CENTERS FOR DISEASE CONTROL

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MORBIDITY AND MORTALITY WEEKLY REPORT

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*Epidemiologic Notes and Reports*

## Pertussis — Maryland, 1982

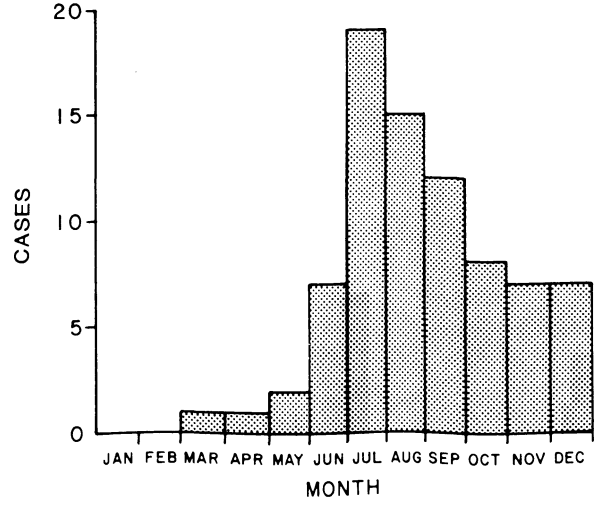
During 1982, 79 cases of pertussis were reported to the Maryland Department of Health and Mental Hygiene (*1*), a marked increase from the one to 18 cases reported annually during the previous 10 years. All cases were investigated. Thirty-five cases were from Baltimore city, and 44 were from 14 of the state's 23 counties. The first patient reported to have pertussis had onset in March. The number of cases peaked in July and August and decreased gradually through December (Figure 1).

Of the 79 reported cases, 32 occurred in males and 47 in females. Ages ranged from 7 weeks to 23 years. Sixty patients (76%) were less than 1 year of age (a pertussis incidence rate in Maryland of 0.22/1,000 children less than 1 year old), and forty-six (58%) were under 6 months of age (Figure 2).

Fifty-seven percent of all patients and 68% of patients less than 1 year old were hospitalized. The average duration of hospitalization was 8.6 days. Whoop was reported in 32 (41%) patients, episodes of apnea in 17 (22%), and pneumonia in 12 (15%), of whom 11 were under 1 year of age. Two (3%) of the 79 children, both infants, developed seizures; one of these (1/79) also developed an encephalopathy. No deaths occurred.

Forty-four cases (56%) were laboratory confirmed, 29 (37%) by direct fluorescent antibody (DFA) technique, four (5%) by culture, and 11 (14%) by both DFA and culture. The remaining

FIGURE 1. Pertussis cases, by month — Maryland, 1982



*Pertussis — Continued*

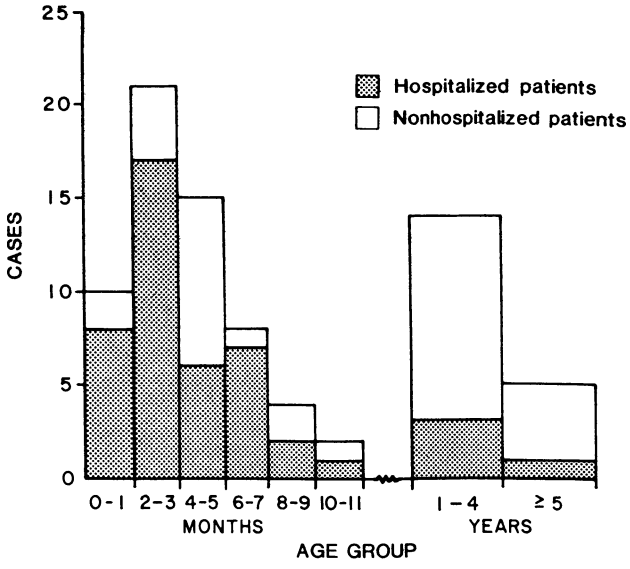
thirty-five (44%) reported cases were diagnosed on clinical grounds alone. Twenty-three (52%) of the 44 hospitalized patients had laboratory-confirmed cases. Twenty-three (32%) of the 71 patients for whom laboratory specimens were submitted received antibiotics before the specimens were obtained; only seven (30%) of these were DFA- and/or culture-positive. By contrast, of the 48 patients whose specimens were taken before antibiotic administration, 35 (73%) were DFA- and/or culture-positive ($p < 0.01$). For two patients, information on when antibiotics were begun was unavailable.

Of the 33 patients 6 months of age or older, 20 (61%) had received fewer than three doses of pertussis vaccine; these episodes may have been prevented by vaccination. Twenty-six (33%) of all patients were non-compliant with the age-recommended diphtheria-tetanus-pertussis (DTP) dosage schedule for the following reasons: illness at the time of scheduled vaccination—13 (50%), prematurity—three (12%), religious belief—three (12%), fear of vaccine effects—three (12%), and other—four (15%).

The household of each reported patient was investigated. In 72 completed household investigations, 236 household members were identified, of whom 74 (31%) were less than 10 years old. Immunization records were available for 64 (86%) of these children. Prior receipt of three or more doses of DTP vaccine was verified for 54 (84%). Four secondary cases were identified among all household contacts, one in an unimmunized child aged 4 years, two in children aged 20 months and 3 years with documentation of three or more doses of DTP, and one in an adult with an undocumented history of three doses of DTP as a child. Pertussis was laboratory-confirmed in the three secondary cases in children or in the primary case within their households. Although the numbers were small, the calculated clinical vaccine efficacy in household contacts 0-9 years of age in Maryland was 89%.

The increase in pertussis activity in 1982 was confirmed by reviews of hospital admissions and laboratory specimen submissions for 1981 and 1982. A survey of admissions for pertussis or pertussis-like syndromes to six major hospitals in the Baltimore metropolitan area revealed that, in 1981, only four children were admitted for pertussis—one with laboratory confirmation of disease. In contrast, in 1982, 25 children were hospitalized with

**FIGURE 2. Age distribution and hospitalization of patients with pertussis — Maryland, 1982**



*Pertussis – Continued*

pertussis—10 with laboratory confirmation. The Maryland State Laboratory received 161 specimens from patients with clinical pertussis for examination in 1981; three were DFA- or culture-positive. In 1982, the same laboratory, using the same procedures and personnel, received 324 specimens; 31 were DFA- or culture-positive. Many of the specimens submitted in 1982 were from contacts of patients.

While completion rates for DTP immunization were high at school entry (96%) in 1980 and 1981 in Maryland (*2*), completion rates in the preschool population may be considerably lower. In one comprehensive child-care clinic in Baltimore city, only 67 (69%) of the 97 infants 7.5-9.5 months of age on December 17, 1982, had received three doses of DTP vaccine.

Following a television presentation on pertussis vaccine side effects, DTP vaccine sales by one pharmaceutical company to the private medical sector in Maryland decreased 45% in April 1982, compared to average monthly sales for the preceding 3 months. Concomitantly, DT/Td* sales to the private medical sector increased 160%. Although DTP sales returned to normal during the following 2 months, DT/Td sales continued at 100% above the average of the first 3 months of 1982 through at least June 1982, the last month for which data are available. Following recognition of the increase in pertussis in Maryland, some private providers began to request pertussis single antigen vaccine from the state health department.

*Reported by Local health depts, FYC Lin, MD, M Johnson, RE Longenecker, E Israel, MD, State Epidemiologist, Maryland State Dept of Health and Mental Hygiene; Div of Immunization, Center for Prevention Svcs, CDC.*

**Editorial Note:** Despite high immunization levels of 96% for at least three doses of DTP vaccine in children entering school, Maryland experienced a marked increase in pertussis cases in 1982. Over 50% of pertussis patients were hospitalized for more than 1 week each; 18% of patients less than 1 year old developed pneumonia. Maryland's experience, as well as that of the United States from 1979 to 1981 (*7*), clearly indicates that pertussis remains a serious illness in young children.

