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Coccidioidomycosis — Arizona, 1990–1995

Coccidioidomycosis is a systemic infection caused by the inhalation of airborne arthroconidia from *Coccidioides immitis*, a soil-dwelling fungus found in the southwestern United States, parts of Mexico, and Central and South America (*1*). Clinical manifestations occur in approximately 40% of infected persons and may include mild influenza-like illness; severe pneumonia; and rarely, disseminated disease and death (*2*). During 1990–1995, the number of reported cases of coccidioidomycosis in Arizona increased by 144%. To characterize trends in and the impact of coccidioidomycosis in Arizona, the Arizona Department of Health Services (ADHS) analyzed surveillance, death-certificate, and hospital discharge data. This report summarizes the findings, which indicate that, during 1990–1995, coccidioidomycosis in Arizona disproportionately affected persons aged ≥65 years and persons with human immunodeficiency virus (HIV) infection.

Surveillance

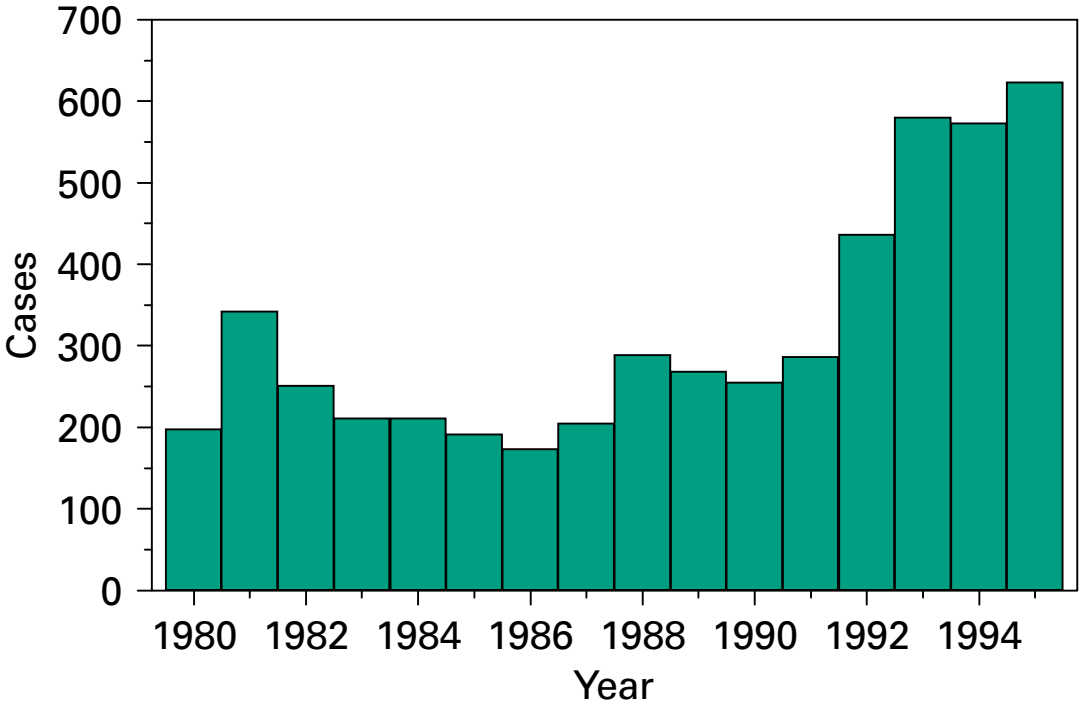
Surveillance data were compiled from the ADHS' General Communicable Disease Reporting System. In 1994, ADHS adopted the surveillance case definition for coccidioidomycosis proposed by the Council of State and Territorial Epidemiologists, which requires the presence of clinically compatible symptoms and laboratory evidence of infection* (*3*). Before 1994, ADHS relied solely on physician diagnosis of coccidioidomycosis and did not require laboratory confirmation. Incidence rates were calculated using 1990 census data adjusted to reflect Arizona's estimated annual population growth.

During 1980–1989, the annual number of reported cases of coccidioidomycosis in Arizona remained relatively stable (median: 211, range: 191–342) (Figure 1). During 1990–1995, a total of 2762 cases of coccidioidomycosis were reported to ADHS, and the annual number of reported cases increased from 255 (7.0 cases per 100,000 population) in 1990 to 623 (14.9 cases per 100,000 population) in 1995. The median age

*The laboratory criteria for diagnosis are cultural, histopathologic, or molecular evidence of the presence of *C. immitis*; a positive serologic test for coccidioidal antibodies in serum or cerebrospinal fluid by 1) detection of coccidioidal immunoglobulin M by immunodiffusion, enzyme immunoassay (EIA) latex agglutination, or tube precipitin or 2) detection of rising titer of coccidioidal immunoglobulin G by immunodiffusion, EIA, or complement fixation; or a coccidioidal skin test conversion from negative to positive after the onset of clinical signs and symptoms.

Coccidioidomycosis — Continued

FIGURE 1. Number of reported cases of coccidioidomycosis,* by year — Arizona, 1980–1995



*In 1994, the Arizona Department of Health Services (ADHS) adopted the surveillance case definition for coccidioidomycosis proposed by the Council of State and Territorial Epidemiologists, which requires the presence of clinically compatible symptoms and laboratory evidence of infection (*3*). Before 1994, ADHS relied solely on physician diagnosis of coccidioidomycosis and did not require laboratory confirmation.

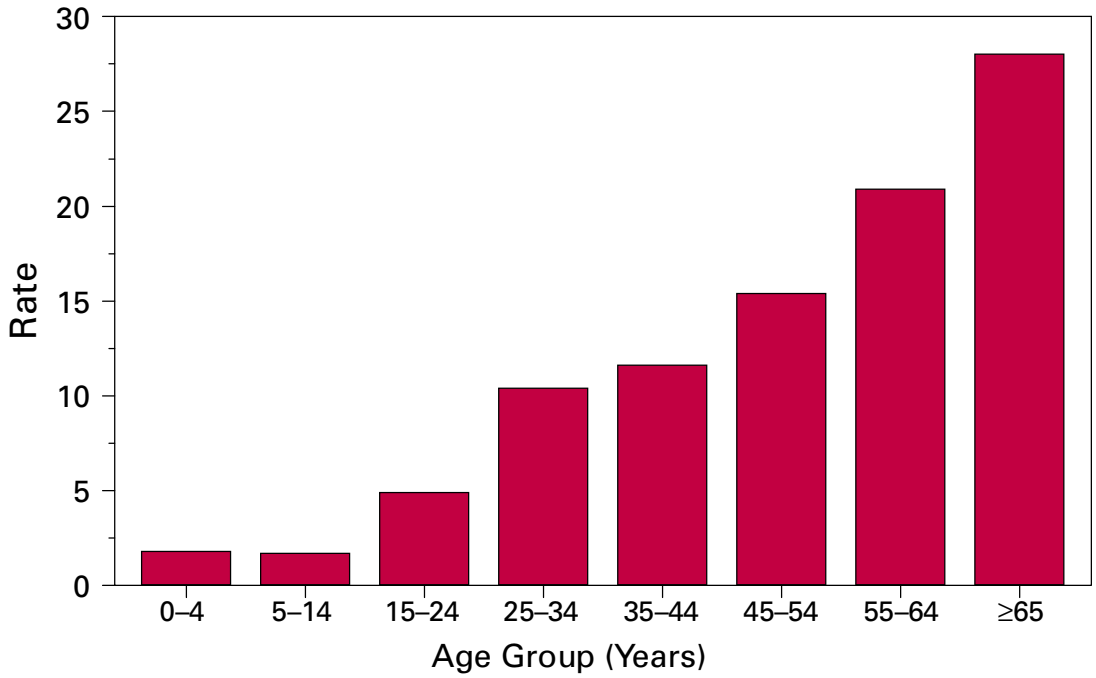
of case-patients was 51 years (range: <1 year–100 years), and most (1731 [63%]) occurred among males. Of the 2762 total cases, 1101 (40%) had pulmonary disease; 96 (3%), disseminated disease; and 1565 (57%), other or unspecified disease.

During 1990–1995, annual incidence rates for coccidioidomycosis were highest among males (range: 8.2–19.3 per 100,000 population) and persons aged ≥65 years (range: 14.6–35.0 per 100,000). During this period, annual rates increased within each age group. Mean annual rates increased from 1.8 per 100,000 population for persons aged 0–4 years to 28.0 per 100,000 for persons aged ≥65 years (Figure 2). Three counties (Maricopa, Pima, and Pinal) located in the Sonora Desert accounted for approximately 79% of Arizona's population and 93% of all cases statewide; the highest annual rates in these counties were 16.4, 23.6, and 30.1, respectively.

Because surveillance data did not indicate disease outcome, death certificates were reviewed to determine mortality from coccidioidomycosis. During 1990–1994 (the latest year for which death-certificate data were available), coccidioidomycosis was listed as the underlying cause of death for 134 persons, and the annual number of deaths increased from 21 in 1990 to 37 in 1994.

