COMMUNICABLE DISEASE CENTER

# Morbidity and Mortality

Vol. 15, No. 12

WEEKLY REPORT

Week Ending March 26, 1966

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



## CURRENT TRENDS

### MALARIA IN THE UNITED STATES, 1966

This week 5 cases of malaria were reported in the United States through the National Morbidity Reporting System, bringing the total number of cases reported in 1966 to 67. The Parasitic Disease Unit of the Communicable Disease Center has received additional epidemiological information on 47 of the malaria cases reported through March 26, all of which have had onsets during 1966. Twenty-two of these cases occurred in military personnel who were diagnosed in the United States, 18 cases occurred in civilians, and 7 were known malaria cases transferred to the United States for treatment.

Of the 22 military cases, 19 contracted malaria in Viet Nam, and one case each was imported from Thailand, Panama and Korea. In the 19 military cases from Viet Nam, the species was *Plasmodium falciparum* in 8 cases, *P. vivax* in 10 cases, and *P. malariae* in one case.

The 18 civilian cases include two merchant seamen and six Peace Corps workers. Only one of the 18 cases acquired the disease in Viet Nam. Of the 16 cases in which the country of origin is known, Africa was the source of infection in 10 cases.

The seven cases transferred to the United States for therapy were military personnel who acquired their disease in Viet Nam. All had falciparum malaria.

CONTENTS



## CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

(Cumulative totals include revised and delayed reports through previous weeks)

| DISEASE | 12th WEEK ENDED | | MEDIAN 1961–1965 | CUMULATIVE, FIRST 12 WEEKS | | |
|---|---|---|---|---|---|---|
| | MARCH 26, 1966 | MARCH 27, 1965 | | 1966 | 1965 | MEDIAN 1961–1965 |
| Aseptic meningitis | 20 | 27 | 16 | 341 | 335 | 268 |
| Brucellosis | 6 | 2 | 7 | 43 | 45 | 76 |
| Diphtheria | 5 | — | 6 | 34 | 51 | 81 |
| Encephalitis, primary: | | | | | | |
| Arthropod-borne & unspecified | 17 | 28 | - - - | 274 | 360 | - - - |
| Encephalitis, post-infectious | 17 | 18 | - - - | 195 | 170 | - - - |
| Hepatitis, serum | 24 | 770 | 933 | 269 | 9,495 | 12,960 |
| Hepatitis, infectious | 685 | | | 8,561 | | |
| Measles (rubeola) | 9,469 | 11,272 | 15,519 | 85,000 | 105,866 | 129,117 |
| Poliomyelitis, Total (including unspecified) | — | 1 | 3 | 3 | 3 | 37 |
| Paralytic | — | 1 | 3 | 2 | 3 | 32 |
| Nonparalytic | — | — | - - - | — | — | - - - |
| Meningococcal infections, Total | 125 | 111 | 60 | 1,186 | 1,012 | 691 |
| Civilian | 114 | 105 | - - - | 1,025 | 941 | - - - |
| Military | 11 | 6 | - - - | 161 | 71 | - - - |
| Rubella (German measles) | 2,175 | - - - | - - - | 15,554 | - - - | - - - |
| Streptococcal sore throat & Scarlet fever | 13,611 | 11,974 | 11,118 | 140,291 | 134,601 | 120,080 |
| Tetanus | 2 | 4 | - - - | 24 | 42 | - - - |
| Tularemia | 2 | 3 | - - - | 46 | 52 | - - - |
| Typhoid fever | 5 | 2 | 6 | 60 | 78 | 78 |
| Typhus, tick-borne (Rky. Mt. Spotted fever) | — | — | - - - | 9 | 6 | - - - |
| Rabies in Animals | 135 | 96 | 96 | 956 | 1,176 | 923 |

## NOTIFIABLE DISEASES OF LOW FREQUENCY

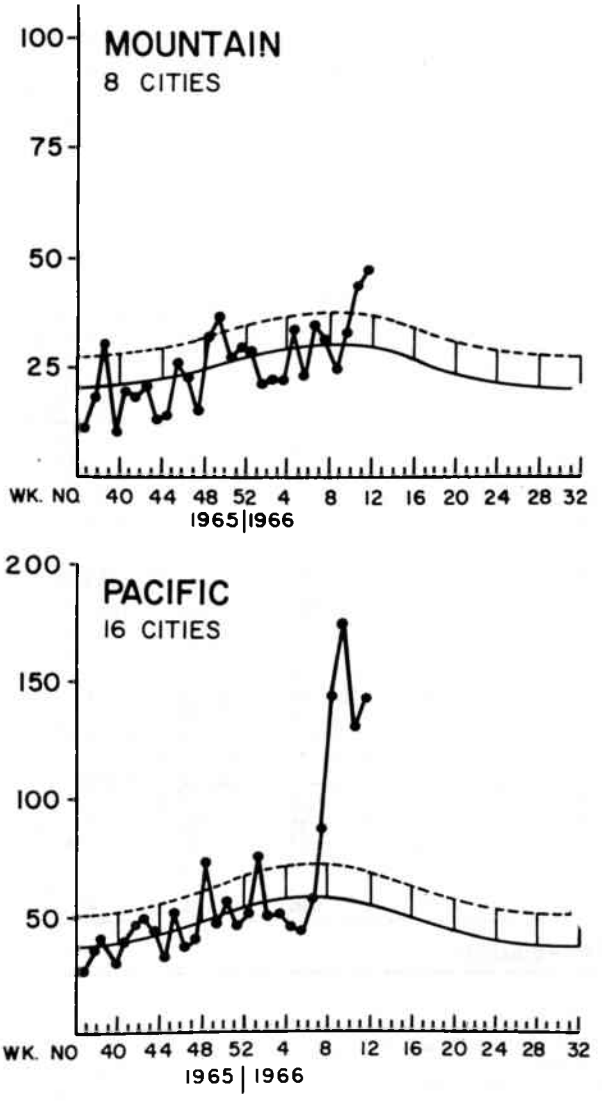
| | Cum. | | Cum. |
|---|---|---|---|
| Anthrax: | 2 | Botulism: | 1 |
| Leptospirosis: Texas-1 | 9 | Trichinosis: N.C.-1, Tenn.-1 | 25 |
| Malaria: D.C.-1, N.Y. Up-State-1, Pa.-2, Calif.-1, P.R.-1 | 67 | Rabies in Man: | — |
| Psittacosis: Wisc.-1 | 14 | Rubella, Congenital Syndrome: | 9 |
| Typhus, murine: Conn.-1, Texas-1 | 4 | | |

## INFLUENZA – UNITED STATES

During the week ending March 26, 1966, reporting of influenza outbreaks to the CDC has shown a general decline. Of particular interest is the continued reporting of influenza virus isolates not associated with generalized outbreaks. In Idaho where type A2 influenza outbreaks have been confirmed, there has been a single isolation of type B influenza virus from a patient not associated with an outbreak.

