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MORBIDITY AND MORTALITY WEEKLY REPORT

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Deaths from Motor-Vehicle–Related Unintentional Carbon Monoxide Poisoning — Colorado, 1996, New Mexico, 1980–1995, and United States, 1979–1992

Carbon monoxide (CO) is a colorless, odorless, toxic gas that is a product of incomplete combustion. Motor vehicles, heaters, and appliances that use carbon-based fuels are the main sources of this poison. Most fatal unintentional CO poisonings associated with motor vehicles are preventable and can result from differing mechanisms of exposure: 1) operation of a motor vehicle with a damaged or malfunctioning exhaust system and an inadequately ventilated passenger compartment, 2) operation of a motor vehicle in an enclosed space (e.g., a garage) with inadequate ventilation, and 3) use of auxiliary fuel-burning heaters inside a passenger compartment or in a camper (1–8). This report describes the investigation of deaths associated with multiple motor-vehicle–related CO poisonings in Colorado on November 3, 1996, summarizes a review of such deaths in New Mexico during 1980–1995, and presents geographic and seasonal patterns in national death rates for 1979–1992. These findings indicate that deaths from motor-vehicle–related unintentional CO poisonings increase during winter months and that death rates from CO poisoning in stationary motor vehicles are highest in states with colder average winter temperatures.

Colorado

On November 3, 1996, five men aged 17–22 years were found dead inside two automobiles with the engine of one car running inside a garage with closed doors and windows. Friends and relatives of the decedents reported that on the night of November 2, the men had been out consuming alcohol and continued socializing in the garage after they had returned home. In an apparent attempt to keep warm, they had entered the cars, started the engine of one car, and turned on the heat.

New Mexico

During 1980–1995, a total of 56 motor-vehicle–related CO poisoning deaths occurred in New Mexico: 24 (43%) were caused by the combination of a faulty exhaust system and an inadequately ventilated passenger compartment; 22 (39%), by operation of a motor vehicle inside an improperly ventilated structure; and 10 (18%), by the use of a fuel-burning heating device inside an inadequately ventilated passenger

Carbon Monoxide Poisoning — Continued

compartment. During this period, the number of deaths increased sharply during October and peaked during December–January (Figure 1).

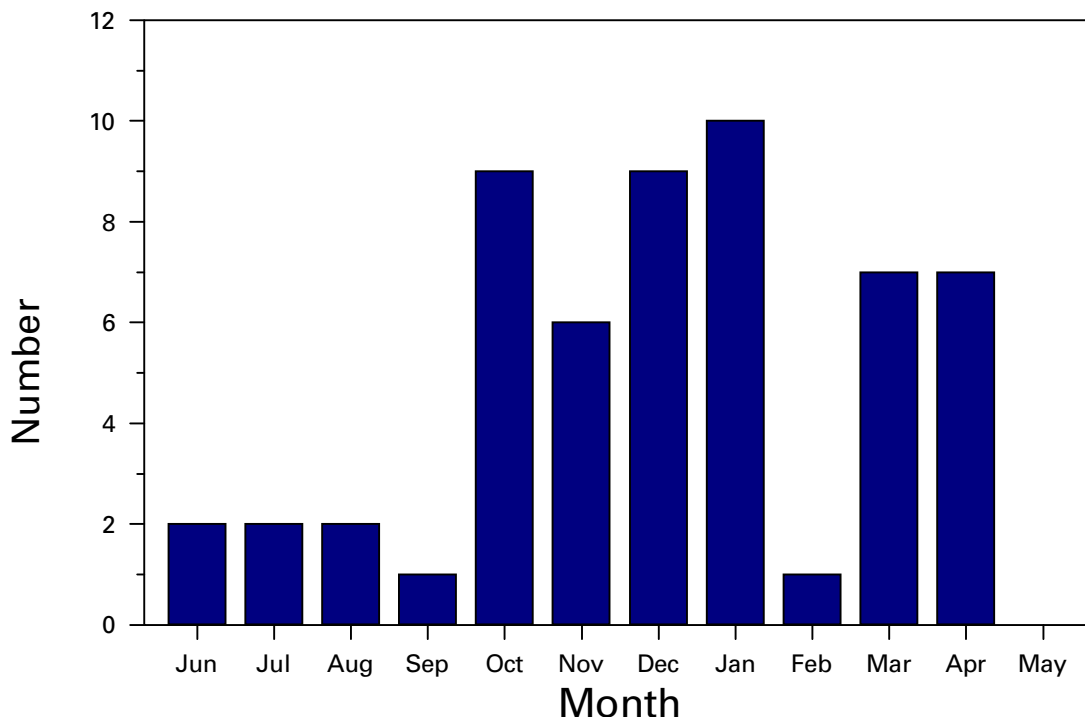
National Death Rates

National mortality data (underlying cause of death) for 1979–1992 were used to calculate death rates for CO poisoning in stationary motor vehicles (*International Classification of Diseases, Ninth Revision* [ICD-9], code E868.2). Data about nonstationary vehicular CO poisoning (ICD-9 code E818) were excluded from the analysis. Death rates from CO poisoning were higher in most states in the northern regions of the United States, where winter temperatures are coldest, than in states in southern regions, which have warmer winter temperatures (Figure 2).