Coccidioidomycosis — Continued

FIGURE 2. Mean annual incidence rate* of coccidioidomycosis†, by age group — Arizona, 1990–1995§



*Per 100,000 population.
†In 1994, the Arizona Department of Health Services (ADHS) adopted the surveillance case definition for coccidioidomycosis proposed by the Council of State and Territorial Epidemiologists, which requires the presence of clinically compatible symptoms and laboratory evidence of infection (*3*). Before 1994, ADHS relied solely on physician diagnosis of coccidioidomycosis and did not require laboratory confirmation.
§For persons aged ≥65 years, the denominator does not include persons who temporarily moved to Arizona during the winter.

Hospitalizations

Data from the Arizona Hospital Discharge Database (AHDDB) were used to determine the impact of coccidioidomycosis-related hospital admissions in 1993. The AHDDB documents the first five discharge diagnoses for persons admitted to nonfederal hospitals in Arizona. The AHDDB was reviewed to identify patients with a discharge diagnosis of coccidioidomycosis (*International Classification of Diseases, Ninth Revision, Clinical Modification* [ICD-9-CM], codes 114.0–114.3 and 114.9). Because unique patient identifiers were not available, patients were identified by date of birth, sex, and zip code.

During 1993, a total of 659 patients had coccidioidomycosis among their first five discharge diagnoses; for 415 (63%), coccidioidomycosis was listed as the principal diagnosis. The discharge diagnoses for these 659 patients included primary pulmonary coccidioidomycosis (66%), progressive coccidioidomycosis (20%), coccidioidal meningitis (6%), unspecified coccidioidomycosis (6%), and primary extrapulmonary coccidioidomycosis (0.1%); 1% of patients were discharged with multiple coccidioidomycosis diagnoses; and 72 (11%) died. Comorbid conditions in these 72 patients included HIV infection (32 [44%]), chronic lung disease (13 [18%]), allogeneic organ transplantation (four [6%]), and other conditions (23 [32%]). Although the

Coccidioidomycosis — Continued

hospitalization rate was highest among persons aged ≥60 years (39 per 100,000 population), the case-fatality rate was highest among patients aged 30–39 years (17%).

During 1993, direct hospital costs for all coccidioidomycosis-related admissions for the 659 patients totaled approximately $19 million, with an average cost per hospitalization of $23,889 and an average length of stay of 10 days (range: 1–125 days).

In 1993, a total of 973 patients had a discharge diagnosis of HIV infection; of these, 98 (10%) also had a discharge diagnosis of coccidioidomycosis, and 32 (33%) of these 98 patients died. In comparison, of patients with a discharge diagnosis of HIV infection but without coccidioidomycosis, 15% died, and of patients with a discharge diagnosis of coccidioidomycosis without known HIV infection, 7% died.

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Editorial Note: The findings in this report indicate that the incidence of coccidioidomycosis in Arizona increased substantially during 1990–1995; in addition, coccidioidomycosis disproportionately affected persons aged ≥65 years and persons with HIV infection. The increase in incidence may have reflected, in part, an increase in Arizona in the number of older residents, an increase in the number of HIV-infected persons with AIDS, and weather conditions.

During 1990–1995, the number of Arizona residents aged ≥65 years increased by 22%. Many of these persons may have moved to the state from areas where coccidioidomycosis is not endemic and, therefore, were more susceptible to infection than those who had been long-term residents of Arizona. In addition, older adults may be at increased risk for developing symptomatic illness following infection with *C. immitis* (*4*) because of host factors (e.g., chronic lung disease and other underlying medical conditions) and may be more likely to seek medical attention following onset of respiratory symptoms. Because the denominator does not include persons who temporarily move to Arizona during the winter, incidence rates in this report for persons aged ≥65 years probably were slightly overestimated.

During 1990–1995, the prevalence of AIDS in Arizona increased by at least 79%, from 938 to 1683 (1995 data are provisional). The high prevalence of coccidioidomycosis among HIV-infected persons is consistent with previous reports documenting severe coccidioidomycosis as a common opportunistic infection among HIV-infected populations in areas where coccidioidomycosis is endemic (*5–7*).

Severe drought followed by heavy rainfall was identified as a factor possibly associated with the recent epidemic of coccidioidomycosis in California (*8*); this weather pattern may be important in facilitating the growth of *C. immitis* and the airborne spread of arthroconidia to humans. Although meteorologic data have not been analyzed, climatic factors also may have played an important role in the recent increase in coccidioidomycosis in Arizona.

Although coccidioidomycosis cannot be readily prevented (*8*), improved understanding of the epidemiology of this disease can assist in developing more effective prevention strategies. Efforts should include 1) increasing awareness of this disease among clinicians and the public, especially visitors to Arizona (and other areas where coccidioidomycosis is endemic) from areas where coccidioidomycosis is not endemic; 2) promoting more complete reporting of coccidioidomycosis cases by encouraging

Coccidioidomycosis — Continued

clinical laboratories to report all specimens positive for *C. immitis*; 3) better characterizing the environmental and host factors for acquiring infection, especially for older persons and HIV-infected persons; 4) conducting studies to evaluate the effectiveness of chemoprophylaxis for preventing coccidioidomycosis in persons with AIDS or other immunosuppressive conditions who live in areas where coccidioidomycosis is endemic; and 5) developing an effective vaccine that confers lasting immunity against *C. immitis*.

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Update: Fatal Air Bag–Related Injuries to Children — United States, 1993–1996

Dual air bags will be required standard equipment in all new passenger cars sold in the United States beginning in 1997 and all light trucks sold in the United States in 1998 but are available now in many earlier-model vehicles. Air bags are designed to supplement the protection provided by safety belts in frontal crashes; when combined with lap and shoulder safety belts, air bags assist in preventing fatal and nonfatal injuries in motor-vehicle crashes. However, passenger-side air bags have been associated with injuries to children who, in almost all cases, were unrestrained or incorrectly restrained in the front seat (*1–4*). In 1993, approximately 1.4 million (0.8% of all vehicles registered) were equipped with passenger-side air bags, compared with an estimated 21.6 million vehicles (11.4% of all vehicles registered) in 1996 (National Highway Traffic Safety Administration [NHTSA], unpublished data, 1996). NHTSA, the National Transportation Safety Board (NTSB), and CDC collaborated with the American Academy of Pediatrics, the Children's Hospital of Philadelphia, The Air Bag Safety Campaign, the National Safety Council, the Brain Injury Association, the National Association of Governors Highway Safety Representatives, the National Association of Children's Hospitals and Related Institutions, and the Health Resources and Services Administration to examine crashes from the Special Crash Investigation Data File maintained by NHTSA, in which fatal injuries in children (aged <12 years) were

Fatal Air Bag–Related Injuries — Continued

associated with passenger-side air bags. This report presents the findings of this review, which indicate that during January 1993–November 1996, annual increases occurred for both the number of fatal injuries to children resulting from air-bag deployments and the proportion of dual air bag-equipped vehicles (Table 1).

Of the 32 fatal injuries during January 1993–November 1996, a total of 21 occurred among children who were unrestrained or incorrectly restrained. Nine other fatalities occurred among children who had been seated in rear-facing child-safety seats in the front passenger seat. Two reports of incidents in 1996 suggest that children who are restrained by lap and shoulder belts also may be at risk for severe injury and death associated with air-bag deployment: in separate incidents, two 5-year-old children who were using lap and shoulder belts died as a result of air-bag deployment.

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Editorial Note: Use of a vehicle's lap and shoulder belts is essential to protect an occupant; a fully deployed air bag provides supplemental restraint and protects the occupant from impact with the dashboard or steering wheel. Air bags deploy within 0.05 seconds at velocities of 140–200 miles per hour to ensure rapid and full deployment before the occupant has any contact with the bag. However, for at least six reasons, children are more likely than adults to be improperly positioned in relation to a deploying air bag, and therefore at increased risk for serious injury. First, children are more likely to move around or lean forward to look out of a window. Second, because of the positioning of forward-facing child restraints, children who are properly buckled into such restraints are several inches closer to the intense forces of air bag deployment. Third, because children's feet usually do not touch the floor, they cannot brace themselves on the floor during precrash braking. Fourth, children too small to have the shoulder belt fit properly across their shoulder and the lap belt across their hips may place the shoulder belt under their arm or behind their back, allowing their upper

TABLE 1. Number of deaths among children aged <12 years related to passenger-side air bag deployment, by restraint method and year, and percentage of registered vehicles with dual air bags — United States, 1993–1996

	No. deaths				
Year	In rear-facing child-safety seat	Incorrectly restrained*	Restrained with lap and shoulder belts	Total deaths	% Vehicles with dual air bags
1993	0	1	0	**1**	0.8
1994	0	5	0	**5**	2.6
1995	3	5	0	**8**	6.4
1996	6	10	2	**18**	11.4
Total	**9**	**21**	**2**	**32**	

*Two of these cases were classified as restrained with lap and shoulder belts by the National Transportation Safety Board. The remaining cases were unrestrained or used only lap belts.

Source: Special Crash Investigation Data File, National Highway Traffic Safety Administration, and reviewed by the National Transportation Safety Board.

