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# Perspectives in Disease Prevention and Health Promotion 

## Premature Mortality due to Sudden Infant Death Syndrome

Sudden infant death syndrome (SIDS) ranked as the seventh leading cause of years of potential life lost before age 65 (YPLL) in 1984. It accounted for $314.000(2.4 \%)$ YPLL of the total YPLL in that year (see Table V, page 179). In 1984, SIDS accounted for $12.4 \%$ of all YPLL from deaths among infants.

Data presented below are from the National Center for Health Statistics (NCHS) Mortality Detail tapes. The latest year for which these tapes are available is 1982. Deaths were attributed to SIDS if the underlying cause of death was classified as category 798.0 in The International Classification of Diseases, 9th Revision (ICD-9), and age at death was under 1 year.

In 1979, 340,496 YPLL were attributed to SIDS; in 1980, 355,395; in 1981, 341,528; and in 1982, 340,431. The average YPLL due to SIDS for this 4 -year period was 344,462 . During this same period, the race- and sex-specific YPLL was 144,319 for white males; 89,752 for white females; 55,873 for black males; 44,424 for black females; 5,644 for other males; and 4,451 for other females. The male:female YPLL ratio for white infants was 1.6:1, compared with 1.3:1 for black and other infants..

YPLL is directly dependent on the number of births in any given group. The average annual YPLL per 1,000 live births is 97.2 for white males; 63.9 for white females; 187.7 for black males; 153.6 for black females; 86.6 for other males; and 72.7 for other females.
Reported by Perinatal Environmental Epidemiology Br, Div of Birth Defects and Developmental Disabilities, Center for Environmental Health, CDC.
Editorial Note: SIDS is defined as the unexpected death of a previously healthy infant between 2 weeks and 1 year of age, unexplained after a complete autopsy examination (1). SIDS usually occurs during the first 6 months of life. The concept and definition of a sudden infant death syndrome were formalized in 1969, and SIDS was not specified as a cause of death until ICD-9 came into use in 1979. Therefore, comparison of YPLL due to SIDS cannot be carried out using vital records for years before 1979.

SIDS is usually a diagnosis of exclusion, theoretically dependent on the performance of a post-mortem examination. Since 1979, the autopsy rate for SIDS in the NCHS Mortality Detail tapes has exceeded $80 \%$. This compares with an autopsy rate of approximately $40 \%$ for non-SIDS infant deaths. The higher autopsy rate for SIDS may result from legal requirements in some areas. It is important to note that the death certificate may be completed before the results of the autopsy are available.

## SIDS - Continued

From 1979 to 1982, the YPLL due to SIDS has ranged from 340,000 to 355,000, and the rate of death due to SIDS $/ 1,000$ live births ranged from 1.4 to 1.5 . This compares with worldwide rates of $0.6 / 1,000$ to $3.0 / 1,000$. In 1980, NCHS recorded the highest U.S. rate of SIDS deaths. This followed the National Institute of Child Health and Human Development SIDS Cooperative Epidemiological Study, which finished interviewing parents in 1980. This may represent increased case finding stimulated by this study.

The etiology of SIDS is unclear, although there are several established risk factors (1). Current theories implicate an abnormality of the autonomic regulation of respiratory and/or cardiovascular function. Whether this is due to genetic or environmental factors, or is prenatal or postnatal in origin, is unknown. Risk factors include sociodemographic and pregnancy-related variables. Siblings of SIDS victims have a tenfold increased risk of SIDS. Blacks and Native Americans have a rate of SIDS two to three times that of whites (2). Preterm and lowbirthweight infants, as well as products of multiple gestations, are also at increased risk of SIDS. In many studies, SIDS appears to be seasonal, with increased rates in the winter months (November-March), raising the speculation that respiratory infections may potentiate whatever underlying predisposition may exist.

Prevention of SIDS is hindered by lack of knowledge of the etiology and lack of understanding of which infants are at particularly high risk. Some survivors of episodes of infant apnea ("near misses") and some siblings of SIDS victims are currently being treated with home apnea monitoring and various pharmacologic therapies. The efficacy of these interventions has not been formally evaluated in a randomized clinical trial. In addition, the number of deaths that are potentially preventable using these interventions represents only a small portion of total SIDS deaths. Laboratory research on SIDS is needed to identify high-risk infants and to develop effective prevention measures.
References

1. Peterson DR. Evolution of the epidemiology of sudden infant death syndrome. Epidemiologic Rev 1980;2:97-112.
2. Adams MM. The descriptive epidemiology of sudden infant deaths among natives and whites in Alaska. Am J Epidemiol 1985;122:637-43.

Recommendations of the Immunization
Practices Advisory Committee (ACIP)

## Update: Prevention of Haemophilus influenzae Type b Disease

Haemophilus influenzae type $b$ (Hib) is the most common cause of bacterial meningitis in the United States. It also causes other serious invasive illnesses, including epiglottitis, sepsis, cellulitis, septic arthritis, osteomyelitis, pericarditis, and pneumonia. By 5 years of age, one of every 200 children in the United States will have had a systemic infection due to Hib. A polysaccharide vaccine against systemic Hib disease was licensed in the United States in April 1985. Information on the vaccine and Immunization Practices Advisory Committee (ACIP) guidelines for its use should be consulted (1). The purpose of this statement is to update these recommendations and to provide guidelines for the prevention of secondary cases of Hib disease.

Haemophilus influenzae - Continued
CHEMOPROPHYLAXIS
Risk of Secondary Disease. Secondary disease, defined as illness within 1-60 days following contact with a child who has Hib disease, accounts for less than $5 \%$ of all invasive Hib disease. However, six studies of household contacts of Hib patients found a secondary attack rate of $0.3 \%$ in the month following disease onset in the index patient, which is about 600-fold higher than the age-adjusted risk in the general population (2-7). Among these studies, the attack rate among household contacts varied markedly with age: $4 \%$ for children under 2 years of age; $2 \%$ for children 2-3 years of age; $0.1 \%$ for children 4-5 years of age; and $0 \%$ for those over 6 years of age (2-7). Among these household contacts, 64\% of secondary cases occurred within the first week (excluding the first 24 hours) of disease onset in the index patient; $20 \%$, during the second week; and $16 \%$, during the third and fourth weeks.

The risk of secondary disease among children who were exposed to a primary case in daycare and who did not receive rifampin prophylaxis has been examined in four studies. A national collaborative study that calculated secondary attack rates for household and day-care classroom contacts found that one ( $1 \%$ ) of 91 children under 4 years of age in day-care acquired disease in the month following the index patient, compared with three ( $2 \%$ ) of 125 household contacts under 4 years of age (2). A multicenter study in Seattle-King County, Washington; Oklahoma; and Atlanta, Georgia, found that the risk of secondary Hib disease among day-care classroom contacts was age-dependent; $10(3 \%)$ cases occurred among the 376 contacts $0-23$ months old, whereas none of the 379 classroom contacts older than 23 months of age acquired secondary disease (8). No cases occurred among children who attended day-care for fewer than 25 hours per week. In this study, classroom contacts were defined as children who spent more than half their day-care time in the same classroom as a child with primary Hib disease in the week before disease onset of the primary case. The overall risk for classroom contacts was $0.7 \%(10 / 1,388), 20$ times higher than the risk for other children in the center ( $0.04 \%$ [ $2 / 5,639]$ ). Thirty-three percent of the secondary cases occurred within 3 weeks of onset of the index case; $13 \%$, between days 21 and 40 ; and $53 \%$, between days 41 and 60 . Meningitis and other systemic Hib infections were equally likely to result in secondary cases.

Two prospective studies have examined the risk of subsequent Hib disease in day-care facilities. In Dallas County, Texas, follow-up for 60 days of classroom contacts revealed no cases of secondary disease in 361 children under 2 years old, and a secondary attack rate of $0.5 \%(1 / 213)$ in those $2-3$ years of age (9). Other cases of Hib disease occurred but could not be classified as secondary cases because these children enrolled in the day-care facility after the index patient became ill. Since it is known that rates of asymptomatic transmission are elevated in day-care classrooms with children with Hib disease, some of these cases may have been associated with the index case.

A similar surveillance study was conducted in Minnesota. No cases of secondary Hib disease were found among 370 day-care contacts under 2 years of age; 263 (71\%) were classroom contacts. These were defined as children who spent more than 8 hours in the same classroom as the primary case in the week before the patient with primary disease became ill. Similarly, secondary cases were not seen in 716 children 2-3 years of age, of whom 421 (59\%) were classroom contacts (10).