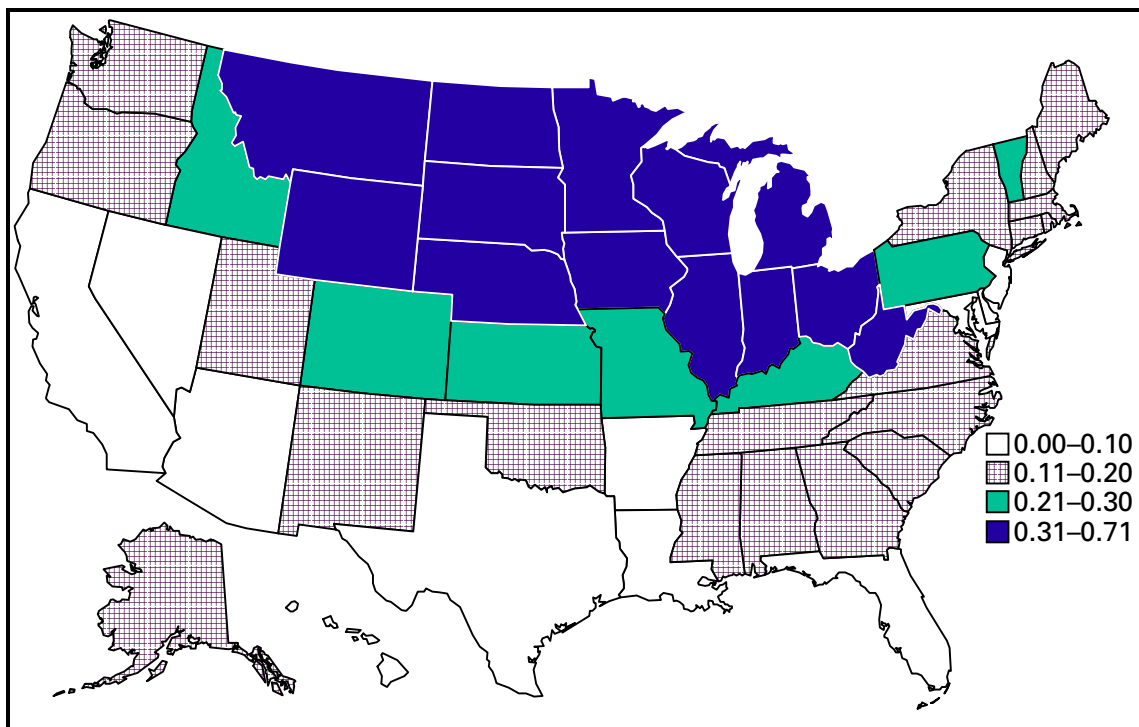
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Editorial Note: The findings in this report underscore that most fatal motor-vehicle-related CO poisonings occur in northern states and during the colder months (1,4–8). The CO in motor-vehicle exhaust accounts for the most poisoning deaths in the United States caused by a single agent (8). Of the 11,547 unintentional CO deaths during 1979–1988, 57% were caused by motor-vehicle exhaust; of these, 83% were associated with stationary vehicles (1). Most motor-vehicle-related CO deaths in garages have occurred even though the garage doors or windows have been open (6), suggesting that passive ventilation may not be adequate to reduce risk in semi-enclosed spaces.

FIGURE 1. Number of deaths from unintentional motor-vehicle-related carbon monoxide poisoning, by month — New Mexico, 1980–1995



Source: Office of the Medical Investigator, New Mexico.

*Carbon Monoxide Poisoning — Continued***FIGURE 2. Rate* of deaths from unintentional motor-vehicle–related carbon monoxide poisoning†, by state — United States, 1979–1992**

*Per 100,000 population.

†*International Classification of Diseases, Ninth Revision, code E868.2.*

Deaths also have occurred in working or living quarters adjacent to enclosed garages with vehicular sources of CO (8).

CO intoxication and resulting tissue hypoxia affect multiple organ systems. Manifestations associated with CO exposure range from subtle neuropsychologic signs and symptoms to coma and death and can include headache, dizziness, fatigue, weakness, drowsiness, nausea, vomiting, loss of consciousness, skin pallor, dyspnea on exertion, palpitation, confusion, irritability, and irrational behavior (9).

Strategies for primary prevention of CO poisoning emphasize limiting CO emissions from known sources and include testing vehicular emissions, inspecting exhaust systems, conducting information and media campaigns with messages about the dangers of vehicular exhaust in enclosed spaces (especially during the colder months), and targeting culturally diverse populations who, because of language barriers, may be unaware of the sources and fatal consequences of CO exposure (10). Secondary prevention efforts, which focus on early detection of potentially toxic exposures, have not been established for motor-vehicle–related CO poisonings and, although CO detectors are widely available, there are no standard recommendations for their use. Although CO detector technology continues to evolve, detectors should not substitute for proper use, inspection, and maintenance of fuel-burning devices.

References

1. Cobb N, Etzel RA. Unintentional carbon monoxide-related deaths in the United States, 1979–1988. *JAMA* 1991;266:659–63.

Carbon Monoxide Poisoning — Continued

2. Hampson NB, Norkool DM. Carbon monoxide poisoning in children riding in the back of pickup trucks. *JAMA* 1992;267:538-40.
3. CDC. Carbon monoxide poisonings associated with snow-obstructed vehicle exhaust systems—Philadelphia and New York City, January 1996. *MMWR* 1996;45:1-3.
4. Moolenaar RL, Etzel RA, Parrish RG. Unintentional deaths from carbon monoxide poisoning in New Mexico, 1980 to 1988: a comparison of medical examiner and national mortality data. *West J Med* 1995;163:431-4.
5. Cook M, Simon PA, Hoffman RE. Unintentional carbon monoxide poisoning in Colorado, 1986 through 1991. *Am J Public Health* 1995;85:988-90.
6. Baron RC, Backer RC, Sopher IM. Unintentional deaths from carbon monoxide in motor vehicle exhaust: West Virginia. *Am J Public Health* 1989;79:328-30.
7. Girman JR, Chang Y, Hayward SB, Liu K. Final report: causes of unintentional deaths from carbon monoxide poisonings in California. Berkley, California: California Department of Health Services, California Indoor Air Quality Program, 1993.
8. Baker SP, O'Neill B, Ginsburg MJ, Li G. The injury factbook. 2nd ed. New York: Oxford University Press, 1992.
9. Ilano AL, Raffin TA. Management of carbon monoxide poisoning. *Chest* 1990;97:165-9.
10. CDC. Unintentional carbon monoxide poisoning following a winter storm—Washington, January 1993. *MMWR* 1993;42:109-11.