Sixty-one percent of Maryland pertussis patients 6 months of age or older had not received three doses of DTP vaccine and can be considered as having had potentially vaccine-preventable cases (*3*). Three doses of pertussis vaccine generally provide a clinical vaccine efficacy between 63% and 94% (*4-8*). Furthermore, vaccine recipients who do develop disease have been shown to have decreased severity of illness, compared to that in patients who do not receive vaccine (*4, 7, 9*).

Age-specific immunization coverage of younger children, particularly those between 6 and 11 months of age, is not available nationwide. In Tennessee, where immunization status was obtained in 98% of a sample of 2-year old children, 91% had received three doses of DTP (*10*). In Hawaii, 68% of a younger cohort, aged 14 months, attending public health clinics had received three doses of DTP, which is comparable to the Baltimore clinic's experience of 69% in children 7.5-9.5 months of age (*11*).

Prevention measures against pertussis must stress full immunization of children at the earliest age possible. By ensuring the administration of three doses of DTP by 6 months of age, a fourth dose approximately 1 year later and a booster dose between 4 and 6 years of age, as recommended by the Immunization Practices Advisory Committee (ACIP) (*3*), the maximum obtainable age-appropriate, vaccine-induced protection can be ensured for children 6 months to 7 years old, thus both reducing the occurrence of pertussis in this age group and decreasing the exposure risk to pertussis organisms of infants less than 6 months of age.

Minor illnesses without fever, such as mild upper respiratory infections, should not cause postponement of vaccinations. However, scheduled DTP vaccination should be postponed for the duration of a severe febrile illness. In such instances, the health care provider should

*Diphtheria and tetanus toxoid adsorbed (for pediatric use) (DT)/tetanus and diphtheria toxoid adsorbed (for adult use) (Td).

*Pertussis — Continued*

reschedule the child for DTP immunization at the earliest time possible and provide followup to assure the child returns for the missed dose.

The percentage of organism recovery is highest when specimens are obtained during the initial 3 weeks of illness and before antibiotics are instituted. Present laboratory procedures for *Bordetella pertussis* confirmation consist of culture and DFA techniques. Properly obtained and processed cultures can be more sensitive than DFA results; in addition, positive culture results are highly specific. Under favorable hospital conditions in which direct plating of the specimen is done, culture confirmation has been obtained in 87% of cases (*12*).

*References*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3. CDC. Diphtheria, tetanus, and pertussis: guidelines for vaccine prophylaxis and other preventive measures. MMWR 1981;30:393-407.
4. Jenkinson D. Outbreak of whooping cough in general practice. Br Med J 1978;177:557-8.
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6. Broome CV, Preblud SR, Bruner B, et al. Epidemiology of pertussis, Atlanta, 1977. J Peds. 1981;98:362-7.
7. CDC. Pertussis surveillance, 1979-81. MMWR 1982;31:333-6.


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

| Disease | 23rd Week Ending | | | Cumulative, 23rd Week Ending | | |
|---|---|---|---|---|---|---|
| | June 11, 1983 | June 12, 1982 | Median 1978-1982 | June 11, 1983 | June 12, 1982 | Median 1978-1982 |
| Aseptic meningitis | 145 | 139 | 82 | 1,890 | 1,845 | 1,450 |
| Encephalitis: Primary (arthropod-borne & unspec.) | 17 | 17 | 17 | 366 | 390 | 282 |
| Post-infectious | - | 4 | 5 | 35 | 38 | 88 |
| Gonorrhea: Civilian | 15,944 | 19,939 | 19,561 | 383,617 | 411,233 | 412,210 |
| Military | 445 | 694 | 674 | 10,590 | 12,349 | 12,103 |
| Hepatitis: Type A | 387 | 359 | 497 | 9,952 | 9,782 | 11,848 |
| Type B | 428 | 383 | 357 | 9,730 | 9,117 | 7,227 |
| Non A, Non B | 54 | 55 | N | 1,460 | 988 | N |
| Unspecified | 177 | 165 | 197 | 3,478 | 3,706 | 4,413 |
| Legionellosis | 13 | 6 | N | 320 | 203 | N |
| Leprosy | 7 | 2 | 3 | 117 | 85 | 77 |
| Malaria | 14 | 36 | 26 | 293 | 408 | 408 |
| Measles: Total | 57 | 66 | 570 | 915 | 758 | 9,488 |
| Indigenous | 47 | N | N | 752 | N | N |
| Imported* | 10 | N | N | 163 | N | N |
| Meningococcal infections: Total | 69 | 80 | 56 | 1,522 | 1,628 | 1,465 |
| Civilian | 69 | 80 | 56 | 1,507 | 1,621 | 1,455 |
| Military | - | - | - | 15 | 7 | 10 |
| Mumps | 106 | 77 | 213 | 1,930 | 3,472 | 6,046 |
| Pertussis | 19 | 17 | 17 | 738 | 480 | 480 |
| Rubella (German measles) | 95 | 83 | 99 | 611 | 1,491 | 2,570 |
| Syphilis (Primary & Secondary): Civilian | 563 | 525 | 456 | 14,035 | 14,470 | 11,333 |
| Military | 6 | 2 | 6 | 206 | 170 | 144 |
| Toxic-shock syndrome | 5 | N | N | 187 | N | N |
| Tuberculosis | 543 | 602 | 602 | 9,865 | 11,087 | 11,558 |
| Tularemia | 12 | 11 | 7 | 89 | 64 | 64 |
| Typhoid fever | 3 | 10 | 9 | 148 | 165 | 191 |
| Typhus fever, tick-borne (RMSF) | 26 | 57 | 57 | 184 | 249 | 223 |
| Rabies, animal | 110 | 117 | 117 | 2,815 | 2,710 | 2,710 |

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

| | Cum. 1983 | | Cum. 1983 |
|---|---|---|---|
| Anthrax | - | Plague (Ariz. 2) | 7 |
| Botulism: Foodborne | 9 | Poliomyelitis: Total | 1 |
| Infant (Conn. 1) | 30 | Paralytic | 1 |
| Other | - | Psittacosis (N.Y. City 1, Minn. 15) | 53 |
| Brucellosis (Ohio 1, Miss. 1, Tex. 1) | 60 | Rabies, human | 2 |
| Cholera | - | Tetanus (Md. 1, Ga. 2, Fla. 1, Ala. 1, Ark. 1) | 28 |
| Congenital rubella syndrome (Calif. 1) | 10 | Trichinosis | 17 |
| Diphtheria | - | Typhus fever, flea-borne (endemic, murine) | 13 |
| Leptospirosis (Mo. 1) | 13 | | |

*Ten of the 57 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 June 11, 1983 and June 12, 1982 (23rd week)

