CENTERS FOR DISEASE CONTROL

# MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

December 19, 1980 / Vol. 29 / No. 50





## *Epidemiologic Notes and Reports*

### Cholera — Florida

A case of cholera has been reported from Florida.

The patient, a 46-year-old woman, experienced the sudden onset of explosive diarrhea, abdominal cramps, and vomiting on November 29, 1980. There was only minimal fever. The illness was assumed to be food poisoning and was treated symptomatically. Symptoms continued unabated, however, and on the third day of illness, her physician ordered a stool culture and started the patient on oral tetracycline. Within 2 days the diarrhea had ceased, and the patient was markedly improved. The treatment with tetracycline was continued. A stool culture grew a toxigenic *Vibrio cholerae*, serotype Inaba, biotype El Tor.

From November 21-25, the patient had ingested approximately 6 dozen raw oysters. These had been harvested from an approved area of Apalachicola Bay in Florida on November 17 or 19. No other seafood ingestion was reported, and the patient had not traveled recently outside of western Florida. An epidemiologic investigation is under way to determine if the oysters were the vehicle of transmission and if there were other cases. Thus far no other cases have been detected. During the past 2 months, routine monitoring of the portions of Apalachicola Bay that are approved and open for oyster harvesting has shown fecal coliform levels to be within the limits required by the National Shellfish Sanitation Program.

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**Editorial Note:** The last cases of cholera reported in the United States in persons who had not recently traveled out of the country occurred in Louisiana in 1978 (*1*). In those cases, ingestion of steamed crabs was epidemiologically associated with infection. The Louisiana isolates were also serotype Inaba and biotype El Tor. The Florida and Louisiana strains will be compared by phage typing and other methods to determine if they are identical.

*Reference*

1. Blake PA, Allegra DT, Snyder JD, et al. Cholera — a possible endemic focus in the United States. N Engl J Med 1980;302:305-9.

## Follow-up on Drug-Resistant Tuberculosis — Mississippi

A community outbreak of drug-resistant tuberculosis in Alcorn County, Mississippi, was reported in December 1977 (*1*). Since a follow-up report in 1978 (*2*), 3 more cases of tuberculosis due to organisms resistant to isoniazid (INH), para-aminosalicyclic acid (PAS), and streptomycin (SM) have been reported in the county, bringing the total of outbreak-related cases to 26.

The first of the recent 3 cases was in a 57-year-old male teacher who had been exposed to the index patient during the 1975-76 school year. In October 1976, he had a 17-mm reaction to tuberculin, purified protein derivative (PPD), and a normal chest X ray. He was issued 7 bottles of INH during the next year but admitted to taking little of it. He came to the health department on August 14, 1978, complaining of generalized weakness, night sweats, and anorexia of 3 weeks' duration. His chest X ray showed infiltrates in the right apex, but there was no evidence of cavitation. Direct examinations of his sputum revealed acid-fast bacilli (AFB), and *Mycobacterium tuberculosis* was isolated on culture. Drug-susceptibility studies showed 100% resistance to INH, PAS, and SM. His organism was identified as phage type B, the same type as the index patient had. On August 23, 1978, treatment was started with INH, rifampin (RIF), and ethambutol (EMB). No AFB were seen on smears, nor was *M. tuberculosis* isolated from a sputum specimen obtained September 24, 1978. Chest X rays have remained stable since September 1978, sputum has remained bacteriologically negative, and treatment was completed in March 1980. Forty-four contacts of this teacher, including 25 students, were examined for tuberculosis; no other cases of tuberculosis or new tuberculous infections were found.

The second case occurred in a 62-year-old woman who was seen at the emergency room of a local hospital on January 17, 1980, because of weight loss, fever, and anorexia of 2 months' duration. A chest X ray revealed multiple areas of calcification and infiltrates in the right upper-lung field; she was admitted to the hospital. She had a 20-mm reaction to tuberculin, PPD. A sputum specimen obtained January 19 contained numerous AFB; *M. tuberculosis*, isolated on culture, was identified as phage type B. Drug-susceptibility studies showed 100% resistance to INH, PAS, and SM.

This woman had had exposure to 2 of the drug-resistant cases in the outbreak. However, during the previous investigation she had not been identified as a contact of either patient and therefore had not been offered preventive therapy. Because of documented exposure to these drug-resistant cases, she was started on treatment with INH, RIF, EMB, and capreomycin. On February 22, after she improved clinically, she was discharged from the hospital; she was referred to the county health department for continued treatment. Smears and cultures of sputum specimens obtained in August, September, and October were negative.

Twenty contacts to this second case were identified and examined. Four of the 20 were persons who had previously had positive skin tests and who were being followed by the health department as contacts of other drug-resistant cases. Five new tuberculin reactors were found among the remaining 16 contacts. Two of the 5 contacts had a history of negative skin tests 3 months previously; 2 had a history of negative skin tests 1½ years previously. The remaining contact was a 10-month-old boy who, because of a 2-month history of upper-respiratory infection, was hospitalized in March 1980 and evaluated for tuberculosis. X-ray findings were not consistent with tuberculosis, and cultures of gastric washings were negative for AFB. This child and 18 other contacts are taking INH preventive therapy. One of the contacts had tuberculous disease.

*Tuberculosis — Continued*

This person, the third patient, was a 17-year-old female. She was a household contact and daughter of the second patient and a student in the same junior-senior high school as attended by the index patient. She had no reaction to tuberculin, PPD, in September 1977 and September 1978, but she had a 20-mm reaction on January 23, 1980. A chest X ray taken on February 25 was negative. She was started on INH preventive therapy on January 25 but did not return for additional medication until April 23. On May 12, she was seen at the health department because of cough, night sweats, weight loss, and fever of 3 weeks' duration. The chest X ray revealed disease in the upper one-third of the right lung. She was hospitalized on May 14. Sputum smears were negative for AFB, but bronchial washings were positive; cultures were positive for *M. tuberculosis*. Drug-susceptibility studies showed 100% resistance to INH, PAS, and SM. The patient was started on chemotherapy with INH, RIF, and EMB. Smears and cultures of sputum specimens obtained in August, September, and October were negative. An X ray taken on August 13 showed dramatic improvement. The patient is continuing under the supervision of the local health department.

There were 109 students who shared classes or rode the school bus with this patient; all were skin tested on May 23, and only one had a reaction (20-mm reaction to tuberculin, PPD). The 108 negative students were retested in August and September; all were again negative.

These 3 recent cases brought the total of patients related to this outbreak of INH-PAS-SM-resistant tuberculosis to 26. After they are treated, such patients are observed for 2 years to detect treatment failures. During this 2-year follow-up period, sputum examinations and chest X rays are done at 6-month intervals, and patients are instructed to report any symptoms immediately.

Nineteen of the 26 have now completed treatment; 4 have died (2 from tuberculosis); and 3 are still being treated. The 3 patients still under treatment have demonstrated an unwillingness to ingest medication on their own initiative. The local health department has successfully used directly administered daily therapy to achieve continuous treatment of these patients.

Although most of the patients in this outbreak have responded well to therapy, 3 have not. The first such patient was a 17-year-old woman who died in March 1977. The second was the father of the index patient; his sputum recently reconverted to positive, despite the fact that he was receiving, 5 times weekly, directly administered medication to which his last positive cultures demonstrated sensitivity. The third patient whose treatment was unsuccessful was the mother of the index patient; she was treated for pulmonary tuberculosis with INH, PAS, and SM in September 1966 but had adverse reactions to SM and PAS. She died in July 1967 with progressive tuberculosis while receiving INH and ethionamide. Her cultures grew *M. tuberculosis*, but drug-susceptibility tests were never done.

In 1976, as a part of the initial investigation, the students in the local junior-senior high school had skin tests; 21% had positive reactions. In a follow-up testing program in 1978, 652 (98%) of 663 junior-senior high school students were tested, and only 5 (0.8%) new reactors were found. In 1979, the first, seventh, and twelfth grades in the school system were tested; 386 (96%) of 401 students received the test, and no new reactors were found.

