

# Morbidity and Mortality



Vol. 24, No. 7

WEEKLY REPORT

FEB 24 1975

For CDC LIBRARY  
 Week Ending  
 February 15, 1975

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE  
 DATE OF RELEASE: FEBRUARY 21, 1975 - ATLANTA, GEORGIA 30333

EPIDEMIOLOGIC NOTES AND REPORTS

OUTBREAK OF STAPHYLOCOCCAL FOOD POISONING ABOARD AN AIRCRAFT

On February 2, 1975, 196 (57%) of 343 passengers and 1 of 20 crew members aboard a chartered commercial aircraft flying from Tokyo to Copenhagen, with an interim stop in Anchorage, developed a gastrointestinal illness characterized by diarrhea (88%), vomiting (82%), abdominal cramps (74%), and nausea (68%). The illness began occurring shortly before the plane landed in Copenhagen after an 8½ hour flight from Anchorage. One hundred forty three (73%) of the ill passengers and the 1 crew member were hospitalized in Copenhagen. Approximately 30 passengers required intravenous fluids, but there were no deaths or serious sequelae.

A snack was served aboard the flight approximately 1 hour after the plane left Anchorage; breakfast was served ap-

CONTENTS

Epidemiologic Notes and Reports

- Outbreak of Staphylococcal Food Poisoning
  - Aboard an Aircraft . . . . . 57
- Rabies - Minnesota . . . . . 59
- Renal Failure and Hepatitis from Inhaled Carbon Tetrachloride and Isopropyl Alcohol - Tennessee . . . . . 59
- Follow-Up on Non-Viable Bacteria in Commercially Distributed Lumbar Puncture Trays - Maryland . . . . . 60
- Influenza - Iceland, North Dakota, Pennsylvania, Virginia, United States . . . . . 65
- Puffer Fish Poisoning - Florida . . . . . 68
- International Notes
  - Salmonella Surveillance - Switzerland . . . . . 65
  - Influenza - Canada . . . . . 65

proximately 5½ hours later, 1½-2 hours before the plane landed in Copenhagen. Four galleys were used to prepare food and all passengers received the same food.

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

| DISEASE                                     | 7th WEEK ENDING   |                   | MEDIAN 1970-1974 | CUMULATIVE, FIRST 7 WEEKS |                   |                  |
|---|-------------------|-------------------|------------------|---------------------------|-------------------|------------------|
|   | February 15, 1975 | February 16, 1974 |                  | February 15, 1975         | February 16, 1974 | MEDIAN 1970-1974 |
| Aseptic meningitis                          | 31                | 37                | 37               | 259                       | 250               | 265              |
| Brucellosis                                 | 6                 | -                 | 1                | 19                        | 10                | 12               |
| Chickenpox                                  | 3,938             | 4,454             | -                | 23,623                    | 23,418            | -                |
| Diphtheria                                  | 3                 | 5                 | 5                | 51                        | 11                | 23               |
| Encephalitis                                | Primary           | 19                | 20               | 83                        | 105               | 117              |
|   | Post-Infectious   | 7                 | 4                | 4                         | 26                | 30               |
| Hepatitis, Viral                            | Type B            | 195               | 190              | 151                       | 1,353             | 1,130            |
|   | Type A            | 694               | 922              | 1,094                     | 4,729             | 5,863            |
|   | Type unspecified  | 140               | 230              | 34                        | 967               | 1,055            |
| Malaria                                     | 5                 | 3                 | 34               | 35                        | 22                | 255              |
| Measles (rubeola)                           | 381               | 528               | 791              | 1,962                     | 2,977             | 4,454            |
| Meningococcal infections, total             |                   | 38                | 42               | 233                       | 178               | 257              |
|   | Civilian          | 36                | 23               | 40                        | 226               | 177              |
| Military                                    | 2                 | 1                 | 2                | 7                         | 1                 | 9                |
| Mumps                                       | 1,486             | 1,929             | 2,172            | 9,508                     | 11,107            | 14,597           |
| Pertussis                                   | 28                | 35                | -                | 198                       | 189               | -                |
| Rubella (German measles)                    | 355               | 336               | 681              | 1,474                     | 1,453             | 3,520            |
| Tetanus                                     | 1                 | 1                 | -                | 9                         | 8                 | 7                |
| Tuberculosis                                | 586               | 522               | -                | 3,674                     | 3,386             | -                |
| Typhoid fever                               | 4                 | 10                | 3                | 29                        | 44                | 36               |
| Typhus, tick-borne (Rky. Mt. spotted fever) | -                 | -                 | -                | 10                        | 13                | 3                |
| Venereal Diseases:                          |                   |                   |                  |                           |                   |                  |
| Gonorrhea                                   | Civilian          | 16,864            | 16,057           | -                         | 123,879           | 112,402          |
|   | Military          | 707               | 520              | -                         | 4,303             | 3,640            |
| Syphilis, primary and secondary             | Civilian          | 416               | 465              | -                         | 3,406             | 3,258            |
|   | Military          | 5                 | 9                | -                         | 50                | 61               |
| Rabies in animals                           | 18                | 41                | 71               | 228                       | 324               | 398              |

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

|                              | Cum. |                       | Cum. |
|------------------------------|------|-----------------------|------|
| Anthrax:                     | -    | Poliomyelitis, total: | 1    |
| Botulism:                    | 3    | Paralytic:            | 1    |
| Congenital rubella syndrome: | 5    | Psittacosis: Tex. I:  | 5    |
| Leprosy: Tex. I:             | 25   | Rabies in man:        | 1    |
| Leptospirosis: Mo. I:        | 7    | Trichinosis:          | 8    |
| Plague:                      | -    | Typhus, murine:       | -    |

## FOOD POISONING — Continued

Epidemiologic investigation revealed that 115 (86%) of 133 passengers sitting in the front of the plane and served food prepared in galleys 1 and 2 were ill, compared to 81 (39%) of 210 passengers sitting in the area served food prepared in galleys 3 and 4 ( $p < .001$ ). Food specific attack rates demonstrated a statistically significant association between illness and consumption of ham at the breakfast meal (Table 1). The ham had been served on top of cheese omelettes. Cases occurred 30 minutes to 5½ hours after eating the breakfast meal with a mean of about 2.5 hours (Figure 1).

Except for the 1 crew member who ate ham, none of the crew aboard the aircraft, including the pilots, became ill. Since it was suppertime for the crew, which had boarded in Anchorage, they were served a steak dinner instead of the breakfast meal. Some of the crew ate the same snack as the passengers.

The snack and breakfast were prepared in Anchorage by a catering company owned by the air line. Three cooks were involved in the preparation of the ham and omelettes. Cooks No. 1 and No. 2 and assistant No. 1 worked from 11:00 a.m. to 1:30 p.m. on February 1. They first cracked and mixed 120 dozen eggs. Cook No. 2 then made 133 omelettes for use in galleys 1 and 2, and Cook No. 1 placed ham slices on these omelettes. This ham had been sliced and fried the previous day by assistant No. 1 and refrigerated overnight. Cook No. 1 then made 72 omelettes for use in galleys 3 and 4, and Cook No. 2 put ham slices on these omelettes. Cook No. 3 and assistant No. 2 worked from 2:00 p.m. to 5:00 p.m. Cook No. 3 made omelettes for the remaining passengers served by galleys 3 and 4, and assistant No. 2 placed ham slices on these omelettes. The ham and omelettes were stored at room temperature during the 6 hours required for preparation. Following preparation, this food was placed for 14½ hours in a holding room where the temperature was measured at 10°C (50°F) before and after the outbreak. Beginning about 7:30 a.m. the next day, the snack and breakfast food were loaded onto the plane. The snack was refrigerated, but the breakfast food was stored at room temperature in the galley ovens until it was heated just prior to serving.

Coagulase-positive *Staphylococcus aureus* lysed by group III phages 53 and 83a was isolated from an inflamed lesion on a finger on the right hand of Cook No. 1, from fecal and other specimens from 5 ill patients, from 3 leftover ham samples, and from 2 leftover omelette samples. *S. aureus* with the same phage pattern was also isolated from the wrist of Cook No. 3 and the nose of assistant No. 2. *S. aureus* lysed by group I phages 29, 52, 80, 81, and 85 was isolated from 1 patient, from 1 of the omelette samples, and from the nose of Cook No. 2. Assistant No. 1 was negative for *S. aureus*. The antibiogram patterns of the 2 *S. aureus* phage types were different. At the U.S. Food and Drug Administration Laboratories the phage group III strain was found to produce type D enterotoxin, while the phage group I strain did not produce enterotoxin. Type D enterotoxin was isolated from leftover ham and omelette.

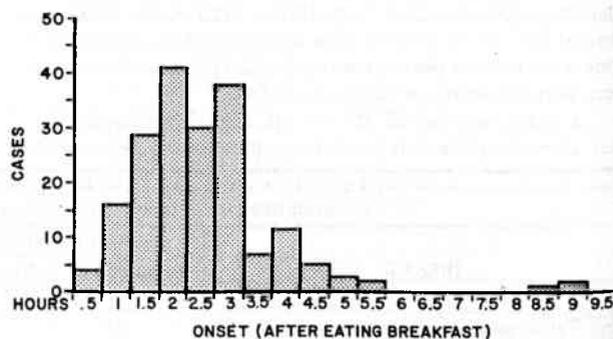
(Reported by Herdis von Magnus, MD, Epidemiologist, Hans Lautrop, MD, Knud Gaarslev, MD, Kristen Rosendal, MD, Bacteriology Section, Statens Serum Institut, Copenhagen, Denmark; Neils Skovgaard, VMD, Bacteriology Section, Royal Veterinary and Agricultural University, Copenhagen, Den-

Table 1  
Food Specific Attack Rates

| Food       | Persons Eating Food |         |             | Persons Not Eating Food |         |             |
|------------|---------------------|---------|-------------|-------------------------|---------|-------------|
|            | Ill                 | Not Ill | Percent Ill | Ill                     | Not Ill | Percent Ill |
| Snack:     |                     |         |             |                         |         |             |
| Tuna       | 125                 | 119     | 51          | 67                      | 28      | 71          |
| Roast      | 148                 | 127     | 54          | 44                      | 20      | 69          |
| Chicken    | 127                 | 120     | 51          | 65                      | 27      | 71          |
| Shrimp     | 163                 | 128     | 56          | 29                      | 19      | 60          |
| Choc. Cake | 115                 | 104     | 53          | 77                      | 43      | 64          |
| Breakfast: |                     |         |             |                         |         |             |
| Omelette   | 169                 | 133     | 56          | 23                      | 14      | 62          |
| *Ham       | 190                 | 139     | 58          | 2                       | 8       | 20          |
| Yogurt     | 147                 | 98      | 60          | 45                      | 49      | 49          |
| Roll       | 166                 | 135     | 55          | 26                      | 12      | 68          |
| Butter     | 137                 | 130     | 51          | 55                      | 17      | 76          |
| Cheese     | 103                 | 94      | 52          | 89                      | 53      | 63          |

\*Fisher's two-tail  $P = .023$

Figure 1  
FOODBORNE OUTBREAK ON AN AIRCRAFT  
FEBRUARY 1975



mark; Carol Elliott, Public Health Nurse, Greater Anchorage Area Borough Health Department; John R. Kuhn, District Sanitarian, Rose Tanaka, Director, South Central Regional Laboratory, Donald K. Freedman, MD, Director, Division of Health, Department of Health and Social Services, State of Alaska; Reginald Bennett, Research Microbiologist, Food Microbiology Branch, Division of Microbiology, Bureau of Foods, FDA; Michael M. Pullen, DVM, Staff Officer, Epidemiology, Meat and Poultry Inspection Program, USDA; Field Services Division, Quarantine Division, Bacterial Diseases Division, CDC; and 3 EIS Officers.)