Fatal Air Bag–Related Injuries — Continued

torso to move forward into the deploying air bag during precrash braking. Fifth, because most children are shorter than adults (*5*), a child's neck and head are more likely to contact the deploying air bag, increasing the risk for fatal or serious injury. Finally, a rear-facing child-safety seat cannot be positioned far enough from the air bag to eliminate any risk of serious or fatal injury.

To reduce the risk for injuries associated with air bags, automotive safety engineers are designing "smart" air bags that will be appropriate for different ages and sizes of occupants (*4*). Until passenger vehicles and light trucks are equipped with these smart air bags and they are shown to be safe and effective (*3*), all children aged <12 years should ride in the back seat using age- and size-appropriate occupant restraints (*6,7*) (see box). The NTSB and NHTSA are requesting case reports of serious air-bag–induced injuries to children and adults. Cases can be reported to Vernon Roberts, NTSB, telephone (202) 314-6483, or to NHTSA, telephone (202) 493-0400, or by e-mail to airbag.crash@nhtsa.dot.gov. Additional information about air-bag–related injuries or child-occupant restraints is available from the NHTSA Hotline, telephone (800) 424-9393.

Recommendations to Prevent Air Bag-Associated Injuries to Infants and Children

- Infants (aged <1 year and weighing <20 pounds) in rear-facing child-safety seats should **never** ride in the front seat of a vehicle equipped with a passenger-side air bag. Infants in rear-facing child-safety seats always must ride in the back seat facing the rear of the car.
- All children aged <12 years should be properly secured in the back seat. For older children who have outgrown child-safety seats and booster seats, shoulder belts never should be placed either behind the back or under the arm.
- All children should be placed in the restraint device that offers the maximum protection for their size and age.*
- If possible, children should not be placed in the front seat. If a child must be placed in a forward-facing seat in the front of a vehicle with a passenger-side air bag, the vehicle seat should be adjusted as far back as possible from the dashboard. The child's restraint harness also should be secure and tight over the child's shoulder.
- Because unrestrained occupants **of any age** can be injured or killed by a deploying air bag, all vehicle occupants should use lap and shoulder belts. For all front-seat passengers, the seat should be moved as far back as possible from the steering wheel and dashboard.

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* Children who are aged ≤1 year and weigh ≤20 pounds must ride in a rear-facing child-safety seat; children who are aged >1 year, weigh approximately ≤40 pounds, or are ≤40 inches tall should be in a forward-facing restraint; and children who weigh >40 pounds or are >40 inches tall regardless of age should use a booster seat until the lap and shoulder belt fits properly.

Source: National Highway Traffic Safety Administration, National Transportation Safety Board, American Academy of Pediatrics, and CDC.

Fatal Air Bag–Related Injuries — Continued

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Progress Toward Poliomyelitis Eradication — People's Republic of China, 1990–1996

In 1988, the Western Pacific Region of the World Health Organization (WHO) adopted a resolution to eradicate poliomyelitis from the region by the end of 1995. The People's Republic of China has made rapid progress toward this goal by implementing the four WHO-recommended strategies for polio eradication: 1) achieving and maintaining high routine vaccination coverage levels among children aged <1 year with at least three doses of oral poliovirus vaccine (OPV); 2) administering supplementary doses of OPV to all young children during National Immunization Days (NIDs)* to rapidly interrupt poliovirus transmission; 3) establishing sensitive systems of surveillance for acute flaccid paralysis (AFP) and virologic surveillance for poliovirus; and 4) conducting "supplementary immunization activities" (SIAs)—localized campaigns targeted at high-risk areas where poliovirus transmission is most likely to persist at low levels. These strategies have resulted in the apparent interruption of wild poliovirus transmission in China. In 1995, no indigenous wild polioviruses were detected despite a strengthened surveillance system. This report describes progress toward achievement of the eradication goal and updates the status of polio-eradication efforts in China during 1990–1996 (*1*).

Routine Vaccination

The use of OPV in China began in 1964. WHO's Expanded Program on Immunization was started in China in 1978, and the cold chain was strengthened in 1982 (*2*). Routine vaccination coverage rates increased from 79% in 1983 to >90% in the 1990s. In 1995, only two of 30 provinces reported coverage below 90%: Jiangsu (84%) and Guangdong (88%) (*3*). Focal areas of lower vaccination coverage persist at lower

*Mass campaigns over a short period (days to weeks) in which two doses of OPV are administered to all children in the target age group, regardless of prior vaccination history, with an interval of 4–6 weeks between doses.

Poliomyelitis Eradication — Continued

administrative levels, and routine vaccination services are more difficult to provide to some persons (e.g., children of migrant workers).

Subnational and National Immunization Days

Initial supplemental vaccination activities began during 1990–1993 with limited provincewide subnational immunization days (SNIDs). During this period, there were province-specific differences in the age groups targeted for vaccination, number of participating counties, number of rounds, and timing of the SNIDs. The first two rounds of coordinated NIDs were conducted in December 1993 and January 1994; 82 million and 83 million children aged 0–3 years, respectively, were vaccinated (*2*). Three NIDs were conducted, with subsequent NIDs during December 1994–January 1995 and December 1995–January 1996.

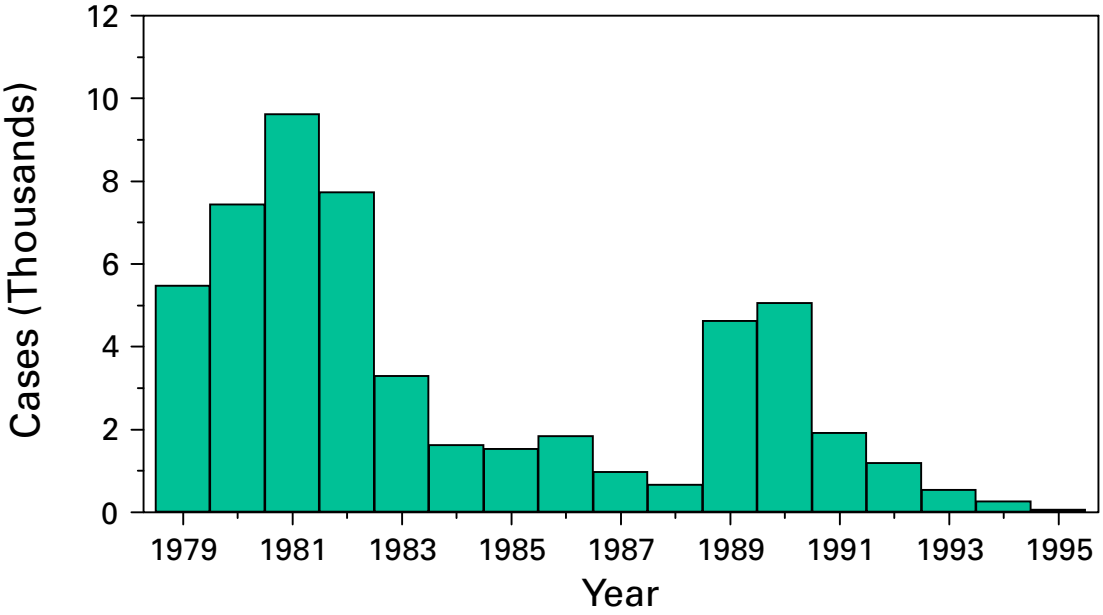
Routine Poliomyelitis Surveillance

A routine surveillance system for notifiable diseases, including polio, has been operational in China since the 1950s. Polio cases are diagnosed by individual health professionals' clinical judgment without use of a standard case definition; case-specific information and virologic confirmation of reported cases are not available. This system has documented a decline in polio cases, from 9625 cases in 1981, to 5065 cases in 1990 (when SNIDs were initiated), to 62 cases in 1995 (Figure 1).

Acute Flaccid Paralysis Surveillance

A surveillance system to detect all cases of AFP was initiated in 1990 and includes case-based information, electronic data transfer from the provincial to the central level, a network of 30 provincial laboratories to process stool specimens for isolation of poliovirus, and one national reference laboratory for intratypic differentiation of poliovirus as wild or vaccine-related. An annual nonpolio AFP rate of ≥1 per 100,000 persons aged <15 years is used as an indicator of effective surveillance. During 1993–1995, the national nonpolio AFP rate increased from 0.4 to 1.5.

FIGURE 1. Number of reported poliomyelitis cases, by year — People's Republic of China, 1979–1995



Poliomyelitis Eradication — Continued

WHO standard guidelines recommend investigation of reported AFP cases within 48 hours and collection of two stool specimens 24–48 hours apart from each AFP case-patient to determine the presence of poliovirus. During 1992–1995, case investigations performed within 48 hours (target: 80%) increased from 34% to 98% and the percentage of cases from which two stool samples were collected increased from 11% to 88%. In 1995, adequate stool specimens (i.e., collection of two samples within 14 days of paralysis, collection at least 24 hours apart, sufficient quantity, not desiccated, and arrival on ice or frozen ice packs at the provincial laboratory with complete documentation) was reported to be 64% (target: 80%) (*3*). The improved virologic surveillance system isolated the last indigenous wild polioviruses (all poliovirus type 1) in China in 1994.