*Reported by DL Blakey, MD, State Epidemiologist, Mississippi Board of Health; Tuberculosis Control Division, Bur of State Services, CDC.*

*Tuberculosis — Continued*

**Editorial Note:** The incidence of drug-resistant cases in Alcorn County has declined, and transmission in the junior-senior high school has ceased. Nevertheless, sporadic INH-PAS-SM-resistant cases may continue to occur in this county for many years because of the relatively large number of contacts believed to have been infected with these drug-resistant organisms. About 50% of the contacts have completed at least 6 months of INH preventive therapy, but whether INH is effective in preventing disease in individuals infected with INH-resistant organisms is unknown.

When new drug-resistant cases do occur, effective case and contact management can usually contain the disease and prevent further transmission of infection and disease. This can be accomplished by continuing to oversee the therapy of patients unwilling or unable to take the medications on their own initiative and by appropriate management of infected contacts.

There are 3 options for the management of close contacts of INH-resistant cases: 1) treat with INH, 2) treat with RIF (alone or in combination with INH or another drug), 3) use no drugs for preventive treatment but assure close clinical follow-up of infected contacts for 3 to 5 years, arranging prompt treatment with appropriate drugs for any who develop tuberculosis. A recently completed study of these options, using decision

*(Continued on page 609)*

**TABLE I. Summary — cases of specified notifiable diseases, United States**

*[Cumulative totals include revised and delayed reports through previous weeks.]*

| DISEASE | 50th WEEK ENDING | | MEDIAN 1975-1979 | CUMULATIVE, FIRST 50 WEEKS | | MEDIAN 1975-1979 |
|---|---|---|---|---|---|---|
| | December 13, 1980 | December 15, 1979 | | December 13, 1980 | December 15, 1979 | |
| Aseptic meningitis | 145 | 181 | 89 | 7,130 | 8,220 | 4,535 |
| Brucellosis | 1 | 6 | 3 | 167 | 186 | 214 |
| Chickenpox | 3,905 | 3,205 | 3,522 | 176,657 | 189,564 | 175,113 |
| Diphtheria | – | 1 | 1 | 4 | 60 | 81 |
| Encephalitis: Primary (arthropod-borne & unspec.) | 16 | 19 | 12 | 1,084 | 1,061 | 1,150 |
| Post-infectious | 6 | 7 | 5 | 210 | 239 | 239 |
| Hepatitis, Viral: Type B | 448 | 395 | 304 | 17,550 | 14,366 | 14,366 |
| Type A | 602 | 625 | 667 | 27,181 | 28,702 | 29,588 |
| Type unspecified | 228 | 206 | 206 | 11,452 | 10,089 | 8,343 |
| Malaria | 36 | 27 | 4 | 1,872 | 788 | 512 |
| Measles (rubeola) | 44 | 166 | 208 | 13,362 | 13,315 | 26,359 |
| Meningococcal infections: Total | 55 | 46 | 39 | 2,545 | 2,482 | 1,710 |
| Civilian | 55 | 46 | 39 | 2,532 | 2,462 | 1,699 |
| Military | – | – | – | 13 | 20 | 20 |
| Mumps | 102 | 267 | 394 | 8,221 | 13,389 | 20,211 |
| Pertussis | 20 | 134 | 27 | 1,572 | 1,452 | 1,520 |
| Rubella (German measles) | 94 | 57 | 110 | 3,746 | 11,504 | 15,993 |
| Tetanus | 3 | 3 | 1 | 72 | 74 | 76 |
| Tuberculosis | 685 | 703 | 689 | 26,416 | 26,604 | 28,944 |
| Tularemia | 9 | 9 | 4 | 213 | 188 | 133 |
| Typhoid fever | 3 | 5 | 5 | 478 | 506 | 388 |
| Typhus fever, tick-borne (Rky. Mt. spotted) | 7 | 15 | 3 | 1,128 | 1,048 | 1,038 |
| Venereal diseases: | | | | | | |
| Gonorrhea: Civilian | 20,429 | 22,083 | 21,315 | 970,137 | 967,245 | 967,245 |
| Military | 604 | 601 | 439 | 25,747 | 26,783 | 26,783 |
| Syphilis, primary & secondary: Civilian | 591 | 579 | 508 | 26,327 | 24,135 | 22,992 |
| Military | 6 | 3 | 5 | 305 | 311 | 311 |
| Rabies in animals | 86 | 61 | 49 | 6,079 | 4,806 | 2,911 |

**TABLE II. Notifiable diseases of low frequency, United States**

| | CUM. 1980 | | CUM. 1980 |
|---|---|---|---|
| Antrax | 1 | Poliomyelitis: Total | 8 |
| Botulism Ohio 1, N. Mex. 1 | 66 | Paralytic | 6 |
| Cholera | 8 | Psittacosis Oreg. 1, Calif. 2 | 102 |
| Congenital rubella syndrome | 46 | Rabies in man | – |
| Leprosy N.Y.C. 1, N.C. 1, Calif. 1 | 212 | Trichinosis Tex. 1 | 109 |
| Leptospirosis Ill. 1, Oreg. 1, Hawaii 1 | 73 | Typhus fever, flea-borne (endemic, murine) Tex. 1 | 73 |
| Plague | 18 | | |

All delayed reports and corrections will be included in the following week's cumulative totals.

## TABLE III. Cases of specified notifiable diseases, United States, weeks ending December 13, 1980, and December 15, 1979 (50th week)