Characteristics of Foreign-Born Hispanic Patients with Tuberculosis — Eight U.S. Counties Bordering Mexico, 1995

During 1986–1995, the number of tuberculosis (TB) cases among foreign-born persons in the United States increased 61%, from 4925 cases (22% of the national total) to 7930 cases (35% of the national total). This increase probably reflected, in part, the immigration of persons from regions of the world that have a high incidence of TB (1). In 1995, 22% of all foreign-born persons with TB (8% of the national total) were born in Mexico; of these, 81% were reported by the four U.S. states bordering Mexico—Arizona, California, New Mexico, and Texas (2). In 1995, local health departments in these states conducted an epidemiologic study to characterize patterns of immigration and migration among foreign-born Hispanic patients with TB and their behaviors in seeking health care. This report summarizes the findings of the analysis, which indicate that collaborative efforts for controlling TB should include and extend beyond border areas and that drug-susceptibility testing should be conducted for all TB isolates.

Participants included all consenting foreign-born self-identified Hispanic patients listed on public health department TB clinical registries (n=181) under treatment for TB during October 1, 1995–January 5, 1996, in eight U.S. counties bordering Mexico: Yuma County, Arizona; Imperial and San Diego counties, California; Doña Ana County, New Mexico; and Cameron, El Paso, Hidalgo, and Webb counties, Texas. These counties were selected because they include urban areas in close proximity to urban areas in Mexico. A standardized questionnaire available in both Spanish and English was administered to each patient by bilingual staff from the health departments in these counties. Clinical and microbiologic data were obtained from clinic charts, laboratory records, and data reported to CDC's national TB surveillance system. Drug susceptibility data were analyzed for the 169 patients who were interviewed in this study and for all other patients self-identified as Hispanic or non-Hispanic in the eight counties during 1995.

Tuberculosis — Continued

Overall, 169 (93%) of the 181 patients or an adult family member were interviewed. Of the 169, a total of 100 (59%) were male; the mean age was 42 years (range: 2–97 years), and the median length of residency in the United States at the time of diagnosis was 15 years (range: 4 months–82 years). Most (158 [94%]) of the 169 patients had been born in Mexico, and 11 (7%) were from Costa Rica, Guatemala, or Honduras.

Of the 125 patients aged 18–65 years, 36 (29%) were employed at the time of TB diagnosis. The usual employment of the 125 patients was construction or factory-related jobs (34 [27%]), homemaking and child care (28 [22%]), service-related jobs (e.g., clerical, custodial, or restaurant-related) (25 [20%]), and agriculture-related jobs (19 [15%]); 19 (15%) reported multiple occupations or no occupation.

Complete information about immigration history was available for 164 (97%) of the 169 patients. All 10 patients born in Central America reported immigrating directly to the United States (i.e., did not reside in another country before arriving in the United States) from their countries of birth. Of the 154 patients born in Mexico, 78 (51%) reported being born in one of the six states of Mexico bordering the United States (Baja California Norte, Chihuahua, Coahuila, Nuevo Leon, Sonora, and Tamaulipas). Of these 78 patients, 42 (54%) were born in towns within 31 miles (50 km) of the U.S.-Mexico border (e.g., Ciudad Juárez, Matamoros, and Tijuana) and immigrated directly to the United States from those towns; 18 (23%) moved from their town of birth to one of the border towns before immigrating to the United States; and 18 (23%) immigrated directly from their town of birth. Of the 76 (49%) patients who had been born in non-border states, 43 (57%) immigrated directly from their respective state of birth, and 33 (43%) moved to a border town and then immigrated to the United States. Overall, 93 (60%) of the 154 patients born in Mexico had been living in a border town in Mexico before immigrating to the United States; of these, 42 (45%) had been born in these towns. Most (44 [86%]) of the 51 patients who were not born in border towns but who immigrated to the United States from a border town had lived in that town for ≥ 2 years before immigration.

Of the 169 total participants, 138 (82%) reported ever returning to their country of origin. Of these, 101 (73%) had returned during the year preceding TB diagnosis: 36 reported returning at least weekly (21% of all patients); 23, weekly to monthly (14% of all patients); and 42, monthly to yearly (25% of all patients). The primary reasons for returning included visiting family and friends (75%), shopping (20%), and seeking health care (7%).

Most (146 [86%]) patients had pulmonary TB. The median duration of symptoms at diagnosis was 4 months (range: 2 weeks–11 years). Of the 48 (28%) patients who reported receiving either previous treatment or preventive therapy for TB, 30 (63%) reported previously having taken multiple TB medications (18% of all patients); the remaining 18 (38%) reported having taken only isoniazid (INH). Of the 25 patients for whom information was available on where they had obtained prior treatment, 13 had received treatment outside the United States and 12 had received treatment in the United States. One of the 13 patients treated outside the United States had received treatment from a curandero (i.e., traditional healer).