Excess mortality due to influenza and pneumonia deaths as measured in 122 U.S. cities continues above the epidemic threshold for the 4th consecutive week.

Figure 1
PNEUMONIA – INFLUENZA DEATHS IN MOUNTAIN AND PACIFIC REGIONS – U.S.




The areas contributing to this rise are the Pacific and Mountain Regions (Figure 1).

*(Reported by the Influenza-Respiratory Disease Unit, CDC.)*

Table 1
United States Influenza Summary – 1965-66 (Winter)

| State | First Recognized | Laboratory Confirmation | |
|---|---|---|---|
| | | Isolation | Serology |
| **Lab. Confirmed Outbreaks** | | | |
| Florida | Nov. | B | B |
| Georgia | Dec. | B | B |
| Alabama | Jan. | . . . | B |
| California | Jan. | A2 | A |
| Connecticut | Jan. | . . . | B |
| Massachusetts | Jan. | B | B |
| Rhode Island | Jan. | . . . | B |
| Vermont | Jan. | B | B |
| Alaska | Feb. | B | . . . |
| Dist. of Col. | Feb. | B | . . . |
| Idaho | Feb. | A2 | A |
| Illinois | Feb. | B | B |
| Maine | Feb. | B | . . . |
| Maryland | Feb. | B | . . . |
| Michigan | Feb. | B | . . . |
| New Jersey | Feb. | B | . . . |
| New York | Feb. | B | . . . |
| North Carolina | Feb. | . . . | B |
| Ohio | Feb. | . . . | B |
| Oregon | Feb. | B | A,B |
| Pennsylvania | Feb. | B | . . . |
| Texas | Feb. | . . . | B |
| Virginia | Feb. | B | . . . |
| Washington | Feb. | B | A,B |
| Colorado | Mar. | A2 | . . . |
| Oklahoma | Mar. | A2 | A,B |
| **Influenza Virus Identification (non-outbreak)** | | | |
| Illinois | Jan. | A2 | . . . |
| Iowa | Feb. | A2 | A |
| Kansas | Feb. | A2 | . . . |
| Michigan | Feb. | A2 | . . . |
| Idaho | . . . | B | . . . |
| **Influenza-like Illnesses** | | | |
| Arizona | Feb. | | |
| Nevada | Feb. | | |
| New Hampshire | Feb. | | |
| West Virginia | Feb. | | |
| Delaware | Mar. | | |
| Montana | Mar. | | |
| Nebraska | Mar. | | |
| New Mexico | Mar. | | |
| Louisiana | Mar. | | |
| Tennessee | Mar. | | |
| Wisconsin | Mar. | | |

. . . Information not available

*(Compiled from reports submitted by State Health Departments and collaborative laboratories to the Influenza-Respiratory Disease Unit, CDC and the WHO International Influenza-Center for the Americas, CDC.)*

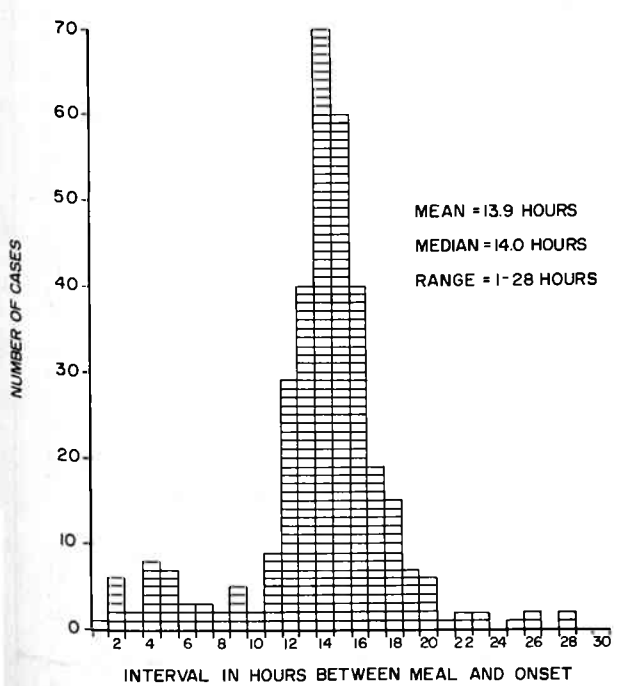
## EPIDEMIOLOGIC NOTES AND REPORTS

### HEAT-RESISTANT *CLOSTRIDIUM PERFRINGENS* OUTBREAK – Wisconsin

On February 24, 1966, over 366 students attending the University of Wisconsin developed mild gastroenteritis. Investigation indicated that illness was largely confined to three of the six dining halls serving the students and incriminated food served at the evening meal on February 23, 1966. These three dining halls served a choice of roast beef with gravy or fish as the entree, while the three other dining halls served a choice of hamburger or fish. All other foods were common to all dining halls. A total of 2,954 students had eaten that evening, according to the dietitian. Epidemiological evidence indicated that contaminated gravy was the source of the outbreak. The causative agent was *Clostridium perfringens*.

A food and illness questionnaire was distributed to students who ate in the three dining halls; 366 questionnaires were returned from ill students, 344 of which included time of onset, and 740 questionnaires were returned from well students. The clinical illness, which usually had a duration of less than 24 hours, was characterized primarily by diarrhea. About half of the students also experienced abdominal cramps, while nausea, vomiting, and fever were rare. The epidemic curve indicates a well demarcated incubation period of 14 hours (Figure 2).