Supplemental Immunization Activities

During November 1995–April 1996, four cases of AFP were reported in persons who crossed the border from Myanmar into Yunnan province in southwestern China. Wild polioviruses type 1 (n=two) and type 3 (n=two) were isolated and confirmed by genomic sequencing to be imported viruses (i.e., representing genotypes not previously detected in China) (*3*). During March and April 1996, two rounds of SIAs were conducted in all prefectures along the Yunnan-Myanmar border involving house-to-house and fixed-site vaccination of approximately 1 million children aged 0–3 years. Since then, there have been no imported AFP cases from which wild poliovirus was isolated. Active surveillance for AFP (e.g., weekly visits of hospitals and village searches for suspected cases) is continuing along the border prefectures between Myanmar and Yunnan province.

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Editorial Note: Since 1990, China has made substantial progress toward polio eradication. The use of SIAs, including three NIDs conducted during 1993–1996, has resulted in the apparent elimination of wild poliovirus. Since 1994, no cases of indigenous wild poliovirus infection have been detected in China despite substantial improvements in surveillance. In addition, the number of reported polio cases decreased 99% during 1990–1995. The remaining cases since 1994 were reported as polio based on clinical criteria (none were laboratory confirmed) and may represent misclassification of other causes of polio-like illnesses (e.g., Guillian-Barré syndrome or transverse myelitis) and vaccine-associated polio.

China remains at risk for importation of wild poliovirus from areas where polio continues to be endemic. Therefore, the Ministry of Health in China plans to continue supplementary vaccination activities in all provinces for at least 3 more years (targeting >70 million children during December 1996–January 1997) to achieve and maintain high immunity levels in provinces at risk for wild poliovirus importation, to compensate for focal areas of low routine vaccination coverage and inadequate AFP surveillance in some areas, and to ensure that any remaining reservoir of wild poliovirus is eliminated. Areas at "high-risk" for poliovirus transmission include those 1) sharing a border with adjacent countries with endemic polio, 2) in which wild poliovirus has been isolated during the last 3 years, 3) characterized by an AFP rate of

Poliomyelitis Eradication — Continued

<1 per 100,000 persons aged <15 years, 4) in which the stool collection rate is <60%, and 5) characterized by low routine vaccination coverage (<90%) (*3*). SNIDs will especially target unvaccinated, minority, and migrant workers' children.

The eradication of polio from China can be certified only after no cases of infection with wild polioviruses have been detected for at least 3 consecutive years in the presence of an effective AFP surveillance system. China can improve the effectiveness of its AFP surveillance system by 1) upgrading the polio laboratory network, 2) implementing a virologic case definition for confirmed polio cases; and 3) improving the completeness and timeliness of investigation and laboratory examination of all AFP cases. Continued international[†] support is necessary to accelerate progress toward polio eradication and to meet the requirements for eventual certification of the absence of wild poliovirus in China.

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[†]The polio-eradication initiative is supported by a coalition of organizations that includes WHO, the United Nations Children's Fund (UNICEF), the World Bank, the Japanese International Cooperative Agency, the Agency for Cooperation in Health, other bilateral and multilateral organizations, and Rotary International.

Accessibility to Minors of Smokeless Tobacco Products — Broward County, Florida, March–June 1996

Health consequences associated with use of smokeless tobacco (SLT) (i.e., snuff or loose-leaf or fine-cut chewing tobacco) products include halitosis, leukoplakia, and oral cancer (*1*). Periodontal degeneration and soft tissue lesions are early indicators of these conditions and diseases among persons who use SLT (*1*). Since October 1992, the sale of tobacco products to minors (i.e., persons aged <18 years) has been prohibited by law in Florida, and since May 1994, Florida law has required businesses to post warning signs stating that tobacco sales to minors are illegal and that proof of age is required to purchase tobacco products such as SLT.* To assess the impact of these laws on over-the-counter access to SLT by minors in Broward County (1990 population: 1,244,531), during March–June 1996 faculty from Florida Atlantic University's Department of Exercise Science/Wellness Education conducted a study to measure vendor compliance with tobacco minimum-age sale laws and with the sign statute. This report summarizes the findings of the assessments, which indicated that nearly one third of attempts by minors to purchase SLT products were successful.

The 1995–1996 Beverage License File maintained by the Florida Department of Business and Professional Regulation (DBPR) was used to identify five categories of businesses in the county: pharmacies, convenience stores, grocery stores, gas stations, and "smoke shops" (i.e., businesses where the predominant merchandise is tobacco or tobacco-related products) (n=1211). A map of the county was divided into 10 equally sized areas; within each of these areas, approximately 20% of the businesses were randomly selected to produce a total sample of 242 businesses. Of these

*Florida Revised Statutes 859.06–859.061.

Smokeless Tobacco Products — Continued

242, a total of 117 were excluded: they were not surveyed because of time constraints (67), were inaccurately surveyed (37), did not sell SLT (eight), or had closed (five). The remaining 125 businesses represented 10% of the 1211 county total and comprised 33 (13%) of the 246 pharmacies, 20 (8%) of the 268 convenience stores, 25 (7%) of the 381 grocery stores, 41 (14%) of the 297 gas stations, and six (32%) of the 19 smoke shops. The assessment employed five teams of volunteers, each comprising one minor and one adult; two of the minors were female (both aged 15 years), and three were male (one each aged 15, 16, and 17 years).

One purchase attempt was made at each of the 125 businesses. Purchase attempts used the following procedure (*2*): the adult member of the team entered the business first to note the presence of any clearly displayed signs stating that tobacco products would not be sold to minors. The adult then observed while the minor entered, selected an SLT product, and attempted to purchase the product. The attempt was considered successful if a sale was recorded on the cash register or the vendor placed the SLT product on the counter for purchase by the minor; the minor would then state that he or she had insufficient money for purchase and would immediately leave the store. The attempt also was considered successful if the vendor asked for age identification but was prepared to sell the SLT product.† The attempt was considered unsuccessful if the minor was denied purchase outright or asked for age verification and denied purchase. The adult member noted the vendor's reasons for refusal at the time of attempted purchase; when no refusal reason was provided to the minor, the adult team member waited until the minor had departed and then asked the vendor about the reason for refusal.

Overall, minors were successful in purchasing SLT in 40 (32%) of 125 retail outlets (Table 1); of these successful purchase attempts, 14 (35%) occurred within one half mile of an elementary, middle, or high school. Success rates were similar among those aged <17 years and aged 17 years (34% [95% confidence interval (CI)=±17.7%] versus 20% [95% CI=±40.0%], respectively), and among males and females (25 [33% (95% CI=±21.2%)] of 75 attempts versus 15 [30% (95% CI=±25.5%)] of 50 attempts, respectively). For each of the five categories of stores that sold SLT, attempts were successful at 10 (30% [95% CI=±31.4%]) pharmacies, 17 (85% [95% CI=±31.4%]) convenience stores, three (12% [95% CI=±25.5%]) grocery stores, nine (22% [95% CI=±25.5%]) gas stations, and one (17% [95% CI=±59.6%]) smoke shop. Warning signs provided by the DBPR were posted and clearly visible in 96 (77%) of the 125 stores; 17 of these stores had signs provided by tobacco companies. Success rates were similar in businesses with and without signs (30 [31% (95% CI=±18.4%)] of 96 versus 10 [35% (95% CI=±34.5%)] of 29, respectively).

Single reasons specified by the vendors for 51 of the 85 unsuccessful attempts were that the minor had no proper identification (40 [47%]), the minor appeared to be underaged (nine [11%]), and that the sale of tobacco products to minors was illegal (two [2%]). Multiple reasons specified by the vendors for 34 unsuccessful attempts were that the sale of tobacco products to minors was illegal and the minor had no proper identification (11 [13%]), that the store had a policy prohibiting sales to minors and that the minor had no proper identification (eight [9%]), that the store had a policy

†During one successful purchase attempt, the adult/minor team determined that although the minor stated that he did not have age identification, the vendor was prepared to sell the SLT product based on his placement of the SLT product on the counter and attempt to record the sale on the cash register.

Smokeless Tobacco Products — Continued

TABLE 1. Number of attempts and number and percentage of successful attempts by minors* to purchase smokeless tobacco,† by category — Broward County, Florida, March–June 1996

Category	No. attempts	Successful attempts		
		No.	(%)	(95% CI§)
Age (yrs)				
<17	110	37	(33.6)	(±17.7%)
17	15	3	(20.0)	(±40.0%)
Sex of minor				
Male	75	25	(33.3)	(±21.2%)
Female	50	15	(30.0)	(±25.5%)
Type of store				
Pharmacy	33	10	(30.3)	(±31.4%)
Convenience	20	17	(85.0)	(±31.4%)
Grocery	25	3	(12.0)	(±25.5%)
Gas	41	9	(22.0)	(±25.5%)
Smoke shops¶	6	1	(16.7)	(±59.6%)
Warning sign				
Yes	96	30	(31.2)	(±18.4%)
No	29	10	(34.5)	(±34.5%)
Total	**125**	**40**	**(32.0)**	**(±16.5%)**

*Persons aged <18 years.
†Snuff or loose-leaf or fine-cut chewing tobacco.
§Confidence interval.
¶Businesses where the predominant merchandise is tobacco or tobacco-related products.

prohibiting sales to minors and that the minor looked too young (six [7%]), and other reasons (nine [11%]).