Prevalences of single-drug resistance among foreign-born Hispanic patients were compared with prevalences in U.S.-born non-Hispanic patients and U.S.-born Hispanic patients residing in the eight counties during 1995. Prevalences among U.S.-born Hispanic patients tended to be 1.6–3.2 times higher than those among U.S.-born

Tuberculosis — Continued

non-Hispanic patients residing in the same counties (Table 1), although some differences were not statistically significant. Prevalences among foreign-born Hispanic patients were 1.7–5.0 times higher than those among U.S.-born non-Hispanic patients. The prevalence of multidrug resistance (resistance to INH plus rifampin) was 6.8 times higher among foreign-born Hispanic patients than among U.S.-born non-Hispanic patients (95% confidence interval=1.4–32.7). Prevalences among U.S.-born and foreign-born Hispanic patients were similar.

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Editorial Note: Based on current worldwide trends in the epidemiology of TB, approximately 90 million new TB cases and 30 million deaths from TB will occur during the 1990s (3,4). To emphasize prevention and control of TB, the World Health Organization has designated TB a global emergency and has encouraged developed countries to assist developing countries in improving their TB-control programs (5). Such efforts also are likely to improve TB control in developed countries, especially those with immigrants arriving from countries with a high prevalence of TB (6).

TABLE 1. Drug-resistance prevalences among U.S.-born non-Hispanics* and U.S.-born† and foreign-born Hispanics‡ with tuberculosis, by drug — eight U.S. counties,¶ 1995

Drug/ Patient group	Resistance prevalence	Risk ratio	(95% CI**)
Isoniazid (INH)			
U.S.-born non-Hispanic	3.9%	referent	
U.S.-born Hispanic	7.2%	1.9	(1.0– 3.3)
Foreign-born Hispanic	6.6%	1.7	(1.0– 3.0)
Rifampin (RIF)			
U.S.-born non-Hispanic	0.3%	referent	
U.S.-born Hispanic	1.1%	3.2	(0.5–19.1)
Foreign-born Hispanic	1.6%	5.0	(1.0–25.0)
Ethambutol			
U.S.-born non-Hispanic	1.3%	referent	
U.S.-born Hispanic	2.2%	1.6	(0.6– 4.6)
Foreign-born Hispanic	3.3%	2.4	(1.0– 6.1)
Streptomycin			
U.S.-born non-Hispanic	3.4%	referent	
U.S.-born Hispanic	8.3%	2.5	(1.4– 4.4)
Foreign-born Hispanic	8.9%	2.6	(1.5– 4.6)
INH and RIF			
U.S.-born non-Hispanic	0.3%	referent	
U.S.-born Hispanic	1.1%	3.2	(0.4–38.9)
Foreign-born Hispanic	2.3%	6.8	(1.4–32.7)

* n=595.

† n=278.

‡ n=305.

¶ Yuma County, Arizona; Imperial and San Diego counties, California; Doña Ana County, New Mexico; and Cameron, El Paso, Hidalgo, and Webb counties, Texas.

** Confidence interval.

Tuberculosis — Continued

CDC supports five binational projects involving the collaboration of paired cities on both sides of the U.S.-Mexico border. These projects are designed to direct resources to areas of need and to develop cooperative working relations between health professionals managing TB-control and -prevention programs in communities along both sides of the U.S.-Mexico border. Although these border projects are an essential part of cooperative TB-control efforts with the local health departments in the six states in Mexico on the U.S. border and the Ministry of Health in Mexico, the finding that 40% of foreign-born Hispanic patients had immigrated to the United States from nonborder communities suggests that efforts should be intensified in nonborder regions of Mexico.

Collaborative efforts involving the United States and Mexico could include assistance to pilot projects being planned by the government of Mexico for instituting directly observed therapy (DOT) to treat active TB cases. DOT requires a health-care worker or other designated person to observe a patient ingesting each dose of TB medication for the duration of treatment. This approach helps to ensure completion of therapy, which is important for reducing continued transmission, relapse rates, and drug-resistance levels (7). Because the findings in this report indicate higher prevalences of drug resistance among foreign-born Hispanic patients, many of whom reported having previously received TB treatment in Mexico, DOT may improve TB control and reduce the prevalence of drug resistance in both Mexico and the United States. In addition, an ongoing study of resistance to TB drugs (being conducted in eight states and the federal district [Mexico City] in Mexico through a partnership between CDC and Mexico's Ministry of Health) may provide information for selecting treatment regimens that further decrease the prevalence of drug resistance.

Expanded TB-control efforts (e.g., ensuring completion of anti-TB therapy) with Mexico also should assist in reducing drug resistance among U.S.-born Hispanic patients by reducing the risk for transmission of drug-resistant strains. In this study, the prevalence of INH and streptomycin resistance was higher among U.S.-born Hispanic patients than among U.S.-born non-Hispanic patients. This finding may reflect the interruption of TB therapy resulting from frequent movement of persons across the U.S.-Mexico border; possible self-medication with TB drugs, which can be purchased without a prescription in Mexico; inadequate treatment or supervision by private providers in either the United States or Mexico; and exposure to drug-resistant TB during visits with family and friends in Mexico and in the United States. Because levels of INH resistance approach 4% in U.S.-born non-Hispanic patients and are substantially higher than 4% in Hispanic patients, an initial four-drug regimen is indicated for TB treatment in all patients in these border areas (8).

References

1. McKenna MT, McCray E, Onorato I. The epidemiology of tuberculosis among foreign-born persons in the United States, 1986 to 1993. *N Engl J Med* 1995;332:1071-6.
2. CDC. Reported tuberculosis in the United States, 1995. Atlanta, Georgia: US Department of Health and Human Services, Public Health Service, CDC, 1996.
3. Dolin PJ, Ravigliione MC, Kochi A. Global tuberculosis incidence and mortality during 1990-2000. *Bull World Health Organ* 1994;72:213-20.
4. Ravigliione MC, Snider DE Jr, Kochi A. Global epidemiology of tuberculosis. *JAMA* 1995; 273:220-6.
5. World Health Organization. Tuberculosis: a global emergency. Geneva, Switzerland: World Health Organization, 1994.