## Editorial Note

This large foodborne outbreak resulted from ham that had been handled by a cook who had an inflamed finger lesion from which *S. aureus* was cultured. The ham was then held at room temperature for a sufficient amount of time to allow growth of *S. aureus* and enterotoxin production. Staphylococcal enterotoxin is heat stable and not readily destroyed at ordinary cooking temperatures (1). *S. aureus* carriage may be found in up to 50% of foodhandlers and is especially high in persons with skin infections; however, this outbreak probably would not have occurred had the food been handled

properly. Food served aboard aircraft should be refrigerated prior to heating and serving. Food handlers on the ground and crew members who work in aircraft galleys should be educated in proper foodhandling techniques and particularly in the risks involved in storing food at room temperature for prolonged periods.

This outbreak emphasizes the importance of serving

pilots different food from that of the passengers and each other just before and during a flight.

#### Reference

1. Bergdoll MS: Enterotoxins. In *Microbial Toxins*. Volume III: Bacterial Protein Toxins, Edited by Montie TC, Kadis S, Aji SJ: New York and London, Academic Press, 1970, p 265

### RABIES — Minnesota

On November 8, 1974, a 60-year-old farmer and part-time animal trapper from northwestern Minnesota experienced an unprovoked bite on his left third finger by a stray cat. Earlier that day, a neighbor had also been bitten on the thigh without provocation by the same cat. The cat escaped and was never found. Both men washed their wounds with soap and water. Subsequently, cellulitis of the farmer's finger developed and antibiotic treatment and tetanus toxoid was given. On November 29, 1974, after becoming concerned about the possibility of rabies, both men began receiving 14-dose courses of duck embryo vaccine; both courses were completed. On January 1, 1975, the farmer experienced gradual onset of malaise, generalized myalgias, fever, and cough. Over the next few days he developed anxiety, increased excitability, personality change, and a choking sensation when attempting to drink fluids. On January 6, 1975, he was admitted to a local hospital where excitability, personality change, and dysphagia worsened. On January 9, he was transferred to a referral hospital. Neurologic examination revealed intact cranial nerves, except for impaired swallowing, hyperexcitability, and emotional lability.

Initial laboratory studies revealed an elevated serum protein concentration, a monoclonal IgM spike, a hypercellular bone marrow with a preponderance of small lymphocytes, and an elevated serum viscosity. Hyperviscosity syndrome was thought likely and plasmapheresis was performed, but little or no improvement occurred. As rabies was also considered a possibility, specimens of serum, CSF, saliva, and corneal impressions were sent to CDC. The importance of strict isolation precautions, already in effect, was emphasized. Increasingly restless, confused, and disoriented, the patient progressively worsened and lapsed into coma. Because stridor was noted, the patient received intubation and assisted ventilation. Intractable hypotension developed and the patient died on January 15, 1975.

Direct fluorescent staining of premortem corneal smears was negative for rabies antigen. Rabies neutralizing antibodies were present in a titer of 1:8 on January 11 and 1:19 at death. Brain tissue obtained at postmortem examination was positive for rabies by direct fluorescent staining by the Division of Medical Laboratories in the state of Minnesota, as well as

by the Rabies Laboratory at CDC. Other postmortem findings included the presence of Negri bodies in brain tissue. (Reported by Richard Branda, MD, Ian Gilson, MD, Jon Dickson, MD, Lynette Thompson, RN, Takashi Okagaki, MD, Joo Hoo Sung, MD, LD Sabbath, MD, Michael Metcalf, MD, Jack Delmore, MD, Richard Kronenberg, MD, William Ogden, MD, Nancy Van Drunen, RN, and Henry Balfour, MD, physicians and nurses at the local and referral hospitals; Henry Bauer, PhD, Director, Division of Medical Laboratories, and Lloyd Boyd, Melvin Fossan, and Robert Siem, PhD, Chief, Virus Laboratory Section, and Barry S Levy, MD, Acting State Epidemiologist and Acting Director, Division of Personal Health Services, Minnesota Department of Health.)

#### Editorial Note

This case emphasizes that human rabies is a diagnosis based upon both clinical illness and epidemiologic evidence of potential rabies exposure. This is the first human case of rabies in the United States since August 1973 and is the first case of rabies from a cat bite in the continental United States since 1960. Terrestrial wildlife rabies is endemic in this area of Minnesota, and surveillance data indicate that since 1970 an epizootic of both wild and domestic animal rabies has been present in Minnesota and neighboring states.

The low humoral antibody titer exhibited by this patient is consistent with earlier reports of occasionally low or undetectable antibody levels after 14 doses of duck embryo vaccine (1,2). Such inadequacy may be important in development of disease. For all bites by animals in which rabies cannot be excluded and for non-bite exposures from animals proven rabid or strongly suspected of being rabid, the Public Health Service Advisory Committee on Immunization Practices recommends post-exposure prophylaxis, including both passive immunization with antirabies serum or globulin and active immunization with duck embryo vaccine (3).

#### References

1. Greenberg M, Childress J: Vaccination against rabies with duck-embryo and simple vaccines. *JAMA* 173:333-337, 1960
2. Hattwick M, Rubin RN, Music S, et al: Postexposure rabies prophylaxis with human rabies immune globulin. *JAMA* 227:407-410, 1974
3. US Public Health Service Advisory Committee on Immunization Practices: Collected Recommendations. *Morbidity and Mortality Weekly Rep* 21 (25 - supplement): 1-34, 24 June 1972

### RENAL FAILURE AND HEPATITIS FROM INHALED CARBON TETRACHLORIDE AND ISOPROPYL ALCOHOL — Tennessee

Fifteen of 41 people employed in the bottle-filling operation at a drug company in Tennessee became ill within 39 hours after leaving work on Friday, November 8, 1974. The illness was characterized by nausea (14), vomiting (13),

weakness (13), and abdominal pain (10), lasting 1 to 3 days. Four persons were hospitalized, 1 for hepatitis, 1 for renal failure, and 2 for both. All 4 suffered vomiting and abdominal pain, 1 had hypertension, 3 elevated BUN, 3 elevated SGOT,

## RENAL FAILURE AND HEPATITIS – Continued

and 3 elevated bilirubin (Table 2). Of the 3 persons with renal failure, 2 were managed with diet alone, but 1 required peritoneal dialysis. All recovered or are recovering.

Epidemiologic investigation revealed that the drug company mixes and packages a variety of drugs in a large room with 10 packaging lines. On the afternoon of November 8, the company packaged 70% isopropyl alcohol, 3% hydrogen peroxide, Merthiolate,\* and turpentine. During packaging, isopropyl alcohol was spilled, leaving puddles on the floor and strong fumes in the air. Between 2:30 and 4:30 p.m., 2 men used approximately 4 gallons of carbon tetrachloride for cleaning pans and scoops. They had no more acetone, their usual cleaning solvent, and, after some discussion, decided that carbon tetrachloride would be a good substitute. They used this in the north end of the plant, 20 to 30 feet from the isopropyl alcohol and hydrogen peroxide packaging lines. The other lines were in the south end of the building.

There was a positive correlation of illness with proximity of workers to the carbon tetrachloride or isopropyl alcohol. Of the 15 ill workers, 13 had been within 25 feet of the cleaning operation or the alcohol line. Ten of 14 persons who worked exclusively in the north end became ill versus 2 of 14 who worked only in the south end ( $p < .003$ ).

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

(Reported by TW Ballard, medical student, Phillip Walker, MD, Assistant Professor, Earl Ginn, MD, Professor, Renal Division Medicine, Vanderbilt University School of Medicine; Robert S Sanders, MD, Rutherford County Health Department; David McMurray, Environmental Engineer, Ella Vander Horst, RN, Nurse Epidemiologist, and Robert H Hutchenson, Jr, MD, State Epidemiologist, Tennessee Department of Public Health; and an EIS Officer.)

## Editorial Note

The ability of ethyl alcohol to potentiate the toxicity of carbon tetrachloride has been well-established (1). Recent reports of animal studies have suggested that isopropyl alcohol is more toxic than ethanol in combination with carbon tetrachloride (2,3). This outbreak documents the toxicity in humans of this combination and emphasizes the importance of considering toxicities of chemical combinations, especially in an industrial setting where combined exposure may occur.

## References

1. New PS, Lubash GD, Scherr, L, and Rubin AL: Acute renal failure associated with carbon tetrachloride intoxication. JAMA: 181, 197, 1962
2. Cornish HH, Adefun J: Potentiation of carbon tetrachloride toxicity by aliphatic alcohols. Arch Environ Health 14:447, 1967
3. Traiger GJ, Gabriel L: Differences in the potentiation of carbon tetrachloride in rats by ethanol and isopropanol pretreatment. Toxicol Appl Pharmacol 20:105-112, 1971

Table 2  
Clinical Features of 4 Workers Exposed to Isopropyl Alcohol  
and Carbon Tetrachloride – Tennessee, 1974

| Patient ID Number | Location on November 8th | Vomiting | Abdominal Pain | Oliguria | Hyper-tension    | Peak BUN | Peak SGOT | Peak Bilirubin (Total) | Perit. Dialysis | Days Hospitalized |
|-------------------|--------------------------|----------|----------------|----------|------------------|----------|-----------|------------------------|-----------------|-------------------|
| 1                 | AL                       | +        | +              | +        | No               | 120      | 500       | 3.1                    | +               | 21*               |
| 2                 | AL                       | +        | +              | 0        | No               | 95       | 13,390    | 9.0                    | –               | 16                |
| 3                 | CCL <sub>4</sub>         | +        | +              | 0        | Yes<br>(200/110) | 89       | 50        | 0.6                    | –               | 10                |
| 4                 | CCL <sub>4</sub>         | +        | +              | 0        | No               | 12       | 7,250     | 2.4                    | –               | 5                 |

AL = Isopropyl Alcohol Line

CCL<sub>4</sub> = CCL<sub>4</sub> Cleaning Area

\*Approximate number of days

### FOLLOW-UP ON NON-VIABLE BACTERIA IN COMMERCIALY DISTRIBUTED LUMBAR PUNCTURE TRAYS – Maryland

Because of non-viable bacteria in some of the specimen tubes in their disposable Lumbar Puncture Trays (MMWR, Vol. 24, No. 6), Pharmaseal Laboratories has voluntarily recalled 3 implicated lots of trays (lots C4K320X and C4N220X—catalog

No. 4303B; lot C4L032B—catalog No. 4302B). The FDA is presently investigating the extent and source of the problem. (Reported by the Food and Drug Administration and the Bacterial Diseases Division, Bureau of Epidemiology, CDC.)