| Reporting Area | Aseptic Meningitis | Encephalitis | | Gonorrhea (Civilian) | | Hepatitis (Viral), by type | | | | Legionellosis | Leprosy | Malaria |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Primary | Post-infectious | | | A | B | NA,NB | Unspecified | | | |
| | 1983 | Cum. 1983 | Cum. 1983 | Cum. 1983 | Cum. 1982 | 1983 | 1983 | 1983 | 1983 | 1983 | Cum. 1983 | Cum. 1983 |
| UNITED STATES | 145 | 366 | 35 | 383,617 | 411,233 | 387 | 428 | 54 | 177 | 13 | 117 | 293 |
| NEW ENGLAND | 4 | 16 | - | 9,826 | 9,758 | 8 | 18 | 1 | 12 | 1 | 3 | 12 |
| Maine | - | - | - | 517 | 443 | - | 2 | 1 | - | - | - | - |
| N.H. | - | 1 | - | 276 | 340 | - | - | - | - | - | 2 | - |
| Vt. | - | 1 | - | 177 | 196 | - | - | - | - | - | - | 1 |
| Mass. | 3 | 8 | - | 4,316 | 4,526 | 4 | 4 | - | 8 | 1 | - | 4 |
| R.I. | 1 | - | - | 569 | 661 | 1 | 1 | - | - | - | - | 2 |
| Conn. | - | 6 | - | 3,971 | 3,592 | 3 | 11 | - | 4 | - | 1 | 5 |
| MID ATLANTIC | 24 | 50 | 3 | 49,254 | 49,606 | 72 | 86 | 4 | 20 | 3 | 18 | 42 |
| Upstate N.Y. | 4 | 13 | - | 7,166 | 7,852 | 7 | 17 | - | 1 | - | - | 13 |
| N.Y. City | 6 | 7 | - | 20,421 | 21,083 | 42 | 18 | - | 6 | 3 | 17 | 13 |
| N.J. | 4 | 12 | - | 9,536 | 8,884 | 4 | 20 | 1 | 9 | - | - | 13 |
| Pa. | 10 | 18 | 3 | 12,131 | 11,787 | 19 | 31 | 3 | 4 | - | 1 | 3 |
| E.N. CENTRAL | 13 | 65 | 8 | 50,961 | 58,652 | 27 | 33 | 6 | 11 | 7 | 4 | 13 |
| Ohio | 4 | 26 | 5 | 13,989 | 16,317 | 6 | 10 | - | 2 | 6 | 1 | 2 |
| Ind. | 4 | 8 | 1 | 6,235 | 6,416 | 7 | 10 | 3 | 5 | - | - | - |
| Ill. | - | - | - | 11,469 | 16,856 | 1 | 1 | - | - | - | 2 | 2 |
| Mich. | 5 | 27 | - | 14,539 | 13,706 | 13 | 12 | 3 | 4 | 1 | 1 | 8 |
| Wis. | - | 4 | 2 | 4,729 | 5,357 | - | - | - | - | - | - | 1 |
| W.N. CENTRAL | 1 | 42 | 4 | 18,025 | 19,128 | 9 | 18 | 2 | 5 | - | 3 | 13 |
| Minn. | - | 18 | 1 | 2,566 | 2,849 | 1 | 4 | 1 | - | - | 2 | 4 |
| Iowa | - | 18 | - | 2,072 | 2,059 | - | 2 | - | - | - | - | 2 |
| Mo. | - | 2 | - | 8,612 | 8,777 | 1 | 11 | 1 | 4 | - | - | 2 |
| N. Dak. | - | - | - | 172 | 267 | - | - | - | - | - | - | 1 |
| S. Dak. | - | - | 1 | 504 | 538 | 6 | - | - | - | - | - | - |
| Nebr. | - | 3 | - | 1,087 | 1,217 | - | - | - | 1 | - | - | 1 |
| Kans. | 1 | 1 | 2 | 3,012 | 3,421 | 1 | 1 | - | - | - | 1 | 3 |
| S. ATLANTIC | 21 | 61 | 12 | 99,155 | 106,518 | 34 | 95 | 9 | 5 | - | 6 | 41 |
| Del. | - | - | - | 1,807 | 1,620 | 1 | 1 | - | - | - | - | - |
| Md. | 2 | 11 | - | 12,558 | 13,300 | 2 | 14 | 4 | 2 | - | 1 | 6 |
| D.C. | - | - | - | 6,827 | 5,604 | - | 1 | - | - | - | - | 4 |
| Va. | 2 | 18 | 1 | 8,290 | 9,066 | 5 | 8 | 1 | 2 | - | - | 6 |
| W. Va. | 2 | - | - | 1,031 | 1,184 | 1 | 1 | 1 | - | - | - | 1 |
| N.C. | 7 | 16 | - | 14,282 | 16,730 | 1 | 14 | - | 1 | - | - | 1 |
| S.C. | 2 | 2 | - | 9,365 | 10,060 | 5 | 16 | 1 | - | - | - | 5 |
| Ga. | - | 3 | - | 21,469 | 20,509 | 2 | 15 | - | - | - | 1 | 4 |
| Fla. | 6 | 11 | 11 | 23,526 | 28,445 | 17 | 25 | 2 | - | - | 4 | 14 |
| E.S. CENTRAL | 7 | 13 | - | 32,354 | 34,736 | 18 | 17 | 1 | - | - | - | 3 |
| Ky. | 3 | - | - | 3,862 | 4,647 | 13 | - | - | - | - | - | - |
| Tenn. | - | 1 | - | 13,037 | 13,271 | 1 | 11 | 1 | - | - | - | - |
| Ala. | 3 | 12 | - | 10,076 | 10,670 | 3 | 3 | - | - | - | - | 1 |
| Miss. | 1 | - | - | 5,379 | 6,148 | 1 | 3 | - | - | - | - | 2 |
| W.S. CENTRAL | 41 | 37 | 1 | 54,897 | 57,103 | 69 | 43 | - | 74 | - | 13 | 35 |
| Ark. | 1 | 4 | - | 4,090 | 4,755 | 1 | - | - | 5 | - | - | 1 |
| La. | 1 | 3 | - | 10,249 | 10,008 | 6 | 6 | - | 5 | - | 1 | 4 |
| Okla. | 16 | 10 | 1 | 6,421 | 6,187 | 4 | 7 | - | 1 | - | - | 8 |
| Tex. | 23 | 20 | - | 34,137 | 36,153 | 58 | 30 | - | 63 | - | 12 | 22 |
| MOUNTAIN | 4 | 21 | 3 | 11,929 | 14,255 | 31 | 17 | 7 | 10 | 1 | 11 | 15 |
| Mont. | - | - | - | 508 | 597 | - | - | - | 2 | 1 | - | - |
| Idaho | - | - | - | 553 | 674 | 1 | - | - | - | - | - | 2 |
| Wyo. | - | 2 | - | 311 | 398 | - | 1 | - | - | - | - | 1 |
| Colo. | 2 | 10 | - | 3,337 | 3,792 | 8 | 1 | - | 2 | - | 2 | 5 |
| N. Mex. | - | 1 | - | 1,444 | 1,784 | 1 | 1 | - | - | - | - | 3 |
| Ariz. | 1 | 1 | 3 | 3,312 | 3,951 | 16 | 11 | 7 | 5 | - | 9 | 3 |
| Utah | 1 | 7 | - | 588 | 655 | 3 | 2 | - | - | - | - | 1 |
| Nev. | - | - | - | 1,876 | 2,404 | 2 | 1 | - | 1 | - | - | - |
| PACIFIC | 30 | 61 | 4 | 57,216 | 61,477 | 119 | 101 | 24 | 40 | 1 | 59 | 119 |
| Wash. | - | 4 | 1 | 4,130 | 5,053 | 7 | 6 | 5 | 1 | - | 7 | 2 |
| Oreg. | - | - | 1 | 2,903 | 3,405 | 20 | 4 | 1 | 3 | 1 | 1 | 4 |
| Calif. | 19 | 53 | 2 | 47,576 | 50,380 | 89 | 91 | 17 | 35 | - | 35 | 113 |
| Alaska | - | - | - | 1,439 | 1,556 | 2 | - | - | - | - | - | - |
| Hawaii | 11 | 4 | - | 1,168 | 1,083 | 1 | - | 1 | 1 | - | 16 | - |
| Guam | U | - | - | 65 | 62 | U | U | U | U | U | - | 2 |
| P.R. | - | - | 1 | 1,324 | 1,295 | - | 5 | - | 5 | - | - | 1 |
| V.I. | U | - | - | 113 | 100 | U | U | U | U | U | - | - |
| Pac. Trust Terr. | U | - | - | - | 204 | U | U | U | U | U | - | - |

