* per day.

The patient remained in the hospital after his injury and ate the same food as the rest of the patients. On November 11, he had difficulty swallowing, difficulty moving his tongue, and blurred vision. He was unable to eat or talk but

(Continued on page 428)

\*Inclusion of trade names does not imply endorsement by the Public Health Service or the U.S. Department of Health, Education, and Welfare.

## Morbidity and Mortality Weekly Report

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING DECEMBER 9, 1972 AND DECEMBER 11, 1971 (49th 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)	
						1972	1971	1972	1972	1972	1971
UNITED STATES	86	4	3,753	4	112	22	37	9	177	1,155	1,162
NEW ENGLAND	6	-	374	-	-	3	-	-	11	65	71
Maine *	-	-	7	-	-	-	-	-	-	1	12
New Hampshire	-	-	6	-	-	-	-	-	-	8	-
Vermont	-	-	15	-	-	-	-	-	-	1	6
Massachusetts	4	-	153	-	-	2	-	-	2	26	27
Rhode Island	-	-	72	-	-	-	-	-	2	3	11
Connecticut	2	-	121	-	-	1	-	-	7	26	15
MIDDLE ATLANTIC	29	-	90	-	3	3	6	-	46	185	267
Upstate New York	11	-	-	-	1	-	1	-	7	40	35
New York City	3	-	86	-	2	-	-	-	11	27	79
New Jersey	8	-	NN	-	-	1	2	-	8	47	74
Pennsylvania	7	-	4	-	-	2	3	-	20	71	79
EAST NORTH CENTRAL	16	-	1,561	-	4	6	7	3	25	185	173
Ohio	-	-	189	-	-	2	1	-	6	57	28
Indiana *	-	-	227	-	-	-	2	-	4	12	20
Illinois	5	-	-	-	3	1	1	3	2	32	37
Michigan	9	-	453	-	1	3	3	-	11	78	82
Wisconsin *	2	-	692	-	-	-	-	-	2	6	6
WEST NORTH CENTRAL	4	1	788	-	18	1	5	2	8	25	45
Minnesota	1	-	1	-	-	-	3	-	-	6	2
Iowa	1	-	540	-	-	1	1	2	-	3	8
Missouri	2	-	29	-	-	-	-	-	-	8	18
North Dakota	-	-	106	-	-	-	-	-	-	-	-
South Dakota	-	-	10	-	15	-	-	-	-	5	8
Nebraska	-	1	52	-	3	-	-	-	2	1	2
Kansas	-	-	50	-	-	-	1	-	6	2	7
SOUTH ATLANTIC	10	1	422	-	10	6	5	1	28	236	161
Delaware *	-	-	2	-	-	-	-	-	-	-	3
Maryland	-	-	28	-	1	-	5	-	-	10	45
District of Columbia	-	-	-	-	-	-	-	-	-	-	4
Virginia	1	1	24	-	-	-	-	-	3	21	23
West Virginia *	-	-	352	-	-	-	-	-	-	11	11
North Carolina	3	-	NN	-	-	-	-	-	7	42	34
South Carolina	-	-	16	-	1	1	-	-	-	21	5
Georgia	-	-	-	-	3	4	-	-	-	21	1
Florida	6	-	-	-	5	1	-	1	18	110	35
EAST SOUTH CENTRAL	5	2	111	-	7	-	6	2	7	64	41
Kentucky	-	-	87	-	-	-	1	-	1	16	19
Tennessee	1	1	NN	-	-	-	4	-	2	37	14
Alabama	4	1	23	-	7	-	-	2	3	5	6
Mississippi	-	-	1	-	-	-	1	-	1	6	2
WEST SOUTH CENTRAL	10	-	154	-	42	1	1	-	11	92	91
Arkansas	-	-	-	-	-	-	-	-	-	7	3
Louisiana	2	-	NN	-	5	-	-	-	2	9	9
Oklahoma	-	-	-	-	1	-	-	-	2	14	21
Texas	8	-	154	-	36	1	1	-	7	62	58
MOUNTAIN	1	-	92	-	6	-	-	-	1	61	83
Montana	-	-	18	-	-	-	-	-	-	2	19
Idaho	1	-	-	-	2	-	-	-	-	16	17
Wyoming	-	-	-	-	-	-	-	-	-	1	-
Colorado	-	-	26	-	-	-	-	-	1	8	14
New Mexico	-	-	7	-	2	-	-	-	-	15	4
Arizona	-	-	21	-	2	-	-	-	-	14	21
Utah	-	-	14	-	-	-	-	-	-	5	7
Nevada	-	-	6	-	-	-	-	-	-	-	1
PACIFIC	5	-	161	4	22	2	7	1	40	242	230
Washington	-	-	142	4	18	-	-	-	-	44	25
Oregon	1	-	-	-	1	-	1	-	1	35	23
California	4	-	-	-	1	2	6	1	39	152	174
Alaska	-	-	-	-	2	-	-	-	-	-	-
Hawaii	-	-	19	-	-	-	-	-	-	11	8
Guam	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico	-	-	7	-	-	-	-	-	2	5	13
Virgin Islands	-	-	-	-	-	-	-	-	-	-	-