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Editorial Note: In 1994, a report issued by the Surgeon General indicated that approximately 20% of high school males were current users of SLT products (*1*). In 1993, approximately one half of minors aged 12–17 years who had used SLT during the previous month usually purchased their own SLT; of those who usually purchased their own SLT, most (82%) often or sometimes bought from small businesses such as convenience stores (*3*). The success rate for minors in Broward County in attempts to purchase SLT (32%) was higher than that previously reported in Kansas (15%), similar to that reported in Palm Beach County, Florida (35%), and lower than that reported in Texas (59%) (*2,4,5*).

In this assessment and in previous reports (*2,4*), minors mimicked (i.e., attempted but did not complete) over-the-counter purchase of SLT; this method has been validated as an accurate measure of vendor compliance with tobacco minimum-age sale laws (*6*). However, the findings in this report are subject to at least two limitations. First, data were obtained from the files of the DBPR for only five types of businesses because they were most likely to sell SLT. However, businesses included in the analysis probably do not differ from businesses in other categories that were excluded. Second, 28% of the selected sample was not surveyed because of time constraints.

Smokeless Tobacco Products — Continued

Whether purchasing SLT at businesses that were not surveyed would have been more difficult could not be determined.

The Synar Amendment and implementing regulations require all states receiving federal funds to prevent and treat substance abuse to enact and enforce a law prohibiting the sale or distribution of tobacco to persons aged <18 years and to reduce the statewide illegal sales rate to ≤20% over several years[§] (*7*). The findings of the assessment in this report may further assist tobacco-use–prevention coalitions and other organizations in developing approaches to educate parents and the public about the need to support enforcement of existing local, state, and federal laws restricting the sale of SLT and other tobacco products to minors.

References

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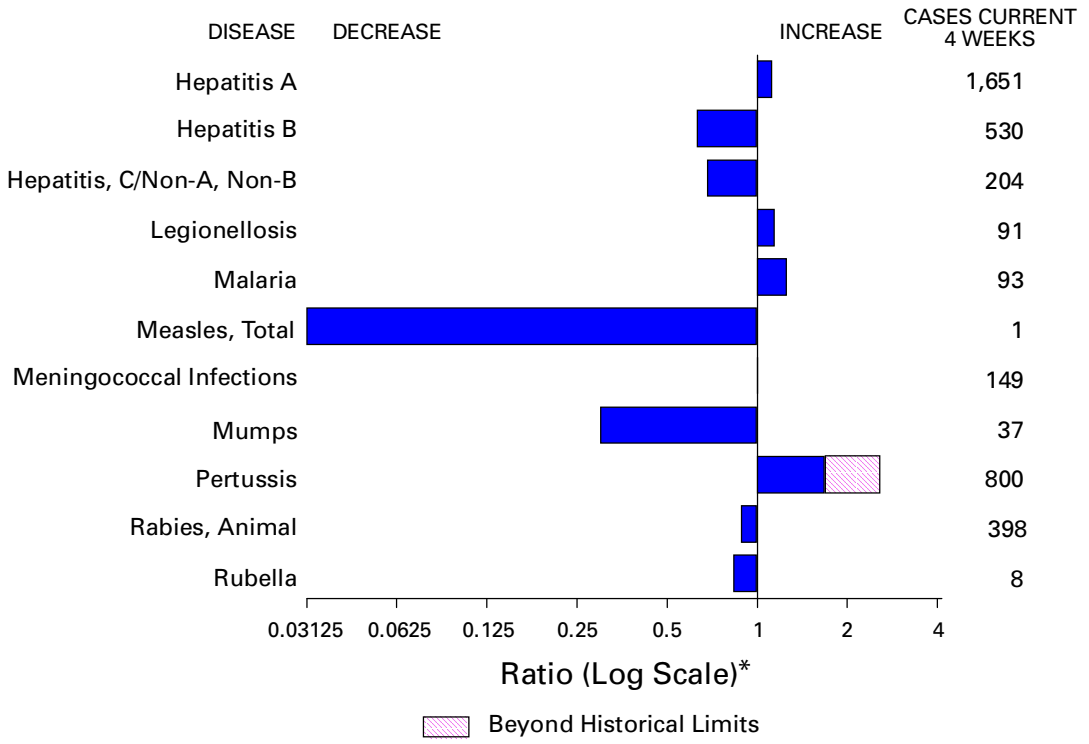
FIGURE I. Selected notifiable disease reports, comparison of provisional 4-week totals ending December 7, 1996, with historical data — United States



*Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

TABLE I. Summary — provisional cases of selected notifiable diseases, United States, cumulative, week ending December 7, 1996 (49th Week)

	Cum. 1996		Cum. 1996
Anthrax	-	Plague	5
Brucellosis	89	Poliomyelitis, paralytic¶	-
Cholera	3	Psittacosis	43
Congenital rubella syndrome	1	Rabies, human	3
Cryptosporidiosis*	2,268	Rocky Mountain spotted fever (RMSF)	672
Diphtheria	1	Streptococcal toxic-shock syndrome*	15
Encephalitis: California*	108	Syphilis, congenital**	225
eastern equine*	2	Tetanus	32
St. Louis*	1	Toxic-shock syndrome	124
western equine*	-	Trichinosis	17
Hansen Disease	108	Typhoid fever	336
Hantavirus pulmonary syndrome*†	19	Yellow fever††	1
HIV infection, pediatric*§	242		

-: no reported cases
*Not notifiable in all states.
† Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases (NCID).
§ Updated monthly to the Division of HIV/AIDS Prevention, National Center for HIV, STD, and TB Prevention (NCHSTP), last update November 26, 1996.
¶ Three suspected cases of polio with onset in 1996 has been reported to date.
**Updated quarterly from reports to the Division of STD Prevention, NCHSTP.
††This fatal case of yellow fever is the first occurrence of this disease reported in the United States since 1924. The infection is presumed to have been acquired in Brazil.

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending December 7, 1996, and December 9, 1995 (49th Week)

Reporting Area	AIDS*		Chlamydia	*Escherichia coli* O157:H7		Gonorrhea		Hepatitis C/NA,NB		Legionellosis	
				NETSS†	PHLIS§						
	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1996	Cum. 1996	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995
UNITED STATES	62,258	65,823	371,112	2,606	1,542	287,334	368,191	3,112	3,816	973	1,086
NEW ENGLAND	2,551	3,112	15,675	335	194	6,634	7,265	108	116	76	36
Maine	42	82	874	22	-	53	86	-	-	3	6
N.H.	85	85	397	40	39	80	107	8	14	5	2
Vt.	19	28	U	35	32	45	63	37	13	4	1
Mass.	1,249	1,337	6,602	153	123	2,091	2,588	57	82	34	22
R.I.	167	211	1,737	15	-	470	520	6	7	30	5
Conn.	989	1,369	6,065	70	-	3,895	3,901	-	-	N	N
MID. ATLANTIC	17,328	17,811	43,813	218	43	33,903	42,548	299	469	225	197
Upstate N.Y.	2,385	2,229	N	144	16	6,353	8,899	234	248	73	55
N.Y. City	9,497	9,219	18,756	16	-	10,373	16,001	1	1	11	6
N.J.	3,353	4,214	7,845	58	5	5,208	5,594	-	181	14	32
Pa.	2,093	2,149	17,212	N	22	11,969	12,054	64	39	127	104
E.N. CENTRAL	4,733	4,912	74,849	561	419	52,082	73,460	429	330	284	330
Ohio	1,058	1,008	16,286	167	101	11,774	22,212	33	15	109	145
Ind.	548	494	9,068	83	55	5,974	8,677	8	14	41	79
Ill.	2,084	2,048	22,037	213	128	16,253	19,408	68	80	9	36
Mich.	788	1,032	18,811	98	73	13,829	17,033	320	221	101	34
Wis.	255	330	8,647	N	62	4,252	6,130	-	-	24	36
W.N. CENTRAL	1,443	1,547	26,540	584	343	11,729	18,496	129	86	61	74
Minn.	270	345	2,702	269	224	U	2,638	4	4	10	6
Iowa	82	104	3,960	124	88	1,077	1,477	59	13	10	21
Mo.	749	711	11,206	68	-	7,678	10,637	39	22	18	16
N. Dak.	11	5	921	16	15	33	34	-	5	-	3
S. Dak.	12	17	1,360	24	-	168	213	-	1	3	3
Nebr.	94	101	2,133	52	4	812	986	8	23	15	17
Kans.	225	264	4,258	31	12	1,961	2,511	19	18	5	8
S. ATLANTIC	15,559	16,639	51,611	135	69	90,782	102,659	244	228	149	161
Del.	264	302	1,148	2	2	1,382	2,122	1	-	11	2
Md.	2,164	2,399	6,583	N	8	13,885	13,198	5	7	30	25
D.C.	1,196	977	N	-	-	4,120	4,548	-	-	8	5
Va.	1,097	1,397	10,975	N	34	8,652	9,887	16	18	22	23
W. Va.	112	114	1	N	3	534	630	9	44	1	4
N.C.	830	963	-	44	15	17,515	22,205	46	60	12	32
S.C.	808	870	-	13	7	10,735	11,780	32	19	7	30
Ga.	2,293	2,171	11,445	30	-	17,151	18,835	U	15	3	14
Fla.	6,795	7,446	21,459	34	-	16,808	19,454	135	65	55	26
E.S. CENTRAL	2,089	2,089	29,666	75	61	32,745	38,184	534	935	49	54
Ky.	362	266	6,325	14	10	3,990	4,515	28	33	9	10
Tenn.	743	840	12,524	34	48	11,180	13,096	371	900	21	25
Ala.	569	560	7,870	15	3	12,673	15,593	9	2	4	7
Miss.	415	423	U	12	-	4,902	4,980	126	U	15	12
W.S. CENTRAL	6,313	5,628	47,952	74	13	33,812	50,252	442	352	19	22
Ark.	247	243	1,631	12	4	3,704	5,494	14	7	1	6
La.	1,375	982	6,941	7	4	7,705	10,055	213	185	3	3
Okla.	245	257	6,762	13	1	4,422	5,363	69	52	5	5
Tex.	4,446	4,146	32,618	42	4	17,981	29,340	146	108	10	8
MOUNTAIN	1,801	2,100	15,903	216	103	6,399	8,805	528	449	53	110
Mont.	34	22	-	26	-	34	65	19	15	1	4
Idaho	37	43	1,399	39	13	93	135	95	50	-	2
Wyo.	6	17	549	11	9	35	49	176	181	7	12
Colo.	463	629	U	80	43	1,077	2,643	61	64	10	39
N. Mex.	153	155	3,689	12	-	873	1,001	67	51	2	5
Ariz.	535	632	6,578	N	26	3,196	3,468	70	54	21	12
Utah	178	143	1,457	32	-	267	256	22	12	6	16
Nev.	395	459	2,231	16	12	824	1,188	18	22	6	20
PACIFIC	10,440	11,985	65,103	408	297	19,248	26,522	399	851	57	102
Wash.	642	848	8,591	148	126	1,898	2,595	50	211	6	21
Oreg.	439	448	4,991	92	59	600	764	9	37	1	-
Calif.	9,160	10,406	48,629	164	102	15,894	22,011	135	493	42	76
Alaska	30	63	1,216	4	2	413	631	3	3	1	-
Hawaii	169	220	1,676	N	8	443	521	202	107	7	5
Guam	4	-	168	N	-	31	91	1	6	2	1
P.R.	2,170	2,395	N	18	U	349	559	75	203	-	-
V.I.	18	31	N	N	U	-	-	-	-	-	-
Amer. Samoa	-	-	-	N	U	-	36	-	-	-	-
C.N.M.I.	1	-	N	N	U	11	51	-	5	-	-