# Morbidity and Mortality Weekly Report

**TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING FEBRUARY 15, 1975 AND FEBRUARY 16, 1974 (7th WEEK)**

| AREA                 | ASEPTIC<br>MENIN-<br>GITIS | BRUCEL-<br>LOSIS | CHICKEN-<br>POX | DIPHTHERIA |    | ENCEPHALITIS                                 |      |                      | HEPATITIS, VIRAL |        |                     | MALARIA |    |
|----------------------|----------------------------|------------------|-----------------|------------|----|--|------|----------------------|------------------|--------|---------------------|---------|----|
|                      |                            |                  |                 |            |    | Primary: Arthropod-<br>borne and Unspecified |      | Post In-<br>fectious | Type B           | Type A | Type<br>Unspecified |         |    |
|                      |                            |                  |                 |            |    | 1975   | 1974 | 1975                 | 1975             | 1975   | 1975                |         |    |
| UNITED STATES        | 31                         | 6                | 3,938           | 3          | 51 | 19   | 20   | 7                    | 195              | 694    | 140                 | 5       | 35 |
| NEW ENGLAND          | -                          | -                | 371             | -          | -  | 1  | 1    | 1                    | 8                | 33     | 17                  | -       | 1  |
| Maine *              | -                          | -                | 2               | -          | -  | -  | -    | -                    | -                | 6      | -                   | -       | -  |
| New Hampshire *      | -                          | -                | 5               | -          | -  | -  | -    | -                    | -                | 2      | -                   | -       | -  |
| Vermont              | -                          | -                | 29              | -          | -  | -  | -    | -                    | 1                | 1      | -                   | -       | -  |
| Massachusetts        | -                          | -                | 129             | -          | -  | 1  | 1    | -                    | 3                | 2      | 17                  | -       | 1  |
| Rhode Island         | -                          | -                | 91              | -          | -  | -  | -    | -                    | 3                | 7      | -                   | -       | -  |
| Connecticut          | -                          | -                | 115             | -          | -  | -  | -    | 1                    | 1                | 15     | -                   | -       | -  |
| MIDDLE ATLANTIC      | 2                          | -                | 204             | -          | -  | 1  | -    | -                    | 18               | 61     | 29                  | 1       | 4  |
| Upstate New York     | -                          | -                | 78              | -          | -  | -  | -    | -                    | 1                | 22     | 4                   | -       | 2  |
| New York City        | -                          | -                | 104             | -          | -  | -  | -    | -                    | 2                | 9      | -                   | 1       | 2  |
| New Jersey           | -                          | -                | NN              | -          | -  | -  | -    | -                    | 10               | 18     | 21                  | -       | -  |
| Pennsylvania *       | 2                          | -                | 22              | -          | -  | 1  | -    | -                    | 5                | 12     | 4                   | -       | -  |
| EAST NORTH CENTRAL   | 4                          | -                | 1,897           | -          | -  | 9  | 1    | 2                    | 46               | 158    | 11                  | -       | 1  |
| Ohio *               | 2                          | -                | 457             | -          | -  | 7  | -    | 1                    | 22               | 60     | -                   | -       | -  |
| Indiana              | -                          | -                | 152             | -          | -  | -  | 1    | -                    | 1                | 14     | -                   | -       | -  |
| Illinois             | -                          | -                | -               | -          | -  | -  | -    | -                    | 4                | 21     | 5                   | -       | 1  |
| Michigan             | 2                          | -                | 853             | -          | -  | 2  | -    | 1                    | 13               | 55     | 6                   | -       | -  |
| Wisconsin            | -                          | -                | 435             | -          | -  | -  | -    | -                    | 6                | 8      | -                   | -       | -  |
| WEST NORTH CENTRAL   | 6                          | 3                | 501             | -          | -  | 1  | 17   | -                    | 15               | 47     | 15                  | -       | 1  |
| Minnesota *          | -                          | -                | 27              | -          | -  | -  | -    | -                    | 8                | 17     | -                   | -       | -  |
| Iowa                 | -                          | 2                | 296             | -          | -  | -  | 2    | -                    | 2                | 11     | -                   | -       | -  |
| Missouri             | 6                          | 1                | 37              | -          | -  | -  | 15   | -                    | 2                | 2      | 14                  | -       | 1  |
| North Dakota *       | -                          | -                | 5               | -          | -  | -  | -    | -                    | -                | 3      | -                   | -       | -  |
| South Dakota         | -                          | -                | -               | -          | -  | 1  | -    | -                    | -                | 1      | -                   | -       | -  |
| Nebraska             | -                          | -                | 1               | -          | -  | -  | -    | -                    | 2                | 5      | 1                   | -       | -  |
| Kansas               | -                          | -                | 135             | -          | -  | -  | -    | -                    | 1                | 8      | -                   | -       | -  |
| SOUTH ATLANTIC       | 3                          | 3                | 348             | -          | -  | -  | -    | 3                    | 28               | 137    | 21                  | 1       | 6  |
| Delaware             | -                          | -                | 3               | -          | -  | -  | -    | -                    | -                | -      | -                   | -       | -  |
| Maryland             | -                          | -                | 27              | -          | -  | -  | -    | -                    | 3                | 3      | 5                   | -       | -  |
| District of Columbia | -                          | -                | 4               | -          | -  | -  | -    | -                    | 1                | 1      | -                   | -       | -  |
| Virginia             | -                          | 1                | 36              | -          | -  | -  | -    | -                    | 2                | 8      | 3                   | 1       | 4  |
| West Virginia        | 1                          | -                | 252             | -          | -  | -  | -    | -                    | -                | 2      | -                   | -       | -  |
| North Carolina       | -                          | -                | NN              | -          | -  | -  | -    | -                    | 6                | 11     | 1                   | -       | -  |
| South Carolina       | -                          | -                | 26              | -          | -  | -  | -    | -                    | -                | 8      | -                   | -       | -  |
| Georgia              | -                          | 1                | -               | -          | -  | -  | -    | -                    | -                | 43     | -                   | -       | -  |
| Florida              | 2                          | 1                | -               | -          | -  | -  | -    | 3                    | 16               | 61     | 12                  | -       | 2  |
| EAST SOUTH CENTRAL   | 7                          | -                | 148             | -          | -  | -  | -    | -                    | 11               | 57     | -                   | 1       | 5  |
| Kentucky             | -                          | -                | 104             | -          | -  | -  | -    | -                    | 1                | 23     | -                   | -       | 2  |
| Tennessee            | 3                          | -                | NN              | -          | -  | -  | -    | -                    | 3                | 25     | -                   | -       | -  |
| Alabama              | 3                          | -                | 31              | -          | -  | -  | -    | -                    | 4                | 7      | -                   | 1       | 2  |
| Mississippi          | 1                          | -                | 13              | -          | -  | -  | -    | -                    | 3                | 2      | -                   | -       | 1  |
| WEST SOUTH CENTRAL   | 5                          | -                | 263             | -          | 1  | 2  | -    | 1                    | 3                | 65     | 6                   | -       | 2  |
| Arkansas             | -                          | -                | 1               | -          | -  | -  | -    | -                    | -                | 10     | -                   | -       | 1  |
| Louisiana            | -                          | -                | NN              | -          | -  | 1  | -    | 1                    | 1                | -      | 1                   | -       | -  |
| Oklahoma             | 1                          | -                | -               | -          | -  | 1  | -    | -                    | -                | 3      | 3                   | -       | 1  |
| Texas                | 4                          | -                | 262             | -          | 1  | -  | -    | -                    | 2                | 52     | 2                   | -       | -  |
| MOUNTAIN             | -                          | -                | 26              | -          | 6  | 3  | -    | -                    | 12               | 19     | 15                  | -       | 8  |
| Montana              | -                          | -                | 10              | -          | -  | -  | -    | -                    | 1                | 3      | -                   | -       | -  |
| Idaho                | -                          | -                | -               | -          | -  | -  | -    | -                    | 1                | 3      | 4                   | -       | -  |
| Wyoming              | -                          | -                | -               | -          | -  | -  | -    | -                    | -                | -      | -                   | -       | -  |
| Colorado *           | -                          | -                | 12              | -          | -  | 3  | -    | -                    | 1                | 1      | 6                   | -       | 8  |
| New Mexico           | -                          | -                | 1               | -          | 1  | -  | -    | -                    | 6                | 8      | 2                   | -       | -  |
| Arizona              | -                          | -                | -               | -          | 5  | -  | -    | -                    | 1                | 3      | 3                   | -       | -  |
| Utah                 | -                          | -                | 3               | -          | -  | -  | -    | -                    | 2                | -      | -                   | -       | -  |
| Nevada               | -                          | -                | -               | -          | -  | -  | -    | -                    | -                | 1      | -                   | -       | -  |
| PACIFIC              | 4                          | -                | 180             | 3          | 44 | 2  | 1    | -                    | 54               | 117    | 26                  | 2       | 7  |
| Washington *         | -                          | -                | 154             | 3          | 43 | -  | 1    | -                    | 6                | 18     | 6                   | 1       | 1  |
| Oregon               | -                          | -                | 2               | -          | -  | -  | -    | -                    | 6                | 13     | 4                   | -       | -  |
| California *         | 4                          | -                | -               | -          | 1  | 1  | -    | -                    | 41               | 69     | 16                  | 1       | 5  |
| Alaska               | -                          | -                | 6               | -          | -  | -  | -    | -                    | 1                | 17     | -                   | -       | -  |
| Hawaii               | -                          | -                | 18              | -          | -  | 1  | -    | -                    | -                | -      | -                   | -       | 1  |
| Guam *               | -                          | -                | -               | -          | -  | -  | -    | -                    | -                | -      | -                   | -       | -  |
| Puerto Rico          | -                          | -                | 16              | -          | -  | -  | -    | -                    | 1                | 16     | -                   | -       | 1  |
| Virgin Islands       | -                          | -                | -               | -          | -  | -  | -    | -                    | -                | -      | -                   | -       | -  |