\*Delayed reports: Aseptic meningitis: Del. 1  
Chickenpox: Me. 28Encephalitis, primary: Wis. 1  
Hepatitis A: Me. 6, Ind. delete 2, Del. 1, W. Va. delete 1



## Morbidity and Mortality Weekly Report

425

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING DECEMBER 9, 1972 AND DECEMBER 11, 1971 (49th WEEK) - Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1972	Cum. 1972	1972	Cumulative		1972	Cumulative		1972	Cum. 1972	1972	Cum. 1972
				1972	1971		1972	1971				
UNITED STATES .....	7	798	483	30,170	73,646	36	1,265	2,079	1,520	67,212	259	23,889
NEW ENGLAND .....	-	27	161	4,183	3,515	2	56	98	63	2,916	21	1,078
Maine *	-	2	1	253	1,491	-	4	9	1	308	-	80
New Hampshire *	-	3	23	750	218	-	3	21	1	193	1	34
Vermont .....	-	1	-	128	121	-	-	-	-	143	-	70
Massachusetts .....	-	10	27	1,093	254	1	25	37	25	742	6	504
Rhode Island .....	-	1	1	526	241	-	12	3	7	421	1	97
Connecticut .....	-	10	109	1,433	1,190	1	12	28	29	1,109	13	293
MIDDLE ATLANTIC .....	3	78	6	1,150	7,725	9	156	273	151	4,216	16	1,987
Upstate New York .....	-	18	1	168	699	2	36	83	NN	NN	3	250
New York City .....	2	19	5	417	3,807	-	43	55	68	2,342	3	261
New Jersey .....	-	19	-	499	1,287	2	30	60	60	1,023	7	1,194
Pennsylvania .....	1	22	-	66	1,932	5	47	75	23	851	3	282
EAST NORTH CENTRAL .....	-	88	153	12,041	16,664	1	190	243	478	18,246	52	6,082
Ohio *	-	19	8	295	4,064	-	74	80	49	2,446	3	440
Indiana .....	-	1	15	1,343	2,964	-	14	19	18	1,201	6	779
Illinois .....	-	33	31	4,374	3,277	1	40	67	104	3,140	9	1,094
Michigan *	-	32	39	2,281	2,609	-	54	62	132	3,390	18	1,407
Wisconsin .....	-	3	60	3,748	3,750	-	8	15	175	8,069	16	2,362
WEST NORTH CENTRAL .....	-	50	79	1,205	7,270	1	89	149	190	9,580	16	1,448
Minnesota .....	-	8	-	23	57	1	25	27	1	707	-	497
Iowa .....	-	3	78	878	2,676	-	6	14	161	6,686	15	442
Missouri .....	-	12	-	170	2,606	-	26	51	-	610	-	195
North Dakota .....	-	1	1	60	242	-	-	6	7	416	1	55
South Dakota .....	-	4	-	12	221	-	2	6	-	122	-	13
Nebraska .....	-	3	-	23	69	-	10	16	1	273	-	54
Kansas .....	-	19	-	39	1,399	-	20	29	20	766	-	192
SOUTH ATLANTIC .....	-	127	13	2,309	8,856	7	277	372	74	6,219	52	2,409
Delaware *	-	-	-	54	42	-	1	2	6	150	-	8