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6. Hopewell PC. Immigrants and tuberculosis [Letter]. *N Engl J Med* 1995;333:667–8.
7. Weis SE, Slocum PC, Blais FX, et al. The effect of directly observed therapy on the rates of drug resistance and relapse in tuberculosis. *N Engl J Med* 1994;330:1179–84.
8. Bass JB Jr, Farer LS, Hopewell PC, et al. Treatment of tuberculosis and tuberculosis infection in adults and children. *Am J Respir Crit Care Med* 1994;149:1359–74.

Accessibility to Minors of Cigarettes from Vending Machines — Broward County, Florida, 1996

The sale of tobacco products to persons aged <18 years has been prohibited by law in Florida since October 1992, and since May 1994, a statewide law in Florida has required retailers or owners of businesses that sell cigarettes or other tobacco products to post a conspicuous sign stating that tobacco sales to minors are illegal and that proof of age is required to purchase tobacco products.* To assess the impact of these laws in Broward County (1990 population: 1,255,531) during February–March 1996, the Florida Atlantic University Department of Exercise Science/Wellness Education conducted studies of vendor compliance with laws enacted to prevent minors from gaining access to cigarettes through vending machines and to ensure that tobacco vendors comply with the sign statute. This report summarizes the findings of the assessment of access to cigarettes from vending machines, which indicated that approximately one third of such attempts by minors were successful.

The 1995–1996 Beverage License File maintained by the Florida Department of Business and Professional Regulation was used to identify four categories of businesses in Broward County: bars, hotels/motels, restaurants, and miscellaneous (e.g., bowling lanes, country clubs, pool halls, and amusement centers) (n=1861). A map of the county was divided into four equally sized areas; within each of these areas, approximately 20% of the businesses were randomly selected to produce a total sample of 373 businesses. Of these 373, a total of 270 were excluded because they had no cigarette vending machines on site, had closed, sold only over-the-counter cigarettes, or were bars that would not admit persons aged <21 years. The remaining 103 businesses represented 6% of the 1861 county total and constituted 64 (14%) of the 466 bars, five (5%) of the 95 hotels/motels, 27 (2%) of the 1218 restaurants, and seven (9%) of the 82 miscellaneous businesses. The assessment employed seven teams of volunteers, each comprising one minor and one adult; five of the minors were female (ages 12 years [one], 15 years [two], and 17 years [two]), and six were male (ages 13 years [two], 15 years [two], 16 years [one], and 17 years [one]).

One purchase attempt was made at each of the 103 businesses. Purchase attempts used the following procedure (1): 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 and attempted to obtain change from a vendor to use in a cigarette vending machine. If no vendor was present, the minor went directly to a vending machine to mimic purchase of cigarettes. The attempt was considered successful if the minor received change for purchasing cigarettes and was able to insert money into a cigarette vending machine and press the coin return without interference. The attempt was considered unsuccessful if the minor was refused change, prevented from inserting money in a cigarette vending machine, or asked for age verification and denied change for purchasing

*Florida Revised Statutes 859.06–859.061.

Accessibility to Minors of Cigarettes — Continued

cigarettes. The adult member noted the vendor's reasons for refusal at the time of the request for change; when no refusal reason was provided to the minor, the adult team member waited until the minor had departed and asked the vendor about the reason for refusal. Significance testing was performed using Pearson chi-square tests.

Overall, attempts by minors to obtain cigarettes from vending machines were successful in 34 (33%) of the 103 business sites (Table 1); 30 (88%) of these successes occurred after the minor received change from the vendor. At four businesses, a vendor was absent, and minors went directly to the vending machines. Twenty-five (74%) of the businesses and purchase attempts were within a radius of one half mile of an elementary, middle, or high school. Overall, success rates were similar among those aged <17 years and aged 17 years (35% [95% confidence interval (CI)=±11%] versus 28% [95% CI=±17%]); however, the rate was higher for females than males (24 [45% (95% CI=±14%)] of 53 attempts versus 10 [20% (95% CI=±12%)] of 50 attempts). Success rates were similar for each category of business, including 21 (33% [95% CI=±12%]) bars, two (40% [95% CI=±68%]) hotels/motels, eight (30% [95% CI=±18%]) restaurants, and three (43% [95% CI=±43%]) other businesses. Warning signs provided by the Florida Department of Business and Professional Regulation were posted and clearly visible in 84 (82%) of the 103 businesses; however, success rates were similar in businesses with and without signs (30 [36% (95% CI=±11%)] of 84 versus four [21% (95% CI=±20%)] of 19, respectively).

Reasons specified by the vendors for the 69 unsuccessful attempts were that the minor had no proper identification (41 [59%]), the minor appeared to be underaged (16 [23%]), and the sale of cigarettes to minors was illegal (nine [13%]); other reasons accounted for three unsuccessful attempts.

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TABLE 1. Number of successful attempts by minors* to purchase cigarettes from vending machines, by category — Broward County, Florida, February–March 1996

Category	No. attempts	Successful attempts		
		No.	(%)	(95% CI†)
Age (yrs)				
<17	71	25	(35.2)	(±11.4%)
17	32	9	(28.1)	(±16.5%)
Sex of minor				
Male	50	10	(20.0)	(±11.5%)
Female	53	24	(45.3)	(±13.9%)
Type of store				
Bar	64	21	(32.8)	(±11.8%)
Hotel/Motel	5	2	(40.0)	(±68.0%)
Restaurant	27	8	(29.6)	(±18.4%)
Other‡	7	3	(42.8)	(±42.9%)
Warning sign				
Yes	84	30	(35.7)	(±10.5%)
No	19	4	(32.9)	(±20.2%)
Total	103	34	(33.0)	(± 9.2%)

*Persons aged <18 years.