| REPORTING AREA | ASEPTIC MENINGITIS | BRUCELLOSIS | CHICKEN-POX | DIPHTHERIA | | ENCEPHALITIS | | | HEPATITIS (VIRAL), BY TYPE | | | MALARIA | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Primary | | Post-infectious | B | A | Unspecified | | |
| | 1980 | 1980 | 1980 | 1980 | CUM. 1980 | 1980 | 1979 | 1980 | 1980 | 1980 | 1980 | 1980 | CUM. 1980 |
| UNITED STATES | 145 | 1 | 3,905 | – | 4 | 16 | 19 | 6 | 448 | 602 | 228 | 36 | 1,872 |
| NEW ENGLAND | 9 | – | 576 | – | – | 1 | 1 | – | 15 | 6 | 3 | 4 | 113 |
| Maine | – | – | 180 | – | – | – | – | – | 1 | 1 | – | – | 17 |
| N.H. | – | – | 20 | – | – | – | – | – | 2 | 1 | – | – | 7 |
| Vt. | – | – | 85 | – | – | – | – | – | – | 1 | – | – | 1 |
| Mass. | 1 | – | 151 | – | – | – | 1 | – | 2 | 2 | 3 | 3 | 59 |
| R.I. | – | – | 57 | – | – | – | – | – | 1 | 1 | – | – | 10 |
| Conn. | 8 | – | 83 | – | – | 1 | – | – | 9 | – | – | 1 | 19 |
| MID. ATLANTIC | 28 | – | 174 | – | 1 | 3 | 3 | – | 51 | 59 | 15 | – | 238 |
| Upstate N.Y. | 7 | – | 98 | – | – | 3 | – | – | 23 | 20 | 5 | – | 42 |
| N.Y. City | 4 | – | 29 | – | 1 | – | 1 | – | 10 | 12 | 2 | – | 65 |
| N.J. | 8 | – | NN | – | – | – | – | – | 18 | 27 | 8 | – | 61 |
| Pa. | 9 | – | 47 | – | – | – | 2 | – | NA | NA | NA | – | 70 |
| E.N. CENTRAL | 11 | – | 1,664 | – | 1 | – | 2 | – | 59 | 74 | 18 | 3 | 114 |
| Ohio | 3 | – | 160 | – | – | – | 1 | – | 8 | 21 | 9 | – | 19 |
| Ind. | – | – | 171 | – | – | – | – | – | 14 | 6 | 2 | – | 12 |
| Ill. | 4 | – | 436 | – | – | – | 1 | – | 18 | 29 | 2 | 2 | 47 |
| Mich. | 4 | – | 518 | – | 1 | – | – | – | 13 | 11 | 2 | 1 | 24 |
| Wis. | – | – | 379 | – | – | – | – | – | 6 | 7 | 3 | – | 12 |
| W.N. CENTRAL | 4 | – | 684 | – | 1 | 1 | 2 | – | 13 | 25 | 4 | 3 | 75 |
| Minn. | – | – | – | – | – | – | – | – | 1 | 3 | – | 2 | 30 |
| Iowa | 4 | – | 251 | – | – | 1 | 2 | – | 2 | 5 | – | – | 7 |
| Mo. | – | – | – | – | 1 | – | – | – | 8 | 8 | 2 | 1 | 15 |
| N. Dak. | – | – | 80 | – | – | – | – | – | – | – | – | – | – |
| S. Dak. | – | – | 150 | – | – | – | – | – | – | – | – | – | 4 |
| Nebr. | – | – | 1 | – | – | – | – | – | – | – | – | – | 7 |
| Kans. | – | – | 202 | – | – | – | – | – | 2 | 9 | 2 | – | 12 |
| S. ATLANTIC | 17 | – | 423 | – | – | 5 | 3 | 4 | 98 | 84 | 32 | 1 | 195 |
| Del. | – | – | – | – | – | – | – | – | 3 | 1 | – | – | – |
| Md. | 1 | – | 25 | – | – | 1 | – | – | 20 | 2 | 9 | – | 32 |
| D.C. | – | – | – | – | – | – | – | – | 4 | 2 | – | – | 4 |
| Va. | 6 | – | 50 | – | – | 1 | – | 2 | 12 | 4 | 6 | 1 | 64 |
| W. Va. | – | – | 183 | – | – | – | – | – | 2 | 1 | – | – | 4 |
| N.C. | 1 | – | NN | – | – | 2 | 1 | – | 3 | 4 | 1 | – | 17 |
| S.C. | – | – | 1 | – | – | 1 | – | – | 8 | 4 | 1 | – | 11 |
| Ga. | – | – | 17 | – | – | – | – | – | 27 | 14 | – | – | 19 |
| Fla. | 9 | – | 147 | – | – | – | 2 | 2 | 19 | 52 | 15 | – | 44 |
| E.S. CENTRAL | 23 | – | 34 | – | – | 1 | 2 | 1 | 32 | 36 | 15 | 1 | 14 |
| Ky. | 1 | – | 15 | – | – | – | – | – | 4 | 9 | 2 | – | 3 |
| Tenn. | 3 | – | NN | – | – | 1 | 2 | 1 | 11 | 13 | 1 | – | – |
| Ala. | 18 | – | 14 | – | – | – | – | – | 15 | 3 | 12 | – | 8 |
| Miss. | 1 | – | 5 | – | – | – | – | – | 2 | 11 | – | 1 | 3 |
| W.S. CENTRAL | 4 | 1 | 81 | – | – | 1 | 1 | – | 30 | 74 | 54 | 8 | 181 |
| Ark. | – | – | 3 | – | – | – | – | – | 1 | 8 | 11 | – | 9 |
| La. | – | – | NN | – | – | 1 | – | – | 8 | 7 | 10 | 3 | 50 |
| Okla. | – | – | – | – | – | – | – | – | 8 | 9 | 1 | – | 12 |
| Tex. | 4 | 1 | 78 | – | – | – | 1 | – | 13 | 50 | 32 | 5 | 110 |
| MOUNTAIN | 3 | – | 174 | – | – | – | – | – | 10 | 50 | 17 | 1 | 92 |
| Mont. | – | – | 51 | – | – | – | – | – | – | – | – | – | 1 |
| Idaho | – | – | – | – | – | – | – | – | – | 20 | – | – | 1 |
| Wyo. | – | – | – | – | – | – | – | – | – | – | – | – | 2 |
| Colo. | 1 | – | 65 | – | – | – | – | – | 2 | 10 | 2 | – | 36 |
| N. Mex. | – | – | – | – | – | – | – | – | – | 1 | – | – | 6 |
| Ariz. | – | – | NN | – | – | – | – | – | 5 | 13 | 10 | – | 18 |
| Utah | – | – | 56 | – | – | – | – | – | – | 3 | 1 | – | 16 |
| Nev. | 2 | – | 2 | – | – | – | – | – | 3 | 3 | 4 | 1 | 12 |
| PACIFIC | 46 | – | 95 | – | 1 | 4 | 5 | 1 | 140 | 194 | 70 | 15 | 850 |
| Wash. | 1 | – | 81 | – | 1 | – | 1 | – | 8 | 13 | 1 | – | 52 |
| Oreg. | 2 | – | 1 | – | – | 1 | – | 1 | 11 | 7 | – | 1 | 48 |
| Calif. | 42 | – | – | – | – | 3 | 3 | – | 115 | 170 | 68 | 7 | 719 |
| Alaska | – | – | 3 | – | – | – | 1 | – | – | – | – | – | 6 |
| Hawaii | 1 | – | 10 | – | – | – | – | – | 6 | 4 | 1 | 7 | 25 |
| Guam | NA | NA | NA | NA | – | NA | – | – | NA | NA | NA | NA | 3 |
| P.R. | 5 | – | 9 | – | – | – | – | – | 2 | 4 | 9 | 1 | 5 |
| V.I. | NA | NA | NA | NA | – | NA | – | – | NA | NA | NA | NA | 2 |
| Pac. Trust Terr. | NA | NA | NA | NA | – | NA | – | – | NA | NA | NA | NA | 2 |

NN: Not notifiable. NA: Not available.
All delayed reports and corrections will be included in the following week's cumulative totals.

## TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending December 13, 1980, and December 15, 1979 (50th week)

| REPORTING AREA | MEASLES (RUBEOLA) | | | MENINGOCOCCAL INFECTIONS TOTAL | | | MUMPS | | PERTUSSIS | RUBELLA | | TETANUS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1980 | CUM. 1980 | CUM. 1979 | 1980 | CUM. 1980 | CUM. 1979 | 1980 | CUM. 1980 | 1980 | 1980 | CUM. 1980 | CUM. 1980 |
| UNITED STATES | 44 | 13,362 | 13,315 | 55 | 2,545 | 2,482 | 102 | 8,221 | 20 | 94 | 3,746 | 72 |
| NEW ENGLAND | 1 | 677 | 291 | 7 | 151 | 148 | 6 | 606 | – | 50 | 269 | 3 |
| Maine | – | 33 | 18 | – | 6 | 9 | 3 | 306 | – | 49 | 119 | 1 |
| N.H. | – | 331 | 33 | – | 8 | 15 | 2 | 24 | – | – | 39 | – |
| Vt. | 1 | 227 | 119 | – | 15 | 8 | – | 12 | – | – | 3 | – |
| Mass. | – | 59 | 15 | 2 | 53 | 59 | – | 131 | – | – | 77 | – |
| R.I. | – | 2 | 102 | – | 12 | 9 | 1 | 33 | – | – | 9 | 1 |
| Conn. | – | 25 | 4 | 5 | 57 | 48 | – | 100 | – | 1 | 22 | 1 |
| MID. ATLANTIC | 15 | 3,901 | 1,627 | 11 | 455 | 400 | 12 | 922 | 5 | 2 | 581 | 8 |
| Upstate N.Y. | 5 | 726 | 673 | 5 | 133 | 138 | 4 | 159 | 4 | 2 | 222 | 3 |
| N.Y. City | 2 | 1,206 | 848 | 3 | 109 | 89 | 3 | 106 | 1 | – | 101 | 2 |
| N.J. | – | 850 | 58 | 1 | 94 | 101 | 3 | 128 | – | – | 106 | – |
| Pa. | 8 | 1,119 | 48 | 2 | 119 | 72 | 2 | 529 | – | – | 152 | 3 |
| E.N. CENTRAL | 1 | 2,454 | 3,531 | 6 | 295 | 293 | 35 | 3,119 | 3 | 10 | 870 | 7 |
| Ohio | – | 380 | 313 | 3 | 98 | 120 | 6 | 1,235 | – | – | 8 | 2 |
| Ind. | – | 94 | 226 | – | 44 | 49 | 2 | 147 | – | 5 | 374 | – |
| Ill. | – | 353 | 1,587 | 1 | 62 | 28 | 6 | 407 | 1 | 2 | 177 | 2 |
| Mich. | – | 250 | 861 | 1 | 73 | 77 | 20 | 969 | 1 | – | 129 | 1 |
| Wis. | 1 | 1,377 | 544 | 1 | 18 | 19 | 1 | 361 | 1 | 3 | 182 | 2 |
| W.N. CENTRAL | – | 1,322 | 1,838 | 10 | 117 | 82 | 7 | 325 | 2 | 2 | 206 | 4 |
| Minn. | – | 1,106 | 1,218 | 9 | 44 | 19 | – | 20 | 1 | – | 28 | 1 |
| Iowa | – | – | 16 | – | 14 | 14 | 6 | 61 | – | – | 9 | 1 |
| Mo. | – | 65 | 429 | – | 39 | 36 | – | 101 | – | – | 42 | 1 |
| N. Dak. | – | 1 | 21 | 1 | 3 | 1 | – | 4 | – | – | 5 | – |
| S. Dak. | – | – | 2 | – | 6 | 4 | – | 4 | 1 | – | 2 | – |
| Nebr. | – | 83 | 77 | – | – | – | – | 9 | – | – | 1 | – |
| Kans. | – | 67 | 75 | – | 11 | 8 | 1 | 126 | – | 2 | 119 | 1 |
| S. ATLANTIC | 11 | 1,989 | 2,153 | 11 | 597 | 600 | 17 | 1,107 | 2 | 2 | 363 | 12 |
| Del. | 1 | 4 | 1 | – | 2 | 5 | 1 | 41 | – | – | 1 | – |
| Md. | 1 | 84 | 16 | – | 52 | 59 | 5 | 353 | – | – | 72 | 1 |
| D.C. | – | 5 | – | – | 2 | – | – | 5 | – | – | 1 | – |
| Va. | – | 339 | 287 | 2 | 64 | 81 | 4 | 78 | – | 2 | 62 | 3 |
| W. Va. | – | 15 | 65 | – | 24 | 16 | 1 | 126 | – | – | 27 | 1 |
| N.C. | – | 130 | 114 | 1 | 99 | 95 | 1 | 100 | – | – | 48 | 1 |
| S.C. | – | 159 | 182 | – | 65 | 65 | – | 211 | – | – | 55 | 3 |
| Ga. | 9 | 844 | 581 | 3 | 116 | 86 | 2 | 13 | 2 | – | – | 1 |
| Fla. | – | 409 | 907 | 5 | 173 | 193 | 3 | 180 | – | – | 97 | 2 |
| E.S. CENTRAL | – | 349 | 265 | 3 | 210 | 171 | – | 886 | 1 | 1 | 88 | 8 |
| Ky. | – | 57 | 40 | – | 64 | 35 | – | 759 | – | – | 43 | 2 |
| Tenn. | – | 172 | 72 | 1 | 58 | 51 | – | 34 | 1 | 1 | 40 | 2 |
| Ala. | – | 22 | 129 | 2 | 57 | 39 | – | 30 | – | – | 3 | 4 |
| Miss. | – | 98 | 24 | – | 31 | 46 | – | 63 | – | – | 2 | – |
| W.S. CENTRAL | 5 | 993 | 950 | 6 | 268 | 349 | 3 | 299 | 1 | 1 | 154 | 19 |
| Ark. | – | 16 | 7 | 1 | 20 | 28 | – | 22 | – | – | 4 | 2 |
| La. | 2 | 15 | 259 | – | 95 | 122 | – | 68 | – | – | 13 | 5 |
| Okla. | – | 776 | 22 | 2 | 26 | 39 | – | – | 1 | 1 | 7 | 1 |
| Tex. | 3 | 186 | 662 | 3 | 127 | 160 | 3 | 209 | – | – | 130 | 11 |
| MOUNTAIN | – | 505 | 338 | – | 104 | 98 | – | 224 | 1 | 3 | 168 | – |
| Mont. | – | 2 | 56 | – | 3 | 15 | – | 60 | – | – | 45 | – |
| Idaho | – | – | 18 | – | 6 | 10 | – | 16 | – | – | 22 | – |
| Wyo. | – | – | 36 | – | 6 | 1 | – | – | – | – | 1 | – |
| Colo. | – | 24 | 71 | – | 25 | 8 | – | 64 | 1 | – | 12 | – |
| N. Mex. | – | 14 | 38 | – | 11 | 6 | – | – | – | – | 5 | – |
| Ariz. | – | 408 | 80 | – | 19 | 36 | – | 46 | – | – | 45 | – |
| Utah | – | 47 | 19 | – | 5 | 9 | – | 29 | – | 2 | 31 | – |
| Nev. | – | 10 | 20 | – | 29 | 13 | – | 9 | – | 1 | 7 | – |
| PACIFIC | 11 | 1,172 | 2,322 | 1 | 348 | 341 | 22 | 733 | 5 | 23 | 1,047 | 11 |
| Wash. | 1 | 178 | 1,153 | – | 64 | 64 | 4 | 150 | 4 | 6 | 94 | – |
| Oreg. | – | 1 | 66 | – | 54 | 28 | 2 | 92 | – | – | 65 | – |
| Calif. | 9 | 980 | 1,018 | 1 | 219 | 233 | 15 | 457 | 1 | 17 | 871 | 11 |
| Alaska | – | 6 | 17 | – | 11 | 6 | – | 13 | – | – | 12 | – |
| Hawaii | 1 | 7 | 68 | – | – | 10 | 1 | 21 | – | – | 5 | – |
| Guam | NA | 6 | 13 | – | 1 | 1 | NA | 10 | NA | NA | 2 | – |
| P.R. | 3 | 177 | 383 | – | 11 | 7 | 3 | 156 | 2 | 1 | 27 | 12 |
| V.I. | NA | 6 | 6 | – | 3 | 3 | NA | 2 | NA | NA | – | – |
| Pac. Trust Terr. | NA | 10 | 10 | – | – | 1 | NA | 21 | NA | NA | 1 | – |

NA: Not available.

All delayed reports and corrections will be included in the following week's cumulative totals.

## TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending December 13, 1980, and December 15, 1979 (50th week)

| REPORTING AREA | TUBERCULOSIS | | TULAREMIA | TYPHOID FEVER | | TYPHUS FEVER (Tick-borne) (RMSF) | | VENEREAL DISEASES (Civilian) | | | | | | RABIES (in Animals) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | GONORRHEA | | | SYPHILIS (Pri. & Sec.) | | | |
| | 1980 | CUM. 1980 | CUM. 1980 | 1980 | CUM. 1980 | 1980 | CUM. 1980 | 1980 | CUM. 1980 | CUM. 1979 | 1980 | CUM. 1980 | CUM. 1979 | CUM. 1980 |
| UNITED STATES | 685 | 26,416 | 213 | 3 | 478 | 7 | 1,128 | 20,429 | 970,137 | 967,245 | 591 | 26,327 | 24,135 | 6,079 |
| NEW ENGLAND | 15 | 731 | 6 | – | 13 | – | 14 | 509 | 24,683 | 23,768 | 15 | 505 | 490 | 60 |
| Maine | 2 | 52 | – | – | 1 | – | – | 34 | 1,376 | 1,669 | – | 6 | 10 | 28 |
| N.H. | – | 17 | – | – | – | – | – | 14 | 859 | 887 | – | 6 | 19 | 7 |
| Vt. | – | 23 | – | – | – | – | – | 3 | 533 | 624 | – | 6 | 3 | – |
| Mass. | 7 | 408 | 4 | – | 8 | – | 7 | 227 | 10,428 | 9,448 | 8 | 310 | 270 | 14 |
| R.I. | 2 | 72 | 1 | – | 1 | – | 2 | 34 | 1,576 | 1,895 | 1 | 32 | 19 | 1 |
| Conn. | 4 | 159 | 1 | – | 3 | – | 5 | 197 | 9,911 | 9,245 | 6 | 145 | 169 | 10 |
| MID. ATLANTIC | 155 | 4,255 | 3 | – | 90 | – | 48 | 2,996 | 109,884 | 106,516 | 81 | 3,625 | 3,681 | 70 |
| Upstate N.Y. | 47 | 840 | 1 | – | 16 | – | 14 | 529 | 19,686 | 18,705 | 11 | 316 | 279 | 38 |
| N.Y. City | 13 | 1,493 | 1 | – | 40 | – | 3 | 1,200 | 43,887 | 41,810 | 47 | 2,348 | 2,510 | – |
| N.J. | 71 | 967 | 1 | – | 21 | – | 19 | 728 | 19,911 | 18,968 | 11 | 421 | 468 | 13 |
| Pa. | 24 | 955 | – | – | 13 | – | 12 | 539 | 26,400 | 27,033 | 12 | 540 | 424 | 19 |
| E.N. CENTRAL | 67 | 3,765 | 2 | 1 | 51 | – | 32 | 2,954 | 149,857 | 152,050 | 30 | 2,645 | 2,972 | 923 |
| Ohio | 14 | 703 | – | 1 | 15 | – | 19 | 1,195 | 40,267 | 41,563 | 1 | 359 | 589 | 55 |
| Ind. | 8 | 414 | – | – | – | – | 2 | 213 | 15,626 | 13,182 | 2 | 188 | 203 | 72 |
| Ill. | 18 | 1,291 | – | – | 18 | – | 6 | 689 | 46,469 | 48,249 | 20 | 1,606 | 1,663 | 508 |
| Mich. | 17 | 1,119 | 2 | – | 11 | – | 3 | 599 | 33,790 | 35,415 | 4 | 395 | 439 | 15 |
| Wis. | 10 | 238 | – | – | 7 | – | 2 | 258 | 13,705 | 13,641 | 3 | 97 | 78 | 273 |
| W.N. CENTRAL | 16 | 962 | 32 | – | 29 | – | 54 | 922 | 46,840 | 47,721 | 9 | 360 | 304 | 2,012 |
| Minn. | 7 | 201 | 1 | – | 4 | – | – | 148 | 7,657 | 7,885 | 5 | 122 | 86 | 245 |
| Iowa | – | 89 | 1 | – | 2 | – | 3 | 94 | 4,916 | 5,648 | – | 31 | 30 | 476 |
| Mo. | 3 | 426 | 25 | – | 19 | – | 34 | 332 | 20,900 | 20,478 | 2 | 158 | 140 | 371 |
| N. Dak. | 2 | 53 | – | – | 1 | – | – | 12 | 658 | 846 | – | 4 | 2 | 231 |
| S. Dak. | – | 49 | 1 | – | 1 | – | 2 | 17 | 1,325 | 1,565 | – | 6 | 2 | 446 |
| Nebr. | 4 | 40 | 3 | – | 1 | – | 5 | 135 | 3,605 | 3,430 | – | 12 | 7 | 93 |
| Kans. | – | 104 | 1 | – | 1 | – | 10 | 184 | 7,779 | 7,869 | 2 | 27 | 37 | 150 |
| S. ATLANTIC | 133 | 5,753 | 13 | 2 | 46 | 5 | 701 | 5,478 | 243,390 | 232,761 | 147 | 6,307 | 5,665 | 495 |
| Del. | 2 | 69 | – | – | 1 | – | 2 | 117 | 3,529 | 3,780 | 2 | 21 | 29 | 2 |
| Md. | 12 | 700 | 4 | – | 3 | 1 | 75 | 824 | 26,387 | 28,645 | 16 | 436 | 377 | 32 |
| D.C. | 7 | 356 | – | – | 4 | – | – | 302 | 16,565 | 15,620 | 12 | 466 | 437 | – |
| Va. | – | 568 | 1 | 1 | 9 | 1 | 94 | 693 | 22,426 | 22,275 | 21 | 569 | 471 | 29 |
| W. Va. | 2 | 207 | – | – | 5 | – | 5 | 98 | 3,298 | 3,164 | – | 17 | 51 | 26 |
| N.C. | 24 | 1,026 | 3 | – | 5 | – | 317 | 608 | 36,946 | 33,867 | 15 | 470 | 422 | 20 |
| S.C. | 32 | 522 | – | – | 3 | – | 141 | 424 | 22,643 | 21,747 | 12 | 376 | 305 | 62 |
| Ga. | 25 | 802 | 5 | – | – | 3 | 60 | 1,049 | 47,569 | 43,999 | 44 | 1,794 | 1,565 | 246 |
| Fla. | 29 | 1,503 | – | 1 | 16 | – | 7 | 1,363 | 64,027 | 59,664 | 25 | 2,158 | 2,008 | 78 |
| E.S. CENTRAL | 67 | 2,452 | 10 | – | 12 | 1 | 116 | 1,364 | 78,698 | 81,872 | 44 | 2,163 | 1,613 | 335 |
| Ky. | 11 | 547 | – | – | 3 | 1 | 21 | 268 | 11,446 | 11,116 | 1 | 126 | 158 | 144 |
| Tenn. | 19 | 794 | 7 | – | 1 | – | 61 | 352 | 28,434 | 29,771 | 10 | 906 | 662 | 138 |
| Ala. | 23 | 638 | 1 | – | 3 | – | 17 | 587 | 23,789 | 23,805 | 14 | 472 | 294 | 53 |
| Miss. | 14 | 473 | 2 | – | 5 | – | 17 | 157 | 15,029 | 17,180 | 19 | 659 | 499 | – |
| W.S. CENTRAL | 80 | 3,006 | 97 | – | 77 | 1 | 141 | 2,490 | 122,297 | 124,160 | 155 | 5,341 | 4,412 | 1,368 |
| Ark. | 10 | 326 | 65 | – | 8 | – | 35 | 143 | 9,777 | 9,978 | 7 | 217 | 159 | 183 |
| La. | 15 | 556 | – | – | 2 | – | 3 | 311 | 21,628 | 22,308 | 32 | 1,336 | 1,117 | 16 |
| Okla. | 11 | 328 | 21 | – | 6 | 1 | 74 | 247 | 12,168 | 12,339 | 1 | 104 | 85 | 239 |
| Tex. | 44 | 1,796 | 11 | – | 61 | – | 29 | 1,789 | 78,724 | 79,535 | 115 | 3,684 | 3,051 | 930 |
| MOUNTAIN | 21 | 756 | 34 | – | 26 | – | 17 | 844 | 37,087 | 38,727 | 11 | 645 | 503 | 242 |
| Mont. | – | 32 | 9 | – | 1 | – | 3 | 28 | 1,404 | 1,965 | – | 2 | 9 | 57 |
| Idaho | 2 | 29 | 1 | – | 1 | – | 2 | 36 | 1,649 | 1,692 | 1 | 28 | 26 | 2 |
| Wyo. | – | 22 | 4 | – | – | – | 2 | 18 | 1,057 | 1,097 | – | 12 | 9 | 17 |
| Colo. | 11 | 141 | 8 | – | 7 | – | 5 | 190 | 10,131 | 10,339 | 6 | 176 | 108 | 54 |
| N. Mex. | 1 | 133 | 2 | – | 3 | – | 4 | 55 | 4,493 | 4,767 | 3 | 115 | 93 | 45 |
| Ariz. | 7 | 322 | 1 | – | 7 | – | – | 141 | 9,633 | 10,776 | – | 209 | 147 | 57 |
| Utah | – | 49 | 6 | – | 7 | – | 1 | 34 | 1,880 | 1,961 | 1 | 19 | 5 | 9 |
| Nev. | – | 28 | 3 | – | – | – | – | 342 | 6,840 | 6,130 | – | 84 | 106 | 1 |
| PACIFIC | 131 | 4,736 | 16 | – | 134 | – | 5 | 2,872 | 157,401 | 159,670 | 99 | 4,736 | 4,495 | 574 |
| Wash. | 6 | 398 | – | – | 3 | – | – | NA | 12,993 | 14,035 | NA | 216 | 228 | – |
| Oreg. | 6 | 185 | 4 | – | 9 | – | 1 | 336 | 10,863 | 9,997 | 1 | 106 | 161 | 4 |
| Calif. | 117 | 3,992 | 11 | – | 120 | – | 4 | 2,392 | 126,584 | 127,761 | 97 | 4,265 | 3,989 | 522 |
| Alaska | – | 64 | 1 | – | – | – | – | 75 | 3,850 | 4,805 | 1 | 9 | 25 | 48 |
| Hawaii | 2 | 97 | – | – | 2 | – | – | 69 | 3,111 | 3,072 | – | 140 | 92 | – |
| Guam | NA | 54 | – | NA | 1 | NA | – | NA | 99 | 113 | NA | 5 | – | – |
| P.R. | 20 | 291 | – | – | 8 | – | – | 63 | 2,658 | 2,092 | 13 | 599 | 574 | 53 |
| V.I. | NA | – | – | NA | – | NA | – | NA | 109 | 156 | NA | 10 | 12 | – |
| Pac. Trust Terr. | NA | 35 | – | NA | – | NA | – | NA | 379 | 470 | NA | – | 1 | – |

NA: Not available.
All delayed reports and corrections will be included in the following week's cumulative totals.