Maryland .....	-	10	-	15	555	-	39	53	13	523	-	55
District of Columbia .....	-	8	-	2	16	-	11	14	-	28	-	7
Virginia .....	-	9	4	76	1,613	1	61	45	20	1,277	-	77
West Virginia .....	-	2	-	302	567	-	8	12	28	2,652	1	435
North Carolina .....	-	40	-	38	1,958	1	35	71	NN	NN	-	33
South Carolina .....	-	12	-	217	930	2	25	20	-	182	2	53
Georgia .....	-	29	2	195	1,138	1	22	25	-	27	1	66
Florida .....	-	17	7	1,410	2,037	2	75	130	7	1,380	48	1,675
EAST SOUTH CENTRAL .....	-	170	4	1,080	8,463	2	98	188	73	3,563	7	1,645
Kentucky .....	-	147	1	540	3,976	-	30	54	10	530	2	900
Tennessee .....	-	-	1	195	1,025	1	32	75	22	2,121	4	560
Alabama .....	-	18	-	154	1,969	-	20	33	41	787	-	68
Mississippi .....	-	5	2	191	1,493	1	16	26	-	125	1	117
WEST SOUTH CENTRAL .....	1	87	29	1,698	12,701	8	155	181	133	5,574	16	1,724
Arkansas .....	1	6	-	13	778	-	12	5	16	194	-	36
Louisiana .....	-	7	4	109	1,712	2	48	68	1	333	-	97
Oklahoma .....	-	6	-	10	758	1	12	10	-	166	-	43
Texas .....	-	68	25	1,566	9,453	5	83	98	116	4,881	16	1,548
MOUNTAIN .....	-	49	12	1,961	3,511	-	32	65	86	3,464	6	1,171
Montana *	-	2	-	18	925	-	6	7	19	239	1	35
Idaho .....	-	3	-	153	274	-	8	11	7	228	1	37
Wyoming .....	-	1	-	51	85	-	1	2	-	335	-	8
Colorado .....	-	31	1	538	846	-	6	7	3	795	1	532
New Mexico .....	-	3	2	134	401	-	3	5	34	711	-	121
Arizona .....	-	7	9	907	637	-	1	9	23	967	1	397
Utah .....	-	2	-	159	336	-	6	20	-	140	2	38
Nevada .....	-	-	-	1	7	-	1	4	-	49	-	3
PACIFIC .....	3	122	26	4,543	4,941	6	212	510	272	13,434	73	6,345
Washington .....	-	1	3	996	1,141	1	20	35	51	4,011	2	916
Oregon .....	1	12	9	175	378	-	14	41	48	1,937	8	445
California .....	2	94	14	3,261	2,837	5	166	424	141	6,951	63	4,902
Alaska .....	-	3	-	13	63	-	9	1	29	229	-	23
Hawaii .....	-	12	-	98	522	-	3	9	3	306	-	59
Guam .....	-	2	-	16	---	-	13	---	-	12	-	12
Puerto Rico .....	-	5	30	1,010	611	-	4	10	15	933	-	33
Virgin Islands .....	-	-	-	3	17	-	2	-	-	130	-	3

\*Delayed reports: Malaria: N.H. delete 1

Measles: Me. 1

Meningococcal infections: Mont. 1

Mumps: Me. 5, Ohio 1, Del. 1

Rubella: Me. 2, Mich. delete 2

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING DECEMBER 9, 1972 AND DECEMBER 11, 1971 (49th WEEK) - Continued