N: Not notifiable U: Unavailable -: no reported cases C.N.M.I.: Commonwealth of Northern Mariana Islands

*Updated monthly to the Division of HIV/AIDS Prevention, National Center for HIV, STD, and TB Prevention, last update November 26, 1996.

†National Electronic Telecommunications System for Surveillance.

§Public Health Laboratory Information System.

TABLE II. (Cont'd.) Provisional cases of selected notifiable diseases, United States, weeks ending December 7, 1996, and December 9, 1995 (49th Week)

Reporting Area	Lyme Disease		Malaria		Meningococcal Disease		Syphilis (Primary & Secondary)		Tuberculosis		Rabies, Animal	
	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995
UNITED STATES	13,280	10,726	1,460	1,254	2,966	2,797	10,439	15,471	17,804	19,803	6,382	7,255
NEW ENGLAND	3,897	1,999	68	48	147	137	177	333	398	487	692	1,428
Maine	53	32	8	7	15	11	-	2	20	23	113	46
N.H.	48	27	3	2	8	23	1	1	16	17	51	147
Vt.	15	9	8	1	4	11	-	-	-	4	132	172
Mass.	346	143	23	18	63	42	77	64	200	265	107	396
R.I.	524	328	8	4	14	6	4	4	30	46	37	315
Conn.	2,911	1,460	18	16	43	44	95	262	132	132	252	352
MID. ATLANTIC	8,116	7,121	385	363	283	336	436	822	3,391	4,026	1,384	1,859
Upstate N.Y.	4,281	3,601	82	63	83	95	71	80	421	498	1,030	1,124
N.Y. City	341	440	208	198	38	51	120	353	1,775	2,205	-	-
N.J.	1,873	1,636	64	72	71	73	127	163	694	738	131	320
Pa.	1,621	1,444	31	30	91	117	118	226	501	585	223	415
E.N. CENTRAL	76	425	151	156	401	388	1,423	2,667	1,862	1,839	90	99
Ohio	49	29	13	12	146	110	516	861	293	257	13	12
Ind.	24	19	14	19	57	57	183	331	158	171	8	14
Ill.	3	18	70	76	112	100	386	998	963	961	24	15
Mich.	-	5	39	26	44	70	176	288	349	362	31	40
Wis.	U	354	15	23	42	51	162	189	99	88	14	18
W.N. CENTRAL	204	227	47	27	230	177	331	689	455	539	493	357
Minn.	108	134	21	6	28	26	51	41	99	130	28	28
Iowa	20	14	3	3	50	29	21	45	66	58	226	125
Mo.	35	51	10	8	93	68	211	565	188	216	18	30
N. Dak.	1	-	1	2	4	2	-	-	6	5	70	27
S. Dak.	-	-	-	2	10	10	-	-	17	22	113	99
Nebr.	5	6	3	3	21	18	12	12	21	21	5	5
Kans.	35	22	9	3	24	24	36	26	58	87	33	43
S. ATLANTIC	686	659	295	243	588	481	3,569	3,862	3,193	3,537	2,668	2,097
Del.	105	50	4	1	2	6	35	17	30	55	76	91
Md.	403	410	80	63	69	37	629	493	278	379	604	418
D.C.	3	3	7	16	10	8	129	100	121	98	11	11
Va.	48	53	55	54	57	61	371	561	282	283	583	433
W. Va.	11	23	6	4	15	9	3	10	51	68	97	113
N.C.	65	83	29	17	74	82	1,048	1,070	465	431	662	450
S.C.	8	17	12	3	60	56	375	554	307	301	86	121
Ga.	1	14	27	37	132	105	633	701	562	649	285	267
Fla.	42	6	75	48	169	117	346	356	1,097	1,273	264	193
E.S. CENTRAL	73	70	35	26	216	203	2,238	3,179	1,180	1,348	206	279
Ky.	25	15	7	3	28	47	149	177	223	292	39	28
Tenn.	20	28	14	10	59	77	807	867	349	412	82	95
Ala.	7	10	6	10	79	42	510	624	397	389	81	147
Miss.	21	17	8	3	50	37	772	1,511	211	255	4	9
W.S. CENTRAL	115	109	63	48	317	331	1,632	3,134	2,286	2,938	375	562
Ark.	23	9	-	2	32	33	231	467	192	217	27	50
La.	8	9	6	5	56	53	479	971	175	345	17	42
Okla.	22	45	-	1	39	41	171	186	162	330	33	29
Tex.	62	46	57	40	190	204	751	1,510	1,757	2,046	298	441
MOUNTAIN	7	12	57	62	165	199	130	191	579	623	148	173
Mont.	-	-	7	3	6	4	-	4	14	10	24	43
Idaho	1	-	-	1	23	12	4	-	9	14	-	3
Wyo.	2	3	7	-	3	8	2	1	6	4	30	27
Colo.	-	-	25	26	38	48	23	98	75	76	42	9
N. Mex.	1	1	2	7	26	35	1	9	80	73	6	6
Ariz.	-	1	7	13	40	57	79	44	232	307	35	56
Utah	1	1	5	6	16	17	3	4	51	38	4	15
Nev.	2	6	4	6	13	18	18	31	112	101	7	14
PACIFIC	106	104	359	281	619	545	503	594	4,460	4,466	326	401
Wash.	18	10	21	21	98	90	6	15	219	263	6	15
Oreg.	19	18	23	19	115	101	12	21	149	143	5	3
Calif.	68	76	303	227	390	337	483	556	3,845	3,809	307	376
Alaska	-	-	3	4	10	13	-	2	64	73	8	7
Hawaii	1	-	9	10	6	4	2	-	183	178	-	-
Guam	-	-	-	2	1	3	3	8	35	106	-	-
P.R.	-	-	-	1	5	24	131	266	63	162	41	38
V.I.	-	-	-	2	-	-	-	-	-	-	-	-
Amer. Samoa	-	-	-	-	-	-	-	-	-	5	-	-
C.N.M.I.	-	-	-	1	-	-	1	9	-	36	-	-

N: Not notifiable U: Unavailable -: no reported cases

TABLE III. Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending December 7, 1996, and December 9, 1995 (49th Week)