The disparities in the risk of day-care-associated secondary Hib disease in Minnesota; Dallas County, Texas; and the two multicenter studies remain unexplained. Possible reasons include differences among the several study areas in day-care characteristics, such as

## Haemophilus influenzae - Continued

classroom size and age distribution of children, which might affect intensity and duration of contact. There may be further unrecognized differences in epidemiologic factors or invasiveness of prevalent Hib strains.

Efficacy of Rifampin Prophylaxis. Most children at risk of secondary disease are too young to respond to the Hib polysaccharide vaccine. Therefore, the main preventive measure presently available is rifampin administration. Currently available data from several studies indicate rifampin in a dosage of $20 \mathrm{mg} / \mathrm{kg}$ per dose once daily (maximum daily dose 600 mg ) for 4 days eradicated Hib carriage in $95 \%$ or more of contacts of primary cases, including children in day-care facilities (11-13). In a randomized placebo controlled trial, rifampin in the currently recommended dosage administered to all household and day-care classroom contacts, including adults, significantly decreased secondary Hib disease among household and day-care contacts (none of 303 rifampin-treated contacts under 4 years of age had secondary disease, compared with four of 216 placebo-treated contacts under 4 years of age [ $p=$ 0.03 ]) (2); the number of cases was insufficient to evaluate efficacy in the household or daycare setting alone. However, the collaborative study of day-care centers cited above found that among classroom contacts of Hib patients, children aged 0-23 months who received rifampin prophylaxis were significantly less likely to develop secondary disease than children who did not take rifampin (none of 232, compared with 10 [ $3 \%$ ] of 376 [ $p<0.02$ ]) (8). Secondary disease did not develop in day-care classes in which over $75 \%$ of the class received rifampin. However, rifampin prophylaxis is unlikely to be $100 \%$ effective, and a daycare center in which rifampin prophylaxis failed to prevent subsequent disease has been reported (14).

Implementation of Chemoprophylaxis. Rifampin is available in $150-\mathrm{mg}$ and $300-\mathrm{mg}$ capsules. For those unable to swallow capsules, rifampin may be mixed with several teaspoons of applesauce immediately before administration, resulting in acceptable serum and salivary levels (15). Although there has been more experience with the applesauce mixture, a suspension of rifampin may also be freshly prepared in United States Pharmacopeia syrup; the preparation should be vigorously shaken before use. Side effects of rifampin in the recommended dose include nausea, vomiting, diarrhea, headache, or dizziness, which occurred among $20 \%$ of those taking rifampin and $11 \%$ of placebo recipients. No serious reactions occurred (2). Those taking rifampin (including parents and day-care staff) should be informed that orange discoloration of urine, discoloration of soft contact lenses, and decreased effectiveness of oral contraceptives can occur.

In implementing chemoprophylaxis in day-care centers, it is important to ensure that all classroom contacts receive rifampin during the same period. Some local and state health departments have facilitated the timely implementation of chemoprophylaxis by coordinating rifampin administration following consultation with private physicians or by providing information to parents of day-care contacts.

## VACCINE

Effect of Haemophilus b Polysaccharide Vaccine on Nasopharyngeal Carriage. Limited data are available on the effect of the Haemophilus b polysaccharide vaccine on nasopharyngeal carriage of the organism. By analogy to carriage studies after serogroups $A$ and $C$ meningococcal polysaccharide vaccination, some reduction in acquisition of carriage may occur shortly after immunization, but no long-term effect has been noted (16-18).

Use of Haemophilus b Polysaccharide Vaccine in Children with Preceding Hib Disease. Studies have shown that the development of anticapsular antibodies following invasive Hib dis-

Haemophilus influenzae - Continued
ease is largely age-dependent. A study of acute and convalescent sera from 125 patients with meningitis, septicemia, or epiglottitis due to Hib determined that, among those who acquired disease when they were younger than 18 months, 41 ( $85 \%$ ) of 48 failed to develop an adequate antibody response, in contrast to 18 ( $23 \%$ ) of 77 of those older than 18 months (19). Cases have been reported in which children who do not mount an antibody response after an invasive episode of Hib have developed a second systemic infection with the organism (20).

## RECOMMENDATIONS

The primary strategy for preventing Hib disease is immunization. Children should be vaccinated at 24 months of age. Those at high risk for Hib disease, including children attending day-care, may be given the vaccine at 18 months of age. ACIP guidelines for use of the vaccine should be consulted (1). This update addresses chemoprophylaxis (recommendations 1-7) and additional vaccine issues (recommendations 8 and 9).

Chemoprophylaxis. Although unexplained disparities in available data prevent a precise estimate of the magnitude of risk among day-care contacts, it is likely that the increased risk of disease observed among young household contacts is also present among day-care classroom contacts under 2 years of age. Since rifampin prophylaxis is effective in preventing subsequent cases in this high-risk group, the ACIP recommends that:

1. Contacts of all ages who develop symptoms suggestive of invasive Hib disease, such as fever or headache, be evaluated promptly by a physician.
2. In any household in which a case of invasive Hib disease has occurred and in which another child under 4 years of age resides, all members of the household, including adults, should receive rifampin according to the following regimen: rifampin in a dosage of $20 \mathrm{mg} / \mathrm{kg}$ per dose once daily (maximal daily dose 600 mg ) for 4 days; the dose for neonates (under 1 month of age) is $10 \mathrm{mg} / \mathrm{kg}$ once daily for 4 days.
3. In day-care classrooms in which a case of Hib disease has occurred and in which another child under 2 years of age has been exposed, all parents should be notified (preferably in writing) regarding the occurrence of the case and the possibility of increased risk to their children. They should be informed about the symptoms and the need for prompt medical evaluation if symptoms occur. They should also be notified of the availability of rifampin prophylaxis. Although the data on which to base recommendations are not optimal, and some authorities disagree, the consensus of the ACIP is as follows: In a day-care classroom in which a case of systemic Hib disease has occurred, and in which one or more children under 2 years old have been exposed, strong consideration should be given to administering rifampin prophylaxis to all children and staff in the classroom, regardless of age.
4. Rifampin should not be used in pregnant women, as its effect on the fetus has not been established, and it is teratogenic in laboratory animals.
5. Chemoprophylaxis should be instituted as rapidly as possible. If more than 14 days have passed since the last contact with the index patient, the benefit of chemoprophylaxis is likely to be decreased.
6. All children convalescing from systemic Hib disease who are anticipated to resume close contact with other young children, at home or in day-care, should receive rifampin immediately after completing treatment for their illness. Therapy for systemic disease does not reliably eradicate respiratory carriage of Hib, and some physicians may wish to give rifampin to all index patients.

## Haemophilus influenzae - Continued

7. In day-care classrooms in which children are to receive chemoprophylaxis, children who have received the Haemophilus b polysaccharide vaccine should also receive rifampin. Although these children are felt to be at decreased risk for disease, the vaccine probably does not affect carriage of the organism, which they may pass on to susceptible classmates.
8. Children who have had invasive Hib disease when they were under 24 months of age should still receive the vaccine according to previous recommendations, since most children under 24 months of age fail to mount an immune response to the clinical disease.
9. Satisfactory response to the vaccine is not consistent among children 18-23 months of age, and most authorities believe that these children should be revaccinated. AIthough data on the precise timing of this second dose are not currently available, it would be reasonable to reimmunize 2-12 months after the initial dose but not before 24 months of age. Previous immunization does not change the immune response or adverse reaction to a subsequent dose of the vaccine (21).
(Continued on page 179)