Figure 2
OUTBREAK OF *CLOSTRIDIUM PERFRINGENS*
UNIVERSITY OF WISCONSIN – FEBRUARY 24, 1966




The attack rates among students who consumed the vulnerable foods are shown in Table 2. The 69.9 percent attack rate among those who ate roast beef and gravy, the 4.9 percent attack rate among those who did not eat roast beef and gravy, and the complete absence of illness in 48 students who ate roast beef without gravy, incriminated the gravy as the source of the outbreak of epidemiological grounds.

Table 2
*Clostridium perfringens* Outbreak
University of Wisconsin
Attack Rate in Students – February 24, 1966

| Food | Consumed Food | | | Did Not Consume Food | | |
|---|---|---|---|---|---|---|
| | No. | Ill | Attack Rate% | No. | Ill | Attack Rate % |
| Fish | 391 | 16 | 4.1 | 715 | 340 | 47.6 |
| Hamburger | 188 | 15 | 8.0 | 918 | 351 | 38.2 |
| Beef with gravy | 479 | 335 | 69.9 | 627 | 31 | 4.9 |
| Beef without gravy | 48 | 0 | 0.0 | 1,058 | 366 | 34.6 |

An interview with the chief cook revealed that both beef bone stock and gravy left over from February 22 had been added to fresh gravy made for the roast beef. About 27 gallons of the left-over gravy had been placed in three plastic containers, each containing about 9 gallons, and placed in the refrigerator overnight. The next day 7 gallons of freshly made gravy were added to the left-over material taken from the refrigerator; the entire mixture was brought to a "rolling boil" and served.

Although no left-over food remained from the meal in question, test samples of each food item which are routinely collected and refrigerated for every meal were available for culture. No clostridia or other organisms were isolated under aerobic or anaerobic conditions. The gravy failed to produce illness in mice, but it is not known whether the test sample included the left-over gravy or was taken only from the fresh gravy prepared on February 23. Nineteen of 20 stool samples from ill students yielded abundant numbers of *Clostridium perfringens;* all of the isolates readily survived boiling for one hour. Among 24 stool specimens collected from kitchen personnel, only one yielded heat-resistant *Clostridium perfringens*.

The outbreak was attributed to heat-resistant *Clostridium perfringens* which had grown in the gravy at some time during preparation or during inadequate refrigeration in the three 9-gallon containers.

*(Reported by Dr. A.S. Evans, Director, State Laboratory of Hygiene, Wisconsin; and Dr. Josef Preizler, Deputy Director, Section of Preventable Disease, Wisconsin State Board of Health.)*

*(Editorial Note on page 108)*

## CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
## FOR WEEKS ENDED
## MARCH 26, 1966 AND MARCH 27, 1965 (12th WEEK)

| AREA | ASEPTIC MENINGITIS | | BRUCELLOSIS | ENCEPHALITIS | | | DIPHTHERIA | | HEPATITIS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Primary including unsp. cases | | Post-Infectious | | | Serum | Infectious | Both Types |
| | 1966 | 1965 | 1966 | 1966 | 1965 | 1966 | 1966 | 1965 | 1966 | 1966 | 1965 |
| UNITED STATES... | 20 | 27 | 6 | 17 | 28 | 17 | 5 | - | 24 | 685 | 770 |
| NEW ENGLAND..... | 1 | 1 | 1 | 2 | 1 | 1 | - | - | 1 | 17 | 47 |
| Maine..... | - | 1 | - | - | - | - | - | - | - | 2 | 3 |
| New Hampshire..... | - | - | - | - | - | - | - | - | - | - | 6 |
| Vermont..... | - | - | - | - | - | - | - | - | - | 1 | 1 |
| Massachusetts..... | 1 | - | 1 | - | - | 1 | - | - | - | 10 | 24 |
| Rhode Island..... | - | - | - | - | - | - | - | - | 1 | 2 | 8 |
| Connecticut..... | - | - | - | 2 | 1 | - | - | - | - | 2 | 5 |