## TABLE IV. Deaths in 121 U.S. cities,* week ending December 13, 1980 (50th week)

| REPORTING AREA | ALL CAUSES, BY AGE (YEARS) | | | | | P&I** TOTAL |
|---|---|---|---|---|---|---|
| | ALL AGES | >65 | 45-64 | 25-44 | <1 | |
| NEW ENGLAND | 713 | 484 | 156 | 37 | 23 | 51 |
| Boston, Mass. | 221 | 141 | 49 | 19 | 8 | 25 |
| Bridgeport, Conn. | 39 | 29 | 5 | 2 | 1 | 3 |
| Cambridge, Mass. | 35 | 22 | 8 | 5 | – | 7 |
| Fall River, Mass. | 28 | 19 | 7 | 1 | 1 | – |
| Hartford, Conn. | 56 | 38 | 13 | 2 | 1 | – |
| Lowell, Mass. | 31 | 21 | 7 | – | 1 | – |
| Lynn, Mass. | 20 | 12 | 6 | 1 | 1 | 1 |
| New Bedford, Mass. | 20 | 15 | 3 | – | 1 | 1 |
| New Haven, Conn. | 66 | 42 | 16 | 2 | 5 | 1 |
| Providence, R.I. | 56 | 39 | 15 | 2 | – | 4 |
| Somerville, Mass. | 20 | 14 | 4 | 1 | 1 | 3 |
| Springfield, Mass. | 17 | 15 | 2 | – | – | – |
| Waterbury, Conn. | 40 | 34 | 6 | – | – | 4 |
| Worcester, Mass. | 64 | 43 | 15 | 2 | 3 | 2 |
| MID. ATLANTIC | 3,216 | 2,181 | 689 | 185 | 67 | 179 |
| Albany, N.Y. | 57 | 37 | 12 | 2 | 4 | 1 |
| Allentown, Pa. | 20 | 18 | 2 | – | – | – |
| Buffalo, N.Y. | 128 | 78 | 39 | 6 | 4 | 5 |
| Camden, N.J. | 57 | 43 | 10 | 2 | 1 | – |
| Elizabeth, N.J. | 31 | 25 | 6 | – | – | 4 |
| Erie, Pa.† | 45 | 26 | 15 | 2 | – | 2 |
| Jersey City, N.J. | 48 | 36 | 7 | 3 | 2 | 1 |
| Newark, N.J. †† | 74 | 35 | 19 | 7 | 4 | 4 |
| N.Y. City, N.Y. | 1,788 | 1,236 | 353 | 115 | 30 | 101 |
| Paterson, N.J. | 41 | 28 | 8 | 5 | – | 3 |
| Philadelphia, Pa.† | 390 | 251 | 87 | 28 | 11 | 31 |
| Pittsburgh, Pa.† | 91 | 50 | 33 | 4 | 3 | 1 |
| Reading, Pa. | 32 | 26 | 6 | – | – | 3 |
| Rochester, N.Y. | 135 | 94 | 31 | 5 | 3 | 11 |
| Schenectady, N.Y. | 29 | 22 | 5 | 1 | 1 | – |
| Scranton, Pa.† | 35 | 23 | 10 | – | – | 2 |
| Syracuse, N.Y. | 112 | 77 | 26 | 2 | 2 | 4 |
| Trenton, N.J. | 33 | 19 | 8 | 3 | 1 | 2 |
| Utica, N.Y. | 34 | 27 | 6 | – | 1 | 4 |
| Yonkers, N.Y. | 36 | 30 | 6 | – | – | – |
| E.N. CENTRAL | 2,510 | 1,532 | 622 | 179 | 87 | 87 |
| Akron, Ohio | 71 | 46 | 19 | – | 3 | – |
| Canton, Ohio | 41 | 29 | 9 | 1 | – | 1 |
| Chicago, Ill. | 541 | 315 | 148 | 37 | 22 | 12 |
| Cincinnati, Ohio | 224 | 134 | 67 | 13 | 5 | 21 |
| Cleveland, Ohio | 178 | 106 | 39 | 18 | 9 | 8 |
| Columbus, Ohio | 129 | 75 | 34 | 8 | 4 | 4 |
| Dayton, Ohio | 111 | 68 | 27 | 10 | 3 | 7 |
| Detroit, Mich. | 296 | 179 | 64 | 25 | 17 | 5 |
| Evansville, Ind. | 50 | 36 | 7 | 4 | – | – |
| Fort Wayne, Ind. | 60 | 35 | 18 | 3 | 4 | 4 |
| Gary, Ind. | 24 | 9 | 6 | 4 | – | – |
| Grand Rapids, Mich. | 43 | 30 | 11 | – | 2 | 4 |
| Indianapolis, Ind. | 174 | 106 | 42 | 12 | 5 | 5 |
| Madison, Wis. | 49 | 33 | 9 | 3 | 2 | 3 |
| Milwaukee, Wis. | 167 | 107 | 46 | 8 | 3 | – |
| Peoria, Ill. | 59 | 50 | 7 | – | 2 | 2 |
| Rockford, Ill. | 54 | 39 | 9 | 2 | 2 | 6 |
| South Bend, Ind. | 50 | 40 | 8 | 1 | 1 | 1 |
| Toledo, Ohio | 106 | 42 | 30 | 26 | 2 | 4 |
| Youngstown, Ohio | 83 | 53 | 22 | 4 | 1 | – |
| W.N. CENTRAL | 796 | 503 | 177 | 43 | 41 | 21 |
| Des Moines, Iowa | 65 | 41 | 16 | 6 | – | – |
| Duluth, Minn. | 24 | 19 | 4 | – | 1 | 1 |
| Kansas City, Kans. | 36 | 25 | 6 | 2 | – | 2 |
| Kansas City, Mo. | 128 | 79 | 31 | 7 | 3 | 2 |
| Lincoln, Nebr. | 37 | 30 | 5 | – | – | 2 |
| Minneapolis, Minn. | 91 | 67 | 12 | 3 | 8 | 1 |
| Omaha, Nebr. | 102 | 64 | 23 | 5 | 5 | 1 |
| St. Louis, Mo. | 173 | 91 | 46 | 15 | 15 | 5 |
| St. Paul, Minn. | 79 | 50 | 20 | 2 | 6 | 3 |
| Wichita, Kans. | 61 | 37 | 14 | 3 | 3 | 4 |