TABLE I. Summary-cases specified notifiable diseases, United States

| Disease | 11 th Week Ending |  |  | Cumulative, 11 th Week Ending |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Mar. } 15 \\ 1986 \\ \hline \end{gathered}$ | $\begin{gathered} \text { Mar. } 16, \\ 1985 \end{gathered}$ | $\begin{gathered} \text { Median } \\ 1981-1985 \end{gathered}$ | $\begin{gathered} \hline \text { Mar. } 15 \\ 1986 \\ \hline \end{gathered}$ | $\begin{gathered} \text { Mar. } 16, \\ 1985 \end{gathered}$ | $\begin{gathered} \text { Median } \\ 1981-1985 \end{gathered}$ |
| Acquired Immunodeficiency Syndrome (AIDS) | 327 | 56 | N | 2,455 | 1.138 | N |
| Aseptic meningitis | 86 | 91 | 77 | 894 | 749 | 874 |
| Encephalitis: Primary (arthropod-bome \& unspec.) | 23 | 24 | 22 | 175 | 184 | 178 |
| Post-infectious | 2 | 3 | 2 | 10 | 26 | 16 |
| Gonorrhea: Civilian | 15,360 | 15,154 | 16,906 | 163,747 | 163,077 | 192,513 |
| Military | 350 | 335 | 342 | 3.268 | 4,032 | 5,248 |
| Hepatitis: Type A | 441 | 440 | 470 | 4,761 | 4,382 | 4.886 |
| Type B | 498 | 505 | 490 | 4,922 | 5,026 | 4,750 |
| Non A, Non B | 73 | 95 | N | 629 | 865 | N |
| Unspecified | 108 | 173 | 173 | 1,134 | 1.042 | 1,495 |
| Legionellosis | 7 | 12 | N | 106 | 142 | N |
| Leprosy | 11 | 2 | 3 | 57 | 88 | 47 |
| Malaria | 12 | 13 | 13 | 137 | 140 | 140 |
| Measles: Total ${ }^{\text {P }}$ | 217 | 43 | 68 | 733 | 282 | 289 |
| Indigenous Imported | 214 3 | 34 9 | N | 701 32 | 221 61 | N N |
| Meningococcal infections: Total | 67 | 81 | 81 | 688 | 683 | 726 |
| Civilian | 67 | 81 | 81 | 687 | 682 | 726 |
| Mumps Military | 35 | 98 | 112 | 550 | 780 | 921 |
| Pertussis | 30 | 38 | 31 | 420 | 297 | 271 |
| Rubella (German measles) | 11 | 19 | 41 | 92 | 70 | 224 |
| Syphilis (Primary \& Secondary): Civilian | 461 | 379 | 586 | 4,998 | 5.049 | 6,464 |
| Military | 6 | 5 | 5 | 44 | 34 | 84 |
| Toxic Shock syndrome | 7 | 5 | N | 57 | 86 | ${ }^{\mathrm{N}}$ |
| Tuberculosis | 451 | 410 | 434 | 3.839 | 3,790 | 4,351 |
| Tularemia | 2 | 1 | - | 15 | 22 | 18 |
| Typhoid fever | 5 | 1 | 5 | 46 | 44 | 72 |
| Typhus fever, tick-borne (RMSF) | - | 1 | 1 | 8 | 6 | 10 |
| Rabies, animal | 81 | 88 | 112 | 867 | 837 | 975 |

TABLE II. Notifiable diseases of low frequency, United States

|  | Cum 1986 |  | Cum 1986 |
| :---: | :---: | :---: | :---: |
| Anthrax | 3 | Leptospirosis | 10 |
| Botulism: Foodborne | 3 | Plague | 10 |
| Infant (Calif. 1) | 12 | Poliomyelitis, Paralytic | - |
| Other | - | Psittacosis (Colo. 1, Hawaii 1) | 12 |
| Brucellosis (Calif. 2) | 11 | Rabies, human | 12 |
| Cholera | - | Tetanus (Ga. 1) | 7 |
| Congenital rubella syndrome | 1 | Trichinosis | 7 |
| Congenital syphilis, ages < 1 year Diphtheria | - | Typhus fever, flea-borne (endemic, murine) | 1 |

*Three of the 217 reported cases for this week were imported from a foreign country or can be directly traceable to a known internationally imported case within two generations.

TABLE III. Cases of specified notifiable diseases, United States, weeks ending
March 15, 1986 and March 16, 1985 (11th Week)

| Reporting Area | AIDS | Aseptic Meningitis | Encephalitis |  | Gonorrhea (Civilian) |  | Hepatitis (Viral), by type |  |  |  | Legionellosis | Leprosy |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Primary | Post-infectious |  |  | A | B | NA, NB | Unspecified |  |  |
|  | $\begin{aligned} & \text { Cum } \\ & 1986 \end{aligned}$ | 1986 | $\begin{aligned} & \text { Cum } \\ & 1986 \end{aligned}$ | $\begin{aligned} & \text { Cum. } \\ & 1986 \end{aligned}$ | $\begin{aligned} & \text { Cum. } \\ & 1986 \end{aligned}$ | $\begin{aligned} & \text { Cum. } \\ & 1985 \end{aligned}$ | 1986 | 1986 | 1986 | 1986 | 1986 | $\begin{aligned} & \text { Cum. } \\ & 1986 \end{aligned}$ |
| UNITED STATES | 2,455 | 86 | 175 | 10 | 163,747 | 163.077 | 441 | 498 | 73 | 108 | 7 | 57 |
| NEW ENGLAND | 112 | 5 | 7 | - | 3,815 | 5.231 | 14 | 45 | 5 | 6 | 1 | 1 |
| Maine | 4 | 1 | - | - | 184 | 215 | 1 | 5 | - | - | 1 | - |
| N.H. | 3 | 1 | 2 | - | 113 | 119 | 4 | 2 | 1 | - | - | - |
| Vt | 2 | 1 | 2 | - | 62 | 48 | 3 | 1 | - | 5 | - | - |
| Mass. | 62 | 1 | 2 | - | 1.583 | 1,880 | 2 | 24 | 2 | 5 | - | 1 |