N: Not notifiable U: Unavailable

## TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending June 11, 1983 and June 12, 1982 (23rd week)

| Reporting Area | Measles (Rubeola) | | | | | Menin-gococcal Infections | Mumps | | | Pertussis | | | Rubella | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Indigenous | | Imported* | | Total | | | | | | | | | | |
| | 1983 | Cum. 1983 | 1983 | Cum. 1983 | Cum. 1982 | Cum. 1983 | 1983 | Cum. 1983 | Cum. 1982 | 1983 | Cum. 1983 | Cum. 1982 | 1983 | Cum. 1983 | Cum. 1982 |
| UNITED STATES | 47 | 752 | 10 | 163 | 758 | 1,522 | 106 | 1,930 | 3,472 | 19 | 738 | 480 | 95 | 611 | 1,491 |
| NEW ENGLAND | - | 2 | - | 8 | 9 | 75 | 4 | 76 | 137 | 3 | 24 | 29 | - | 8 | 11 |
| Maine | - | - | - | - | - | 7 | 1 | 15 | 32 | - | - | 3 | - | - | - |
| N.H. | - | - | - | 1 | 1 | 2 | 1 | 15 | 13 | 2 | 4 | 4 | - | 2 | 8 |
| Vt. | - | - | - | - | 2 | 3 | 1 | 9 | 5 | - | 3 | 1 | - | 3 | - |
| Mass. | - | 2 | - | - | 2 | 27 | - | 17 | 63 | 1 | 15 | 10 | - | 3 | - |
| R.I. | - | - | - | - | - | 6 | - | 9 | 12 | - | 2 | 9 | - | - | 1 |
| Conn. | - | - | - | 7 | 4 | 30 | 1 | 11 | 12 | - | - | 2 | - | - | 2 |
| MID ATLANTIC | 13 | 24 | 2 | 19 | 107 | 251 | 4 | 139 | 223 | 4 | 216 | 78 | 76 | 115 | 76 |
| Upstate N.Y. | - | - | 2† | 6 | 79 | 84 | 3 | 54 | 45 | 3 | 65 | 48 | 1 | 19 | 37 |
| N.Y. City | 13 | 24 | - | 9 | 20 | 40 | 1 | 11 | 34 | 1 | 27 | 16 | 75 | 82 | 26 |
| N.J. | - | - | - | 1 | 4 | 38 | - | 26 | 32 | - | 11 | 7 | - | 3 | 13 |
| Pa. | - | - | - | 3 | 4 | 89 | - | 48 | 112 | - | 113 | 7 | - | 11 | - |
| E.N. CENTRAL | 27 | 450 | - | 51 | 43 | 254 | 75 | 981 | 1,976 | 1 | 170 | 144 | 2 | 82 | 139 |
| Ohio | 21 | 34 | - | 13 | - | 91 | 60 | 491 | 1,455 | 1 | 57 | 33 | - | 1 | - |
| Ind. | - | 325 | - | - | 2 | 29 | 1 | 23 | 33 | - | 14 | 11 | 1 | 15 | 24 |
| Ill. | 6 | 91 | - | 33 | 16 | 64 | - | 106 | 148 | - | 77 | 69 | - | 37 | 50 |
| Mich. | - | - | - | 5 | 25 | 52 | 14 | 306 | 265 | - | 11 | 8 | 1 | 13 | 42 |
| Wis. | - | - | - | - | - | 18 | - | 55 | 75 | - | 11 | 23 | - | 16 | 23 |
| W.N. CENTRAL | - | 2 | - | - | 31 | 91 | 4 | 125 | 384 | 1 | 51 | 24 | - | 33 | 51 |
| Minn. | - | - | - | - | - | 13 | 3 | 20 | 276 | - | 19 | 8 | - | 5 | 2 |
| Iowa | - | - | - | - | - | 10 | - | 35 | 29 | - | 5 | 3 | - | - | - |
| Mo. | - | 2 | - | - | 2 | 47 | 1 | 20 | 7 | - | 8 | 7 | - | 4 | 38 |
| N. Dak. | - | - | - | - | - | 2 | - | - | - | - | 1 | - | - | - | - |
| S. Dak. | - | - | - | - | - | 4 | - | - | 1 | - | 2 | 3 | - | - | 1 |
| Nebr. | - | - | - | - | - | 1 | - | 2 | - | - | - | 1 | - | - | - |
| Kans. | - | - | - | - | 29 | 14 | - | 48 | 71 | 1 | 16 | 2 | - | 24 | 10 |
| S. ATLANTIC | 5 | 149 | - | 23 | 33 | 326 | 5 | 119 | 201 | 6 | 99 | 53 | 1 | 67 | 57 |
| Del. | - | - | - | - | - | - | - | 5 | 6 | - | - | 3 | - | - | 1 |
| Md. | - | - | - | 4 | 2 | 36 | 2 | 23 | 20 | - | 8 | 2 | - | 1 | 31 |
| D.C. | - | - | - | - | 1 | 4 | - | - | - | - | - | 1 | - | - | - |
| Va. | 1 | 11 | - | 11 | 14 | 44 | - | 20 | 30 | 1 | 38 | 8 | - | 1 | 8 |
| W. Va. | - | - | - | - | 2 | 3 | 2 | 25 | 79 | 1 | 4 | 3 | - | - | 1 |
| N.C. | - | - | - | - | - | 65 | - | 4 | 9 | - | 5 | 8 | - | 6 | 1 |
| S.C. | - | - | - | 4 | - | 37 | - | 6 | 11 | 1 | 7 | 6 | - | - | 1 |
| Ga. | - | 6 | - | - | - | 53 | 1 | 36 | 9 | 1 | 24 | 9 | - | 10 | 4 |
| Fla. | 4 | 132 | - | 4 | 14 | 84 | - | - | 37 | 2 | 13 | 13 | 1 | 49 | 10 |
| E.S. CENTRAL | - | - | - | 5 | 5 | 93 | 1 | 35 | 28 | - | 6 | 14 | - | 8 | 37 |
| Ky. | - | - | - | 1 | 1 | 19 | 1 | 15 | 9 | - | 2 | 2 | - | 7 | 21 |
| Tenn. | - | - | - | - | 4 | 34 | - | 17 | 11 | - | 2 | 5 | - | - | - |
| Ala. | - | - | - | 4 | - | 26 | - | - | 5 | - | 1 | - | - | 1 | - |
| Miss. | - | - | - | - | - | 14 | - | 3 | 3 | - | 1 | 7 | - | - | 16 |
| W.S. CENTRAL | - | 34 | 8 | 32 | 9 | 171 | 4 | 138 | 132 | 1 | 76 | 27 | 3 | 86 | 65 |
| Ark. | - | - | - | 11 | - | 13 | - | 2 | 6 | - | 3 | 2 | - | - | - |
| La. | - | - | 8† | 20 | - | 29 | - | - | 3 | - | 2 | 2 | - | 9 | - |
| Okla. | - | 1 | - | - | - | 20 | - | - | - | - | 42 | 3 | - | - | 3 |
| Tex. | - | 33 | - | 1 | 9 | 109 | 4 | 136 | 123 | 1 | 29 | 20 | 3 | 77 | 62 |
| MOUNTAIN | - | - | - | 2 | 5 | 55 | 1 | 84 | 57 | 2 | 69 | 27 | 2 | 19 | 53 |
| Mont. | - | - | - | - | - | 5 | - | 2 | 3 | - | 1 | - | - | 3 | 4 |
| Idaho | - | - | - | - | - | 5 | - | 5 | 3 | - | 2 | 2 | 2 | 7 | 2 |
| Wyo. | - | - | - | - | - | 1 | - | - | 2 | - | 4 | 1 | - | 1 | 5 |
| Colo. | - | - | - | 2 | 5 | 24 | - | 10 | 13 | 1 | 43 | 7 | - | - | 5 |
| N. Mex. | - | - | - | - | - | 5 | - | - | - | - | 5 | 4 | - | - | 5 |
| Ariz. | - | - | - | - | - | 9 | 1 | 58 | 23 | - | 9 | 12 | - | 4 | 7 |
| Utah | - | - | - | - | - | 6 | - | 6 | 11 | 1 | 5 | 1 | - | 3 | 16 |
| Nev. | - | - | - | - | - | - | - | 3 | 2 | - | - | - | - | 1 | 9 |
| PACIFIC | 2 | 91 | - | 23 | 516 | 206 | 8 | 233 | 334 | 1 | 27 | 84 | 11 | 193 | 1,002 |
| Wash. | - | 1 | - | 3 | 24 | 28 | 2 | 34 | 57 | - | 2 | 14 | - | 6 | 30 |
| Oreg. | - | 5 | - | 2 | - | 33 | - | - | - | - | 5 | 20 | 2 | 11 | 3 |
| Calif. | 2 | 84 | - | 18 | 488 | 139 | 5 | 177 | 265 | 1 | 20 | 50 | 9 | 176 | 962 |
| Alaska | - | - | - | - | 1 | - | - | 9 | 6 | - | - | - | - | - | 1 |
| Hawaii | - | 1 | - | - | 3 | 6 | 1 | 13 | 6 | - | - | - | - | - | 6 |
| Guam | U | - | U | 1 | 5 | 1 | U | - | 3 | U | - | - | U | - | 2 |
| P.R. | - | 77 | - | - | 65 | 8 | 7 | 94 | 39 | - | 7 | 12 | - | 3 | 4 |
| V.I. | U | - | U | 5 | - | - | U | - | - | U | - | - | U | 1 | - |
| Pac. Trust Terr. | U | - | U | - | - | - | U | - | 1 | U | - | - | U | - | - |