\*Delayed reports: Aseptic Meningitis: (1975) Iowa 1; (1974) Pa. 1  
 Chickenpox: (1975) Me. 26, N.H. 26, Calif. 41, Guam 3  
 Diphtheria: (1975) Wash. delete 1  
 Hepatitis B: (1974) Pa. 17, Colo. 9  
 Hepatitis A: (1975) Me. 6, Ohio delete 1, Guam 7; (1974) Pa. 18,  
 Minn. 2, N.D. 1, Colo. 27  
 Hepatitis Unspecified: (1974) Colo. 31  
 Malaria: (1974) Pa. 1

## Morbidity and Mortality Weekly Report

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING FEBRUARY 15, 1975 AND FEBRUARY 16, 1974 (7th WEEK) - Continued

| AREA                 | MEASLES (Rubeola) |            |       | MENINGOCOCCAL INFECTIONS,<br>TOTAL |            |      | MUMPS |              | PERTUSSIS | RUBELLA |              | TETANUS      |
|----------------------|-------------------|------------|-------|------------------------------------|------------|------|-------|--------------|-----------|---------|--------------|--------------|
|                      | 1975              | Cumulative |       | 1975                               | Cumulative |      | 1975  | Cum.<br>1975 | 1975      | 1975    | Cum.<br>1975 | Cum.<br>1975 |
|                      |                   | 1975       | 1974  |                                    | 1975       | 1974 |       |              |           |         |              |              |
| UNITED STATES        | 381               | 1,962      | 2,977 | 38                                 | 233        | 178  | 1,486 | 9,508        | 28        | 355     | 1,474        | 9            |
| NEW ENGLAND          | 4                 | 29         | 226   | 1                                  | 11         | 13   | 89    | 415          | -         | 82      | 245          | -            |
| Maine *              | -                 | 1          | 9     | -                                  | -          | -    | 1     | 8            | -         | -       | 6            | -            |
| New Hampshire *      | 1                 | 11         | 135   | -                                  | 1          | 4    | -     | 6            | -         | 54      | 135          | -            |
| Vermont              | -                 | -          | -     | -                                  | -          | -    | -     | -            | -         | -       | 1            | -            |
| Massachusetts        | 3                 | 8          | 40    | -                                  | 4          | 4    | 21    | 71           | -         | 21      | 84           | -            |
| Rhode Island         | -                 | 2          | 32    | 1                                  | 2          | 3    | 45    | 179          | -         | 1       | 1            | -            |
| Connecticut          | -                 | 7          | 10    | -                                  | 4          | 2    | 22    | 151          | -         | 6       | 18           | -            |
| MIDDLE ATLANTIC      | 24                | 119        | 941   | 2                                  | 20         | 19   | 86    | 544          | 2         | 54      | 113          | 1            |
| Upstate New York     | 3                 | 31         | 16    | -                                  | 7          | 2    | 44    | 244          | 1         | 5       | 15           | -            |
| New York City        | 3                 | 15         | 55    | 1                                  | 3          | 6    | 11    | 96           | 1         | 5       | 23           | 1            |
| New Jersey           | 4                 | 51         | 688   | -                                  | 2          | 8    | 22    | 80           | -         | 35      | 56           | -            |
| Pennsylvania *       | 14                | 22         | 182   | 1                                  | 8          | 3    | 9     | 124          | -         | 9       | 19           | -            |
| EAST NORTH CENTRAL   | 216               | 921        | 1,165 | 3                                  | 30         | 14   | 752   | 4,138        | 8         | 125     | 400          | -            |
| Ohio                 | 3                 | 13         | 498   | -                                  | 6          | 5    | 201   | 485          | -         | 15      | 28           | -            |
| Indiana              | 7                 | 65         | 31    | -                                  | -          | -    | 80    | 444          | -         | 10      | 48           | -            |
| Illinois             | 29                | 247        | 232   | 1                                  | 4          | 2    | 29    | 300          | -         | 3       | 30           | -            |
| Michigan             | 117               | 327        | 313   | 1                                  | 16         | 5    | 337   | 2,026        | 3         | 71      | 210          | -            |
| Wisconsin            | 60                | 269        | 91    | 1                                  | 4          | 2    | 105   | 883          | 5         | 26      | 84           | -            |
| WEST NORTH CENTRAL   | 45                | 260        | 95    | 4                                  | 17         | 12   | 113   | 557          | -         | 16      | 90           | 1            |
| Minnesota            | -                 | -          | 74    | -                                  | 1          | 4    | -     | 4            | -         | -       | 3            | -            |
| Iowa                 | -                 | 6          | 2     | 2                                  | 4          | 3    | 89    | 178          | -         | -       | 2            | -            |
| Missouri *           | -                 | 18         | 5     | 1                                  | 9          | 3    | 4     | 81           | -         | 6       | 15           | 1            |
| North Dakota         | -                 | 13         | 5     | -                                  | -          | 1    | 5     | 108          | -         | -       | 17           | -            |
| South Dakota         | 17                | 26         | 1     | -                                  | -          | -    | -     | 1            | -         | -       | 1            | -            |
| Nebraska             | 20                | 116        | 1     | 1                                  | 1          | -    | 1     | 4            | -         | 1       | 1            | -            |
| Kansas               | 8                 | 81         | 7     | -                                  | 2          | 1    | 14    | 181          | -         | 9       | 51           | -            |
| SOUTH ATLANTIC       | 5                 | 34         | 100   | 8                                  | 42         | 38   | 82    | 557          | 6         | 5       | 157          | 2            |
| Delaware             | -                 | -          | 2     | -                                  | 1          | 3    | -     | 4            | -         | 1       | 3            | -            |
| Maryland             | -                 | -          | 2     | -                                  | 1          | 4    | 2     | 12           | -         | -       | -            | -            |
| District of Columbia | -                 | -          | -     | -                                  | 1          | -    | -     | 13           | -         | -       | -            | -            |
| Virginia             | 2                 | 6          | 6     | -                                  | 7          | 8    | 23    | 125          | 1         | -       | 10           | -            |
| West Virginia        | 1                 | 21         | 26    | -                                  | -          | 2    | 39    | 205          | 4         | -       | 22           | -            |
| North Carolina       | -                 | -          | 1     | 2                                  | 8          | 7    | NN    | NN           | -         | -       | -            | -            |
| South Carolina       | -                 | -          | 7     | 1                                  | 7          | 1    | -     | 9            | -         | 2       | 106          | 1            |
| Georgia              | -                 | -          | 1     | 1                                  | 5          | 4    | -     | -            | -         | -       | -            | -            |
| Florida              | 2                 | 7          | 55    | 4                                  | 12         | 9    | 18    | 189          | 1         | 2       | 16           | 1            |
| EAST SOUTH CENTRAL   | 4                 | 29         | 17    | 4                                  | 41         | 13   | 134   | 1,059        | 7         | 24      | 101          | 1            |
| Kentucky             | 3                 | 20         | 16    | -                                  | 13         | 2    | 60    | 588          | 1         | 5       | 26           | 1            |
| Tennessee            | 1                 | 7          | -     | 2                                  | 15         | 10   | 46    | 378          | -         | 18      | 71           | -            |
| Alabama              | -                 | -          | -     | -                                  | 8          | 1    | 20    | 66           | 4         | 1       | 3            | -            |
| Mississippi          | -                 | 2          | 1     | 2                                  | 5          | -    | 8     | 27           | 2         | -       | 1            | -            |
| WEST SOUTH CENTRAL   | 1                 | 21         | 48    | 10                                 | 47         | 42   | 92    | 746          | 3         | 9       | 101          | 1            |
| Arkansas             | -                 | 1          | 4     | -                                  | 1          | 4    | -     | 10           | -         | -       | -            | -            |
| Louisiana *          | -                 | -          | 3     | 3                                  | 14         | 8    | 14    | 117          | 1         | 6       | 31           | -            |
| Oklahoma             | -                 | 4          | 5     | 1                                  | 4          | 6    | 1     | 27           | -         | -       | 44           | -            |
| Texas                | 1                 | 16         | 36    | 6                                  | 28         | 24   | 77    | 592          | 2         | 3       | 26           | 1            |
| MOUNTAIN             | 38                | 172        | 126   | 4                                  | 7          | 6    | 6     | 93           | 1         | 3       | 26           | -            |
| Montana              | -                 | -          | 107   | -                                  | 1          | -    | 1     | 1            | -         | -       | 1            | -            |
| Idaho                | -                 | 2          | 8     | -                                  | -          | 1    | 1     | 1            | -         | 1       | 4            | -            |
| Wyoming              | -                 | -          | -     | -                                  | -          | -    | -     | -            | -         | -       | -            | -            |
| Colorado             | 38                | 168        | 4     | 3                                  | 3          | -    | 4     | 49           | -         | 1       | 10           | -            |
| New Mexico           | -                 | 1          | 6     | 1                                  | 2          | 2    | -     | 3            | 1         | -       | 5            | -            |
| Arizona              | -                 | -          | 1     | -                                  | 1          | 2    | -     | -            | -         | -       | 1            | -            |
| Utah                 | -                 | -          | -     | -                                  | -          | 1    | -     | 12           | -         | 1       | 2            | -            |
| Nevada               | -                 | 1          | -     | -                                  | -          | -    | -     | 27           | -         | -       | 3            | -            |
| PACIFIC              | 44                | 377        | 259   | 2                                  | 18         | 21   | 132   | 1,399        | 1         | 37      | 241          | 3            |
| Washington           | 3                 | 6          | 14    | 1                                  | 3          | 4    | 70    | 675          | 1         | 5       | 68           | -            |
| Oregon               | 3                 | 37         | -     | -                                  | -          | 3    | 17    | 94           | -         | 5       | 23           | -            |
| California           | 38                | 334        | 244   | 1                                  | 15         | 14   | 45    | 619          | -         | 26      | 147          | 3            |
| Alaska               | -                 | -          | -     | -                                  | -          | -    | -     | 7            | -         | -       | -            | -            |
| Hawaii               | -                 | -          | 1     | -                                  | -          | -    | -     | 4            | -         | 1       | 3            | -            |
| Guam *               | -                 | 1          | 1     | -                                  | -          | -    | -     | 2            | -         | -       | -            | -            |
| Puerto Rico          | 10                | 70         | 69    | -                                  | 1          | -    | 26    | 141          | -         | -       | 2            | -            |
| Virgin Islands *     | -                 | 2          | 5     | -                                  | -          | -    | -     | 12           | -         | -       | 1            | -            |

\*Delayed reports: Measles: (1975) V.I. delete 1; (1974) V.I. delete 1  
Meningococcal Infection: (1975) Mo. 2; (1974) N.H. delete 1.