| MIDDLE ATLANTIC..... | 2 | - | - | 3 | 6 | 5 | - | - | 13 | 103 | 138 |
| New York City..... | - | - | - | - | 2 | - | - | - | 9 | 28 | 30 |
| New York, Up-State. | - | - | - | 2 | - | - | - | - | - | 30 | 42 |
| New Jersey..... | 1 | - | - | 1 | 3 | - | - | - | 4 | 12 | 35 |
| Pennsylvania..... | 1 | - | - | - | 1 | 5 | - | - | - | 33 | 31 |
| EAST NORTH CENTRAL... | 1 | 1 | - | 6 | 6 | 2 | - | - | 2 | 141 | 136 |
| Ohio..... | - | - | - | 2 | 4 | - | - | - | 1 | 32 | 27 |
| Indiana..... | 1 | - | - | 2 | 1 | - | - | - | - | 9 | 13 |
| Illinois..... | - | - | - | 1 | 1 | - | - | - | 1 | 41 | 31 |
| Michigan..... | - | 1 | - | 1 | - | 2 | - | - | - | 57 | 55 |
| Wisconsin..... | - | - | - | - | - | - | - | - | - | 2 | 10 |
| WEST NORTH CENTRAL... | - | - | 4 | 2 | 1 | 2 | - | - | 1 | 47 | 45 |
| Minnesota..... | - | - | 1 | - | - | 1 | - | - | - | 7 | 6 |
| Iowa..... | - | - | 2 | - | - | 1 | - | - | - | 20 | 20 |
| Missouri..... | - | - | - | - | - | - | - | - | 1 | 12 | 8 |
| North Dakota..... | - | - | - | - | - | - | - | - | - | - | - |
| South Dakota..... | - | - | - | 2 | 1 | - | - | - | - | - | - |
| Nebraska..... | - | - | 1 | - | - | - | - | - | - | - | 1 |
| Kansas..... | - | - | - | - | - | - | - | - | - | 8 | 10 |
| SOUTH ATLANTIC..... | 5 | 3 | - | 1 | 6 | 2 | 3 | - | 1 | 68 | 95 |
| Delaware..... | 3 | 1 | - | - | - | - | - | - | - | 1 | 7 |
| Maryland..... | - | - | - | - | 1 | 1 | - | - | - | 19 | 8 |
| Dist. of Columbia.. | - | - | - | - | - | - | 3 | - | - | 2 | 3 |
| Virginia..... | - | - | - | - | 2 | - | - | - | - | 6 | 35 |
| West Virginia..... | - | - | - | - | - | - | - | - | - | 7 | 12 |
| North Carolina..... | - | - | - | - | - | - | - | - | - | 13 | 5 |
| South Carolina..... | - | - | - | - | 1 | - | - | - | - | 1 | - |
| Georgia..... | - | - | - | - | - | - | - | - | - | 2 | 4 |
| Florida..... | 2 | 2 | - | 1 | 2 | 1 | - | - | 1 | 17 | 21 |
| EAST SOUTH CENTRAL... | - | 8 | - | - | 2 | 1 | - | - | - | 77 | 72 |
| Kentucky..... | - | 7 | - | - | - | - | - | - | - | 36 | 33 |
| Tennessee..... | - | 1 | - | - | - | 1 | - | - | - | 28 | 25 |
| Alabama..... | - | - | - | - | - | - | - | - | - | 8 | 5 |
| Mississippi..... | - | - | - | - | 2 | - | - | - | - | 5 | 9 |
| WEST SOUTH CENTRAL... | 3 | 2 | 1 | 1 | 1 | 1 | 1 | - | - | 65 | 55 |
| Arkansas..... | - | - | - | 1 | - | 1 | 1 | - | - | 12 | 10 |
| Louisiana..... | - | - | - | - | - | - | - | - | - | 11 | 10 |
| Oklahoma..... | - | - | - | - | - | - | - | - | - | 7 | 1 |
| Texas..... | 3 | 2 | 1 | - | 1 | - | - | - | - | 35 | 34 |
| MOUNTAIN..... | - | 1 | - | 1 | - | - | - | - | - | 22 | 30 |
| Montana..... | - | - | - | - | - | - | - | - | - | 2 | 1 |
| Idaho..... | - | - | - | - | - | - | - | - | - | - | 1 |
| Wyoming..... | - | - | - | - | - | - | - | - | - | - | - |
| Colorado..... | - | - | - | - | - | - | - | - | - | 4 | 7 |
| New Mexico..... | - | - | - | 1 | - | - | - | - | - | 1 | 13 |
| Arizona..... | - | - | - | - | - | - | - | - | - | 12 | 6 |
| Utah..... | - | 1 | - | - | - | - | - | - | - | 3 | 2 |
| Nevada..... | - | - | - | - | - | - | - | - | - | - | - |
| PACIFIC..... | 8 | 11 | - | 1 | 5 | 3 | 1 | - | 6 | 145 | 152 |
| Washington..... | 1 | - | - | - | 1 | - | 1 | - | - | 5 | 15 |
| Oregon..... | - | - | - | - | - | - | - | - | - | 46 | 8 |
| California..... | 7 | 11 | - | 1 | 4 | 3 | - | - | 6 | 93 | 128 |
| Alaska..... | - | - | - | - | - | - | - | - | - | - | - |
| Hawaii..... | - | - | - | - | - | - | - | - | - | 1 | 1 |
| Puerto Rico..... | - | - | - | - | - | - | - | - | - | 26 | 36 |

## CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

### FOR WEEKS ENDED

### MARCH 26, 1966 AND MARCH 27, 1965 (12th WEEK) - Continued

| AREA | MEASLES (Rubeola) | | | MENINGOCOCCAL INFECTIONS, TOTAL | | | POLIOMYELITIS | | | | RUBELLA |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Total | | Paralytic | | |
| | 1966 | Cumulative | | 1966 | Cumulative | | 1966 | 1965 | 1966 | Cumulative | 1966 |
| | | 1966 | 1965 | | 1966 | 1965 | | | | 1966 | |
| UNITED STATES... | 9,469 | 85,000 | 105,866 | 125 | 1,186 | 1,012 | - | 1 | - | 2 | 2,175 |
| NEW ENGLAND..... | 101 | 1,028 | 22,171 | 3 | 58 | 49 | - | - | - | - | 155 |
| Maine..... | 15 | 139 | 1,824 | - | 6 | 7 | - | - | - | - | 3 |
| New Hampshire..... | - | 12 | 300 | - | 7 | 2 | - | - | - | - | - |
| Vermont..... | 2 | 163 | 304 | - | 2 | - | - | - | - | - | 4 |
| Massachusetts..... | 49 | 376 | 12,415 | 3 | 24 | 19 | - | - | - | - | 57 |
| Rhode Island..... | 1 | 48 | 2,450 | - | 4 | 7 | - | - | - | - | 4 |
| Connecticut..... | 34 | 290 | 4,878 | - | 15 | 14 | - | - | - | - | 87 |
| MIDDLE ATLANTIC..... | 958 | 11,074 | 4,043 | 12 | 127 | 142 | - | - | - | - | 155 |
| New York City..... | 570 | 5,631 | 375 | 3 | 23 | 21 | - | - | - | - | 48 |
| New York, Up-State. | 82 | 1,133 | 1,461 | 6 | 30 | 33 | - | - | - | - | 101 |
| New Jersey..... | 93 | 1,202 | 695 | 1 | 39 | 47 | - | - | - | - | - |
| Pennsylvania..... | 213 | 3,108 | 1,512 | 2 | 35 | 41 | - | - | - | - | 6 |
| EAST NORTH CENTRAL... | 3,113 | 33,399 | 18,599 | 16 | 172 | 120 | - | - | - | - | 629 |
| Ohio..... | 376 | 2,355 | 4,099 | 7 | 47 | 30 | - | - | - | - | 65 |
| Indiana..... | 102 | 2,043 | 735 | 4 | 24 | 16 | - | - | - | - | 89 |
| Illinois..... | 496 | 7,282 | 580 | 2 | 35 | 30 | - | - | - | - | 107 |
| Michigan..... | 683 | 5,183 | 9,754 | 2 | 51 | 23 | - | - | - | - | 124 |
| Wisconsin..... | 1,456 | 16,536 | 3,431 | 1 | 15 | 21 | - | - | - | - | 244 |
| WEST NORTH CENTRAL... | 483 | 3,899 | 8,538 | 9 | 63 | 57 | - | 1 | - | - | 73 |
| Minnesota..... | 127 | 1,148 | 226 | 3 | 13 | 13 | - | 1 | - | - | - |
| Iowa..... | 267 | 1,796 | 4,850 | - | 11 | 1 | - | - | - | - | 68 |
| Missouri..... | 55 | 279 | 1,126 | 5 | 25 | 32 | - | - | - | - | 2 |
| North Dakota..... | 27 | 631 | 2,090 | - | 3 | 3 | - | - | - | - | 3 |
| South Dakota..... | 1 | 3 | 51 | 1 | 2 | 2 | - | - | - | - | - |
| Nebraska..... | 6 | 42 | 195 | - | 3 | 2 | - | - | - | - | - |
| Kansas..... | NN | NN | NN | - | 6 | 4 | - | - | - | - | - |
| SOUTH ATLANTIC..... | 858 | 6,527 | 13,419 | 16 | 195 | 204 | - | - | - | - | 328 |
| Delaware..... | 7 | 91 | 238 | 1 | 1 | 3 | - | - | - | - | 2 |
| Maryland..... | 100 | 1,100 | 446 | 1 | 19 | 19 | - | - | - | - | 36 |
| Dist. of Columbia.. | 11 | 282 | 12 | 1 | 3 | 3 | - | - | - | - | - |
| Virginia..... | 54 | 549 | 1,978 | - | 23 | 22 | - | - | - | - | 98 |
| West Virginia..... | 459 | 2,717 | 8,716 | 1 | 8 | 13 | - | - | - | - | 34 |
| North Carolina..... | 12 | 129 | 156 | 3 | 41 | 33 | - | - | - | - | - |
| South Carolina..... | 46 | 324 | 341 | 2 | 27 | 25 | - | - | - | - | 42 |
| Georgia..... | 24 | 150 | 392 | 3 | 32 | 31 | - | - | - | - | - |
| Florida..... | 145 | 1,185 | 1,140 | 4 | 41 | 55 | - | - | - | - | 116 |
| EAST SOUTH CENTRAL... | 1,041 | 9,791 | 6,009 | 8 | 101 | 57 | - | - | - | - | 129 |
| Kentucky..... | 315 | 3,190 | 772 | 1 | 51 | 25 | - | - | - | - | 48 |
| Tennessee..... | 589 | 5,446 | 3,605 | 4 | 27 | 18 | - | - | - | - | 77 |
| Alabama..... | 54 | 734 | 1,215 | 2 | 17 | 10 | - | - | - | - | 4 |
| Mississippi..... | 83 | 421 | 417 | 1 | 6 | 4 | - | - | - | - | - |
| WEST SOUTH CENTRAL... | 1,532 | 8,412 | 14,248 | 28 | 187 | 164 | - | - | - | 1 | 18 |
| Arkansas..... | 201 | 322 | 780 | 2 | 11 | 9 | - | - | - | - | - |
| Louisiana..... | 1 | 53 | 30 | 15 | 69 | 83 | - | - | - | - | - |
| Oklahoma..... | 34 | 165 | 88 | 2 | 7 | 15 | - | - | - | 1 | - |
| Texas..... | 1,296 | 7,872 | 13,350 | 9 | 100 | 57 | - | - | - | - | 18 |
| MOUNTAIN..... | 478 | 4,354 | 8,411 | 3 | 37 | 40 | - | - | - | - | 335 |
| Montana..... | 73 | 688 | 2,316 | 1 | 3 | - | - | - | - | - | 151 |
| Idaho..... | 25 | 510 | 1,267 | - | 1 | 5 | - | - | - | - | 11 |
| Wyoming..... | 5 | 70 | 380 | - | 1 | 2 | - | - | - | - | - |
| Colorado..... | 116 | 492 | 1,419 | 1 | 21 | 9 | - | - | - | - | 35 |
| New Mexico..... | 37 | 184 | 294 | 1 | 5 | 6 | - | - | - | - | - |
| Arizona..... | 216 | 2,283 | 287 | - | 5 | 11 | - | - | - | - | 135 |
| Utah..... | 6 | 120 | 2,377 | - | - | 5 | - | - | - | - | 3 |
| Nevada..... | - | 7 | 71 | - | 1 | 2 | - | - | - | - | - |
| PACIFIC..... | 905 | 6,516 | 10,428 | 30 | 246 | 179 | - | - | - | 1 | 353 |
| Washington..... | 122 | 1,495 | 3,233 | 2 | 13 | 13 | - | - | - | 1 | 105 |
| Oregon..... | 68 | 531 | 1,571 | 1 | 9 | 14 | - | - | - | - | 38 |
| California..... | 706 | 4,422 | 4,555 | 24 | 209 | 147 | - | - | - | - | 203 |
| Alaska..... | 4 | 24 | 88 | 2 | 12 | 3 | - | - | - | - | 2 |
| Hawaii..... | 5 | 44 | 981 | 1 | 3 | 2 | - | - | - | - | 5 |
| Puerto Rico..... | 122 | 956 | 631 | - | 1 | 3 | - | - | - | - | 2 |

## CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
## FOR WEEKS ENDED
## MARCH 26, 1966 AND MARCH 27, 1965 (12th WEEK) - Continued