AREA	TETANUS	TB (New Active)	TULAREMIA		TYPHOID FEVER		TYPHUS FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
									GONOR- RHEA	SYPHILIS (Pri. & Sec.)		
									1972	1972		
UNITED STATES	3	611	3	132	8	362	2	518	15,728	542	52	3,809
NEW ENGLAND	-	39	-	-	-	16	-	2	336	8	5	116
Maine *	-	2	-	-	-	-	-	-	32	-	4	91
New Hampshire	-	2	-	-	-	2	-	-	13	-	-	4
Vermont	-	-	-	-	-	-	-	-	9	-	-	9
Massachusetts	-	31	-	-	-	12	-	2	-	-	1	5
Rhode Island	-	4	-	-	-	-	-	-	57	1	-	2
Connecticut	-	-	-	-	-	2	-	-	225	7	-	5
MIDDLE ATLANTIC	-	108	-	1	1	55	-	39	2,356	133	-	101
Upstate New York *	-	13	-	-	-	15	-	6	444	-	-	44
New York City	-	22	-	-	-	27	-	2	907	77	-	-
New Jersey	-	30	-	1	-	8	-	16	373	28	-	-
Pennsylvania	-	43	-	-	1	5	-	15	632	28	-	57
EAST NORTH CENTRAL	1	109	1	4	-	24	-	28	1,784	25	4	375
Ohio *	-	28	1	2	-	7	-	23	702	4	-	99
Indiana	1	18	-	-	-	1	-	-	272	4	1	74
Illinois	-	40	-	2	-	7	-	4	173	7	-	61
Michigan	-	22	-	-	-	7	-	-	637	7	-	9
Wisconsin	-	1	-	-	-	2	-	1	-	3	3	132
WEST NORTH CENTRAL	-	32	-	29	-	8	-	19	1,113	3	17	1,089
Minnesota	-	6	-	-	-	1	-	-	234	-	10	278
Iowa	-	-	-	-	-	-	-	2	158	1	3	311
Missouri	-	19	-	21	-	3	-	11	505	-	3	100
North Dakota	-	1	-	-	-	-	-	-	21	-	1	143
South Dakota	-	4	-	1	-	-	-	4	44	-	-	116
Nebraska	-	2	-	1	-	1	-	-	62	-	-	16
Kansas	-	-	-	6	-	3	-	2	89	2	-	125
SOUTH ATLANTIC	2	102	1	16	-	45	2	257	4,052	158	6	393
Delaware	-	-	-	-	-	1	-	1	62	-	-	10
Maryland	-	12	-	1	-	9	-	31	485	4	1	19
District of Columbia	-	11	-	-	-	3	-	1	389	17	-	-
Virginia	-	5	1	13	-	11	-	57	344	66	-	98
West Virginia	-	7	-	-	-	1	-	3	50	-	-	58
North Carolina *	-	25	-	-	-	-	-	119	434	11	-	3
South Carolina	-	4	-	-	-	3	-	20	642	33	-	13
Georgia	2	21	-	1	-	7	2	24	606	1	3	108
Florida	-	17	-	1	-	10	-	1	1,040	26	2	84
EAST SOUTH CENTRAL	-	59	-	8	1	40	-	99	820	40	8	613
Kentucky	-	17	-	-	-	13	-	4	198	15	3	238
Tennessee	-	27	-	7	-	11	-	60	258	3	2	305
Alabama	-	6	-	1	1	11	-	19	128	8	3	67
Mississippi	-	9	-	-	-	5	-	16	236	14	-	3
WEST SOUTH CENTRAL	-	53	1	60	-	44	-	63	2,259	65	9	754
Arkansas	-	5	-	34	-	14	-	15	264	2	5	108
Louisiana *	-	7	-	4	-	7	-	-	431	21	-	45
Oklahoma	-	4	-	12	-	3	-	35	180	3	1	281
Texas	-	37	1	10	-	20	-	13	1,384	39	3	320
MOUNTAIN	-	15	-	10	-	15	-	9	493	22	1	96
Montana	-	3	-	1	-	-	-	2	26	-	-	7
Idaho	-	3	-	-	-	-	-	6	71	-	-	-
Wyoming	-	1	-	-	-	-	-	-	6	-	-	1
Colorado	-	6	-	1	-	2	-	-	132	7	-	-
New Mexico	-	-	-	-	-	1	-	-	64	5	-	23
Arizona *	-	-	-	2	-	9	-	-	76	1	-	54
Utah	-	-	-	6	-	3	-	1	49	-	1	9
Nevada	-	2	-	-	-	-	-	-	69	9	-	2
PACIFIC	-	94	-	4	6	115	-	2	2,515	88	2	272
Washington	-	2	-	-	-	4	-	1	269	10	-	-
Oregon	-	3	-	1	-	1	-	1	183	2	-	4
California	-	83	-	2	6	106	-	-	1,929	69	1	259
Alaska	-	-	-	1	-	-	-	-	81	7	1	9
Hawaii	-	6	-	-	-	4	-	-	53	-	-	-
Guam	-	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico	-	8	-	-	-	7	-	-	26	12	2	52
Virgin Islands	-	-	-	-	-	-	-	-	5	-	-	-