Pa. 2

Mumps: (1975) Me. 5, La. delete 1, Guam 1

Rubella: (1975) Me. 1, N.H. 5

# Morbidity and Mortality Weekly Report

**TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING FEBRUARY 15, 1975 AND FEBRUARY 16, 1974 (7th WEEK) - Continued**

| AREA                                | TUBERCULOSIS |           | TULA-REMICIA | TYPHOID FEVER |           | TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever) |           | VENEREAL DISEASES (Civilian Cases Only) |         |                        |            |           |       | RABIES IN ANIMALS |
|-------------------------------------|--------------|-----------|--------------|---------------|-----------|--|-----------|---|---------|------------------------|------------|-----------|-------|-------------------|
|                                     | 1975         | Cum. 1975 | Cum. 1975    | 1975          | Cum. 1975 | 1975   | Cum. 1975 | GONORRHEA                               |         | SYPHILIS (Pri. & Sec.) |            | Cum. 1975 |       |                   |
|                                     |              |           |              |               |           |  |           | 1975                                    | 1974    | 1975                   | Cumulative |           |       |                   |
|                                     |              |           |              |               |           |  |           |   |         |                        | 1975       |           | 1974  |                   |
| <b>UNITED STATES</b> . . . . .      | 586          | 3,674     | 8            | 4             | 29        | -  | 10        | 16,864                                  | 123,879 | 112,402                | 416        | 3,406     | 3,258 | 228               |
| <b>NEW ENGLAND</b> . . . . .        | 16           | 134       | -            | -             | 3         | -  | -         | 445                                     | 3,672   | 2,859                  | 22         | 127       | 124   | 3                 |
| Maine . . . . .                     | 1            | 10        | -            | -             | -         | -  | -         | 32                                      | 282     | 203                    | -          | 3         | 5     | 2                 |
| New Hampshire * . . . . .           | -            | 9         | -            | -             | -         | -  | -         | 14                                      | 101     | 80                     | 2          | 4         | 2     | -                 |
| Vermont . . . . .                   | -            | 1         | -            | -             | -         | -  | -         | 7                                       | 61      | 83                     | -          | 3         | 1     | -                 |
| Massachusetts . . . . .             | 5            | 65        | -            | -             | 2         | -  | -         | 228                                     | 1,684   | 1,324                  | 16         | 85        | 87    | -                 |
| Rhode Island . . . . .              | 4            | 18        | -            | -             | -         | -  | -         | 30                                      | 299     | 230                    | 1          | 2         | 3     | -                 |
| Connecticut . . . . .               | 6            | 31        | -            | -             | 1         | -  | -         | 134                                     | 1,245   | 939                    | 3          | 30        | 26    | 1                 |
| <b>MIDDLE ATLANTIC</b> . . . . .    | 128          | 655       | 1            | 1             | 4         | -  | -         | 1,973                                   | 14,692  | 14,028                 | 81         | 707       | 690   | 8                 |
| Upstate New York . . . . .          | 13           | 95        | 1            | 1             | 2         | -  | -         | 385                                     | 2,972   | 2,628                  | 13         | 78        | 68    | 7                 |
| New York City . . . . .             | 44           | 313       | -            | -             | 2         | -  | -         | 936                                     | 6,354   | 5,828                  | 34         | 408       | 392   | -                 |
| New Jersey . . . . .                | 25           | 123       | -            | -             | -         | -  | -         | 173                                     | 1,764   | 2,104                  | 22         | 102       | 114   | -                 |
| Pennsylvania * . . . . .            | 46           | 124       | -            | -             | -         | -  | -         | 479                                     | 3,602   | 3,468                  | 12         | 119       | 116   | 1                 |
| <b>EAST NORTH CENTRAL</b> . . . . . | 99           | 637       | -            | 1             | 4         | -  | 1         | 3,270                                   | 21,810  | 17,910                 | 42         | 289       | 273   | 6                 |
| Ohio * . . . . .                    | 26           | 182       | -            | -             | 1         | -  | 1         | 815                                     | 6,367   | 4,976                  | 7          | 65        | 35    | -                 |
| Indiana . . . . .                   | 9            | 82        | -            | -             | -         | -  | -         | 192                                     | 1,797   | 1,583                  | 1          | 22        | 26    | -                 |
| Illinois . . . . .                  | 14           | 154       | -            | 1             | 2         | -  | -         | 1,292                                   | 7,288   | 5,480                  | 28         | 135       | 141   | -                 |
| Michigan . . . . .                  | 50           | 212       | -            | -             | 1         | -  | -         | 660                                     | 4,355   | 4,317                  | 4          | 51        | 57    | -                 |
| Wisconsin . . . . .                 | -            | 7         | -            | -             | -         | -  | -         | 311                                     | 2,003   | 1,554                  | 2          | 16        | 14    | 6                 |
| <b>WEST NORTH CENTRAL</b> . . . . . | 17           | 120       | 1            | -             | 1         | -  | -         | 846                                     | 5,730   | 5,728                  | 2          | 81        | 73    | 71                |
| Minnesota . . . . .                 | 2            | 12        | -            | -             | 1         | -  | -         | 99                                      | 1,207   | 1,276                  | -          | 8         | 7     | 21                |
| Iowa . . . . .                      | 1            | 10        | -            | -             | -         | -  | -         | 67                                      | 408     | 834                    | -          | 3         | 6     | 11                |
| Missouri . . . . .                  | 12           | 70        | 1            | -             | -         | -  | -         | 407                                     | 2,375   | 1,787                  | 2          | 51        | 48    | 10                |
| North Dakota . . . . .              | -            | -         | -            | -             | -         | -  | -         | 8                                       | 90      | -                      | 3          | -         | 23    | -                 |
| South Dakota . . . . .              | -            | 4         | -            | -             | -         | -  | -         | 46                                      | 269     | 253                    | -          | 2         | 1     | -                 |
| Nebraska . . . . .                  | -            | 3         | -            | -             | -         | -  | -         | 102                                     | 480     | 455                    | -          | 2         | 1     | 1                 |
| Kansas . . . . .                    | 2            | 21        | -            | -             | -         | -  | -         | 117                                     | 901     | 1,025                  | -          | 12        | 10    | 5                 |
| <b>SOUTH ATLANTIC</b> . . . . .     | 141          | 816       | 4            | -             | 2         | -  | 6         | 4,335                                   | 30,790  | 27,826                 | 143        | 994       | 1,039 | 30                |
| Delaware * . . . . .                | -            | 19        | -            | -             | -         | -  | -         | 40                                      | 406     | 422                    | 2          | 10        | 11    | -                 |
| Maryland . . . . .                  | 24           | 120       | -            | -             | -         | -  | -         | 648                                     | 3,460   | 2,503                  | 17         | 89        | 114   | -                 |
| District of Columbia . . . . .      | 7            | 51        | -            | -             | -         | -  | -         | 302                                     | 2,093   | 2,796                  | 11         | 91        | 92    | -                 |
| Virginia . . . . .                  | 22           | 109       | 2            | -             | -         | -  | -         | 497                                     | 3,278   | 2,537                  | 13         | 91        | 129   | 19                |
| West Virginia * . . . . .           | 3            | 37        | -            | -             | 1         | -  | -         | 41                                      | 377     | 333                    | -          | -         | 3     | 1                 |
| North Carolina . . . . .            | 20           | 117       | -            | -             | 1         | -  | 6         | 643                                     | 4,758   | 3,719                  | 23         | 136       | 110   | 1                 |
| South Carolina . . . . .            | 5            | 20        | 2            | -             | -         | -  | -         | 289                                     | 2,642   | 2,955                  | 9          | 70        | 85    | 1                 |
| Georgia . . . . .                   | 19           | 122       | -            | -             | -         | -  | -         | 678                                     | 5,736   | 4,928                  | 28         | 136       | 166   | 6                 |
| Florida . . . . .                   | 41           | 221       | -            | -             | -         | -  | -         | 1,197                                   | 8,040   | 7,633                  | 40         | 371       | 329   | 2                 |
| <b>EAST SOUTH CENTRAL</b> . . . . . | 70           | 308       | 1            | 2             | 2         | -  | 2         | 1,504                                   | 9,620   | 9,573                  | 25         | 137       | 170   | 28                |
| Kentucky * . . . . .                | 10           | 68        | -            | 1             | 1         | -  | 1         | 184                                     | 1,282   | 1,169                  | 7          | 16        | 38    | 22                |
| Tennessee . . . . .                 | 35           | 121       | 1            | -             | -         | -  | -         | 584                                     | 4,059   | 3,770                  | 8          | 55        | 67    | 2                 |
| Alabama * . . . . .                 | 18           | 86        | -            | -             | -         | -  | 1         | 452                                     | 2,357   | 2,706                  | 1          | 38        | 31    | 4                 |
| Mississippi . . . . .               | 7            | 33        | -            | 1             | 1         | -  | -         | 284                                     | 1,922   | 1,928                  | 9          | 28        | 34    | -                 |
| <b>WEST SOUTH CENTRAL</b> . . . . . | 59           | 363       | 1            | -             | 1         | -  | 1         | 2,105                                   | 15,719  | 14,947                 | 52         | 333       | 299   | 60                |
| Arkansas . . . . .                  | 1            | 59        | -            | -             | 1         | -  | -         | 264                                     | 1,379   | 1,634                  | 1          | 5         | 14    | 9                 |
| Louisiana * . . . . .               | 6            | 71        | -            | -             | -         | -  | -         | 214                                     | 2,858   | 3,228                  | 11         | 87        | 89    | 1                 |
| Oklahoma . . . . .                  | 3            | 32        | -            | -             | -         | -  | 1         | 210                                     | 1,331   | 1,133                  | 1          | 18        | 21    | 20                |
| Texas . . . . .                     | 44           | 201       | 1            | -             | -         | -  | -         | 1,417                                   | 10,151  | 8,952                  | 39         | 223       | 175   | 30                |
| <b>MOUNTAIN</b> . . . . .           | 4            | 86        | -            | -             | 2         | -  | -         | 681                                     | 4,669   | 3,971                  | 6          | 74        | 79    | 6                 |
| Montana * . . . . .                 | -            | -         | -            | -             | -         | -  | -         | 26                                      | 269     | 239                    | -          | -         | -     | 1                 |
| Idaho . . . . .                     | -            | 4         | -            | -             | -         | -  | -         | 34                                      | 250     | 256                    | -          | 1         | -     | -                 |
| Wyoming . . . . .                   | -            | 3         | -            | -             | 1         | -  | -         | 16                                      | 97      | 95                     | -          | -         | 1     | -                 |
| Colorado . . . . .                  | -            | -         | -            | -             | -         | -  | -         | 238                                     | 1,363   | 1,146                  | 2          | 20        | 16    | -                 |
| New Mexico * . . . . .              | 4            | 19        | -            | -             | -         | -  | -         | 207                                     | 838     | 551                    | -          | 16        | 16    | 4                 |
| Arizona . . . . .                   | -            | 47        | -            | -             | 1         | -  | -         | 78                                      | 1,219   | 1,031                  | 3          | 31        | 31    | 1                 |
| Utah . . . . .                      | -            | 1         | -            | -             | -         | -  | -         | 52                                      | 255     | 194                    | 1          | 1         | 3     | -                 |
| Nevada . . . . .                    | -            | 12        | -            | -             | -         | -  | -         | 30                                      | 378     | 459                    | -          | 5         | 12    | -                 |
| <b>PACIFIC</b> . . . . .            | 52           | 555       | -            | -             | 10        | -  | -         | 1,705                                   | 17,177  | 15,560                 | 43         | 664       | 511   | 16                |
| Washington . . . . .                | 4            | 47        | -            | -             | -         | -  | -         | 322                                     | 1,711   | 1,494                  | -          | 40        | 19    | -                 |
| Oregon . . . . .                    | 4            | 14        | -            | -             | -         | -  | -         | 140                                     | 1,548   | 1,340                  | 2          | 13        | 13    | -                 |
| California . . . . .                | 30           | 423       | -            | -             | 10        | -  | -         | 1,181                                   | 13,208  | 12,092                 | 41         | 605       | 475   | 14                |
| Alaska . . . . .                    | -            | 6         | -            | -             | -         | -  | -         | 27                                      | 394     | 332                    | -          | -         | -     | 2                 |
| Hawaii . . . . .                    | 14           | 65        | -            | -             | -         | -  | -         | 35                                      | 316     | 302                    | -          | 6         | 4     | -                 |
| Guam * . . . . .                    | -            | 19        | -            | -             | -         | -  | -         | -                                       | 54      | ---                    | -          | 1         | ---   | -                 |
| Puerto Rico . . . . .               | 8            | 54        | -            | -             | -         | -  | -         | 96                                      | 412     | 433                    | 25         | 96        | 133   | 7                 |
| Virgin Islands . . . . .            | -            | -         | -            | -             | -         | -  | -         | 6                                       | 24      | 99                     | -          | 4         | 10    | -                 |