†Confidence interval.

‡Includes bowling lanes, country clubs, pool halls, and amusement centers.

Accessibility to Minors of Cigarettes — Continued

Editorial Note: The assessment in Broward County indicates that, despite the enactment of state laws prohibiting the sale of tobacco products to persons aged <18 years, approximately 33% of minors aged 12–17 years were successful in attempts to purchase cigarettes from vending machines. These success rates were lower than those reported in surveys conducted in Massachusetts and Minnesota (86% and 42%, respectively) (2,3). Study design differences (i.e., in the Florida study and one other study [1], minors requested change from vendors before mimicking purchases at vending machines) may have contributed to these discrepancies, and both studies may have underestimated the ease of cigarette access. If minors had gone directly to the vending machine, they might have been more successful.

The findings in this report are subject to at least one limitation. Data were obtained from the files of the Florida Department of Business and Professional Regulation for only four types of businesses because cigarette vending machines were most likely to be present on the premises of these businesses. Although businesses included in the analysis probably do not differ from businesses in other categories that were not included, it could not be determined whether purchasing cigarettes from vending machines at businesses that were not surveyed would have been more difficult.

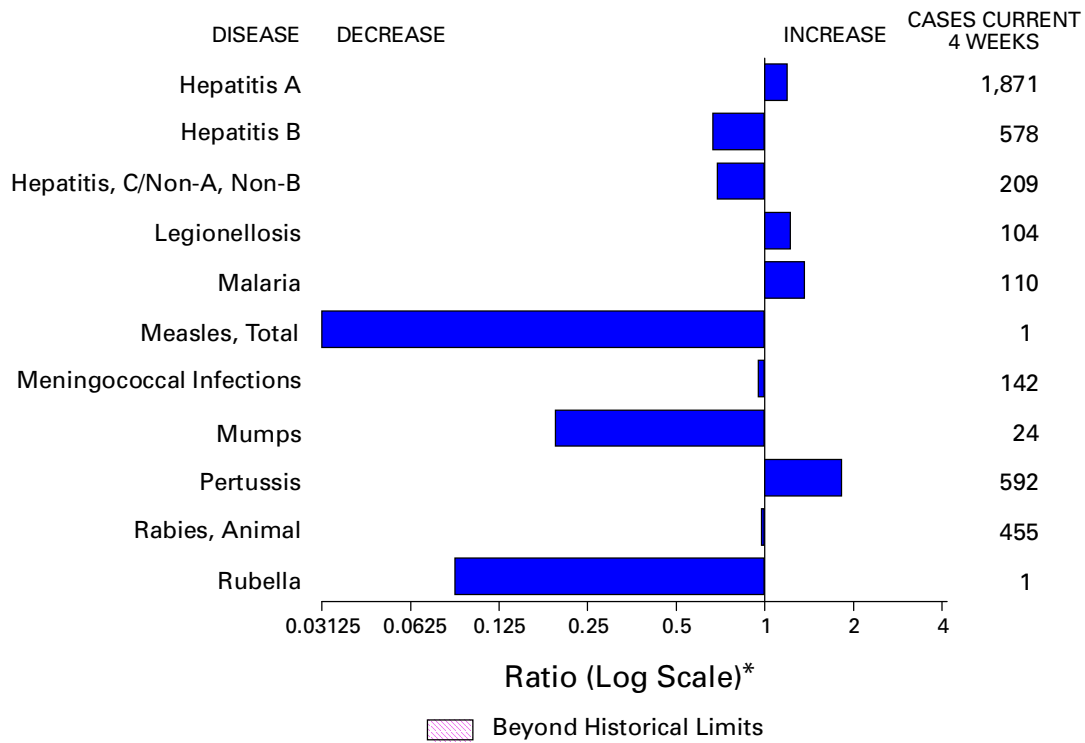
The findings of this assessment will be used locally to educate the public and the business community about the need to support local, state, and federal laws restricting the sale of tobacco to minors. For example, the Synar Amendment requires all states receiving federal funds for prevention and treatment of substance abuse to have and enforce a law prohibiting the sale of tobacco to persons aged <18 years and to reduce the statewide illegal sales rate to $\leq 20\%$ over several years[†] (4). These findings provide further support for the Food and Drug Administration (FDA) regulations that, in addition to other provisions aimed at decreasing the appeal of and access to tobacco products by minors, ban vending machines except in facilities where only adults are permitted (5). The effective date for the provision restricting sales through vending machines is August 28, 1997. The FDA rule will further enhance state and local efforts to decrease minors' access to tobacco.

References

1. Hoppock KC, Houston TP. Availability of tobacco products to minors. *J Fam Pract* 1990;30:174–6.
2. DiFranza JR, Savageau JA, Aisquith BF. Youth access to tobacco: the effects of age, gender, vending machine locks, and "It's the Law" programs. *Am J Public Health* 1996;86:221–4.
3. Forster JL, Hourigan ME, Kelder S. Locking devices on cigarette vending machines: evaluation of a city ordinance. *Am J Public Health* 1992;82:1217–9.
4. Substance Abuse and Mental Health Services Administration. Final regulations to implement section 1926 of the Public Health Service Act regarding the sale and distribution of tobacco products to individuals under the age of 18. *Federal Register* 1996;61:13,1492–500.
5. Food and Drug Administration. Regulations restricting the sale and distribution of cigarettes and smokeless tobacco products to protect children and adolescents—final rule. *Federal Register* 1996;61:41,314–75.