| AREA | STREPTOCOCCAL SORE THROAT & SCARLET FEVER | TETANUS | | TULAREMIA | | TYPHOID | | TYPHUS FEVER TICK-BORNE (Rky. Mt. Spotted) | | RABIES IN ANIMALS | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1966 | 1966 | Cum. 1966 | 1966 | Cum. 1966 | 1966 | Cum. 1966 | 1966 | Cum. 1966 | 1966 | Cum. 1966 |
| UNITED STATES... | 13,611 | 2 | 24 | 2 | 46 | 5 | 60 | - | 9 | 135 | 956 |
| NEW ENGLAND..... | 1,967 | - | 2 | - | 1 | - | 2 | - | - | 1 | 8 |
| Maine..... | 233 | - | - | - | - | - | - | - | - | - | - |
| New Hampshire..... | 30 | - | - | - | - | - | - | - | - | 1 | 3 |
| Vermont..... | 11 | - | - | - | - | - | - | - | - | - | 5 |
| Massachusetts..... | 506 | - | 2 | - | 1 | - | - | - | - | - | - |
| Rhode Island..... | 131 | - | - | - | - | - | - | - | - | - | - |
| Connecticut..... | 1,056 | - | - | - | - | - | 2 | - | - | - | - |
| MIDDLE ATLANTIC..... | 464 | - | 4 | - | - | 2 | 14 | - | 1 | 10 | 73 |
| New York City..... | 27 | - | 3 | - | - | 1 | 6 | - | - | - | - |
| New York, Up-State. | 306 | - | - | - | - | - | 3 | - | - | 10 | 70 |
| New Jersey..... | NN | - | - | - | - | - | 3 | - | - | - | - |
| Pennsylvania..... | 131 | - | 1 | - | - | 1 | 2 | - | 1 | - | 3 |
| EAST NORTH CENTRAL... | 2,173 | - | - | - | 11 | - | 9 | - | - | 20 | 131 |
| Ohio..... | 300 | - | - | - | 3 | - | 5 | - | - | 13 | 75 |
| Indiana..... | 363 | - | - | - | 2 | - | 1 | - | - | 2 | 23 |
| Illinois..... | 461 | - | - | - | 5 | - | - | - | - | 3 | 12 |
| Michigan..... | 480 | - | - | - | - | - | 1 | - | - | 1 | 11 |
| Wisconsin..... | 569 | - | - | - | 1 | - | 2 | - | - | 1 | 10 |
| WEST NORTH CENTRAL... | 609 | - | 1 | - | 3 | 2 | 7 | - | 1 | 19 | 210 |
| Minnesota..... | 5 | - | - | - | - | - | - | - | - | 4 | 40 |
| Iowa..... | 312 | - | - | - | - | - | 2 | - | - | 5 | 50 |
| Missouri..... | 15 | - | 1 | - | 1 | 2 | 4 | - | - | 7 | 85 |
| North Dakota..... | 134 | - | - | - | - | - | - | - | - | - | 3 |
| South Dakota..... | 12 | - | - | - | - | - | - | - | - | 2 | 21 |
| Nebraska..... | 12 | - | - | - | - | - | - | - | - | 1 | 6 |
| Kansas..... | 119 | - | - | - | 2 | - | 1 | - | 1 | - | 5 |
| SOUTH ATLANTIC..... | 1,410 | - | 6 | - | 6 | - | 10 | - | 6 | 20 | 135 |
| Delaware..... | 58 | - | - | - | - | - | - | - | - | - | - |
| Maryland..... | 232 | - | - | - | - | - | 2 | - | - | - | - |
| Dist. of Columbia.. | - | - | - | - | - | - | - | - | - | - | - |
| Virginia..... | 336 | - | - | - | 2 | - | 5 | - | 2 | 11 | 95 |
| West Virginia..... | 464 | - | - | - | 1 | - | 1 | - | - | 4 | 15 |
| North Carolina..... | 23 | - | - | - | 2 | - | 1 | - | 3 | - | - |
| South Carolina..... | 78 | - | 1 | - | 1 | - | - | - | - | - | - |
| Georgia..... | 13 | - | 2 | - | - | - | - | - | 1 | 2 | 15 |
| Florida..... | 206 | - | 3 | - | - | - | 1 | - | - | 3 | 10 |
| EAST SOUTH CENTRAL... | 2,042 | 1 | 1 | - | 12 | - | 5 | - | - | 17 | 146 |
| Kentucky..... | 131 | - | - | - | 2 | - | 1 | - | - | 2 | 19 |
| Tennessee..... | 1,688 | - | - | - | 6 | - | 3 | - | - | 15 | 124 |
| Alabama..... | 123 | 1 | 1 | - | 4 | - | 1 | - | - | - | 3 |
| Mississippi..... | 100 | - | - | - | - | - | - | - | - | - | - |
| WEST SOUTH CENTRAL... | 1,079 | 1 | 7 | 2 | 11 | 1 | 3 | - | 1 | 40 | 191 |
| Arkansas..... | 1 | - | - | 2 | 9 | - | - | - | 1 | 3 | 24 |
| Louisiana..... | - | - | 4 | - | 1 | 1 | 1 | - | - | 3 | 12 |
| Oklahoma..... | 29 | - | - | - | - | - | 1 | - | - | 14 | 30 |
| Texas..... | 1,049 | 1 | 3 | - | 1 | - | 1 | - | - | 20 | 125 |
| MOUNTAIN..... | 2,161 | - | - | - | 1 | - | 6 | - | - | 2 | 12 |
| Montana..... | 84 | - | - | - | - | - | - | - | - | - | 1 |
| Idaho..... | 196 | - | - | - | - | - | - | - | - | - | - |
| Wyoming..... | 50 | - | - | - | - | - | - | - | - | - | - |
| Colorado..... | 1,301 | - | - | - | - | - | 2 | - | - | - | 1 |
| New Mexico..... | 231 | - | - | - | - | - | - | - | - | - | 3 |
| Arizona..... | 113 | - | - | - | - | - | 1 | - | - | 2 | 7 |
| Utah..... | 186 | - | - | - | 1 | - | 3 | - | - | - | - |
| Nevada..... | - | - | - | - | - | - | - | - | - | - | - |
| PACIFIC..... | 1,706 | - | 3 | - | 1 | - | 4 | - | - | 6 | 50 |
| Washington..... | 672 | - | - | - | - | - | - | - | - | - | - |
| Oregon..... | 19 | - | - | - | - | - | 1 | - | - | - | - |
| California..... | 923 | - | 3 | - | 1 | - | 3 | - | - | 6 | 50 |
| Alaska..... | 18 | - | - | - | - | - | - | - | - | - | - |
| Hawaii..... | 74 | - | - | - | - | - | - | - | - | - | - |
| Puerto Rico..... | 11 | 6 | 9 | - | - | - | 3 | - | - | - | 1 |