\*Delayed reports: TB: N.Y. Ups. 36, Ohio delete 4, N.C. delete 4, Ariz. delete 1

Gonorrhea: La. delete 1

Rabies in animals: Me. 2, Ariz. 1

## Morbidity and Mortality Weekly Report

427

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING DECEMBER 9, 1972

Week No.  
49

(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	659	420	27	34	SOUTH ATLANTIC	1,310	690	46	49
Boston, Mass.	187	109	9	9	Atlanta, Ga.	168	83	10	4
Bridgeport, Conn.	38	21	6	2	Baltimore, Md.	245	125	8	6
Cambridge, Mass.	26	19	1	5	Charlotte, N. C.	77	27	6	—
Fall River, Mass.	26	19	—	—	Jacksonville, Fla.	97	57	5	—
Hartford, Conn.	54	37	2	1	Miami, Fla.	118	61	3	3
Lowell, Mass.	34	21	1	4	Norfolk, Va.	68	35	3	9
Lynn, Mass.	22	15	—	—	Richmond, Va.	120	63	2	9
New Bedford, Mass.	27	19	1	—	Savannah, Ga.	44	20	—	5
New Haven, Conn.	48	26	3	—	St. Petersburg, Fla.	88	71	1	2
Providence, R. I.	57	33	3	6	Tampa, Fla.	79	52	3	6
Somerville, Mass.	13	8	—	1	Washington, D. C.	149	68	2	3
Springfield, Mass.	36	24	1	4	Wilmington, Del.	57	28	3	2
Waterbury, Conn.	31	23	—	—	EAST SOUTH CENTRAL	743	398	32	35
Worcester, Mass.	60	46	—	2	Birmingham, Ala.	140	73	5	2
MIDDLE ATLANTIC	3,404	2,119	103	133	Chattanooga, Tenn.	51	25	3	4
Albany, N. Y.	38	26	3	1	Knoxville, Tenn.	32	21	—	—
Allentown, Pa.	37	29	—	2	Louisville, Ky.	138	73	11	8
Buffalo, N. Y.	132	84	7	13	Memphis, Tenn.	153	76	1	2
Camden, N. J.	43	24	2	3	Mobile, Ala.	53	36	1	2
Elizabeth, N. J.	24	17	—	—	Montgomery, Ala.	53	32	6	9
Erie, Pa.	37	21	5	3	Nashville, Tenn.	123	62	5	8
Jersey City, N. J.	45	30	—	2	WEST SOUTH CENTRAL	1,370	766	47	37
Newark, N. J.	71	32	4	1	Austin, Tex.	51	24	1	2
New York City, N. Y. †	1,786	1,112	45	70	Baton Rouge, La.	55	31	4	2
Paterson, N. J.	41	27	1	4	Corpus Christi, Tex.	6	4	—	—
Philadelphia, Pa.	498	305	11	6	Dallas, Tex.	185	98	7	4
Pittsburgh, Pa.	213	121	8	11	El Paso, Tex.	70	35	4	9
Reading, Pa.	34	27	—	2	Fort Worth, Tex.	93	56	4	—
Rochester, N. Y.	123	77	8	9	Houston, Tex.	303	155	8	6
Schenectady, N. Y.	27	17	1	2	Little Rock, Ark.	62	42	1	2
Scranton, Pa.	60	42	1	—	New Orleans, La.	169	102	3	1