\*Delayed reports: Tuberculosis: (1975) Ohio delete 1, Del. 12, Ky. delete 2  
 Guam 3; (1974) Ky. delete 6  
 Typhoid: (1975) N. H. delete 1  
 (1975) W. Va. delete 1; (1974) Pa. 1  
 Gonorrhea: (1975) La. delete 5, Guam 18  
 Syphilis: (1975) Ala. 14, La. delete 1, Mont. delete 1  
 Rabies: (1975) N. M. delete 6

## Morbidity and Mortality Weekly Report

Week No. 07

TABLE IV. DEATHS IN 121 UNITED STATES CITIES FOR WEEK ENDING FEBRUARY 15, 1975

(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 | 45-64 years | 25-44 years | Under 1 year |                                  |                           | All Ages   | 65 years and over | 45-64 years | 25-44 years | Under 1 year |                                  |
| <b>NEW ENGLAND</b>        | 879        | 589               | 206         | 41          | 21           | 59                               | <b>SOUTH ATLANTIC</b>     | 1,416      | 797               | 405         | 103         | 53           | 57                               |
| Boston, Mass.             | 255        | 155               | 62          | 19          | 9            | 18                               | Atlanta, Ga.              | 157        | 85                | 45          | 15          | 1            | 7                                |
| Bridgeport, Conn.         | 48         | 35                | 12          | 1           | -            | 1                                | Baltimore, Md.            | 204        | 104               | 69          | 14          | 8            | 3                                |
| Cambridge, Mass.          | 37         | 27                | 10          | -           | -            | 7                                | Charlotte, N. C.          | 56         | 35                | 12          | 4           | 3            | 1                                |
| Fall River, Mass.         | 40         | 27                | 9           | 2           | -            | 2                                | Jacksonville, Fla.        | 124        | 62                | 42          | 10          | 4            | 1                                |
| Hartford, Conn.           | 70         | 50                | 15          | 2           | -            | 7                                | Miami, Fla.               | 131        | 82                | 35          | 8           | 4            | 5                                |
| Lowell, Mass.             | 45         | 27                | 13          | 3           | 1            | 2                                | Norfolk, Va.              | 76         | 47                | 22          | 3           | 1            | 6                                |
| Lynn, Mass.               | 28         | 21                | 3           | 3           | 1            | -                                | Richmond, Va.             | 118        | 68                | 27          | 9           | 8            | 6                                |
| New Bedford, Mass.        | 45         | 32                | 10          | 2           | 1            | 4                                | Savannah, Ga.             | 50         | 24                | 15          | 6           | 2            | 9                                |
| New Haven, Conn.          | 53         | 40                | 8           | 3           | 1            | -                                | St. Petersburg, Fla.      | 129        | 101               | 20          | 5           | 2            | 8                                |
| Providence, R. I.         | 75         | 51                | 17          | 2           | 5            | 8                                | Tampa, Fla.               | 74         | 53                | 14          | 1           | 2            | 7                                |
| Somerville, Mass.         | 13         | 10                | 2           | 1           | -            | 3                                | Washington, D. C.         | 252        | 111               | 91          | 26          | 15           | 4                                |
| Springfield, Mass.        | 63         | 38                | 19          | 1           | 1            | 5                                | Wilmington, Del.          | 45         | 25                | 13          | 2           | 3            | -                                |
| Waterbury, Conn.          | 34         | 23                | 7           | 2           | 2            | -                                | <b>EAST SOUTH CENTRAL</b> | 773        | 466               | 191         | 62          | 25           | 48                               |
| Worcester, Mass.          | 73         | 53                | 19          | -           | -            | 2                                | Birmingham, Ala.          | 127        | 66                | 33          | 13          | 12           | 4                                |
| <b>MIDDLE ATLANTIC</b>    | 3,024      | 1,832             | 811         | 207         | 97           | 175                              | Chattanooga, Tenn.        | 53         | 29                | 18          | 3           | 1            | 9                                |
| Albany, N. Y.             | 62         | 37                | 14          | 4           | 5            | 2                                | Knoxville, Tenn.          | 50         | 32                | 12          | 3           | -            | 4                                |
| Allentown, Pa.            | 24         | 17                | 6           | -           | -            | 1                                | Louisville, Ky.           | 147        | 101               | 31          | 6           | 5            | 11                               |
| Buffalo, N. Y.            | 159        | 86                | 52          | 12          | 5            | 10                               | Memphis, Tenn.            | 196        | 115               | 50          | 17          | 3            | 3                                |
| Camden, N. J.             | 31         | 17                | 10          | 2           | 1            | 2                                | Mobile, Ala.              | 58         | 34                | 9           | 9           | 3            | 1                                |
| Elizabeth, N. J.          | 30         | 21                | 7           | 2           | -            | 1                                | Montgomery, Ala.          | 36         | 25                | 9           | 1           | -            | 6                                |
| Erie, Pa.                 | 47         | 33                | 11          | -           | 2            | 3                                | Nashville, Tenn.          | 106        | 64                | 29          | 10          | 1            | 10                               |
| Jersey City, N. J.        | 42         | 25                | 12          | -           | 4            | 1                                | <b>WEST SOUTH CENTRAL</b> | 1,221      | 640               | 369         | 89          | 49           | 73                               |
| Newark, N. J. *           | 69         | 32                | 21          | 9           | 5            | 5                                | Austin, Tex.              | 45         | 21                | 13          | 4           | 1            | 1                                |
| New York City, N. Y. *    | 1,508      | 927               | 384         | 114         | 41           | 84                               | Baton Rouge, La.          | 33         | 20                | 11          | 1           | 1            | 5                                |
| Paterson, N. J.           | 30         | 14                | 9           | 3           | 4            | 1                                | Corpus Christi, Tex.      | 44         | 20                | 16          | 3           | 1            | 3                                |
| Philadelphia, Pa.         | 397        | 217               | 131         | 30          | 12           | 14                               | Dallas, Tex.              | 174        | 83                | 54          | 16          | 12           | 8                                |
| Pittsburgh, Pa.           | 197        | 105               | 69          | 12          | 4            | 19                               | El Paso, Tex.             | 76         | 44                | 22          | 2           | 4            | 14                               |
| Reading, Pa.              | 36         | 31                | -           | 3           | 1            | 6                                | Fort Worth, Tex.          | 83         | 48                | 21          | 3           | 4            | 4                                |
| Rochester, N. Y.          | 122        | 81                | 34          | 2           | 3            | 10                               | Houston, Tex.             | 304        | 139               | 98          | 28          | 15           | 13                               |
| Schenectady, N. Y.        | 31         | 22                | 6           | 1           | 1            | 3                                | Little Rock, Ark.         | 77         | 40                | 30          | 3           | 2            | 2                                |
| Scranton, Pa.             | 40         | 31                | 8           | 1           | -            | -                                | New Orleans, La.          | 101        | 57                | 34          | 6           | 1            | 2                                |
| Syracuse, N. Y.           | 89         | 59                | 16          | 4           | 7            | 4                                | San Antonio, Tex.         | 154        | 85                | 44          | 15          | 1            | 12                               |
| Trenton, N. J.            | 45         | 30                | 11          | 3           | -            | 1                                | Shreveport, La.           | 50         | 30                | 11          | 4           | 2            | 1                                |
| Utica, N. Y.              | 32         | 24                | 4           | 3           | 1            | 6                                | Tulsa, Okla.              | 80         | 53                | 15          | 4           | 5            | 8                                |
| Yonkers, N. Y.            | 33         | 23                | 6           | 2           | 1            | 2                                | <b>MOUNTAIN</b>           | 537        | 336               | 129         | 29          | 18           | 40                               |
| <b>EAST NORTH CENTRAL</b> | 2,522      | 1,525             | 664         | 128         | 98           | 105                              | Albuquerque, N. Mex.      | 76         | 46                | 14          | 5           | 5            | 14                               |
| Akron, Ohio               | 69         | 42                | 19          | 2           | 5            | -                                | Colorado Springs, Colo.   | 21         | 14                | 3           | 1           | 1            | 4                                |
| Canton, Ohio              | 44         | 28                | 9           | 1           | 1            | 3                                | Denver, Colo.             | 133        | 74                | 42          | 6           | 4            | 8                                |
| Chicago, Ill.             | 701        | 403               | 194         | 45          | 27           | 14                               | Las Vegas, Nev.           | 19         | 9                 | 10          | -           | -            | 1                                |
| Cincinnati, Ohio          | 131        | 81                | 35          | 7           | 4            | 5                                | Ogden, Utah               | 18         | 11                | 3           | 1           | -            | 2                                |
| Cleveland, Ohio           | 199        | 117               | 46          | 13          | 13           | 4                                | Phoenix, Ariz.            | 125        | 80                | 29          | 7           | 5            | 3                                |
| Columbus, Ohio            | 135        | 82                | 38          | 4           | 6            | 5                                | Pueblo, Colo.             | 24         | 20                | 3           | 1           | -            | 4                                |
| Dayton, Ohio              | 112        | 73                | 27          | 5           | 4            | 5                                | Salt Lake City, Utah      | 61         | 42                | 10          | 4           | 3            | 4                                |
| Detroit, Mich.            | 302        | 167               | 93          | 18          | 8            | 8                                | Tucson, Ariz.             | 60         | 40                | 15          | 4           | -            | -                                |
| Evansville, Ind.          | 54         | 38                | 14          | -           | -            | 5                                | <b>PACIFIC</b>            | 2,136      | 1,422             | 488         | 114         | 58           | 85                               |
| Fort Wayne, Ind.          | 55         | 34                | 7           | 5           | 4            | 10                               | Berkeley, Calif.          | 18         | 12                | 5           | 1           | -            | -                                |
| Gary, Ind.                | 25         | 12                | 11          | -           | -            | -                                | Fresno, Calif.            | 50         | 30                | 9           | 5           | 5            | -                                |
| Grand Rapids, Mich.       | 66         | 47                | 11          | 3           | 2            | 7                                | Glendale, Calif.          | 46         | 36                | 5           | 4           | -            | 2                                |
| Indianapolis, Ind.        | 117        | 78                | 28          | 6           | 2            | 6                                | Honolulu, Hawaii          | 56         | 36                | 13          | 1           | 6            | 3                                |
| Madison, Wis.             | 30         | 16                | 7           | 2           | 2            | 3                                | Long Beach, Calif.        | 150        | 98                | 41          | 6           | 3            | 5                                |
| Milwaukee, Wis.           | 150        | 99                | 33          | 8           | 9            | 8                                | Los Angeles, Calif.       | 896        | 607               | 197         | 46          | 18           | 40                               |
| Peoria, Ill.              | 51         | 32                | 12          | 2           | 1            | 6                                | Oakland, Calif.           | 71         | 48                | 15          | 5           | 1            | 2                                |
| Rockford, Ill.            | 51         | 33                | 11          | 3           | 3            | 7                                | Pasadena, Calif.          | 40         | 28                | 10          | -           | 1            | 3                                |
| South Bend, Ind.          | 59         | 41                | 14          | -           | 1            | 7                                | Portland, Ore.            | 106        | 72                | 23          | 5           | 1            | 5                                |
| Toledo, Ohio              | 107        | 66                | 31          | 1           | 5            | 1                                | Sacramento, Calif.        | 80         | 47                | 23          | 6           | 3            | 1                                |
| Youngstown, Ohio          | 64         | 36                | 24          | 3           | 1            | 1                                | San Diego, Calif.         | 125        | 69                | 31          | 11          | 11           | 2                                |
| <b>WEST NORTH CENTRAL</b> | 767        | 480               | 179         | 49          | 29           | 48                               | San Francisco, Calif.     | 170        | 113               | 44          | 9           | 2            | 9                                |
| Des Moines, Iowa          | 64         | 43                | 16          | 1           | 2            | 5                                | San Jose, Calif.          | 85         | 55                | 19          | 7           | -            | 1                                |
| Duluth, Minn.             | 24         | 15                | 7           | -           | 1            | 2                                | Seattle, Wash.            | 144        | 96                | 34          | 6           | 6            | 5                                |
| Kansas City, Kans.        | 42         | 30                | 3           | 4           | 1            | 1                                | Spokane, Wash.            | 52         | 42                | 8           | -           | 1            | 6                                |
| Kansas City, Mo.          | 141        | 88                | 38          | 8           | 6            | 10                               | Tacoma, Wash.             | 47         | 33                | 11          | 2           | -            | 1                                |
| Lincoln, Nebr.            | 33         | 15                | 10          | 6           | 2            | 3                                | <b>Total</b>              | 13,275     | 8,087             | 3,442       | 822         | 448          | 690                              |
| Minneapolis, Minn.        | 79         | 43                | 21          | 5           | 8            | 3                                | <b>Expected Number</b>    | 13,306     | 8,067             | 3,526       | 834         | 399          | 567                              |
| Omaha, Nebr.              | 82         | 55                | 19          | 5           | 2            | 5                                |                           |            |                   |             |             |              |                                  |
| St. Louis, Mo.            | 192        | 126               | 36          | 13          | 5            | 4                                |                           |            |                   |             |             |              |                                  |
| St. Paul, Minn.           | 53         | 42                | 5           | 2           | 1            | 5                                |                           |            |                   |             |             |              |                                  |
| Wichita, Kans.            | 57         | 23                | 24          | 5           | 1            | 10                               |                           |            |                   |             |             |              |                                  |