*For measles only, imported cases includes both out-of-state and international importations. U: Unavailable †International §Out-of-state

## TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending June 11, 1983 and June 12, 1982 (23rd week)

| Reporting Area | Syphilis (Civilian) (Primary & Secondary) | | Toxic-shock Syndrome | Tuberculosis | | Tula-remia | Typhoid Fever | Typhus Fever (Tick-borne) (RMSF) | Rabies, Animal |
|---|---|---|---|---|---|---|---|---|---|
| | Cum. 1983 | Cum. 1982 | 1983 | 1983 | Cum. 1983 | Cum. 1983 | Cum. 1983 | Cum. 1983 | Cum. 1983 |
| UNITED STATES | 14,035 | 14,470 | 5 | 543 | 9,865 | 89 | 148 | 184 | 2,815 |
| NEW ENGLAND | 307 | 252 | 1 | 8 | 262 | - | 6 | 1 | 8 |
| Maine | 8 | 1 | - | - | 17 | - | - | - | 2 |
| N.H. | 9 | 2 | 1 | 1 | 23 | - | - | - | 1 |
| Vt. | 2 | 1 | - | - | 2 | - | - | - | - |
| Mass. | 190 | 175 | - | 6 | 137 | - | 6 | 1 | 2 |
| R.I. | 10 | 12 | - | - | 20 | - | - | - | - |
| Conn. | 88 | 61 | - | 1 | 63 | - | - | - | 3 |
| MID ATLANTIC | 1,764 | 1,977 | - | 74 | 1,778 | - | 29 | 1 | 83 |
| Upstate N.Y. | 89 | 232 | - | 12 | 292 | - | 4 | - | 34 |
| N.Y. City | 1,061 | 1,173 | - | 31 | 739 | - | 14 | 1 | - |
| N.J. | 360 | 249 | - | 31 | 373 | - | 9 | - | 1 |
| Pa. | 254 | 323 | - | - | 374 | - | 2 | - | 48 |
| E.N. CENTRAL | 651 | 905 | 1 | 76 | 1,294 | 1 | 23 | 16 | 228 |
| Ohio | 201 | 136 | - | 6 | 199 | - | 6 | 8 | 28 |
| Ind. | 71 | 93 | - | - | 91 | - | 1 | - | 17 |
| Ill. | 248 | 498 | - | 37 | 584 | - | 9 | 3 | 125 |
| Mich. | 96 | 128 | 1 | 27 | 351 | 1 | 7 | 3 | 2 |
| Wis. | 35 | 50 | - | 6 | 69 | - | - | 2 | 56 |
| W.N. CENTRAL | 171 | 279 | - | 11 | 315 | 26 | 7 | 11 | 424 |
| Minn. | 73 | 54 | - | 5 | 61 | - | 1 | - | 84 |
| Iowa | 5 | 14 | - | - | 27 | - | - | - | 109 |
| Mo. | 59 | 167 | - | 3 | 167 | 20 | 1 | 7 | 51 |
| N. Dak. | 1 | 4 | - | - | 3 | - | - | 1 | 33 |
| S. Dak. | 8 | - | - | 1 | 22 | - | - | 2 | 70 |
| Nebr. | 11 | 8 | - | - | 8 | 2 | - | - | 37 |
| Kans. | 14 | 32 | - | 2 | 27 | 4 | 5 | 1 | 40 |
| S. ATLANTIC | 3,706 | 3,951 | 1 | 94 | 1,965 | 13 | 20 | 63 | 982 |
| Del. | 17 | 8 | - | 1 | 15 | - | - | - | 1 |
| Md. | 235 | 224 | - | 13 | 158 | 5 | 4 | 6 | 405 |
| D.C. | 157 | 243 | - | 2 | 78 | - | - | - | 1 |
| Va. | 253 | 278 | - | 8 | 193 | 1 | 4 | 13 | 361 |
| W. Va. | 12 | 14 | 1 | 3 | 71 | - | 2 | 4 | 70 |
| N.C. | 350 | 278 | - | 11 | 264 | 6 | 1 | 17 | 8 |
| S.C. | 232 | 195 | - | 12 | 178 | - | 1 | 11 | 14 |
| Ga. | 702 | 815 | - | 15 | 392 | 1 | 1 | 11 | 105 |
| Fla. | 1,748 | 1,896 | - | 29 | 616 | - | 7 | 1 | 17 |
| E.S. CENTRAL | 966 | 1,003 | - | 52 | 940 | 7 | 2 | 11 | 231 |
| Ky. | 57 | 55 | - | 14 | 241 | - | - | 1 | 49 |
| Tenn. | 273 | 269 | - | 13 | 280 | 5 | 1 | 6 | 151 |
| Ala. | 390 | 353 | - | 12 | 239 | - | - | 3 | 31 |
| Miss. | 246 | 326 | - | 13 | 180 | 2 | 1 | 1 | - |
| W.S. CENTRAL | 3,721 | 3,628 | - | 106 | 1,133 | 37 | 13 | 77 | 594 |
| Ark. | 93 | 94 | - | 5 | 120 | 26 | 2 | 10 | 103 |
| La. | 779 | 783 | - | 16 | 174 | 2 | 3 | - | 16 |
| Okla. | 106 | 77 | - | 1 | 126 | 8 | - | 50 | 62 |
| Tex. | 2,743 | 2,674 | - | 84 | 713 | 1 | 8 | 17 | 413 |
| MOUNTAIN | 324 | 363 | - | 10 | 265 | 2 | 7 | 3 | 92 |
| Mont. | 5 | 3 | - | - | 22 | - | 1 | 1 | 66 |
| Idaho | 6 | 18 | - | - | 13 | 1 | - | 1 | - |
| Wyo. | 6 | 10 | - | 1 | 5 | - | - | 1 | 1 |
| Colo. | 76 | 102 | - | 3 | 25 | - | 1 | - | - |
| N. Mex. | 104 | 77 | - | - | 49 | 1 | - | - | 4 |
| Ariz. | 74 | 87 | - | 5 | 119 | - | 3 | - | 21 |
| Utah | 10 | 11 | - | - | 22 | - | 1 | - | - |
| Nev. | 43 | 55 | - | 1 | 10 | - | 1 | - | - |
| PACIFIC | 2,425 | 2,112 | 2 | 112 | 1,913 | 3 | 41 | 1 | 173 |
| Wash. | 71 | 71 | - | 4 | 97 | 2 | 2 | - | 1 |
| Oreg. | 47 | 57 | 1 | 2 | 83 | - | - | - | - |
| Calif. | 2,270 | 1,920 | 1 | 104 | 1,589 | 1 | 38 | 1 | 165 |
| Alaska | 7 | 7 | - | - | 25 | - | - | - | 7 |
| Hawaii | 30 | 57 | - | 2 | 119 | - | 1 | - | - |
| Guam | - | 1 | U | U | 2 | - | - | - | - |
| P.R. | 400 | 273 | - | - | 182 | - | - | - | 25 |
| V.I. | 8 | 7 | U | U | 1 | - | - | - | - |
| Pac. Trust Terr. | - | - | U | U | - | - | - | - | - |