Reporting Area	*H. influenzae*, invasive		Hepatitis (viral), by type				Measles (Rubeola)			
			A		B		Indigenous		Imported†	
	Cum. 1996*	Cum. 1995	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	1996	Cum. 1996	1996	Cum. 1996
UNITED STATES	927	1,058	26,875	28,580	9,364	9,422	1	420	-	48
NEW ENGLAND	32	39	399	296	196	217	-	14	-	1
Maine	-	3	22	30	2	12	-	-	-	-
N.H.	9	10	24	12	20	20	-	-	-	-
Vt.	1	2	10	5	11	6	-	1	-	1
Mass.	20	13	191	129	68	88	-	12	-	-
R.I.	2	5	22	34	10	8	-	-	-	-
Conn.	-	6	130	86	85	83	-	1	-	-
MID. ATLANTIC	134	157	1,771	1,868	1,369	1,403	-	23	-	5
Upstate N.Y.	12	39	415	466	326	361	-	-	-	-
N.Y. City	36	34	570	896	551	422	-	9	-	3
N.J.	58	28	335	285	247	355	-	3	-	-
Pa.	28	56	451	221	245	265	-	11	-	2
E.N. CENTRAL	163	177	2,294	3,021	946	1,043	-	6	-	7
Ohio	87	92	713	1,680	116	102	-	2	-	3
Ind.	15	20	348	179	138	218	-	-	-	-
Ill.	39	45	591	630	255	270	-	2	-	1
Mich.	11	18	475	350	372	377	-	-	-	3
Wis.	11	2	167	182	65	76	-	2	-	-
W.N. CENTRAL	46	80	2,468	1,837	522	599	-	20	-	3
Minn.	27	43	133	176	68	62	-	16	-	2
Iowa	7	3	328	90	78	46	-	-	-	1
Mo.	9	27	1,264	1,259	291	407	-	3	-	-
N. Dak.	-	-	137	23	2	4	-	-	-	-
S. Dak.	1	1	42	79	5	2	-	-	-	-
Nebr.	1	3	210	57	47	32	-	-	-	-
Kans.	1	3	354	153	31	46	-	1	-	-
S. ATLANTIC	185	206	1,423	1,089	1,477	1,232	-	5	-	9
Del.	2	-	21	9	7	9	-	1	-	-
Md.	60	66	241	206	284	247	-	-	-	2
D.C.	6	-	36	25	31	21	-	1	-	-
Va.	9	28	176	207	130	107	-	-	-	3
W. Va.	10	8	17	24	31	53	-	-	-	-
N.C.	25	30	173	104	322	286	-	3	-	1
S.C.	5	3	56	44	97	49	-	-	-	-
Ga.	39	64	153	54	32	63	-	-	-	2
Fla.	29	7	550	416	543	397	-	-	-	1
E.S. CENTRAL	26	11	1,177	2,106	822	790	-	2	-	-
Ky.	4	5	43	43	62	66	-	-	-	-
Tenn.	12	-	742	1,772	470	620	-	2	-	-
Ala.	9	5	188	81	72	104	-	-	-	-
Miss.	1	1	204	210	218	U	U	-	U	-
W.S. CENTRAL	38	65	5,512	4,336	1,203	1,357	-	26	-	2
Ark.	-	6	475	592	73	71	-	-	-	-
La.	5	1	177	161	147	224	-	-	-	-
Okla.	29	26	2,330	1,258	59	161	-	-	-	-
Tex.	4	32	2,530	2,325	924	901	-	26	-	2
MOUNTAIN	93	113	4,221	4,097	1,069	813	1	154	-	5
Mont.	-	1	111	164	15	23	-	-	-	-
Idaho	1	4	233	338	86	95	1	2	-	-
Wyo.	35	9	38	101	44	26	-	1	-	-
Colo.	15	16	490	478	128	129	-	4	-	3
N. Mex.	10	14	339	775	390	296	-	17	-	-
Ariz.	15	29	1,629	1,282	224	115	-	8	-	-
Utah	9	11	1,004	660	104	71	-	117	-	2
Nev.	8	29	377	299	78	58	-	5	-	-
PACIFIC	210	210	7,610	9,930	1,760	1,968	-	170	-	16
Wash.	4	9	698	820	106	189	-	51	-	-
Oreg.	29	27	813	2,613	114	114	-	10	-	1
Calif.	172	169	5,961	6,286	1,510	1,624	-	38	-	8
Alaska	2	1	43	47	18	12	-	63	-	-
Hawaii	3	4	95	164	12	29	-	8	-	7
Guam	-	-	2	8	-	5	U	-	U	-
P.R.	1	3	135	104	359	610	-	8	-	-
V.I.	-	-	-	9	-	15	U	-	U	-
Amer. Samoa	-	-	-	6	-	-	U	-	U	-
C.N.M.I.	10	11	1	24	5	22	U	-	U	-

N: Not notifiable U: Unavailable -: no reported cases

*Of 220 cases among children aged <5 years, serotype was reported for 54 and of those, 19 were type b.

†For imported measles, cases include only those resulting from importation from other countries.

TABLE III. (Cont'd.) Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending December 7, 1996, and December 9, 1995 (49th Week)

Reporting Area	Measles (Rubeola), cont'd. Total		Mumps			Pertussis			Rubella		
	Cum. 1996	Cum. 1995	1996	Cum. 1996	Cum. 1995	1996	Cum. 1996	Cum. 1995	1996	Cum. 1996	Cum. 1995
UNITED STATES	468	293	11	613	809	265	5,887	4,306	8	210	117
NEW ENGLAND	15	11	-	2	12	12	1,356	659	-	27	49
Maine	-	-	-	-	4	-	20	45	-	-	-
N.H.	-	-	-	-	1	6	149	52	-	-	1
Vt.	2	-	-	-	-	6	199	75	-	2	-
Mass.	12	4	-	2	3	-	921	455	-	21	9
R.I.	-	5	-	-	1	-	32	4	-	-	-
Conn.	1	2	-	-	3	-	35	28	-	4	39
MID. ATLANTIC	28	12	2	86	116	129	691	403	-	13	15
Upstate N.Y.	-	1	1	26	25	113	459	217	-	5	4
N.Y. City	12	5	-	17	16	-	48	54	-	5	8
N.J.	3	6	-	3	21	-	19	19	-	2	3
Pa.	13	-	1	40	54	16	165	113	-	1	-
E.N. CENTRAL	13	15	2	97	166	9	589	566	-	3	4
Ohio	5	2	-	42	51	5	272	157	-	-	-
Ind.	-	-	-	9	9	2	107	59	-	-	-
Ill.	3	2	-	20	47	2	156	124	-	1	-
Mich.	3	5	2	25	59	-	49	99	-	2	4
Wis.	2	6	-	1	-	-	5	127	-	-	-
W.N. CENTRAL	23	2	-	19	46	16	401	253	-	-	1
Minn.	18	-	-	6	8	14	317	125	-	-	-
Iowa	1	-	-	3	10	2	22	11	-	-	-
Mo.	3	1	-	7	23	-	44	61	-	-	-
N. Dak.	-	-	-	2	1	-	1	8	-	-	-
S. Dak.	-	-	-	-	-	-	4	12	-	-	-
Nebr.	-	-	-	-	4	-	9	14	-	-	-
Kans.	1	1	-	1	-	-	4	22	-	-	1
S. ATLANTIC	14	19	1	105	122	43	676	340	7	100	10
Del.	1	-	-	-	-	1	26	10	-	-	-
Md.	2	1	-	28	35	9	250	47	-	-	1
D.C.	1	-	-	1	-	-	4	6	-	2	-
Va.	3	-	-	16	25	-	98	31	-	2	-
W. Va.	-	-	-	-	-	-	6	-	-	-	-
N.C.	4	-	1	21	16	31	131	110	7	85	1
S.C.	-	-	-	7	11	1	45	27	-	1	-
Ga.	2	4	-	3	10	1	18	25	-	-	-
Fla.	1	14	-	29	25	-	98	84	-	10	8
E.S. CENTRAL	2	-	1	22	17	1	195	272	-	2	1
Ky.	-	-	-	-	-	-	140	26	-	-	-
Tenn.	2	-	-	3	5	-	21	208	-	-	1
Ala.	-	-	1	4	4	1	25	36	-	2	-
Miss.	-	-	U	15	8	U	9	2	N	N	N
W.S. CENTRAL	28	34	4	43	53	10	125	292	-	3	7
Ark.	-	2	-	1	7	-	10	39	-	-	-
La.	-	18	1	18	13	2	11	19	-	1	-
Okla.	-	-	-	1	-	-	19	31	-	-	-
Tex.	28	14	3	23	33	8	85	203	-	2	7
MOUNTAIN	159	70	-	22	31	3	407	632	1	7	4
Mont.	-	-	-	-	1	-	35	9	-	-	-
Idaho	2	2	-	-	4	2	103	107	-	2	-
Wyo.	1	-	-	1	-	-	8	1	-	-	-
Colo.	7	26	-	3	2	-	107	105	1	3	-
N. Mex.	17	31	N	N	N	-	61	143	-	-	-
Ariz.	8	10	-	1	2	-	29	155	-	1	3
Utah	119	-	-	2	11	1	23	28	-	-	1
Nev.	5	1	-	15	11	-	41	84	-	1	-
PACIFIC	186	130	1	217	246	42	1,447	889	-	55	26
Wash.	51	19	-	20	15	29	691	337	-	2	1
Oreg.	11	1	-	-	-	-	35	64	-	1	-
Calif.	46	108	1	165	206	12	688	429	-	49	20
Alaska	63	-	-	3	12	-	4	1	-	-	-
Hawaii	15	2	-	29	13	1	29	58	-	3	5
Guam	-	-	U	5	4	U	1	2	U	-	1
P.R.	8	3	-	1	2	-	1	2	-	-	-
V.I.	-	-	U	-	3	U	-	-	U	-	-
Amer. Samoa	-	-	U	-	-	U	-	-	U	-	-
C.N.M.I.	-	-	U	-	1	U	-	-	U	-	-