\*Estimate based on average percent of divisional total

INTERNATIONAL NOTES  
SALMONELLA SURVEILLANCE – Switzerland

In July 1974, more than 20 cases of enteric infections due to *Salmonella tennessee* and/or *S. newington* were observed in infants and young children in various regions of the country. The number of strains of *S. tennessee* isolated at the Swiss Salmonella Center rose from 1 in the first quarter of 1974 to 27 in the second quarter, while *S. newington* isolates rose from 4 in the first quarter to 14 in the second. In 1973, a total of 9 strains of *S. tennessee* and none of *S. newington* were isolated, compared with 9 strains of *S. tennessee* and 1 of *S. newington* in 1972.

These serotypes were also isolated in a package containing a food product for children and carrying the sign "To be sold up to 11.2.75." The manufacturers of the baby food withdrew it from the market (chemist shops and drugstores) and temporarily suspended production; the product is not exported.

As a result of intensive systematic investigations by the manufacturers, the source of contamination was traced to a number of samples of imported yeast. In order to preserve the nutritive value of the yeast, it is mixed cold into the finished pre-cooked product. It is this process that allowed the growth of salmonella in the batch which was withdrawn from the market at the time of the outbreak. Throughout Switzerland, cantonal chemists immediately prohibited the

use of this yeast without pre-heating. As a precaution, all other packages of the incriminated baby food were withdrawn from shops and households.

(Reported by the World Health Organization: Weekly Epidemiological Record 49(30):258, 26 July 1974 and 49(46):383, 15 Nov 1974.)

Editorial Note

Surveillance of salmonella serotypes permitted early recognition of this common-source outbreak, while prompt investigation identified the contaminated vehicle. The fact that the outbreak was controlled by removing the contaminated product from the market illustrates the importance of surveillance in controlling salmonellosis.

In the United States, 2 yeast-associated outbreaks of salmonellosis have been reported. One interstate outbreak was caused by contaminated yeast in a food supplement, while a nosocomial outbreak was associated with a liquid formula administered through an intragastric tube (1,2).

References

1. McCall CE, Collins RN, Jones DB, et al: An interstate outbreak of salmonellosis traced to a contaminated food supplement. *Am J Epidemiol* 84:32-39, 1966
2. Kunz LJ, Ouchterlony OTG: Salmonellosis originating in a hospital: A newly recognized source of infection. *N Engl J Med* 253:761-763, 1955

INFLUENZA – Canada

In early January, influenza-like illness associated with isolation of A/Port Chalmers/1/73 was reported from Ontario and Quebec. By January 24, localized outbreaks of influenza A were confirmed in Saskatchewan. In February, scattered outbreaks of influenza-like illness occurred in Ontario, British Columbia, Nova Scotia, and the Prairie Provinces. A single isolate of influenza B/Canada/5/66 was reported in Alberta.

Although a lessening in reporting of influenza has occurred in the past week, it is not certain at present whether the peak of activity has passed.

(Reported by Frank M White, MD, Chief, Communicable Diseases, Bureau of Epidemiology, Laboratory Centre for Disease Control, Department of National Health and Welfare, Ottawa, Ontario.)

EPIDEMIOLOGIC NOTES AND REPORTS

INFLUENZA – Iceland, North Dakota, Pennsylvania, Virginia, United States

US Naval Station, Iceland

In January, an outbreak of serologically confirmed influenza A occurred in military and civilian personnel in Keflavik. The first cases occurred in early January among squadron personnel who had flown in from Florida during Christmas week. Subsequent cases were noted in military and dependent personnel and in the civilian population. Only a small number of military personnel had received influenza vaccine in the fall.

(Reported by John W Kirk, LCDR, Medical Corps, US Naval Reserve, Director, Preventive Medicine; Margaret Tugudnaddottir, Professor of Virology, National Hospital and Medical School, Reykjavik, Iceland.)

Pennsylvania

Influenza type A, Port Chalmers, has been isolated from persons with influenza in Allegheny, Bucks, Montgomery, Northumberland, and Philadelphia counties.

(Reported by William E Parkin, DVM, Chief, Epidemiology Section, Division of Communicable Diseases, Pennsylvania Department of Health.)

North Dakota

Reports from physicians, nurses, and health officers of influenza-like illness peaked in the last 2 weeks of January and began decreasing in early February. Seroconversions have

indicated recent infections by influenza A. A/Port Chalmers /1/73 was isolated from 1 patient.

(Reported by Kenneth Mosser, Director, Division of Disease Control, State Department of Health.)

Virginia

Reports show an increase in influenza activity throughout many regions of the state. A rise in both private physician reporting of influenza in Charlottesville and occurrence of influenza-like illness at the University of Richmond have recently been observed. Influenza A has been isolated.

Over 400 cases of influenza have also occurred at the Quantico Marine Corps Air Station.

(Reported by Jack Gwaltney, MD, University of Virginia; Georgia Moore, MD, Director, Albemarle-Nelson-Charlottesville Health Department; Herbert Coone, MD, Director, Prince William Health Department; Robert S Jackson, MD, State Epidemiologist, Virginia State Department of Health.)

United States

Pneumonia and influenza deaths in 121 U.S. cities have decreased sharply, as have deaths due to all causes. The decreases in most regions reflect a lessening in reported influenza activity (Figures 2 and 3).

(Reported by Viral Diseases Division, Bureau of Epidemiology, CDC.)