Week No. 12

## DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDED MARCH 26, 1966

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

| Area | All Causes | | Pneumonia and Influenza All Ages | Under 1 year All Causes |
|---|---|---|---|---|
| | All Ages | 65 years and over | | |
| NEW ENGLAND: | 738 | 433 | 51 | 51 |
| Boston, Mass. | 230 | 129 | 11 | 11 |
| Bridgeport, Conn. | 56 | 33 | 5 | 1 |
| Cambridge, Mass. | 33 | 19 | - | 4 |
| Fall River, Mass. | 23 | 10 | - | 3 |
| Hartford, Conn. | 57 | 29 | 7 | 5 |
| Lowell, Mass. | 29 | 14 | 2 | 2 |
| Lynn, Mass. | 28 | 19 | 3 | - |
| New Bedford, Mass. | 24 | 18 | 1 | - |
| New Haven, Conn. | 53 | 19 | 3 | 15 |
| Providence, R. I. | 72 | 45 | 3 | 4 |
| Somerville, Mass. | 7 | 6 | 1 | - |
| Springfield, Mass. | 45 | 34 | 7 | 1 |
| Waterbury, Conn. | 26 | 16 | - | 4 |
| Worcester, Mass. | 55 | 42 | 8 | 1 |
| MIDDLE ATLANTIC: | 3,635 | 2,154 | 180 | 181 |
| Albany, N. Y. | 47 | 29 | - | 2 |
| Allentown, Pa. | 38 | 22 | 2 | 1 |
| Buffalo, N. Y. | 162 | 103 | 6 | 10 |
| Camden, N. J. | 50 | 26 | 1 | 7 |
| Elizabeth, N. J. | 38 | 22 | 6 | 3 |
| Erie, Pa. | 37 | 28 | 2 | 1 |
| Jersey City, N. J. | 68 | 46 | 5 | 3 |
| Newark, N. J. | 86 | 40 | 3 | 3 |
| New York City, N. Y. | 1,799 | 1,059 | 90 | 85 |
| Paterson, N. J. | 42 | 25 | 3 | 1 |
| Philadelphia, Pa. | 686 | 397 | 21 | 37 |
| Pittsburgh, Pa. | 216 | 121 | 8 | 11 |
| Reading, Pa. | 44 | 30 | 4 | 1 |
| Rochester, N. Y. | 97 | 66 | 9 | 6 |
| Schenectady, N. Y. | 23 | 13 | 3 | 1 |
| Scranton, Pa. | 49 | 25 | 3 | 2 |
| Syracuse, N. Y. | 51 | 36 | 4 | 2 |
| Trenton, N. J. | 46 | 26 | 4 | 2 |
| Utica, N. Y. | 24 | 18 | 4 | 2 |
| Yonkers, N. Y. | 32 | 22 | 2 | 1 |
| EAST NORTH CENTRAL: | 2,623 | 1,479 | 114 | 131 |
| Akron, Ohio | 64 | 45 | - | 2 |
| Canton, Ohio | 46 | 32 | 9 | 1 |
| Chicago, Ill. | 794 | 437 | 32 | 38 |
| Cincinnati, Ohio | 138 | 80 | 4 | 7 |
| Cleveland, Ohio | 229 | 127 | 5 | 8 |
| Columbus, Ohio | 111 | 57 | 1 | 6 |
| Dayton, Ohio | 80 | 57 | 12 | - |
| Detroit, Mich. | 364 | 186 | 18 | 27 |
| Evansville, Ind. | 33 | 28 | - | 1 |
| Flint, Mich. | 43 | 25 | 4 | 4 |
| Fort Wayne, Ind. | 46 | 33 | 1 | 1 |
| Gary, Ind. | 42 | 18 | 5 | 3 |
| Grand Rapids, Mich. | 45 | 27 | 4 | 3 |
| Indianapolis, Ind. | 167 | 93 | 5 | 13 |
| Madison, Wis. | 39 | 20 | - | 2 |
| Milwaukee, Wis. | 121 | 65 | 5 | 8 |
| Peoria, Ill. | 32 | 13 | 1 | 3 |
| Rockford, Ill. | 31 | 12 | 3 | 2 |
| South Bend, Ind. | 32 | 20 | - | - |
| Toledo, Ohio | 94 | 60 | 3 | 1 |
| Youngstown, Ohio | 72 | 44 | 2 | 1 |
| WEST NORTH CENTRAL: | 852 | 543 | 28 | 36 |
| Des Moines, Iowa | 46 | 28 | 2 | 2 |
| Duluth, Minn. | 28 | 21 | 1 | 2 |
| Kansas City, Kans* | 40 | 21 | 3 | 3 |
| Kansas City, Mo. | 142 | 85 | 1 | 6 |
| Lincoln, Nebr. | 45 | 32 | - | - |
| Minneapolis, Minn. | 98 | 58 | 2 | 5 |
| Omaha, Nebr. | 60 | 41 | 2 | 3 |
| St. Louis, Mo. | 283 | 184 | 11 | 10 |
| St. Paul, Minn. | 61 | 41 | 3 | 2 |
| Wichita, Kans. | 49 | 32 | 3 | 3 |