[†]Public Law 102-321, §1926 (42 USC §300x–26).

FIGURE I. Selected notifiable disease reports, comparison of provisional 4-week totals ending November 23, 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 November 23, 1996 (47th Week)

	Cum. 1996		Cum. 1996
Anthrax	-	Plague	5
Brucellosis	84	Poliomyelitis, paralytic [¶]	-
Cholera	3	Psittacosis	38
Congenital rubella syndrome	1	Rabies, human	1
Cryptosporidiosis*	2,091	Rocky Mountain spotted fever (RMSF)	662
Diphtheria	1	Streptococcal toxic-shock syndrome*	14
Encephalitis: California*	107	Syphilis, congenital**	225
eastern equine*	2	Tetanus	26
St. Louis*	-	Toxic-shock syndrome	118
western equine*	-	Trichinosis	17
Hansen Disease	98	Typhoid fever	331
Hantavirus pulmonary syndrome* [†]	19	Yellow fever ^{††}	1
HIV infection, pediatric* [§]	227		

-: 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 October 29, 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 November 23, 1996, and November 25, 1995 (47th Week)

Reporting Area	AIDS*		Chlamydia	Escherichia coli O157:H7		Gonorrhea		Hepatitis C/NA,NB		Legionellosis	
	Cum. 1996	Cum. 1995		Cum. 1996	NETSS†	PHLIS‡	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	Cum. 1996
			Cum. 1996		Cum. 1996						
UNITED STATES	56,760	63,034	342,954	2,545	1,512	270,875	350,996	3,011	3,617	914	1,035
NEW ENGLAND	2,334	2,951	15,234	328	191	6,419	6,966	105	111	68	33
Maine	39	82	864	22	-	53	84	-	-	2	6
N.H.	72	85	397	39	38	80	101	8	12	5	2
Vt.	18	28	U	35	31	42	59	36	13	4	-
Mass.	1,134	1,336	6,374	147	122	2,003	2,450	55	79	28	20
R.I.	159	205	1,678	15	-	452	485	6	7	29	5
Conn.	912	1,215	5,921	70	-	3,789	3,787	-	-	N	N
MID. ATLANTIC	15,871	17,494	41,016	213	43	32,435	38,485	275	442	206	184
Upstate N.Y.	2,180	2,119	N	140	16	5,891	8,319	217	229	69	51
N.Y. City	8,653	9,209	18,756	15	-	10,373	15,463	1	1	10	5
N.J.	3,102	4,104	6,614	58	5	4,989	3,468	-	173	14	31
Pa.	1,936	2,062	15,646	N	22	11,182	11,235	57	39	113	97
E.N. CENTRAL	4,442	4,629	72,569	556	409	50,822	70,567	414	311	269	314
Ohio	940	943	15,943	165	97	11,486	21,668	33	15	101	140
Ind.	497	467	8,884	83	52	5,886	8,231	8	12	41	73
Ill.	1,988	1,872	21,637	210	128	16,029	18,601	65	77	9	35
Mich.	782	1,031	18,194	98	70	13,574	16,127	308	207	94	30
Wis.	235	316	7,911	N	62	3,847	5,940	-	-	24	36
W.N. CENTRAL	1,324	1,440	25,015	567	340	11,336	17,847	118	82	56	73
Minn.	260	345	2,702	258	221	U	2,638	4	4	9	6
Iowa	76	94	3,960	122	88	1,077	1,431	51	13	10	20
Mo.	673	643	10,847	67	-	7,433	10,216	36	21	17	16
N. Dak.	11	5	2	16	15	-	31	-	5	-	3
S. Dak.	11	17	1,341	24	-	168	206	-	1	2	3
Nebr.	87	93	2,096	50	4	790	974	8	23	13	17
Kans.	206	243	4,067	30	12	1,868	2,351	19	15	5	8
S. ATLANTIC	14,203	15,794	50,327	132	66	87,707	98,153	238	223	143	157
Del.	248	277	1,148	1	2	1,325	2,042	1	-	11	2
Md.	2,008	2,288	6,243	N	8	13,231	12,500	5	7	29	25
D.C.	1,120	896	N	-	-	3,948	4,267	-	-	8	5
Va.	965	1,204	10,582	N	34	8,336	9,530	16	18	23	21
W. Va.	101	94	1	N	3	484	598	9	44	1	4
N.C.	744	898	-	44	12	17,026	21,574	46	57	12	31
S.C.	717	868	-	12	7	10,161	11,079	28	19	6	30
Ga.	2,058	2,001	11,197	30	-	16,657	17,860	U	15	3	14
Fla.	6,242	7,268	21,156	33	-	16,539	18,703	133	63	50	25
E.S. CENTRAL	1,931	1,999	28,779	71	61	31,851	36,604	533	896	47	52
Ky.	345	261	6,053	13	10	3,853	4,301	28	29	9	10
Tenn.	708	763	12,199	33	48	10,881	12,573	371	865	19	24
Ala.	512	559	7,580	13	3	12,215	14,921	8	2	4	6
Miss.	366	416	U	12	-	4,902	4,809	126	U	15	12
W.S. CENTRAL	5,722	5,550	33,489	72	13	25,897	48,941	417	322	19	21
Ark.	229	241	-	13	4	2,772	5,231	14	7	2	6
La.	1,264	929	6,680	6	4	7,374	9,718	188	179	2	3