| R.I. | 9 | 1 | - | - | 337 | 406 | - | 4 | 1 | 1 | - | - |
| Conn. | 32 | 1 | 1 | - | 1.536 | 2.563 | 4 | 9 | 1 | - | - | - |
| MID ATLANTIC | 885 | 18 | 32 | - | 27.731 | 21,929 | 21 | 59 | 7 | 25 | - | 5 |
| Upstate N.Y. | 93 | 10 | 12 | - | 3.378 | 3.220 | 11 | 43 | 4 | 1 | - | 5 |
| N.Y. City | 571 | 2 | 7 | - | 15,907 | 9.194 | 1 | 1 | 1 | 21 | - | 5 |
| N.J. | 153 | 5 | 2 | - | 3.246 | 4.682 | 9 | 15 | 2 | 3 | - | - |
| Pa . | 68 | 1 | 11 | - | 5.200 | 4.833 | - | - | - | - | - | - |
| EN CENTRAL | 121 | 10 | 31 | 2 | 21.689 | 24,054 | 16 | 21 | 6 | 2 | - | 3 |
| Ohio | 30 | 2 | 10 | 2 | 6.169 | 6.050 | 6 | 7 | - | 1 | - | - |
| Ind. | 16 | 4 | 2 | - | 3.475 | 2.211 | 1 | 4 | 1 | - | - | $\bar{\square}$ |
| III. | 42 | 2 | 3 | - | 3,009 | 7.364 | 8 | 4 | 1 | - | - | 2 |
| Mich. | 28 | 2 | 15 | - | 7.471 | 6.817 | 1 | 6 | 4 | 1 | - | 1 |
| Wis. | 5 | - | 1 | - | 1.565 | 1.612 | - | - | - | - | - | - |
| W.N. CENTRAL | 53 | 4 | 3 | 1 | 7.680 | 8.540 | 8 | 9 | - | - | 3 | 1 |
| Minn. | 26 | 1 | 1 | - | 1.074 | 1.326 | 2 | 3 | - | - | - | 1 |
| lowa | 4 | - | 2 | - | 770 | 920 | - | 1 | - | - | 1 | - |
| Mo. | 13 | 3 | - | - | 3.676 | 3,895 | 3 | 2 | - | - | 2 | - |
| N Dak. | 2 | - | - | - | 82 | 68 | $\bar{\square}$ | - | - | - | - | - |
| S Dak | 1 | - | - | - | 139 | 155 | 3 | - | - | - | - | - |
| Nebr. | 3 | - | - | - | 567 | 730 | - | 3 | - | - | - | - |
| Kans | 4 | - | - | 1 | 1.372 | 1.446 | - | - | - | - | - | - |
| S. ATLANTIC | 345 | 9 | 31 | 6 | 35,770 | 35.265 | 44 | 75 | 6 | 8 | 1 | - |
| Del | 7 | - | 3 | - | 728 | 719 | 3 | 2 | 1 | - | - | - |
| Md | 31 | 1 | 9 | - | 5,037 | 5.485 | 2 | 15 | 1 | 2 | - | - |
| D C | 59 | - | - | - | 3.168 | 2.968 | $15^{\circ}$ | 1 | - | - | - | - |
| Va | 42 | 1 | 12 | - | 3.719 | 3.756 | 15 | 11 | 2 | - | - | - |
| W Va. | 1 | - | 2 | - | 485 | 443 | - | 7 | - | - | - | - |
| N.C | 20 | - | 4 | - | 6,858 | 7.117 | 1 | 8 | 1 | 1 | 1 | - |
| S.C. | 14 | - | - | - | 3.971 | 4.470 | - | 7 | 1 | - | - | - |
| Ga | 21 | 1 | - | - | 11,804 | 10,307 | 4 | 13 | - | 5 | - | - |
| Fla. | 150 | 6 | 1 | 6 | 11,804 | 10.307 | 19 | 11 | - | 5 | - | - |
| E. CENTRAL $^{\text {c }}$ | 26 | 13 | 15 | - | 14.806 | 14,339 | 14 | 46 | 4 | 1 | 1 | - |
| Ky. | 7 | 1 | 6 | - | 1.721 | 1.579 | - | 3 | - | - | - | - |
| Tenn. | 12 | 3 | 1 | - | 5.900 | 5.639 | 13 | 13 | 3 | 1 | - | - |
| Ala | 3 | 9 | 8 | - | 4,022 | 4.396 | 1 | 22 | 1 | - | 1 | - |
| Miss | 4 | - | - | - | 3,163 | 2.725 | - | 8 | - | - | - | - |
| W S CENTRAL | 207 | 7 | 11 | - | 21.763 | 23.448 | 64 | 56 | 6 | 15 | 1 | 5 |
| Ark | 7 | - | - | - | 1.974 | 2.274 | 4 | 2 | - | - | - | - |
| La. | 31 | 1 | 1 | - | 3.812 | 5,003 | - | 11 | - | 1 | - | - |
| Okla | 2 | 1 | 3 | - | 2,493 | 2.308 | 3 | 4 | 2 | $1{ }^{-}$ | $\overline{-}$ | 5 |
| Tex. | 167 | 5 | 7 | - | 13,484 | 13.863 | 57 | 39 | 4 | 14 | 1 | 5 |
| MOUNTAIN | 70 | 3 | 10 | 1 | 5,520 | 5.355 | 32 | 32 | 4 | 7 | - | 7 |
| Mont | - | 1 | - | 1 | 132 | 170 | - | - | - | - | - | - |
| Idaho | 1 | - | - | - | 183 | 181 | 2 | 3 | - | - | - | - |
| Wyo. | 2 | - | 2 | - | 123 | 148 | 1 | - | - | - | - | - |
| Colo. | 35 | 1 | 2 | - | 1,456 | 1,554 | 3 | 2 | - | 4 | - | 3 |
| N. Mex | 4 | - | - | - | 596 | 654 | 5 | 2 | - | - | - | - |
| Ariz. | 17 | - | 4 | - | 1,601 | 1,589 | 15 | 17 | 4 | 3 | - | 2 |
| Utah | 5 | - | 1 | - | 236 | 230 | 3 | 5 | - | - | - | - |
| Nev . | 6 | 1 | 1 | - | 1.193 | 829 | 3 | 3 | - | - | - | 2 |
| PACIFIC | 636 | 17 | 35 | - | 24.973 | 24.916 | 228 | 155 | 35 | 44 | - | 35 |
| Wash. | 21 | 1 | 2 | - | 1.908 | 1,892 | 14 | 17 | 5 | - | $\cdots$ | 5 |
| Oreg. | 14 | - | - | - | 932 | 1.407 | 20 | 11 | 4 | - | - | - |
| Calif | 585 | 14 | 31 | - | 21,127 | 20,628 | 192 | 121 | 26 | 44 | - | 29 |
| Alaska | 7 | - | 2 | - | 724 | 612 | 1 | 6 | - | - | - | - |
| Hawaii | 9 | 2 | - | - | 282 | 377 | 1 | - | - | - | - | 1 |
| Guam | - | - | - | - | 7 | 33 | - | 1 | - | 1 | - | - |
| P.R. | 22 | 3 | 2 | - | 489 | 830 | 3 | 2 | - | - | - | - |
| V.I. | - | - | - | - | 47 | 86 | - | - | - | - | - | - |
| Pac. Trust Terr. | - | - | - | - | 12 | 146 | 13 | - | - | - | - | - |
| Amer Samoa | - | - | - | - | 8 | - | 1 | 2 | - | - | - | - |

TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending
March 15, 1986 and March 16, 1985 (11th Week)

| Reporting Area | Malaria | Measles (Rubeola) |  |  |  |  | Meningococcal Infections | Mumps |  | Pertussis |  |  | Rubella |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Indigenous |  | Imported * |  | Cum. <br> 1985 |  |  |  |  |  |  |  |  |  |
|  | $\begin{aligned} & \text { Cum. } \\ & 1986 \end{aligned}$ | 1986 | $\begin{aligned} & \text { Cum. } \\ & 1986 \end{aligned}$ | 1986 | $\begin{aligned} & \text { Cum. } \\ & 1986 \end{aligned}$ |  | $\begin{aligned} & \text { Cum. } \\ & 1986 \end{aligned}$ | 1986 | $\begin{aligned} & \text { Cum. } \\ & 1986 \end{aligned}$ | 1986 | $\begin{aligned} & \text { Cum. } \\ & 1986 \end{aligned}$ | $\begin{aligned} & \text { Cum. } \\ & 1985 \end{aligned}$ | 1986 | $\begin{aligned} & \text { Cum. } \\ & 1986 \end{aligned}$ | $\begin{aligned} & \text { Cum. } \\ & 1985 \end{aligned}$ |
| UNITED STATES | 137 | 214 | 701 | 3 | 32 | 282 | 688 | 35 | 550 | 30 | 420 | 297 | 11 | 92 | 70 |
| NEW ENGLAND | 8 | - | 9 | - | - | 3 | 52 | 1 | 9 | 2 | 26 | 13 | - | - | 4 |
| Maine | - | - | - | - | - | - | 11 | - | - | - | 2 | 2 | - | - | - |
| N.H. | - | - | - | - | - | - | 3 | - | 4 | - | 7 | 7 | - | - | 2 |
| Vt . | 1 | - | - | - | - | - | 7 | - | - | - | 1 | 1 | - | - | - |
| Mass. | 3 | - | 9 | - | - | 3 | 9 | - | - | - | 8 | 2 | - | - | 2 |
| R.I. | 1 | - | - | - | - | - | 4 | 1 | 4 | - | 1 | 1 | - | - | . |
| Conn. | 3 | - | - | - | - | - | 18 | - | 1 | 2 | 7 | - | - | - | - |
| MID ATLANTIC | 21 | 182 | 363 | - | 3 | 17 | 123 | 9 | 43 | 2 | 59 | 47 | 1 | 21 | 14 |
| Upstate N.Y. | 1 | - | 1 | - | 2 | 7 | 33 | 6 | 16 | 1 | 39 | 25 | - | 14 | 5 |
| N.Y. City | 7 | 11 | 28 | - | 1 | 8 | 32 | - | 1 | , | 5 | 7 | - | 5 | 6 |
| N.J. | 2 | 171 | 334 | - | - | 2 | 18 | 1 | 13 | - | - | 1 | 1 | 2 | 3 |
| Pa . | 11 | - | , | - | - | 2 | 40 | 2 | 13 | 1 | 15 | 14 | - | - |  |
| E.N. CENTRAL | 4 | - | 48 | - | - | 83 | 85 | 7 | 255 | 7 | 100 | 57 | - | 1 | 6 |
| Ohio | 1 | - |  | - | - | 11 | 39 | 2 | 40 | 7 | 52 | 13 | - | 1 | 6 |
| Ind. | - | - | - | - | - | - | 9 | - | 12 | - | 9 | 11 | - | - | - |
| III. | 2 | - | 21 | - | - | 4 | 20 | - | 129 | - | 8 | 9 | - | - | - |
| Mich. | 1 | - | 7 | - | - | 34 | 17 | 5 | 37 | - | 11 | 5 | - | - | 5 |
| Wis. | - | - | 27 | - | - | 34 | . | - | 37 | - | 20 | 19 | - | 1 | 1 |
| W.N. CENTRAL | 3 | 4 | 55 | - | - | 2 | 30 | 2 | 20 | - | 23 | 27 | - | 2 | 6 |
| Minn. | 1 | - |  | - | - |  | 7 | . | 1 | - | 11 | 10 | - | 2 |  |
| lowa | 1 | - | - | - | - | - | 4 | - | 5 | - | 4 | 1 | - | - | - |
| Mo. | 1 | - | - | - | - | 2 | 14 | 2 | 6 | - | 3 | 6 | - | 1 | - |
| N. Dak. | - | - | - | - | - | - | - | - | 1 | - | 2 | 4 | - | - | - |
| S. Dak. | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - |
| Nebr. | - | - | - | - | - | - | 3 | - | - | - | - | 1 | - | - | - |
| Kans. | - | 4 | 55 | - | - | - | 2 | - | 6 | - | 3 | 5 | - | 1 | 6 |
| S. ATLANTIC | 19 | 21 | 93 | - | 2 | 9 | 144 | 3 | 51 | 11 | 85 | 56 | 1 | 6 | 8 |
| Del. | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | 8 |
| Md. | 3 | - | 4 | - | - | 1 | 18 | - | 3 | - | 18 | 16 | - | - | 1 |
| D.C. | - | - | - | - | - | 1 | 2 | - |  | - | - | - | - | - | 1 |
| Va . | 6 | - | - | - | - | 5 | 29 | - | 6 | 2 | 8 | 1 | - | - | - |
| W. Va. | - | - | - | - | - | - | 2 | 1 | 20 | - | 2 | - | - | - | - |
| N.C. | 2 | - | - | - | - | - | 16 | - | 4 | - | 12 | 6 | - | - | - |
| S.C. | - | 20 | 78 | - | - | - | 22 | - | 4 | - | 2 |  | - | - | 2 |
| Ga. | 2 | , | - | - | 1 | - | 15 | 1 | 4 | 9 | 38 | 19 | - | - | 4 |
| Fla. | 6 | 1 | 11 | - | 1 | 2 | 39 | 1 | 10 |  | 5 | 14 | 1 | 6 | 1 |
| E.S. CENTRAL | 4 | - | - | - | - | - | 35 | - | 5 | - | 11 | 3 | - | 1 | 1 |
| $K y .$ | 2 | - | - | - | - | - | 6 | - | 2 | - | 1 | 1 | - | 1 | 1 |
| Tenn. | - | - | - | - | - | - | 15 | - | 1 | - | 2 | 1 | . | - | , |
| Ala. | 2 | - | - | - | - | - | 12 | - | 1 | - | 8 | 1 | - | - | - |
| Miss. | 2 | - | - | - | - | - | 2 | - | 1 | - | 8 | 1 | - | - | - |
| W.S. CENTRAL | 5 | - | 30 | 1 | 12 | 2 | 41 | 4 | 41 | - | 18 | 19 | 4 | 17 | 10 |
| Ark. | - | - | 21 | - | - | - | 2 | 1 | 3 | - | - | 7 | - | - | 1 |
| La. | 1 | - | 2 | - | - | - | 4 | - | N- | - | 2 | 12 | - | - | . |
| Okla. | 1 | - | - | $i+$ | - | - | 8 | N | N | - | 16 | 12 | - | - | - |
| Tex. | 3 | - | 9 | $1^{\dagger}$ | 12 | 2 | 27 | 3 | 38 | - |  | 12 | 4 | 17 | 9 |
|  | 5 | 1 | 34 | - |  |  | 31 | 2 | 60 | 6 | 58 | 16 | - | - | 1 |
| Mont. | - | - | - | - | 1 | 113 | 4 | - | 2 | - | - | 2 | - | - |  |
| Idaho | 1 | - | - | - | - | - | 1 | - | 2 | - | 13 | - | - | - | - |
| Wyo. | - | - | - | - | - | - | 2 | - | - | - | $1{ }^{-}$ | 7 | - | - | - |
| Colo. | 1 | - | - | - | 2 | - | 6 | - | 4 | - | 12 | 7 | - | - | - |
| N. Mex. | - | , | 13 | - | 2 | - | 4 | N | N | 1 | 8 | 2 | - | - | - |
| Ariz. | 2 | 1 | 21 | - | - | - | 9 | 2 | 48 | 5 | 19 | 2 | - | - | 1 |
| Utah | - | - | 2 | - | - | - | 3 | - | 1 | 5 | 6 | 3 | - | - | . |
| Nev. | 1 | - | - | - | - | - | 2 | - | 3 | - | - | - | - | - | - |
| PACIFIC | 68 | 6 |  |  | 10 | 53 | 147 | 7 | 66 | 2 | 40 | 59 | 5 | 44 | 20 |
| Wash. | 5 |  | 19 | $2 \dagger$ | 6 | 1 | 21 | - | 4 | 1 | 17 | 9 | - |  | 20 |
| Oreg. | 7 | - | - | - | 2 | - | 13 | N | N | - | 2 | 5 | - | - | 1 |
| Calif. | 56 | 2 | 40 | - | 2 | 46 | 108 | 6 | 55 | 1 | 18 | 42 | 5 | 44 | 17 |
| Alaska | - | - | $10^{-}$ | - | - | - | 5 | - | 2 | - | 1 | 1 | - | - | - |
| Hawaii | - | 4 | 10 | - | - | 6 | - | 1 | 5 | - | 2 | 2 | - | - | 2 |
| Guam | 1 | - | 1 | - | - | 10 | , | - | 1 | - |  | - | - | 1 | 1 |
| P.R. | 1 | - | , | - | - | 38 | 1 |  | 11 | - | 2 | 1 | - | 1 | 4 |
| V.I. | - | - | - | - | - | 9 | - | 2 | 5 | - | - | - | - | - | - |
| Pac. Trust Terr. | - | - | - | - | - |  | - | - | - | - | - | - | - | - | - |
| Amer. Samoa | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

- For measles only, imported cases includes both out-of-state and international importations.

TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending March 15, 1986 and March 16, 1985 (11th Week)