U: Unavailable

## TABLE IV. Deaths in 121 U.S. cities,* week ending June 11, 1983 (23rd week)

| Reporting Area | All Causes, By Age (Years) | | | | | | P&I** Total |
|---|---|---|---|---|---|---|---|
| | All Ages | ≥65 | 45-64 | 25-44 | 1-24 | <1 | |
| NEW ENGLAND | 610 | 430 | 134 | 15 | 14 | 17 | 37 |
| Boston, Mass. | 170 | 110 | 44 | 4 | 6 | 6 | 14 |
| Bridgeport, Conn. | 44 | 32 | 10 | - | 1 | 1 | 1 |
| Cambridge, Mass. | 25 | 23 | 2 | - | - | - | 1 |
| Fall River, Mass. | 18 | 14 | 4 | - | - | - | - |
| Hartford, Conn. | 47 | 31 | 11 | 2 | 1 | 2 | - |
| Lowell, Mass. | 30 | 21 | 7 | 1 | 1 | - | 1 |
| Lynn, Mass. | 17 | 13 | 4 | - | - | - | 1 |
| New Bedford, Mass. | 26 | 18 | 6 | 1 | - | 1 | 1 |
| New Haven, Conn. | 46 | 34 | 5 | 4 | 1 | 2 | 2 |
| Providence, R.I. | 63 | 46 | 12 | 1 | - | 4 | 4 |
| Somerville, Mass. | 6 | 5 | 1 | - | - | - | - |
| Springfield, Mass. | 41 | 25 | 14 | 2 | - | - | 6 |
| Waterbury, Conn. | 29 | 23 | 4 | - | 2 | - | 2 |
| Worcester, Mass. | 48 | 35 | 10 | - | 2 | 1 | 4 |
| MID. ATLANTIC | 2,343 | 1,542 | 496 | 179 | 66 | 59 | 99 |
| Albany, N.Y. | 54 | 33 | 14 | 4 | 1 | 2 | 1 |
| Allentown, Pa. | 20 | 15 | 5 | - | - | - | - |
| Buffalo, N.Y. | 133 | 88 | 28 | 3 | 8 | 6 | 11 |
| Camden, N.J. | 47 | 33 | 8 | 3 | 2 | 1 | 1 |
| Elizabeth, N.J. | 26 | 19 | 7 | - | - | - | 3 |
| Erie, Pa.† | 55 | 42 | 8 | 3 | 1 | 1 | 3 |
| Jersey City, N.J. | 37 | 28 | 5 | 1 | 1 | 2 | 2 |
| N.Y. City, N.Y. | 1,397 | 896 | 290 | 134 | 40 | 37 | 46 |
| Newark, N.J. § | 65 | 60 | - | 1 | 2 | 1 | 6 |
| Paterson, N.J. | 25 | 13 | 9 | 1 | 2 | - | 1 |
| Philadelphia, Pa.† | 94 | 59 | 24 | 5 | 2 | 4 | 7 |
| Pittsburgh, Pa.† | 55 | 28 | 21 | 3 | 1 | 2 | 3 |
| Reading, Pa. | 25 | 18 | 5 | 2 | - | - | 2 |
| Rochester, N.Y. | 94 | 63 | 23 | 6 | 1 | 1 | 7 |
| Schenectady, N.Y. | 21 | 16 | 2 | 3 | - | - | - |
| Scranton, Pa.† | 24 | 16 | 8 | - | - | - | - |
| Syracuse, N.Y. | 91 | 58 | 23 | 6 | 2 | 2 | 1 |
| Trenton, N.J. | 35 | 25 | 7 | 1 | 2 | - | - |
| Utica, N.Y. | 20 | 13 | 7 | - | - | - | 4 |
| Yonkers, N.Y. | 25 | 19 | 2 | 3 | 1 | - | 1 |
| E.N. CENTRAL | 2,257 | 1,464 | 538 | 129 | 68 | 58 | 78 |
| Akron, Ohio | 61 | 41 | 13 | 5 | 1 | 1 | - |
| Canton, Ohio | 40 | 29 | 9 | 2 | - | - | 3 |
| Chicago, Ill | 536 | 329 | 155 | 30 | 13 | 9 | 13 |
| Cincinnati, Ohio | 184 | 126 | 48 | 4 | 5 | 1 | 20 |
| Cleveland, Ohio | 146 | 95 | 36 | 8 | 3 | 4 | - |
| Columbus, Ohio | 130 | 80 | 25 | 13 | 4 | 8 | 7 |
| Dayton, Ohio | 104 | 65 | 28 | 3 | 4 | 4 | 1 |
| Detroit, Mich. | 279 | 157 | 79 | 26 | 14 | 3 | 3 |
| Evansville, Ind. | 30 | 24 | 6 | - | - | - | - |
| Fort Wayne, Ind. | 60 | 44 | 8 | 3 | 2 | 3 | 4 |
| Gary, Ind. | 11 | 7 | 4 | - | - | - | - |
| Grand Rapids, Mich. | 66 | 43 | 13 | 2 | 4 | 4 | 2 |
| Indianapolis, Ind. | 165 | 104 | 34 | 13 | 7 | 7 | 3 |
| Madison, Wis. | 40 | 25 | 12 | 1 | 2 | - | 4 |
| Milwaukee, Wis. | 140 | 104 | 24 | 4 | 3 | 5 | 7 |
| Peoria, Ill. | 41 | 26 | 8 | 3 | 2 | 2 | 3 |
| Rockford, Ill. | 40 | 32 | 3 | 3 | - | 2 | 3 |
| South Bend, Ind. | 45 | 32 | 10 | 2 | 1 | - | - |
| Toledo, Ohio | 91 | 66 | 17 | 4 | 1 | 3 | 4 |
| Youngstown, Ohio | 48 | 35 | 6 | 3 | 2 | 2 | 1 |
| W.N. CENTRAL | 775 | 525 | 156 | 40 | 18 | 35 | 43 |
| Des Moines, Iowa | 77 | 45 | 22 | 5 | 1 | 4 | 7 |
| Duluth, Minn. | 34 | 25 | 5 | - | 2 | 2 | 2 |
| Kansas City, Kans. | 29 | 16 | 9 | 2 | 1 | 1 | - |
| Kansas City, Mo. | 108 | 79 | 22 | 4 | 1 | 1 | 5 |
| Lincoln, Nebr. | 28 | 20 | 6 | 1 | - | 1 | 1 |
| Minneapolis, Minn. | 80 | 55 | 12 | 7 | 3 | 3 | 5 |
| Omaha, Nebr. | 85 | 55 | 19 | 6 | 1 | 4 | 6 |
| St. Louis, Mo. | 186 | 128 | 33 | 10 | 7 | 8 | 7 |
| St. Paul, Minn. | 62 | 46 | 10 | 2 | 2 | 2 | 3 |
| Wichita, Kans. | 86 | 56 | 18 | 3 | - | 9 | 7 |