Morbidity and Mortality Weekly Report

PNEUMONIA-INFLUENZA DEATHS IN 121 UNITED STATES CITIES

Figure 2

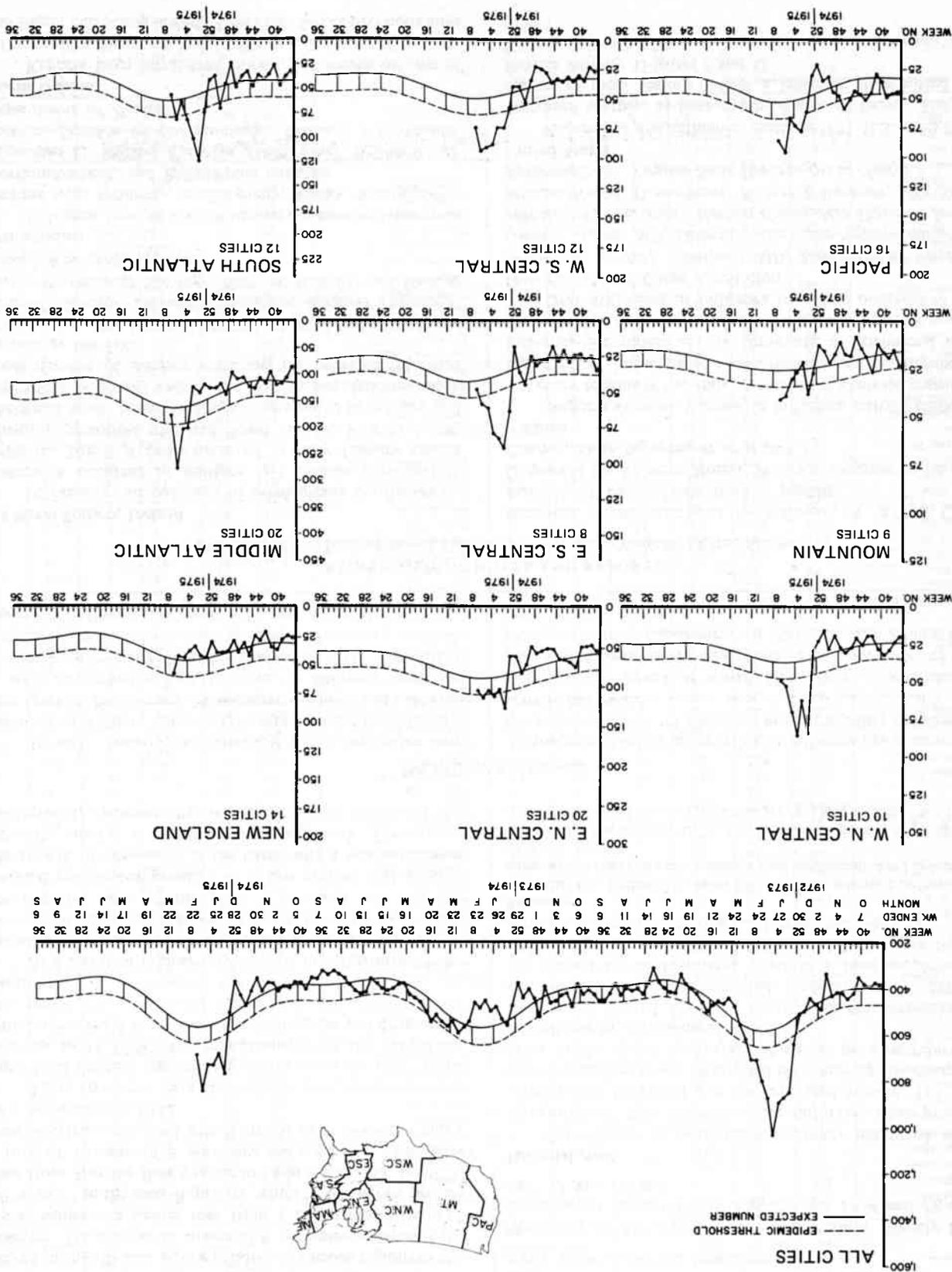
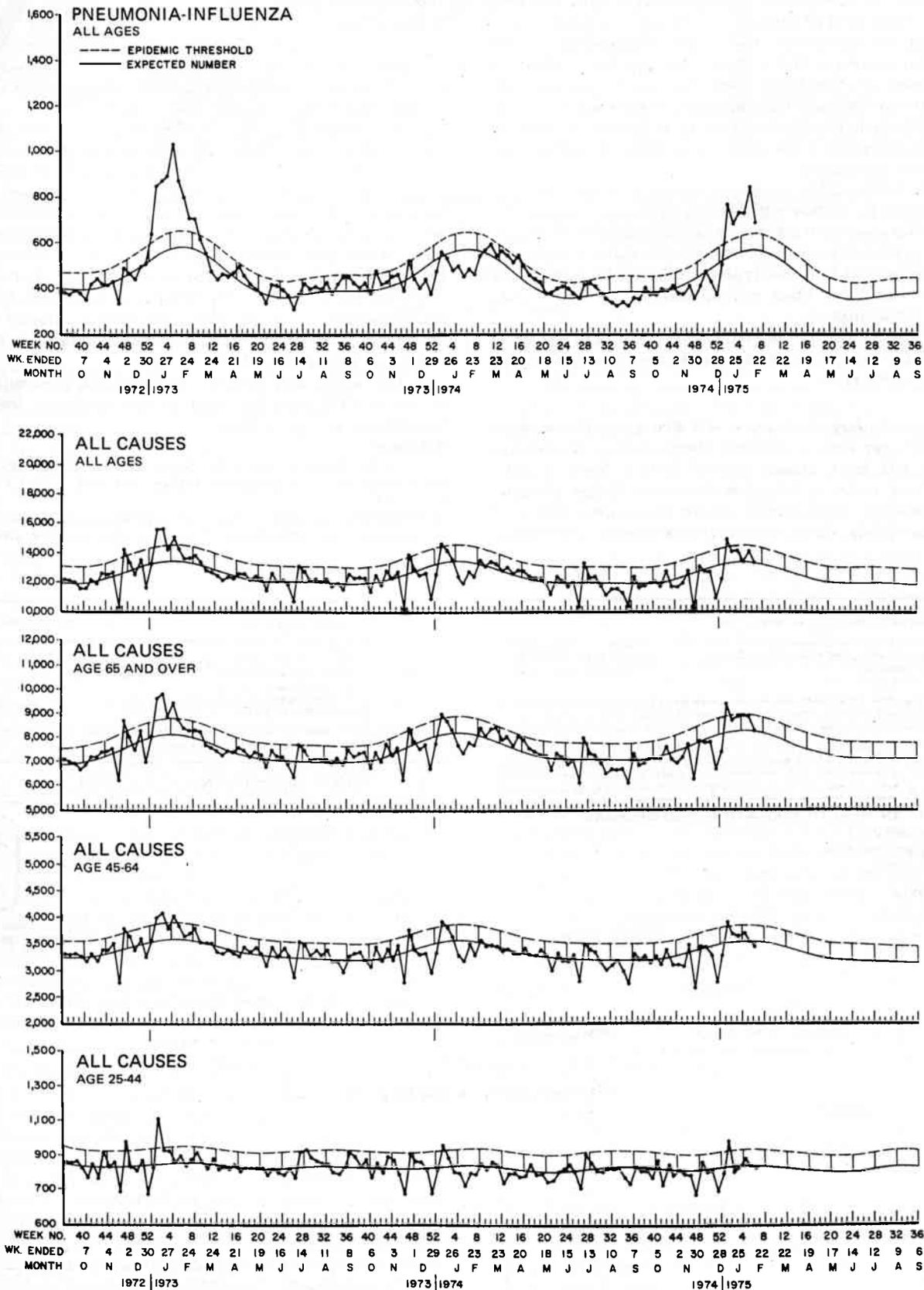


Figure 3  
MORTALITY IN 121 UNITED STATES CITIES



## PUFFER FISH POISONING — Florida

On December 5, 1974, a married couple purchased "blowfish" at a commercial seafood market in Pinellas County on the west coast of Florida. Prior to sale, the fish had been skinned and eviscerated. The couple consumed part of the fish that evening in Miami. Two hours later both individuals had onset of paresthesias about the mouth and face, followed by loss of equilibrium, difficulty swallowing, and vomiting. After symptomatic treatment in an emergency room the next morning and a few days of generalized weakness, they recovered completely.

A water-soluble extract of cooked and uncooked fish was found to contain tetrodotoxin by mouse bio-assay. No intact fish specimen was available for determination of species.

Epidemiologic investigation revealed that the implicated seafood market sold this type of fish only occasionally. A random survey of other seafood markets did not identify other distributors.

Health authorities in Florida have undertaken a program to inform the public of the danger associated with eating puffer or blowfish.

*(Reported by Jorge Gasteazoro, MD, Emergency Room physician, Parkway General Hospital, Miami, Florida; Myriam Enriquez, MD, Head, Disease Control Section, Joel L Nitzkin, MD, Chief, Office of Consumer Protection, Milton S Saslaw, MD, Director, Dade County Health Department; Nathan J Schneider, PhD, Chief, Bureau of Laboratories, and Chester*

*L Nayfield, MD, State Epidemiologist, Florida Division of Health; and 2 EIS Officers.)*

## Editorial Note

This illness is compatible with a mild form of puffer fish poisoning. In more severe cases, cranial nerve palsies and skeletal muscle and respiratory paralysis may occur (1). Case-fatality rates of 40-60% have been reported.

The illness is caused by tetrodotoxin, a potent, heat-stable, non-protein toxin found in fish belonging to the order Tetraodontiformes. The highest concentration of toxin is found in the liver, ovaries, intestine, and skin of fish and may be present in lower concentration in muscle. Female fish are more toxic than males, and toxicity, which is related to the reproductive cycle, is greatest during the spawning season (2). Puffer fish are found in salt and fresh water and are not restricted to any geographic area. In Japan where certain species are considered delicacies, cooks are specially trained and licensed by the government to prepare "fugu," a local variety of puffer fish (2).

This is the first outbreak of puffer fish poisoning reported to CDC since the origin of the Foodborne Disease Surveillance System in 1966.

## References

1. Torda TA, Sinclair E, Ulyatt DB: Puffer fish (tetrodotoxin) poisoning: Clinical record and suggested management. *Med J Aust* 1:599-602, 1973
2. Halstead BW, Courville DA: Poisonous and Venomous Marine Animals of the World, Vol. 2. Vertebrates. Washington, GPO, 1967, pp 679-844

The Morbidity and Mortality Weekly Report, circulation 41,500, is published by the Center for Disease Control, Atlanta, Ga.

Director, Center for Disease Control  
Director, Bureau of Epidemiology, 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 cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials.

## Send reports to:

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

## Send mailing list additions, deletions, and address changes to:

Center for Disease Control  
Attn: Distribution Services, GSO, B-SB-2  
Atlanta, Georgia 30333

When requesting changes, be sure to give your former address, including zip code and mailing list code number, or send an old address label.

DHEW Publication No. (CDC) 75-8017

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

OFFICIAL BUSINESS

FIRST CLASS



POSTAGE AND FEES PAID  
U.S. DEPARTMENT OF HEW  
HEW 399

9A1906  
Mrs Mary Alice Mills  
Director, Library  
1-408