| Area | All Causes | | Pneumonia and Influenza All Ages | Under 1 year All Causes |
|---|---|---|---|---|
| | All Ages | 65 years and over | | |
| SOUTH ATLANTIC: | 1,181 | 634 | 61 | 71 |
| Atlanta, Ga. | 159 | 75 | 7 | 12 |
| Baltimore, Md. | 234 | 115 | 14 | 17 |
| Charlotte, N. C. | 47 | 21 | 2 | 5 |
| Jacksonville, Fla. | 62 | 34 | 2 | 3 |
| Miami, Fla. | 89 | 58 | - | 4 |
| Norfolk, Va. | 56 | 26 | 6 | 3 |
| Richmond, Va. | 96 | 40 | 2 | 5 |
| Savannah, Ga. | 28 | 15 | 3 | 1 |
| St. Petersburg, Fla. | 81 | 68 | 3 | 1 |
| Tampa, Fla. | 73 | 45 | 9 | 5 |
| Washington, D. C. | 204 | 107 | 10 | 14 |
| Wilmington, Del. | 52 | 30 | 3 | 1 |
| EAST SOUTH CENTRAL: | 646 | 347 | 32 | 31 |
| Birmingham, Ala. | 107 | 56 | 4 | 2 |
| Chattanooga, Tenn. | 46 | 19 | 4 | 3 |
| Knoxville, Tenn. | 56 | 37 | 4 | 3 |
| Louisville, Ky. | 114 | 70 | 12 | 6 |
| Memphis, Tenn. | 164 | 86 | 1 | 8 |
| Mobile, Ala. | 45 | 19 | - | 2 |
| Montgomery, Ala. | 27 | 18 | 3 | 1 |
| Nashville, Tenn. | 87 | 42 | 4 | 6 |
| WEST SOUTH CENTRAL: | 1,134 | 580 | 55 | 84 |
| Austin, Tex. | 43 | 24 | 8 | 4 |
| Baton Rouge, La. | 32 | 20 | - | 1 |
| Corpus Christi, Tex. | 25 | 12 | 1 | 3 |
| Dallas, Tex. | 158 | 80 | 11 | 10 |
| El Paso, Tex* | 37 | 18 | 3 | 5 |
| Fort Worth, Tex. | 74 | 35 | 4 | 4 |
| Houston, Tex. | 219 | 111 | 4 | 17 |
| Little Rock, Ark. | 48 | 29 | 2 | 3 |
| New Orleans, La. | 204 | 99 | 7 | 15 |
| Oklahoma City, Okla. | 86 | 51 | 2 | 4 |
| San Antonio, Tex. | 97 | 47 | 2 | 10 |
| Shreveport, La. | 55 | 25 | 4 | 3 |
| Tulsa, Okla. | 56 | 29 | 7 | 5 |
| MOUNTAIN: | 568 | 348 | 47 | 30 |
| Albuquerque, N. Mex. | 43 | 23 | 10 | 3 |
| Colorado Springs, Colo. | 32 | 19 | 2 | 1 |
| Denver, Colo. | 143 | 86 | 6 | 6 |
| Ogden, Utah | 35 | 21 | - | 3 |
| Phoenix, Ariz. | 181 | 110 | 19 | 9 |
| Pueblo, Colo. | 27 | 16 | 1 | 3 |
| Salt Lake City, Utah | 45 | 32 | 5 | 3 |
| Tucson, Ariz. | 62 | 41 | 4 | 2 |
| PACIFIC: | 2,056 | 1,363 | 141 | 62 |
| Berkeley, Calif. | 20 | 14 | 2 | - |
| Fresno, Calif. | 47 | 32 | 3 | 2 |
| Glendale, Calif. | 56 | 41 | 2 | 1 |
| Honolulu, Hawaii | 52 | 19 | 3 | 2 |
| Long Beach, Calif. | 71 | 47 | 2 | 2 |
| Los Angeles, Calif. | 781 | 556 | 71 | 22 |
| Oakland, Calif. | 115 | 76 | 9 | 7 |
| Pasadena, Calif. | 47 | 34 | 3 | 3 |
| Portland, Oreg. | 107 | 71 | - | 1 |
| Sacramento, Calif. | 74 | 40 | 2 | - |
| San Diego, Calif. | 121 | 78 | 8 | - |
| San Francisco, Calif. | 214 | 115 | 7 | 10 |
| San Jose, Calif* | 45 | 31 | 7 | 2 |
| Seattle, Wash. | 206 | 147 | 15 | 5 |
| Spokane, Wash. | 58 | 37 | 4 | 3 |
| Tacoma, Wash. | 42 | 25 | 3 | 2 |
| Total | 13,433 | 7,881 | 709 | 677 |

*Estimate - based on average percent of divisional total.

Cumulative Totals
including reported corrections for previous weeks

| | |
|---|---|
| All Causes, All Ages | 160,422 |
| All Causes, Age 65 and over | 93,313 |
| Pneumonia and Influenza, All Ages | 7,971 |
| All Causes, Under 1 Year of Age | 8,215 |

## HEAT-RESISTANT *CLOSTRIDIUM PERFRINGENS* OUTBREAK – Wisconsin

*(Continued from page 103)*

**Editorial Note:**

The clinical and epidemiological pattern of *Clostridium perfringens* food poisoning is so characteristic as to be almost diagnostic. After an incubation period of 8 to 24 hours (usually 10 to 14 hours), the patient develops abdominal pain with nausea and diarrhea. Vomiting and fever are seldom present. The illness is of short duration and the patient is usually well within 24 hours.

Illness follows the ingestion of a food heavily contaminated with the causative organism. The food item is usually a meat dish or gravy which has been prepared on one day and served the following day after a short warming period. Creamed chicken, "turkey-a-la-king", and boiled or braised meats have been incriminated in outbreaks. The contaminated foods appear edible, rarely showing evidence of spoilage.[1] Occasionally when milk sauces of vegetables are involved, "stormy fermentation" has been observed.

The causal organism is *Cl. perfringens,* type A. Food poisoning strains are heat-resistant by virtue of spore formation, a property that allows the organism to survive cooking. The spores are ubiquitous on meats, and when conditions are favorable they germinate and prolific growth results within a few hours.

In outbreaks, the same serologic type of *Cl. perfringens* may often be isolated from the incriminated food and from a high proportion of stool specimens. Isolation of the organism is best accomplished after boiling the specimen for one hour. This procedure should not be used, however, in examining suspect foods, since only vegetative cells may be present.[2]

Prevention of clostridial food poisoning requires that meat dishes be eaten soon after thorough cooking. Where this is impractical, as for example in large institutions, cooked foods must be refrigerated promptly and reheated adequately immediately before serving.

**References:**

[1]Hobbs, B.C., Smith, M.E., Oakley, C.L., Warrack, G.H., and Cruickshank, J.F.: *Clostridium welchii* food poisoning. J Hyg *51*:75, 1953.

[2]Hobbs, B.C.: *Clostridium welchii* as a food poisoning organism. J Appl Bact *28*(1):74-82, 1965.

THE MORBIDITY AND MORTALITY WEEKLY REPORT, WITH A CIRCULATION OF 15,600, IS PUBLISHED AT THE COMMUNICABLE DISEASE CENTER, ATLANTA, GEORGIA.

CHIEF, COMMUNICABLE DISEASE CENTER — DAVID J. SENCER, M.D.
CHIEF, EPIDEMIOLOGY BRANCH — A. D. LANGMUIR, M.D.
ACTING CHIEF, STATISTICS SECTION — IDA L. SHERMAN, M.S.

EDITOR: MMWR — D. J. M. MacKENZIE, M.B., F.R.C.P.E.

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

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

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