| Reporting Area | All Causes, By Age (Years) | | | | | | P&I** Total |
|---|---|---|---|---|---|---|---|
| | All Ages | ≥65 | 45-64 | 25-44 | 1-24 | <1 | |
| S. ATLANTIC | 1,227 | 779 | 278 | 90 | 39 | 41 | 56 |
| Atlanta, Ga. | 145 | 91 | 32 | 13 | 8 | 1 | 5 |
| Baltimore, Md. | 130 | 80 | 31 | 7 | 4 | 8 | 1 |
| Charlotte, N.C. | 48 | 29 | 13 | 2 | 1 | 3 | 1 |
| Jacksonville, Fla. | 93 | 47 | 28 | 9 | 2 | 7 | 4 |
| Miami, Fla. | 225 | 144 | 53 | 19 | 5 | 4 | 9 |
| Norfolk, Va. | 55 | 30 | 13 | 4 | 5 | 3 | 2 |
| Richmond, Va. | 86 | 61 | 18 | 7 | - | - | 9 |
| Savannah, Ga. | 46 | 25 | 10 | 4 | 3 | 4 | 3 |
| St. Petersburg, Fla. | 74 | 61 | 8 | 1 | - | 4 | 6 |
| Tampa, Fla. | 87 | 63 | 17 | 4 | - | 3 | 6 |
| Washington, D.C. | 185 | 120 | 40 | 15 | 8 | 2 | 8 |
| Wilmington, Del. | 53 | 28 | 15 | 5 | 3 | 2 | 2 |
| E.S. CENTRAL | 688 | 442 | 165 | 30 | 26 | 25 | 42 |
| Birmingham, Ala. | 117 | 76 | 29 | 3 | 6 | 3 | 4 |
| Chattanooga, Tenn. | 59 | 40 | 10 | 5 | 1 | 3 | 3 |
| Knoxville, Tenn. | 44 | 31 | 10 | 1 | 1 | 1 | - |
| Louisville, Ky. | 108 | 76 | 22 | 3 | 3 | 4 | 14 |
| Memphis, Tenn. | 130 | 80 | 26 | 7 | 9 | 8 | 8 |
| Mobile, Ala. | 66 | 42 | 17 | 4 | 3 | - | 2 |
| Montgomery, Ala. | 36 | 23 | 10 | - | 1 | 2 | - |
| Nashville, Tenn. | 128 | 74 | 41 | 7 | 2 | 4 | 11 |
| W.S. CENTRAL | 1,293 | 720 | 339 | 113 | 71 | 50 | 57 |
| Austin, Tex. | 48 | 32 | 8 | 4 | 4 | - | 3 |
| Baton Rouge, La. | 51 | 35 | 8 | 5 | 2 | 1 | 5 |
| Corpus Christi, Tex. | 46 | 34 | 7 | 2 | - | 3 | - |
| Dallas, Tex. | 217 | 110 | 64 | 22 | 12 | 9 | 4 |
| El Paso, Tex. | 69 | 33 | 20 | 9 | 5 | 2 | 4 |
| Fort Worth, Tex. | 74 | 49 | 16 | 3 | 3 | 3 | 6 |
| Houston, Tex. | 260 | 120 | 78 | 28 | 26 | 8 | 6 |
| Little Rock, Ark. | 92 | 63 | 19 | 6 | 1 | 3 | 6 |
| New Orleans, La. | 137 | 66 | 45 | 11 | 4 | 11 | - |
| San Antonio, Tex. | 160 | 92 | 40 | 13 | 10 | 5 | 11 |
| Shreveport, La. | 44 | 28 | 8 | 6 | - | 2 | 3 |
| Tulsa, Okla. | 95 | 58 | 26 | 4 | 4 | 3 | 9 |
| MOUNTAIN | 621 | 365 | 139 | 59 | 36 | 22 | 15 |
| Albuquerque, N.Mex. | 75 | 39 | 21 | 8 | 5 | 2 | 2 |
| Colo. Springs, Colo. | 34 | 27 | 4 | 2 | 1 | - | 4 |
| Denver, Colo. | 114 | 64 | 24 | 8 | 10 | 8 | 2 |
| Las Vegas, Nev. | 87 | 29 | 25 | 22 | 9 | 2 | 2 |
| Ogden, Utah | 20 | 14 | 6 | - | - | - | 1 |
| Phoenix, Ariz. | 133 | 91 | 29 | 6 | 4 | 3 | 2 |
| Pueblo, Colo. | 29 | 20 | 5 | 2 | 2 | - | - |
| Salt Lake City, Utah | 50 | 31 | 6 | 6 | 2 | 5 | - |
| Tucson, Ariz. | 79 | 50 | 19 | 5 | 3 | 2 | 2 |
| PACIFIC | 1,970 | 1,322 | 376 | 145 | 73 | 51 | 103 |
| Berkeley, Calif. | 26 | 19 | 6 | 1 | - | - | - |
| Fresno, Calif. | 85 | 61 | 16 | 4 | 2 | 2 | 8 |
| Glendale, Calif. | 33 | 27 | 5 | - | - | 1 | 2 |
| Honolulu, Hawaii | 36 | 22 | 11 | 1 | 1 | 1 | 6 |
| Long Beach, Calif. | 90 | 65 | 19 | 6 | - | - | 4 |
| Los Angeles, Calif. | 588 | 369 | 117 | 58 | 30 | 14 | 18 |
| Oakland, Calif. | 89 | 60 | 21 | 5 | 2 | 1 | 5 |
| Pasadena, Calif. | 35 | 25 | 6 | 2 | 2 | - | 2 |
| Portland, Oreg. | 136 | 94 | 20 | 10 | 6 | 6 | 7 |
| Sacramento, Calif. | 74 | 46 | 16 | 4 | 4 | 3 | 11 |
| San Diego, Calif. | 167 | 112 | 31 | 12 | 9 | 1 | 18 |
| San Francisco, Calif. | 181 | 129 | 28 | 16 | 2 | 6 | 4 |
| San Jose, Calif. | 135 | 90 | 25 | 7 | 6 | 7 | 10 |
| Seattle, Wash. | 159 | 115 | 27 | 10 | 4 | 3 | 3 |
| Spokane, Wash. | 63 | 40 | 13 | 5 | 3 | 2 | 1 |
| Tacoma, Wash. | 73 | 48 | 15 | 4 | 2 | 4 | 4 |
| TOTAL | 11,784†† | 7,589 | 2,621 | 800 | 411 | 358 | 530 |

* 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.

†† Total includes unknown ages.

§ Data not available. Figures are estimates based on average of past 4 weeks.

*Pertussis – Continued*

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## Niacin Intoxication from Pumpernickel Bagels — New York

On April 27, 1983, 14 (20%) of 69 persons attending a brunch had acute onset of rash, pruritis, and sensation of warmth. The illness was of relatively short duration, with an incubation period of approximately 30 minutes after consumption of one or more pumpernickel bagels served at the brunch. Of 25 persons who ate the bagels, 14 (56%) became ill, whereas none of the 44 persons who did not eat pumpernickel bagels became ill. The bagels had been produced at a local bagel factory from a batch of dough originally prepared on April 23.

A review of reports from the hospital emergency room serving the area revealed that an emergency-room visit was made by one person with similar symptoms on April 24 and by two other persons on April 27. All three had eaten pumpernickel bagels made from the same batch of dough.

Because the pumpernickel bagels were very light in color, the ingredients were suspected. Investigation revealed that, in an attempt to enrich the pumpernickel flour, a large quantity of niacin had been added, apparently from an improperly labeled container. Laboratory studies revealed 60 times the normal level of niacin in the pumpernickel flour. On the basis of these data, each bagel contained approximately 190 mg of niacin; the recommended dietary allowance for niacin is 6.6 mg/1000 calories or about 13 mg/day for the average adult (*1*). Measures have been taken to assure proper labeling of all ingredient containers in the bagel factory.