| REPORTING AREA | ALL CAUSES, BY AGE (YEARS) | | | | | P&I** TOTAL |
|---|---|---|---|---|---|---|
| | ALL AGES | >65 | 45-64 | 25-44 | <1 | |
| S. ATLANTIC | 1,173 | 637 | 324 | 95 | 71 | 47 |
| Atlanta, Ga. | 178 | 77 | 45 | 12 | 37 | 6 |
| Baltimore, Md. | 139 | 73 | 41 | 16 | 4 | 4 |
| Charlotte, N.C. | 57 | 26 | 16 | 7 | 4 | 1 |
| Jacksonville, Fla. | 97 | 49 | 28 | 10 | 5 | 4 |
| Miami, Fla. | 142 | 69 | 40 | 17 | 6 | 1 |
| Norfolk, Va. | 45 | 26 | 14 | 1 | 1 | 3 |
| Richmond, Va. | 69 | 44 | 19 | 3 | 2 | 5 |
| Savannah, Ga. | 51 | 31 | 13 | 5 | 1 | 9 |
| St. Petersburg, Fla. | 99 | 79 | 18 | 1 | 1 | 5 |
| Tampa, Fla. | 71 | 46 | 14 | 2 | 5 | 4 |
| Washington, D.C. | 189 | 101 | 60 | 18 | 4 | 4 |
| Wilmington, Del. | 36 | 16 | 14 | 3 | 1 | 1 |
| E.S. CENTRAL | 924 | 561 | 238 | 53 | 35 | 37 |
| Birmingham, Ala. | 144 | 93 | 36 | 5 | 6 | – |
| Chattanooga, Tenn. | 104 | 59 | 35 | 3 | 4 | 5 |
| Knoxville, Tenn. | 57 | 42 | 12 | 1 | 1 | 1 |
| Louisville, Ky. | 132 | 76 | 37 | 7 | 8 | 14 |
| Memphis, Tenn. | 266 | 161 | 69 | 17 | 6 | 12 |
| Mobile, Ala. | 58 | 31 | 20 | 2 | 1 | 2 |
| Montgomery, Ala. | 56 | 30 | 11 | 8 | 4 | 1 |
| Nashville, Tenn. | 107 | 69 | 18 | 10 | 5 | 2 |
| W.S. CENTRAL | 1,628 | 953 | 410 | 134 | 61 | 64 |
| Austin, Tex. | 70 | 46 | 14 | 4 | 1 | 4 |
| Baton Rouge, La. | 32 | 22 | 6 | 4 | – | 3 |
| Corpus Christi, Tex. | 44 | 25 | 10 | 5 | 2 | – |
| Dallas, Tex. | 211 | 124 | 41 | 20 | 11 | 2 |
| El Paso, Tex. | 63 | 41 | 13 | 5 | 3 | 11 |
| Fort Worth, Tex. | 101 | 70 | 22 | 5 | – | 5 |
| Houston, Tex. | 568 | 272 | 196 | 55 | 17 | 8 |
| Little Rock, Ark. | 71 | 44 | 15 | 5 | 6 | 5 |
| New Orleans, La. | 185 | 110 | 42 | 19 | 9 | – |
| San Antonio, Tex. | 136 | 94 | 26 | 8 | 5 | 9 |
| Shreveport, La. | 39 | 28 | 2 | 3 | 3 | – |
| Tulsa, Okla. | 108 | 77 | 23 | 1 | 4 | 7 |
| MOUNTAIN | 723 | 447 | 158 | 58 | 29 | 25 |
| Albuquerque, N. Mex. | 89 | 40 | 10 | 22 | 5 | – |
| Colo. Springs, Colo. | 33 | 18 | 13 | 2 | – | 2 |
| Denver, Colo. | 144 | 97 | 26 | 7 | 9 | 3 |
| Las Vegas, Nev. | 97 | 56 | 33 | 5 | 1 | 8 |
| Ogden, Utah | 13 | 10 | 2 | 1 | – | 1 |
| Phoenix, Ariz. | 157 | 110 | 31 | 6 | 5 | – |
| Pueblo, Colo. | 27 | 19 | 8 | – | – | 4 |
| Salt Lake City, Utah | 58 | 29 | 13 | 7 | 5 | 2 |
| Tucson, Ariz. | 105 | 68 | 22 | 8 | 4 | – |
| PACIFIC | 1,992 | 1,350 | 399 | 111 | 61 | 85 |
| Berkeley, Calif. | 27 | 20 | 6 | – | – | 1 |
| Fresno, Calif. | 88 | 65 | 16 | 2 | 4 | 2 |
| Glendale, Calif. | 33 | 28 | 4 | 1 | – | 5 |
| Honolulu, Hawaii | 41 | 25 | 11 | 1 | 4 | 2 |
| Long Beach, Calif. | 115 | 80 | 23 | 4 | 4 | 2 |
| Los Angeles, Calif. | 558 | 396 | 93 | 37 | 9 | 29 |
| Oakland, Calif. | 91 | 51 | 25 | 9 | 4 | 5 |
| Pasadena, Calif. | 42 | 33 | 5 | 2 | 2 | 6 |
| Portland, Oreg. | 135 | 91 | 28 | 8 | 5 | – |
| Sacramento, Calif. | 84 | 54 | 22 | 3 | 1 | 4 |
| San Diego, Calif. | 129 | 79 | 31 | 6 | 6 | 1 |
| San Francisco, Calif. | 154 | 100 | 28 | 10 | 9 | 6 |
| San Jose, Calif. | 166 | 109 | 32 | 11 | 7 | 13 |
| Seattle, Wash. | 204 | 129 | 51 | 15 | 2 | 8 |
| Spokane, Wash. | 67 | 47 | 14 | 2 | 1 | 1 |
| Tacoma, Wash. | 58 | 43 | 10 | – | 3 | – |
| TOTAL | 13,675 | 8,648 | 3,173 | 895 | 475 | 586 |

*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza

†Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Data not available this week. Figures are estimates based on average percent of regional totals.

*Tuberculosis – Continued*

analysis and the Delphi technique—in which specialists in tuberculosis control and infectious diseases were polled—suggests that RIF may be the preferred drug for preventive therapy for persons in whom the infecting organism is most likely resistant to INH (*3*). However, the use of RIF as preventive therapy has not been clinically evaluated. INH remains the preferred drug for preventive treatment when the estimated probability that the infecting organism is resistant to INH is less than 50%. Close clinical follow-up with no treatment was found to be the least satisfactory approach.

*References*

1. MMWR 1977;26:417-8,423.
2. MMWR 1978;27:355-6.
3. Koplan J, Farer LS. The choice of preventive treatment for isoniazid-resistant tuberculous infection. JAMA (in press).

## Adverse Reactions to Human Diploid Cell Rabies Vaccine

In the period June 23-September 15, 1980, approximately 25,200 doses of Merieux human diploid cell rabies vaccine (M-HDCV) were distributed to all states except Hawaii and Delaware. A follow-up survey of state health departments revealed that approximately 2,500 patients received rabies prophylaxis with M-HDCV during this time; the vast majority of these were postexposure treatments. During this 12-week period, CDC received a number of reports of adverse reactions to M-HDCV. Each report was investigated by telephone contact with the patient's physician. Adverse reactions were only tabulated when verified by statements from these physicians.

Four patients (1 per 625 treated) had systemic allergic reactions ranging from hives to anaphylactic shock. Although 2 of the patients reported allergies to other drugs in the past, the other 2 had no such history of allergy. Two of the cases were complicated by simultaneous administration of human rabies immune globulin (HRIG) or tetanus toxoid. In 2 of the cases, however, repeated administration of the vaccine alone resulted in the reappearance of the adverse reaction.

Four cases of fever and severe headache (1 per 625 treated) were reported during this same time. The febrile headaches were not associated with a stiff neck or other signs of meningitis or encephalitis. The symptoms characteristically resolved within 24 hours and occasionally, but not invariably, recurred following additional injections of M-HDCV.

Other systemic reactions occasionally reported were chills, diarrhea, malaise, headache without fever, and fever without headache. Local reactions, affecting less than 25% of persons treated, consisted of redness, swelling, or pain at the site of injection. No deaths or cases of encephalopathy have been reported following vaccination with M-HDCV.

*Reported by GR Iverson, MD, North Dakota; WJ Many Jr, MD, Montgomery, Alabama; L Mahoney, MD, S Gaspers, San Bernardino County Health Dept, California; L Dales, MD, RR Roberto, MD, California State Dept of Health Services; BJ Francis, MD, State Epidemiologist, Illinois Dept of Public Health; Viral Zoonoses Br, Virology Div, Bur of Laboratories; Field Services Div, and Respiratory and Special Pathogens Br, Viral Diseases Div, Bur of Epidemiology, CDC.*

**Editorial Note:** Since the licensure of M-HDCV on June 9, 1980 (*1*), this vaccine has gained wide acceptance in the medical community in the United States. It has largely replaced duck embryo vaccine for postexposure prophylaxis because of 1) higher levels of antibody stimulated by fewer doses of vaccine and 2) fewer adverse reactions. No cases of rabies have yet developed in persons treated with M-HDCV in the United States.

*Rabies Vaccine -- Continued*

In addition, there have been no documented cases of failure to develop protective antibody when the 5-dose postexposure prohylaxis regimen has been adhered to.