| Reporting Area | Syphilis (Civilian) (Primary \& Secondary) |  | Toxicshock Syndrome | Tuberculosis |  | Tularemia <br> Cum. <br> 1986 | Typhoid <br> Fever <br> Cum. <br> 1986 | Typhus Fever <br> (Tick-borne) <br> (RMSF) <br> Cum. <br> 1986 | Rabies, <br> Animal <br> Cum, <br> 1986 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { Cum. } \\ & 1986 \end{aligned}$ | $\begin{aligned} & \text { Cum. } \\ & 1985 \end{aligned}$ | 1986 | $\begin{aligned} & \text { Cum. } \\ & 1986 \end{aligned}$ | $\begin{aligned} & \text { Cum. } \\ & 1985 \end{aligned}$ |  |  |  |  |
| UNITED STATES | 4.998 | 5.049 | 7 | 3,839 | 3.790 | 15 | 46 | 8 NO | $867$ |
| NEW ENGLAND | 116 | 116 | - | 109 | 133 | - | 2 | 10 |  |
| Maine | 7 | 3 | - | 12 | 11 | - | - |  | - |
| N.H. | 6 | 3 | - | 3 | 6 | - | - | - | - |
| Vt . | 4 | - | - | 6 | 77 | - | - | - | - |
| Mass | 61 | 62 | - | 51 | 77 | - | 1 | 1 | - |
| R.I. | 5 | 4 | - | 5 | 16 | - | - | - | - |
| Conn. | 33 | 44 | - | 32 | 23 | - | 1 | - | - |
| MID ATLANTIC | 734 | 633 | 1 | 757 | 744 | - | 4 | - | 102 |
| Upstate N.Y. | 38 | 31 | - | 108 | 95 | - | 1 | - | 13 |
| N Y City | 421 | 417 | 1 | 376 | 411 | - | 3 | - | - |
| N.J. | 145 | 131 | - | 138 | 51 | - | - | - | $8{ }^{\circ}$ |
| Pa | 130 | 54 | - | 135 | 187 | - | - | - | 89 |
| E. N. CENTRAL | 128 | 246 | - | 529 | 480 | - | 4 | - | 12 |
| Ohio | 28 | 25 | - | 79 | 89 | - | - | - | 1 |
| Ind. | 26 | 17 | - | 61 | 55 | - | - | - | 3 |
| III. | 29 | 132 | - | 230 | 223 | - | $\bar{\square}$ | - | 2 |
| Mich. | 30 | 60 | - | 127 | 89 | - | 3 | - | 2 |
| Wis. | 15 | 12 | - | 32 | 24 | - | 1 | - | 4 |
| W N CENTRAL | 57 | 65 | - | 94 | 102 | 5 | 3 | - | 106 |
| Minn | 8 | 19 | - | 20 | 19 | - | 1 | - | 9 |
| lowa | 4 | 11 | - | 11 | 17 | 1 | - | - | 28 |
| Mo. | 30 | 21 | - | 46 | 43 | 4 | 2 | - | 10 |
| N. Dak. | 2 | - | - | 3 | 2 | - | - | - | 34 |
| S. Dak | - | 4 | - | 2 | 5 | - | - | - | 25 |
| Nebr | 8 | 1 | - | 3 | 4 | - | - | - | - |
| Kans | 5 | 9 | - | 9 | 12 | - | - | - | - |
| S ATLANTIC | 1.284 | 1.299 | 2 | 745 | 751 | 3 | 4 | 3 | 239 |
| Del. | 10 | 12 | . | 7 | 8 | - | - | - | - |
| Md | 98 | 107 | - | 45 | 71 | 1 | - | - | 156 |
| D.C. | 81 | 69 | - | 33 | 34 | - | - | - | $3{ }^{-}$ |
| Va | 108 | 71 | 2 | 57 | 50 | 1 | - | - | 36 |
| W. Va. | 3 | 2 | 2 | 30 | 18 | - | - | - | 6 |
| N.C. | 129 | 150 | - | 115 | 79 | - | 2 | 2 | - |
| S.C. | 157 | 171 | - | 97 | 103 | - | - | 1 | 6 |
| Ga | 15 | , | - | 88 | 115 | 1 | - | - | 29 |
| Fla. | 698 | 717 | - | 273 | 273 | - | 2 | - | 6 |
| ES CENTRAL | 354 | 456 | - | 360 | 326 | 3 | - | 2 | 34 |
| Ky | 23 | 16 | - | 89 | 71 | 2 | - | 1 | 9 14 |
| Tenn. | 164 | 120 | - | 102 | 90 | 1 | - | - | 14 |
| Ala. | 123 | 167 | - | 127 | 122 | - | - | 1 | 11 |
| Miss | 44 | 153 | - | 42 | 43 | - | - | - | - |
| W.S. CENTRAL | 1.143 | 1,240 | 4 | 457 | 370 | 3 | 1 | 2 | 84 |
| Ark. | . 51 | 69 | - | 48 | 29 | 2 | - | - | 17 |
| La. | 189 | 229 | - | 107 | 58 | - | - | - | 3 |
| Okla | 37 | 43 | 4 | 41 | 50 | 1 | - | - | 8 |
| Tex. | 866 | 899 | - | 261 | 233 | - | 1 | 2 | 56 |
| MOUNTAIN | 145 | 171 | - | 81 | 68 | - | 2 | - | 162 |
| Mont. | 3 | 1 | - | 5 | 5 | - | - | - | 64 |
| Idaho | 1 | 2 | - | 4 | 2 | - | - | - | 0 |
| Wyo. | - | 4 | - | - | 1 | - | - | - | 66 |
| Colo. | 44 | 41 | - | 1 | 3 | - | - | - | - |
| N. Mex. | 17 | 17 | - | 19 | 14 | - | - | - | 2 |
| Ariz | 61 | 97 | - | 38 | 36 | - | 1 | - | 30 |
| Utah | 4 | 2 | - | 4 | 2 | - | 1 | - | - |
| Nev . | 15 | 7 | - | 10 | 5 | - | - | - | - |
| PACIFIC | 1,037 | 823 | - | 707 | 816 | 1 | 26 | - | 128 |
| Wash. | 16 | 29 | - | 45 | 36 | - | 2 | - | - |
| Oreg. | 25 | 24 | - | 29 | 24 | - | - | - | - |
| Calif. | 986 | 754 | - | 583 | 679 | - | 22 | - | 125 |
| Alaska | - | - | - | 12 | 37 | 1 | - | - | 3 |
| Hawaii | 10 | 16 | - | 38 | 40 | - | 2 | - | - |
| Guam | 1 | 2 | - | - | 6 | - | - | - | - |
| P.R. | 179 | 196 | - | 58 | 61 | - | - | - | 7 |
| V.I. |  | - | - | - | 1 | - | - | - | - |
| Pac. Trust Terr. | - | 13 | - | 3 | 16 | - | - | - | - |
| Amer. Samoa | - | - | - | - | - | - | - | - | - |

TABLE IV. Deaths in 121 U.S. cities,* week ending
March 15, 1986 (11th Week)