Syracuse, N. Y.	79	51	5	1	Oklahoma City, Okla. *	97	59	3	2
Trenton, N. J.	50	31	2	—	San Antonio, Tex.	154	89	6	4
Utica, N. Y.	27	20	—	2	Shreveport, La.	63	37	4	—
Yonkers, N. Y.	39	26	—	1	Tulsa, Okla.	62	34	2	5
EAST NORTH CENTRAL	2,627	1,560	115	98	MOUNTAIN	515	285	29	27
Akron, Ohio	62	39	2	—	Albuquerque, N. Mex.	53	15	1	3
Canton, Ohio	36	23	1	4	Colorado Springs, Colo.	27	20	—	6
Chicago, Ill.	695	392	34	14	Denver, Colo.	120	57	13	2
Cincinnati, Ohio	172	106	9	9	Las Vegas, Nev.	20	10	—	—
Cleveland, Ohio	206	126	5	4	Ogden, Utah	27	19	1	4
Columbus, Ohio	176	102	5	10	Phoenix, Ariz.	111	64	8	2
Dayton, Ohio	107	56	7	2	Pueblo, Colo.	30	18	1	7
Detroit, Mich.	372	222	11	8	Salt Lake City, Utah	64	40	4	—
Evansville, Ind.	36	25	2	5	Tucson, Ariz.	63	42	1	3
Fort Wayne, Ind.	35	16	1	—	PACIFIC	1,927	1,175	70	30
Gary, Ind.	44	16	3	3	Berkeley, Calif.	12	11	—	—
Grand Rapids, Mich.	61	47	3	9	Fresno, Calif.	54	28	3	—
Indianapolis, Ind.	149	91	8	5	Glendale, Calif.	40	30	—	—
Madison, Wis.	29	11	1	7	Honolulu, Hawaii *	62	31	5	1
Milwaukee, Wis.	131	81	9	4	Long Beach, Calif.	94	50	3	2
Peoria, Ill.	37	24	4	5	Los Angeles, Calif.	730	484	23	14
Rockford, Ill.	35	26	1	2	Oakland, Calif.	113	68	7	1
South Bend, Ind.	49	28	—	6	Pasadena, Calif.	35	23	2	1
Toledo, Ohio	134	88	7	—	Portland, Oreg.	129	71	8	1
Youngstown, Ohio	61	41	2	1	Sacramento, Calif.	70	39	3	—
WEST NORTH CENTRAL	857	566	43	27	San Diego, Calif.	143	84	2	1
Des Moines, Iowa	62	39	4	—	San Francisco, Calif.	180	100	8	4
Duluth, Minn.	21	16	1	1	San Jose, Calif.	45	31	1	—
Kansas City, Kans.	27	15	3	3	Seattle, Wash.	119	64	4	1
Kansas City, Mo.	141	101	7	5	Spokane, Wash.	44	28	1	2
Lincoln, Nebr.	46	30	1	3	Tacoma, Wash.	57	33	—	2
Minneapolis, Minn.	108	67	4	3	Total	13,412	7,979	512	470
Omaha, Nebr.	96	63	7	—	Expected Number	13,079	7,612	560	489
St. Louis, Mo.	221	139	10	6	Cumulative Total (includes reported corrections for previous weeks)	620,462	361,519	24,518	23,602
St. Paul, Minn.	96	73	3	3					
Wichita, Kans.	39	23	3	3					

†Delayed report for week ending Dec. 2, 1972.