N: Not notifiable U: Unavailable -: no reported cases

TABLE IV. Deaths in 121 U.S. cities,* week ending December 7, 1996 (49th Week)

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	>65	45-64	25-44	1-24	<1	
NEW ENGLAND	650	494	91	44	10	11	30
Boston, Mass.	145	104	18	15	2	6	2
Bridgeport, Conn.	45	32	8	4	-	1	1
Cambridge, Mass.	23	15	4	3	1	-	4
Fall River, Mass.	24	23	1	-	-	-	-
Hartford, Conn.	48	31	12	2	2	1	3
Lowell, Mass.	27	22	4	1	-	-	2
Lynn, Mass.	16	13	3	-	-	-	-
New Bedford, Mass.	37	29	5	3	-	-	-
New Haven, Conn.	49	29	11	5	3	1	1
Providence, R.I.	88	73	13	1	1	-	3
Somerville, Mass.	3	3	-	-	-	-	-
Springfield, Mass.	39	32	3	3	1	-	4
Waterbury, Conn.	36	29	4	2	-	1	4
Worcester, Mass.	70	59	5	5	-	1	6
MID. ATLANTIC	2,884	2,013	526	248	58	39	157
Albany, N.Y.	57	41	10	6	-	-	3
Allentown, Pa.	22	16	6	-	-	-	-
Buffalo, N.Y.	73	58	10	3	1	1	6
Camden, N.J.	48	26	14	4	4	-	3
Elizabeth, N.J.	37	28	8	1	-	-	1
Erie, Pa.§	54	46	6	1	-	1	4
Jersey City, N.J.	70	55	7	7	-	1	4
New York City, N.Y.	1,611	1,124	302	138	27	20	85
Newark, N.J.	73	30	14	20	8	1	3
Paterson, N.J.	34	14	12	6	-	2	1
Philadelphia, Pa.	300	194	57	35	9	5	15
Pittsburgh, Pa.§	100	71	15	8	2	4	4
Reading, Pa.	12	9	2	-	1	-	5
Rochester, N.Y.	178	145	24	5	3	1	11
Schenectady, N.Y.	25	18	4	1	1	1	1
Scranton, Pa.§	41	38	1	-	-	2	2
Syracuse, N.Y.	53	34	14	4	1	-	4
Trenton, N.J.	45	29	11	5	-	-	2
Utica, N.Y.	17	14	2	1	-	-	1
Yonkers, N.Y.	34	23	7	3	1	-	2
E.N. CENTRAL	2,484	1,762	467	156	39	60	162
Akron, Ohio	55	42	6	1	2	4	-
Canton, Ohio	40	30	9	-	1	-	8
Chicago, Ill.	433	271	99	46	7	10	38
Cincinnati, Ohio	94	66	17	6	1	4	3
Cleveland, Ohio	187	141	36	4	3	3	4
Columbus, Ohio	194	128	36	18	6	6	15
Dayton, Ohio	150	116	27	4	2	1	13
Detroit, Mich.	291	192	59	25	6	9	12
Evansville, Ind.	61	51	7	-	1	2	4
Fort Wayne, Ind.	54	48	5	1	-	-	6
Gary, Ind.	U	U	U	U	U	U	U
Grand Rapids, Mich.	57	49	4	2	1	1	5
Indianapolis, Ind.	280	191	57	17	3	12	20
Madison, Wis.	67	50	8	5	3	1	4
Milwaukee, Wis.	170	121	33	12	1	3	15
Peoria, Ill.	50	38	10	1	-	1	3
Rockford, Ill.	58	43	11	1	1	2	3
South Bend, Ind.	54	41	10	2	-	1	3
Toledo, Ohio	111	81	22	7	1	-	6
Youngstown, Ohio	78	63	11	4	-	-	-
W.N. CENTRAL	812	570	141	53	16	20	42
Des Moines, Iowa	55	35	17	2	1	-	7
Duluth, Minn.	30	20	7	3	-	-	1
Kansas City, Kans.	40	31	3	3	2	1	-
Kansas City, Mo.	100	57	19	5	4	3	5
Lincoln, Nebr.	51	42	5	2	-	2	3
Minneapolis, Minn.	193	148	25	12	3	5	14
Omaha, Nebr.	69	55	10	2	1	1	4
St. Louis, Mo.	144	86	34	15	3	6	4
St. Paul, Minn.	53	41	10	2	-	-	1
Wichita, Kans.	77	55	11	7	2	2	3

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	>65	45-64	25-44	1-24	<1	
S. ATLANTIC	1,346	826	312	145	36	27	72
Atlanta, Ga.	277	150	72	43	4	8	8
Baltimore, Md.	164	105	34	18	4	3	11
Charlotte, N.C.	109	75	25	6	1	2	9
Jacksonville, Fla.	177	110	44	16	4	3	10
Miami, Fla.	85	47	19	10	8	1	-
Norfolk, Va.	68	43	13	5	5	2	8
Richmond, Va.	U	U	U	U	U	U	U
Savannah, Ga.	32	25	5	2	-	-	2
St. Petersburg, Fla.	91	73	10	2	2	4	6
Tampa, Fla.	196	120	45	22	5	4	16
Washington, D.C.	116	62	30	21	3	-	2
Wilmington, Del.	31	16	15	-	-	-	-
E.S. CENTRAL	575	368	133	41	17	16	53
Birmingham, Ala.	116	73	25	7	6	5	10
Chattanooga, Tenn.	57	33	14	8	2	-	7
Knoxville, Tenn.	52	32	13	1	5	1	7
Lexington, Ky.	87	53	26	7	1	-	9
Memphis, Tenn.	U	U	U	U	U	U	U
Mobile, Ala.	56	32	14	5	1	4	1
Montgomery, Ala.	60	37	13	7	-	3	2
Nashville, Tenn.	147	108	28	6	2	3	17
W.S. CENTRAL	1,615	1,049	333	158	44	31	93
Austin, Tex.	80	49	15	10	3	3	6
Baton Rouge, La.	69	47	12	7	1	2	4
Corpus Christi, Tex.	55	37	9	6	-	3	1
Dallas, Tex.	206	122	50	16	11	7	3
El Paso, Tex.	44	32	7	2	2	1	5
Ft. Worth, Tex.	118	79	21	16	1	1	4
Houston, Tex.	405	258	82	47	12	6	28
Little Rock, Ark.	72	48	12	7	3	2	3
New Orleans, La.	124	71	26	17	6	4	-
San Antonio, Tex.	256	171	61	19	4	1	26
Shreveport, La.	35	26	6	2	-	1	4
Tulsa, Okla.	151	109	32	9	1	-	9
MOUNTAIN	945	662	154	82	28	19	70
Albuquerque, N.M.	132	99	19	11	1	2	2
Colo. Springs, Colo.	61	46	9	4	1	1	5
Denver, Colo.	112	75	17	12	3	5	15
Las Vegas, Nev.	172	119	30	15	5	3	13
Ogden, Utah	26	22	3	-	-	1	-
Phoenix, Ariz.	164	102	33	18	8	3	9
Pueblo, Colo.	37	23	7	4	2	1	3
Salt Lake City, Utah	93	61	19	5	5	3	9
Tucson, Ariz.	148	115	17	13	3	-	14
PACIFIC	1,618	1,126	292	134	34	30	137
Berkeley, Calif.	25	17	2	5	1	-	-
Fresno, Calif.	107	74	20	7	1	5	11
Glendale, Calif.	22	18	3	-	1	-	1
Honolulu, Hawaii	82	62	14	4	2	-	11
Long Beach, Calif.	88	62	14	7	4	1	8
Los Angeles, Calif.	290	193	58	26	5	8	9
Pasadena, Calif.	U	U	U	U	U	U	U
Portland, Oreg.	133	98	14	15	5	1	14
Sacramento, Calif.	U	U	U	U	U	U	U
San Diego, Calif.	182	107	43	18	6	7	13
San Francisco, Calif.	154	102	32	15	2	2	24
San Jose, Calif.	182	134	28	15	3	2	26
Santa Cruz, Calif.	33	27	3	1	1	1	3
Seattle, Wash.	157	110	28	16	-	3	2
Spokane, Wash.	71	56	13	2	-	-	6
Tacoma, Wash.	92	66	20	3	3	-	9
TOTAL	12,929¶	8,870	2,449	1,061	282	253	816

U: Unavailable -: no reported cases

*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.

¶Total includes unknown ages.

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