| Reporting Area | All Causes, By Age (Years) |  |  |  |  |  | $\begin{aligned} & \text { P\& } 1^{-\bullet} \\ & \text { Total } \end{aligned}$ | Reporting Area | All Causes, By Age (Years) |  |  |  |  |  | P\& ${ }^{-\bullet}$ Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { All } \\ & \text { Ages } \end{aligned}$ | $\geqslant 65$ | 45-64 | 25-44 | 1-24 | $<1$ |  |  | $\begin{aligned} & \text { All } \\ & \text { Ages } \end{aligned}$ | $\geqslant 65$ | 45-64 | 25-44 | 1-24 | <1 |  |
| NEW ENGLAND | 791 | 556 | 161 | 33 | 21 | 20 | 94 | S. ATLANTIC | 1.390 | 902 | 290 | 110 | 31 | 54 | 87 |
| Boston, Mass. | $180$ | $116$ | 44 | $12$ | 3 | 5 | 34 | Atlanta, Ga. | +185 | 117 | 34 | 25 | 8 | 54 | 8 |
| Bridgeport, Conn. | 54 | 34 | 13 | 2 | 1 | 4 | 4 | Baltimore, Md. | 229 | 152 | 51 | 18 | 1 | 7 | 7 |
| Cambridge, Mass. | 26 | 24 | 2 | - | - | - | 3 | Charlotte, N.C. | 69 | 47 | 15 | 4 | 1 | 2 | 2 |
| Fall River, Mass. | 24 | 20 | 4 |  |  |  | - | Jacksonville, Fla. | 132 | 82 | 32 | 4 | 6 | 7 | 11 |
| Hartford, Conn. | 115 | 83 | 22 | 5 | 3 | 2 | 11 | Miami, Fla. | 111 | 61 | 31 | 14 | 2 | 3 | 3 |
| Lowell, Mass. | 32 | 27 | 3 | 1 | 1 | - | 3 | Norfolk, Va. | 80 | 43 | 20 | 9 | 2 | 8 | 7 |
| Lynn, Mass. | 23 | 16 | 7 | - | - | - | 2 | Richmond, Va. | 93 | 63 | 18 | 5 | 2 | 5 | 10 |
| New Bedford, Mass. | s. 28 | 19 | 5 | 3 | 1 | 1 | 1 | Savannah, Ga. | 72 | 53 | 10 | 4 | 2 | 3 | 8 |
| New Haven, Conn. | 56 | 37 | 12 | 5 | 1 | 1 | 4 | St. Petersburg. Fla. | 119 | 102 | 13 | 1 | 2 | 3 3 | 8 11 |
| Providence, R.I. | 72 | 51 7 | 14 | 2 | 1 | 4 | 8 | Tampa, Fla. | 87 | 52 | 19 | 5 | 2 | 7 | 8 |
| Somerville, Mass. | 10 52 | $\begin{array}{r}7 \\ 38 \\ \hline\end{array}$ | 3 | 2 | 3 | 3 | 1 | Washington, D.C. | 179 | 102 | 44 | 19 | 6 | 8 | 13 |
| Waterbury, Conn. | 44 | 31 | 10 | 2 | 3 | 3 | 6 9 | Wilmington, Del. | 34 | 28 | 3 | 2 | 1 | - | - |
| Worcester, Mass. | 75 | 53 | 16 | 1 | 4 | 1 | 8 | E.S. CENTRAL | 755 | 473 | 190 | 45 | 27 | 19 | 41 |
| MID ATLANTIC | 2,772 | 1.920 | 511 | 207 | 66 | 66 | 177 | Birmingham, Ala. | 137 56 | 84 | 34 | 7 | 7 | 5 | 7 |
| Albany. N.Y. | 2,74 | 1.920 40 | 10 | 207 1 | 66 1 | 66 2 | 177 2 | Chattanooga, Tenn. Knoxville, Tenn. | 56 106 | 41 73 | 12 | 2 | 4 | 1 | 4 |
| Allentown, Pa. | 20 | 17 | 2 | 1 | - |  | 1 | Louisville, Ky. | 93 | 52 | 34 | 6 | 4 | 2 | 7 |
| Buffalo, N.Y. | 104 | 78 | 19 | 6 | - | 1 | 11 | Memphis, Tenn. | 94 | 60 | 26 | 4 | 3 | 1 | 6 |
| Camden, N.J. | 49 | 33 | 11 | 3 | - | 2 | 1 | Mobile, Ala. | 73 | 42 | 16 | 8 | 3 | 3 | 7 |
| Elizabeth, N.J. | 25 | 20 | 3 | 2 | - | - | - | Montgomery. Ala. | 60 | 39 | 9 | 3 | 6 | 3 | 7 |
| Erie, Pa.t | 48 | 35 | 8 | 2 | 2 | 1 | 6 | Nashville, Tenn. | 136 | 82 | 38 | 9 | 4 | 3 | 6 |
| Jersey City, N.J. N.Y. City, N.Y. | 41 1.396 | 24 | 9 | 5 | 1 | 2 | 4 |  |  |  |  |  |  |  |  |
| N.Y. City, N.Y. | 1.396 | 924 | 257 | 142 | 37 | 36 | 80 | W.S. CENTRAL | 1.423 | 983 | 243 | 92 | 58 | 46 | 71 |
| Newark, N.J | 102 35 | 58 | 20 | 10 | 9 | 4 | 5 | Austin, Tex. | . 53 | 38 | 6 | 5 | 2 | 4 2 | 71 3 |
| Paterson, N.J. Philadelphia, Pa. | 35 302 | 23 | 8 | 1 | 1 | 2 | 6 | Baton Rouge, La. | 47 | 28 | 12 | 5 | 2 | - | 1 |
| Philadelphia, Pa. | 302 102 | 209 75 | 64 21 | 17 | 6 | 6 3 | 14 | Corpus Christi. Tex. | 52 | 34 | 10 | 6 | 1 | 1 | 3 |
| Reading, Pa . | 39 | 33 | 21 | 2 | 1 | 3 3 | 7 | Dallas, Tex. | 216 | 116 | 58 | 28 | 11 | 3 | 9 |
| Rochester, N.Y. | 144 | 111 | 26 | 4 | 3 | 3 | 15 | Fort Worth, Tex. | 89 | 53 61 | 16 | 3 5 | 2 | 5 | 5 |
| Schenectady, N.Y. | 36 | 29 | 6 | - | 1 | - | - | Houston, Tex § | 314 | 282 | 6 | 5 | 10 | 3 11 | 6 |
| Scranton, Pa.t | 38 | 32 | 4 | 1 | 1 | - | 2 | Little Rock. Ark. | 95 | 60 | 18 | 5 | 10 | 11 | 5 |
| Syracuse, N.Y. | 148 | 110 | 28 | 5 | 3 | 1 | 11 | New Orleans, La. | 137 | 88 | 18 30 | 7 12 | 4 | 5 | 10 |
| Trenton, N.J. | 27 | 19 | 4 | 1 | - | 3 | 1 | San Antonio, Tex. | 185 | 122 | 35 | 10 | 12 | 6 | 2 |
| Utica, N.Y. | 30 | 25 | 4 | 1 | - |  | 4 | Shreveport, La. | +58 | 122 34 | 35 15 | 10 3 | 12 | 6 | 17 |
| Yonkers, N.Y. | 32 | 25 | 4 | 3 | - | - | 6 | Tulsa, Okla. | 58 98 | 34 67 | 15 21 | $\begin{aligned} & 3 \\ & 3 \end{aligned}$ | $\begin{aligned} & 4 \\ & 5 \end{aligned}$ | 2 | 5 5 |
| E.N. CENTRAL | 2,571 | 1,803 | 463 | 147 | 65 | 92 | 156 | MOUNTAIN | 742 |  |  |  |  |  |  |
| Akron, Ohio | 61 | 40 | 10 | 5 | 4 | 2 | 3 | Albuquerque, N.Mex | -. 105 | 483 66 | 148 | 69 12 | 20 | 22 | 45 8 |
| Canton, Ohio | 33 | 24 | 7 | 1 | - | 1 | 6 | Colo. Springs, Colo. | 38 | 27 | 4 | 12 4 | 1 | 2 | 8 |
| Chicago, III. § | 553 | 462 | 11 | 26 | 16 | 37 | 16 | Denver, Colo. | 137 | 86 | 35 | 10 | 1 | 5 | 5 |
| Cincinnati, Ohio | 161 | 103 | 43 | 7 | 5 | 3 | 17 | Las Vegas, Nev. | 90 | 57 | 18 | 12 | 2 | 1 | 8 |
| Cleveland, Ohio | 197 | 125 | 52 | 14 | 3 | 3 | 10 | Ogden, Utah | 17 | 12 | 3 | 1 | 2 | 1 | 2 |
| Columbus, Ohio Dayton, Ohio | 128 | 86 | 28 | 12 | 1 | 1 | 3 | Phoenix, Ariz. | 180 | 115 | 36 | 18 | 5 | 6 | 7 |
| Detroit, Mich. | 148 | 100 | 41 | 4 | 3 | - | 10 | Pueblo. Colo. | 26 | 20 | 2 | 4 | - | - | 3 |
| Evansville, Ind. | 312 49 | 184 | 80 11 | 30 | 9 | 9 1 | 13 | Salt Lake City, Utah | 35 114 | 17 | 12 | 3 | 2 | 1 | - |
| Fort Wayne, Ind. | 69 | 41 | 13 | 4 | 1 | 10 | 4 | Tucson, Ariz. | 114 | 83 | 21 | 5 | 1 | 4 | 11 |
| Gary, Ind. | 18 | 13 | 2 | 2 | - | 1 | - | PACIFIC | 1,791 | 1,182 | 377 |  |  |  |  |
| Grand Rapids, Mich. | h. 108 | 77 | 14 | 4 | 6 | 7 | 15 | Berkeley, Calif. | 12 | 1.182 9 | 2 | 128 | 50 | 44 | 123 |
| Indianapolis, Ind. | 222 | 138 | 57 | 15 | 5 | 7 | 4 | Fresno, Calif. | 82 | 60 | 12 | 4 | 1 | 5 | 8 |
| Madison, Wis. | 37 | 19 | 9 | 6 | 2 | 1 | 6 | Glendale, Calif. | 15 | 11 | 4 |  | - | 5 | 8 |
| Milwaukee, Wis. Peoria, III. | 149 35 | 116 | 22 | 3 | 4 | 4 | 6 | Honolulu, Hawaii | 68 | 50 | 10 | 5 | 1 | 2 | 3 |
| Peoria, III. Rockford, III. | 35 38 | 23 | 9 | 2 | - | 1 | 5 | Long Beach, Calif. | 96 | 67 | 22 | 3 | - | 4 | 22 |
| South Bend, Ind. | 38 69 | 25 | 9 11 | 2 | 2 | 4 | $1{ }^{4}$ | Los Angeles, Calif. | 384 | 233 | 91 | 37 | 11 | 4 | 14 |
| Toledo, Ohio | 108 | 78 | 21 | 6 | 3 | 4 | 16 | Pakandena, Calif. | 66 45 | 44 | 14 | 5 | 2 | 1 | 3 |
| Youngstown, Ohio | 76 | 63 | 13 | 6 | 3 | - | 5 | Portland, Oreg. | 45 122 | 81 | 9 27 | 4 7 | 3 3 | 1 | 3 9 |
| W.N. CENTRAL | 726 | 531 |  |  |  |  |  | Sacramento, Calif. | 136 | 85 | 25 | 13 | 8 | 5 | 16 |
| Des Moines, lowa | 35 | 29 | 118 4 | 32 1 | 27 | 18 1 | 54 4 | San Diego, Calif. | 166 | 114 | 31 | 10 | 5 | 6 | 19 |
| Duluth, Minn. | 29 | 27 | 4 | 1 |  | 1 | 3 | San Jose, Calif. | 177 | 98 111 | 37 | 20 | 5 | 1 | 6 |
| Kansas City, Kans. | 38 | 24 | 9 | 2 | 3 | 1 | 1 | Seattle, Wash. | 150 | 108 | 49 | 11 | 1 | 5 | 11 |
| Kansas City, Mo. | 110 | 76 | 23 | 3 | 4 | 4 | 8 | Spokane, Wash. | 60 | 108 46 | 11 | 8 | 9 | 1 | 4 |
| Lincoln, Nebr. | 32 | 27 | 4 | 3 | - | 1 | 3 | Tacoma, Wash. | 49 | 37 | 11 9 | - | 1 | 2 | 3 1 |
| Minneapolis, Minn. | 67 | 46 | 14 | 4 | 2 | 1 | 5 |  |  |  | 9 | - | - | 3 | 1 |
| Omaha, Nebr. St Louis, Mo. | 95 167 | 65 | 17 | 4 | 6 | 3 | 9 | TOTAL 1 | 12,961 | 8.833 | 2.501 | 863 | 365 | 381 | 848 |
| St. Louis, Mo. | 167 75 | 125 60 | 17 10 | 15 | 7 | 3 4 | 4 |  |  |  |  |  |  |  |  |
| Wichita, Kans. | 78 | 52 | 20 | 2 | 4 |  | 8 |  |  |  |  |  |  |  |  |

- 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 3 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.
$\dagger \dagger$ Total includes unknown ages.
§ Data not available. Figures are estimates based on average of past 4 weeks.