\*Estimate based on average percent of divisional total.

**BOTULISM — Continued**

had no muscle spasms or convulsions. A tentative diagnosis of tetanus was made, and he was given 3,000 units of tetanus hyperimmune gamma globulin intramuscularly on November 12. The next day, reexamination of the hand showed no evidence of necrotic tissue or infection. Later that day, the patient complained of breathing difficulty. On November 15, he became apneic, and a tracheostomy was performed. He was given ventilatory assistance and transferred to the University of Utah Medical Center, Salt Lake City.

Physical examination on admission revealed a temperature of 99.8°F. The patient was unable to breathe without respirator assistance. His sensorium was clear. He had an external ophthalmoplegia with weakness of cranial nerves 3, 4, 6, and 7 and paralysis of cranial nerves 9 through 12. His pupils were dilated, slightly unequal, and reacted minimally to light. His deep tendon reflexes were normal. There was marked weakness in the muscles of the shoulder girdle. Sensory examination was normal. On the basis of these findings, the clinical diagnosis of botulism was made. Subsequent laboratory tests revealed a normal protein and the absence of cells in the cerebral spinal fluid. Myasthenia gravis was considered, but the Tensilon test was negative. An ulnar nerve conduction study was normal.

On the evening of admission, the patient was treated with two vials of trivalent botulinal antitoxin. The healing laceration was opened on each end, and there was no evidence of infection. Also, there was no growth in anaerobic

cultures of serosanguineous discharge from the laceration. Botulinal toxin type A was identified in serum drawn prior to the administration of antitoxin.

On November 17, a repeat ulnar nerve conduction study showed enhanced muscle contraction, consistent with botulism. On November 18, the patient was given two additional vials of botulinal AB antitoxin. That evening, the hand wound was opened down to the bone and tendon, approximately 20 cc of purulent fluid was removed, and extensive debridement was performed. Anaerobic cultures of tissue and of the purulent fluid are growing a *Clostridium* organism. Results of biochemical tests for *Clostridium* species are pending. Repeat serums taken on November 18 and 21 were negative for botulinal toxin. Guanadine treatment was started on November 21, but there was no demonstrable improvement as a result of this therapy. However, the patient has shown marked clinical improvement. He can now move his tongue and jaw but continues to require respiratory assistance.

(Reported by George Hales, M.D., private physician, Blackfoot, Idaho; John Mather, M.D., State Epidemiologist, Idaho Department of Environmental Protection and Health; Charles B. Smith, M.D., Associate Professor, Chief, Michael Britt, M.D., Fellow in Infectious Disease, James Wilfert, M.D., Division of Infectious Disease, and Richard Sontheimer, M.D., University of Utah Medical Center; James I. Miller, Bacteriologist, Intermountain Regional Medical Program; Taira Fukushima, M.D., State Epidemiologist, Utah State Division of Health; and an EIS Officer.)

The Morbidity and Mortality Weekly Report, circulation 30,500, is published by the Center for Disease Control, Atlanta, Ga.

Director, Center for Disease Control  
Director, Epidemiology Program, CDC  
Editor, MMWR

David J. Sencer, M.D.  
Philip S. Brachman, M.D.  
Michael B. Gregg, M.D.

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.

Address all correspondence to: Center for Disease Control  
Attn: Editor  
Morbidity and Mortality Weekly Report  
Atlanta, Georgia 30333

DHEW Publication No. (HSM) 73-8017

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE  
PUBLIC HEALTH SERVICE  
HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION  
CENTER FOR DISEASE CONTROL  
ATLANTA, GEORGIA 30333

OFFICIAL BUSINESS

POSTAGE AND FEES PAID  
U.S. DEPARTMENT OF HEW  
HEW 396



3-G-19-08

Mrs Mary F Jackson, Library  
Center for Disease Control