*Reported by J Campana, S Redmond, MD, JL Nitzkin, MD, Monroe County Health Dept, C Reiffler, MD, Student Health Svcs, University of Rochester, K Martin, MD, Emergency Dept, The Genesee Hospital, Rochester, D Eiseman, New York State Dept of Agriculture and Markets, J Guzewich, R Rothenberg, MD, State Epidemiologist, New York State Dept of Health; Div of Field Svcs, Epidemiology Program Office, Epidemiology Br, Div of Nutrition, Center for Health Promotion and Education, CDC.*

**Editorial Note:** Acute ingestion of excessive amounts of niacin (nicotinic acid, one of the B-complex vitamins), such as in this instance, can produce an acute syndrome of cutaneous vasodilation of the face and trunk, pruritus and sensation of heat (*2*). Gastrointestinal distress has also been noted. Although alarming, these symptoms usually resolve spontaneously over several hours without sequelae. Outbreaks of this syndrome have previously been reported in association with inappropriate food additive use (*3*) or with mislabeled food ingredient containers (*4*). An unusual color of the implicated food was also noted in the latter outbreak.

Excessive, chronic use of high doses of niacin, which may occur in persons taking large amounts of vitamins, has been related to the occurrence of hepatitis (*5*).

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*Current Trends*

## Condyloma Acuminatum — United States, 1966-1981

From 1966 to 1981, the estimated number of consultations* for condyloma acuminata (genital and venereal warts) with office-based, private physicians in the United States increased 459%. CDC analysis of data on condylomata collected by the National Disease and Therapeutic Index (NDTI)† shows that the number of consultations rose from 169,000 in 1966 to 946,000 in 1981 (Figure 3). By comparison, in 1981, the number of consultations with private physicians for genital herpes was 295,000; thus, in that year genital and venerealwarts accounted for more than three times as many consultations with private physicians as genital herpes.

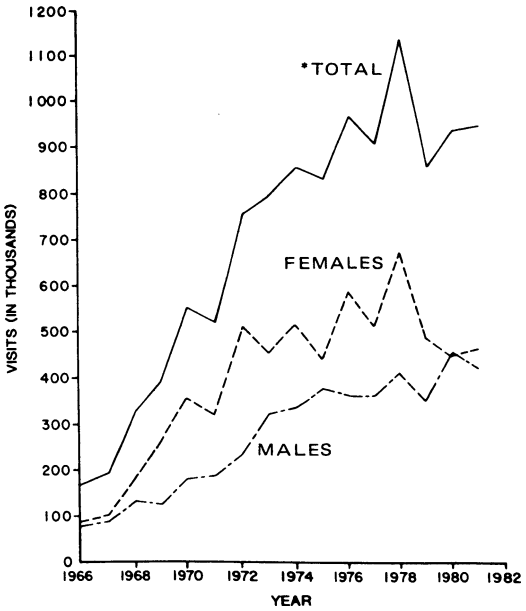
From 1966 to 1978, the number of consultations for condyloma acuminata increased 398% for males and 684% for females. Although the number of visits or calls declined slightly in 1978-1981, this may have been due in part to sampling error. For example, at the 95% confidence level, the associated relative sampling error in the NDTI survey for 900,000 consultations is 22% (range 703,000-1,096,000).

In 1978, the year when consultations for the disease peaked, 62% of all visits and calls were made by females. Except in 1980, more consultations were with females than males during all these years.

*Included are all consultations between patients and sample physicians in an office, hospital, or nursing home or in the form of a house call or telephone conversation.

†The NDTI survey is a national, stratified random sample of patient consultations with physicians in fee-for-service, office-based practice in the continental United States.

**FIGURE 3. Number of visits to private physicians for treatment of genital warts, by year — United States, 1966-1981**




*Includes visits by patients with gender not stated.
Source: National Disease Therapeutic Index, IMS, Inc. Ambler, Pa.

*Condyloma Acuminata — Continued*

Females and males consulted different specialists. Over half the females (54.4%) visited or called obstetrician-gynecologists. For males, the largest percentage (24.4%) of consultations was with dermatologists; general practitioners, internists, and urologists also handled a sizeable percentage (Table 1).

As with other sexually transmitted diseases (STDs), young adults comprised the group most frequently consulting physicians for genital warts. In 1981, more than 65% of such consultations were with persons aged 15-29 years. The highest risk group was the 20- to 24-year age group (33% of total), followed by the 25- to-29-year group (23%). The mode was 23 years.

*Reported by Evaluation and Statistical Svcs Br, Operational Research Br, Div of Venereal Disease Control, Center for Prevention Svcs, CDC.*

**Editorial Note:** Condyloma acuminata are Papillomavirus-induced soft, pink growths that appear singly or in clusters in moist areas around the genitalia and rectum. This disease is one of the most common STDs in the United States. Morbidity and complications associated with it can be severe. One study has shown a positive epidemiologic association between genital warts and cervical carcinoma (*2*).

Because the NDTI survey does not include visits to public health, hospital outpatient, or military medical facilities, it is impossible to estimate the total number of consultations in the United States for genital warts. The data collected do indicate, however, the relative importance of various STDs among persons visiting private practitioners.

A limited study by CDC of visits to public clinics for STDs supports the NDTI findings that visits for genital warts may surpass those for genital herpes in this country (*1*). For males attending public STD clinics, 4.3 cases of venereal warts were diagnosed for every 100 visits, compared with 3.4 cases of genital herpes and 24.0 cases of gonorrhea. For every 100 visits by females, 4.0 cases of venereal warts were diagnosed, compared with 2.1 cases of genital herpes and 23.5 cases of gonorrhea.

Unlike the more publicized STDs, such as gonorrhea, syphilis, genital herpes, and genital chlamydia infections, relatively little is known about the epidemiology, microbiology, and complications of genital warts. Although they tend to recur, no specific treatment is available to prevent further episodes. Small condyloma acuminata usually result in dyspareunia and rectal pain, while large condylomata can cause tenesmus and may result in transmission to neonates during childbirth. Such neonatal transmission is thought to cause childhood laryngeal papillomatosis (*3*). Additional studies are needed to better define the epidemiologic relationship between condyloma acuminata and genital malignancies.

The NDTI data show an increased number of consultations for condyloma acuminata during the 1970s. The rate of increase in consultations for genital warts is particularly notable

**TABLE 1. Number of consultations for genital warts by physician specialty — United States, 1981**

| Physician specialty | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | Visits* | % |
| General practitioners | 75,210 | 17.9 | 41,350 | 8.9 | 136,010 | 14.4 |
| OB/GYN | 7,130 | 1.7 | 252,000 | 54.4 | 273,160 | 28.9 |
| Dermatologists | 102,360 | 24.4 | 52,740 | 11.4 | 167,980 | 17.8 |
| General surgeons | 39,340 | 9.4 | 32,600 | 7.0 | 71,940 | 7.6 |
| Internists | 64,020 | 15.3 | 7,340 | 1.6 | 71,360 | 7.5 |
| Urologists | 44,280 | 10.6 | 13,430 | 2.9 | 64,230 | 6.8 |
| Other | 87,070 | 20.8 | 63,760 | 13.8 | 161,590 | 17.1 |
| Total | 419,410 | | 463,220 | | 946,270 | |

*Includes visits by patients with gender not stated.

*Condyloma Acuminata – Continued*

because visits to physicians for all reasons did not increase after 1972, while visits for genital warts continued to rise until 1978. As with some other STDs, this overall increase may be partially due to changing social and demographic factors, including changes in marriage and family institutions, shift in the age pyramid as a result of the "baby-boom," increased urbanization of the American population, and changes in casual and non-marital sexual behavior (*4*).

Diagnostic and therapeutic practices have lowered the incidence of STDs for which laboratory tests can detect asymptomatic or incubating infection and which readily respond to therapy (e.g., syphilis and gonorrhea); however, they have had little influence on the incidence of genital warts. At present, no laboratory tests exist to detect incubating condyloma acuminata; moreover, therapy can be difficult, prolonged, and only marginally efficacious (*5*). These are areas in which research is needed.

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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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