The adverse reactions noted have been similar to those described in the European literature in trials using M-HDCV (*2,3*). In the European literature, however, a single case of Guillain-Barré syndrome was reported. It occurred 14 days after the second prophylactic dose of M-HDCV was given to a 14-year-old Norwegian boy living in Zambia, Africa. He fully recovered (*4*). Although temporally associated, a cause-effect relationship between Guillain-Barré syndrome and M-HDCV has not been established in this case.

Although 2 of the persons in the United States with severe allergic reactions were hospitalized or observed by a physician during administration of successive doses of vaccine, in no instance was it necessary to discontinue the postexposure prophylaxis regimen. Data accumulated so far indicate that although the vaccine is safe and efficacious, physicians should be aware of the possibility of occasional adverse reactions. A 5-state surveillance system has been initiated to define more clearly any risks associated with this vaccine.

*References*

1. MMWR 1980;29:265-72,277-80.
2. Aoki FY, Tyrrell DAJ, Hill LE. Immunogenicity and acceptability of a human diploid cell rabies vaccine in volunteers. Lancet 1975;1:660-2.
3. Costy-Berger F. Vaccinacion antirabique preventive par due vaccine prepare sur cellules diploides humaines. Dev Biol Stand 1978;40:101-4.
4. Bφe E, Nyland H. Guillain-Barré syndrome after vaccination with human diploid cell rabies vaccine. Scand J Infect Dis 1980;12:231-2.

## Ciguatera Fish Poisoning -- Maryland

An outbreak of ciguatera fish poisoning occurred on September 24-25, 1980, among persons who had eaten in a seafood restaurant in Montgomery County, Maryland. The county and state health departments, using reservation and credit card lists and announcements in the media, identified 85 individuals who had eaten in the restaurant between September 24-26; 12 of these persons had gastrointestinal and neurologic symptoms compatible with ciguatera fish poisoning, including nausea (92% of patients), diarrhea (83%), paresthesias of the mouth and feet (83%), weakness (58%), changes in hot and cold sensation (58%), numbness (58%), muscle aches (50%), vomiting (42%), and itching (42%). Two patients became hypotensive and were hospitalized; one required hospitalization in the intensive care unit. All affected individuals still exhibited some neurologic symptoms 25 days after onset of illness. In no instance was an initial diagnosis of ciguatera fish poisoning made by the physician seeing the patient.

With the use of food-specific attack rates, grouper was implicated as the cause of the outbreak ($p<.0001$, Fisher exact test, 2-tailed). All persons who ate 1 particular fish served on September 24-25 (including an individual who ate less than 1 ounce) developed symptoms of ciguatera fish poisoning. The mean incubation period was 5 hours (range 3-7½ hours). Two individuals who ate red snapper on the evening of September 25 also had symptoms compatible with ciguatera; the restaurant chef, however, admitted that grouper may have been substituted for snapper in these 2 cases, and the 2 individuals involved indicated that they were unfamiliar with either fish and would not have been able to identify what they were eating.

*Fish Poisoning — Continued*

The implicated grouper weighed 44 pounds. It was delivered to the restaurant on September 24. The fish was brought by truck to the Washington, D.C., area as part of a shipment purchased in Florida on September 22 by a local distributor.

*Reported by RM Helfrich, KG Henning, E Dunlop, RN, SE Martin, EA Rosenberger, MD, Montgomery County Health Dept; J Horman, DVM, NER Jackman, MD, DL Sorley, MD, State Epidemiologist, Maryland State Dept of Health and Mental Hygiene; Food and Drug Administration; and Enteric Diseases Br, Bacterial Diseases Div, Bureau of Epidemiology, CDC.*

**Editorial Note:** Ciguatera fish poisoning is a distinctive clinical syndrome characterized by a combination of gastrointestinal and neurologic symptoms (*1*). It is thought to be caused by a toxin (or toxins) produced by *Gambierdiscus toxicus* (*2*), a dinoflagellate found on tropical reefs. The toxin is concentrated in predatory species of fish, and thus is passed up the marine food chain. In any given species, the larger fish are more likely to be toxic. The toxin is tasteless and is unaffected by cooking. There is no generally available method of detecting toxic fish.

In the United States between 1975 and 1979, ciguatera fish poisoning was the most common foodborne disease associated with eating fish, accounting for as many fish-associated foodborne outbreaks as all other etiologies combined. Cases are identified most commonly in Hawaii and in Dade County, Florida; in the Miami area the incidence of ciguatera fish poisoning has been estimated at 5 cases per 10,000 population per year (*3*). This is one of the first instances in which an outbreak of ciguatera fish poisoning occurred outside of a known endemic area; with the current availability of large tropical fish from Florida in many areas along the East Coast, additional outbreaks of the disease may be expected.

*References*

1. Hughes JM, Merson MH. Fish and shellfish poisoning. N Engl J Med 1976;295:1117-20.
2. Bagnis R, Chanteau S, Chungue E, Hurtel JM, Yasumoto T, Inoue A. Origins of ciguatera fish poisoning: a new dinoflagellate, *Gambierdiscus toxicus* Adachi and Fukuyo, definitely involved as a causal agent. Toxicon 1980;18:199-208.
3. Lawrence DN, Enriguez MB, Lumish RM, Maceo A. Ciguatera fish poisoning in Miami. JAMA 1980;244:254-8.

## *International Notes*

### Influenza — Worldwide

In the Northern Hemisphere there has been little influenza activity thus far this winter. Influenza A(H1N1) viruses related to the A/Brazil/11/78 strain have, however, been isolated from school children and young adults in the British Isles (in the Shetland Isles, in other islands and rural areas of Scotland, and in England)(*1,2*) and in Hungary.

**The Morbidity and Mortality Weekly Report, circulation 102,241, is published by the Centers for Disease Control, Atlanta, Georgia. 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.**

**The editor welcomes accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Send reports to: Attn: Editor, Morbidity and Mortality Weekly Report, Centers for Disease Control, Atlanta, Georgia 30333.**

**Send mailing list additions, deletions, and address changes to: Attn: Distribution Services, Management Analysis and Services Office, 1-SB-419, Centers for Disease Control, Atlanta, Georgia 30333. Or call 404-329-3219. When requesting changes be sure to give your former address, including zip code and mailing list code number, or send an old address label.**

*Influenza — Continued*

In the Americas, influenza A(H3N2) strains related to A/Bangkok/1/79 were reported from outbreaks in Mexico in October (*1*) and in Canada during November (*3*). The Canadian outbreak occurred in a nursing home near Winnipeg, Manitoba. In 1 ward, 13 of 63 persons were ill, and in a second ward 40 of 87 persons were ill, with several requiring hospitalization. Three persons died; influenza A(H3N2) virus was isolated from 1 fatal case. None of the seriously ill persons had been vaccinated.

Influenza A(H3N2) virus infections also continue to be reported from the Southern Hemisphere, with isolates reported in October in Australia (*4*) and New Caledonia (*1*). Influenza B viruses also were isolated in Australia in October (*4*).

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*References*

1. WHO. Influenza surveillance. Weekly Epidemiological Record 1980;54:368.
2. WHO. Influenza surveillance. Weekly Epidemiological Record 1980;54:375.
3. Laboratory Centre for Disease Control. Canada Diseases Weekly Report (in press).
4. Department of Health, Australia. Communicable Disease Intelligence Bulletin 1980;80(23).

## Errata, Vol. 29

No. 48 **p577.** In the article, "Chickenpox—United States, 1979," the last line of the second paragraph should state that there are only 6.4 cases per 100,000 population aged 15 years and older, not 1 case.

**p585.** In the article, "Waterborne Illness—South Carolina," 6th paragraph, 5th line, 34 well persons drank water, not 14. The percentage is correct.

### Notice to Readers

The MMWR will not be published the week of Christmas. The next issue of the MMWR that you will receive will be No. 51 of Volume 29, dated January 2, 1981. That issue will accommodate the tables on specified notifiable diseases and deaths in 121 U.S. cities for the weeks ending December 20 and 27 (51st and 52nd weeks). The last publication of provisional statistics on notifiable diseases for 1980 (53rd week) will appear in Vol. 29, No. 52, dated January 9, 1981.

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HHS Publication No. (CDC) 81-8017