Table V. Estimated years of potential life lost before age 65 and cause-specific mortality, by cause of death - United States, 1984

| Cause of mortality (Ninth Revision ICD) | Years of potential life lost by persons dying in 1984* | Cause-specific mortality ${ }^{\dagger}$ (rate/100,000) |
| :---: | :---: | :---: |
| ALL CAUSES (Total) | 11,761,000 | 866.7 |
| Unintentional injuries $\S$ (E800-E949) | 2,308,000 | 40.1 |
| Malignant neoplasms $(140-208)$ | 1,803,000 | 191.6 |
| Diseases of the heart (390-398, 402, 404-429) | 1,563,000 | 324.4 |
| Suicide, homicide (E950-E978) | 1,247,000 | 20.6 |
| Congenital anomalies (740-759) | 684,000 | 5.6 |
| Prematurity ${ }^{\\|}$ (765, 769) | 470,000 | 3.5 |
| Sudden infant death syndrome (798) | 3140000 | 24 |
| Cerebrovascular diseases (430-438) | 266,000 | 65.6 |
| Chronic liver diseases and cirrhosis (571) | 233,000 | 11.3 |
| Pneumonia and influenza (480-487) | 163,000 | 25.0 |
| Chronic obstructive pulmonary diseases (490-496) | 123,000 | 29.8 |
| Diabetes mellitus (250) | 119,000 | 15.6 |

*For details of calculation, see footnotes for Table V, MMWR 1986;35:27.
${ }^{\dagger}$ Cause-specific mortality rates as reported in the MVSR are compiled from a $10 \%$ sample of all deaths.
$\S_{\text {Equivalent to accidents and adverse effects. }}$
${ }^{1}$ Category derived from disorders relating to short gestation and respiratory distress syndrome.

## Haemophilus influenzae - Continued

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## Current Trends

## Poliomyelitis - United States, 1975-1984

In September 1985, CDC-selected consultants individually reviewed clinical, laboratory, and epidemiologic data on 150 suspected cases of poliomyelitis reported to CDC from 1975-1984. CDC's Division of Immunization, Center for Prevention Services, and Division of Virology, Center for Infectious Diseases, had tentatively determined that 121 cases met the

## Poliomyelitis - Continued

case definition for paralytic poliomyelitis.* Overall, 118 cases were accepted by the consultants as cases and classified according to an epidemiologic classification system established in 1975 that provides "epidemic," "endemic," "imported," and "immune-deficient" categories (Table 1).

Compared to the average of 15,822 cases per year during 1951-1955, the period directly preceding the widespread availability and use of polio vaccines, U.S. cases averaged 15 per year during 1975-1979 and declined to nine per year during 1980-1984. Of the total 118 cases for 1975-1984, 10 (8\%) were epidemic cases, i.e., were epidemiologically linked with another case(s), all from a 1979 epidemic caused by a wild type 1 poliovirus; 12 (10\%) were imported cases among U.S. citizens with illness onset before or after return to the United States; and 11 ( $9 \%$ ) were cases occurring among persons with primary immunodeficiencies. One of these latter cases, which occurred in 1981 in a nontraveler, was the last case of endemic, wild-virus poliomyelitis in the United States. The remaining 85 ( $72 \%$ ) cases were endemic, i.e., were not epidemiologically linked to another case(s); 71 (60\%) were epidemiologically associated with vaccine usage. Of the 71 vaccine-associated cases, 30 ( $42 \%$ ) oc-
"Since 1969, the CDC definition of a case of paralytic poliomyelitis has been a patient with paralysis
clinically and epidemiologically compatible with poliomyelitis who, at 60 days after onset of symptoms,
has a residual neurologic deficit, has died, or for whom no information is available on neurologic residua.

TABLE 1. Epidemiologic classification of reported poliomyelitis cases, by year - United States, 1975-1984

| Category | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 10-year |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  | Subtotal | Total |
| Epidemic |  |  |  |  |  |  |  |  |  |  |  | 10 |
| No OPV | 0 | 0 | 0 | 0 | 10* | 0 | 0 | 0 | 0 | 0 | 10 |  |
| OPV received | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Endemic |  |  |  |  |  |  |  |  |  |  |  | 85 |
| Not vaccineassociated | 3 | 1 | 4 | 2 | 1 | 1 | 0 | 1 | 0 | 1 | 14 |  |
| OPV recipient | 0 | 2 | 3 | 3 | 6 | $2^{\dagger}$ | 1 | 3 | 7 | 3 | 30 |  |
| OPV contact (Household) | $3^{\S}$ | 3 | ${ }_{5}^{6}$ | 1 | 4 | 1 | 3 | 3 | 3 | 1 | 41 (28) (13) |  |
| (Nonhousehold) |  | 0 | 5 | 1 | 1 | 1 | 2 | 2 | 1 | 0 | (13) |  |
| Imported | 4** | 2 | 2 | 1 | 0 | 2 | 0 | 0 | 0 | 1 | 12 | 12 |
| Immune-deficient | 3 | 2 | 0 | 0 | 0 | 2 | $1^{\text {tt }}$ | 1 | 1 | 1 | 11 | 11 |
| Total | 13 | 10 | 20 | 8 | 22 | 9 | 7 | 10 | 12 | 7 |  | 118 |

*Outbreak among Amish caused by type 1 poliovirus.
${ }^{\dagger}$ One patient received OPV on same day as twin and had onset 38 days later.

IOne patient with severe persistent paralysis had coxsackie B1 isolated from pharynx; however, clinical findings met CDC case definition of paralytic poliomyelitis.
**One patient had onset 2 months before returning to the United States.
${ }^{\dagger}{ }^{+}$Wild type poliovirus isolated (source unknown).

## Poliomyelitis - Continued

curred among vaccine recipients, and 41 ( $58 \%$ ), among contacts of vaccine recipients. Fourteen ( $40 \%$ ) of the endemic cases were not epidemiologically associated with vaccine; however, five had virus isolates characterized definitively as vaccine-related.
Reported by Surveillance, Investigations, and Research Br, Div of Immunization, Center for Prevention Svcs, Div of Viral Diseases, Center for Infectious Diseases, CDC.
Editorial Note: Continuing transmission of wild virus-caused paralytic poliomyelitis has been eliminated in the United States using the currently recommended immunization policy of the Immunization Practices Advisory Committee (ACIP), which relies primarily on oral polio vaccine (OPV) use for the primary immunization series (1). From 1980 to 1984, only three of 45 cases (two imported and one immune-deficient) were documented as wild by strain characterization of poliovirus isolates. A third imported case was presumed epidemiologically to be caused by a wild poliovirus. Otherwise, the rare cases of reported paralytic poliomyelitis in the United States have been vaccine-associated.

The risk of vaccine-associated paralytic poliomyelitis, based on 85 cases occurring in immunologically normal recipients and contacts and the distribution of an estimated 274.1 million doses of OPV during 1973-1984, is one case per 3.22 million doses of OPV distributed.

When all 104 vaccine-associated cases ( 85 among immunologically normal recipients and contacts; 13 among immune-deficient recipients and contacts; and six others, patients from whom a vaccine-like virus was isolated) from this same period are included, the overall vaccine-associated risk is one case per 2.64 million doses of OPV distributed.

At the October 24-25, 1985, meeting of the ACIP, issues concerning polio vaccines and current polio vaccination policy in the United States were reviewed. Discussion included live polio vaccine and both the currently available inactivated polio vaccine (IPV) and a more potent IPV not currently available in the United States. The issues discussed included seroconversion, intestinal immunity, duration of immunity, replication of poliovirus in the intestine, safety, immunization coverage, seroprevalence, the current epidemiology of poliomyelitis in the United States, and the estimated likelihood of wild poliovirus introduction. In light of the data reviewed, the ACIP concluded that no change in the basic U.S. approach to poliomyelitis (primary reliance on OPV with selected use of IPV [1]) is warranted currently but that the subject should be reviewed on a continuing basis.

[^0]FIGURE I. Reported measles cases - United States, weeks 7-10, 1986


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The data in this report are provisional, based on weekly reports 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. Such reports and any other matters pertaining to editorial or other textual considerations should be addressed to: ATTN: Editor, Morbidity and Mortality Weekly Report, Centers for Disease Control, Atlanta. Georgia 30333.

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