Okla.	227	236	6,695	12	1	4,376	5,228	69	50	5	4
Tex.	4,002	4,144	20,114	41	4	11,375	28,764	146	86	10	8
MOUNTAIN	1,644	1,974	15,134	211	100	6,131	8,484	523	427	51	105
Mont.	34	22	-	25	-	34	63	19	14	1	4
Idaho	35	43	1,373	37	13	93	127	95	47	-	2
Wyo.	5	17	518	11	9	34	48	173	178	7	12
Colo.	437	629	U	80	41	1,077	2,543	59	61	9	38
N. Mex.	139	155	3,579	11	-	840	973	67	44	2	4
Ariz.	486	552	6,418	N	25	3,150	3,335	70	50	20	9
Utah	161	129	1,413	31	-	261	249	22	11	6	16
Nev.	347	427	1,833	16	12	642	1,146	18	22	6	20
PACIFIC	9,288	11,203	61,391	395	289	18,277	24,949	388	803	55	96
Wash.	587	781	8,157	145	126	1,849	2,507	50	205	6	20
Oreg.	412	425	4,849	90	59	582	742	9	36	1	-
Calif.	8,103	9,715	45,625	156	94	15,026	20,583	131	479	42	71
Alaska	28	62	1,124	4	2	396	603	3	2	1	-
Hawaii	158	220	1,636	N	8	424	514	195	81	5	5
Guam	4	-	168	N	-	31	91	1	6	2	1
P.R.	2,026	2,181	N	17	U	342	540	80	203	-	-
V.I.	17	30	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 October 29, 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 November 23, 1996, and November 25, 1995 (47th 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	12,952	10,287	1,376	1,204	2,859	2,675	9,778	14,815	17,193	18,975	6,173	7,039
NEW ENGLAND	3,846	1,945	66	48	130	135	171	325	373	452	666	1,387
Maine	52	25	8	7	14	10	-	2	20	11	105	46
N.H.	46	25	3	2	7	23	1	1	14	17	51	139
Vt.	15	9	7	1	4	11	-	-	-	4	128	167
Mass.	337	138	22	18	56	42	71	62	186	251	102	393
R.I.	485	312	8	4	14	6	4	4	27	45	36	307
Conn.	2,911	1,436	18	16	35	43	95	256	126	124	244	335
MID. ATLANTIC	7,872	6,793	372	339	260	327	425	741	3,192	3,887	1,336	1,806
Upstate N.Y.	4,108	3,427	76	61	80	93	68	76	403	488	993	1,085
N.Y. City	294	416	203	184	34	49	120	344	1,644	2,134	-	-
N.J.	1,849	1,617	63	65	61	71	126	139	660	698	125	310
Pa.	1,621	1,333	30	29	85	114	111	182	485	567	218	411
E.N. CENTRAL	74	419	115	149	394	372	1,395	2,551	1,797	1,800	89	98
Ohio	47	28	13	11	142	107	510	851	283	253	13	12
Ind.	24	19	13	17	57	52	181	318	155	165	8	14
Ill.	3	18	35	73	110	96	382	935	917	934	23	15
Mich.	-	5	39	26	43	68	166	262	342	362	31	39
Wis.	U	349	15	22	42	49	156	185	100	86	14	18
W.N. CENTRAL	196	208	47	26	221	167	325	678	437	512	482	351
Minn.	108	121	21	5	25	26	51	41	96	124	27	27
Iowa	20	13	3	3	48	29	21	43	59	56	221	124
Mo.	27	46	10	8	91	64	209	556	183	202	18	30
N. Dak.	1	-	1	2	4	1	-	-	6	4	65	27
S. Dak.	-	-	-	2	10	7	-	-	17	22	113	95
Nebr.	5	6	3	3	20	17	12	12	21	20	5	5
Kans.	35	22	9	3	23	23	32	26	55	84	33	43
S. ATLANTIC	669	634	283	237	566	461	3,418	3,717	3,170	3,312	2,565	2,013
Del.	105	50	4	1	2	6	35	16	30	53	68	85
Md.	395	401	78	62	69	36	600	459	268	356	579	400
D.C.	3	3	7	16	10	8	124	97	121	94	10	11
Va.	48	53	53	54	56	60	359	551	282	283	562	410
W. Va.	11	22	5	4	14	8	3	10	50	64	95	111
N.C.	63	70	28	16	68	78	996	1,024	464	393	643	436
S.C.	6	16	12	2	58	56	353	528	296	286	84	119
Ga.	1	14	27	37	128	100	609	690	562	617	278	258
Fla.	37	5	69	45	161	109	339	342	1,097	1,166	246	183
E.S. CENTRAL	73	68	35	24	214	187	2,196	3,032	1,152	1,284	203	267
Ky.	25	14	7	3	28	42	143	167	210	285	39	28
Tenn.	20	28	14	10	59	73	778	817	346	393	82	92
Ala.	7	9	6	8	77	39	503	598	385	361	78	138
Miss.	21	17	8	3	50	33	772	1,450	211	245	4	9
W.S. CENTRAL	113	106	56	48	307	319	1,241	3,036	2,187	2,790	374	557
Ark.	24	9	-	2	34	32	131	460	177	217	28	46
La.	6	8	6	5	55	50	464	950	175	314	17	42
Okla.	22	45	-	1	37	39	169	178	155	326	31	28
Tex.	61	44	50	40	181	198	477	1,448	1,680	1,933	298	441
MOUNTAIN	7	12	57	60	161	186	124	187	565	613	142	172
Mont.	-	-	7	3	6	3	-	4	14	10	22	43
Idaho	1	-	-	1	22	11	4	-	7	14	-	3
Wyo.	2	3	7	-	3	8	2	1	6	4	30	26
Colo.	-	-	25	26	38	45	23	98	75	76	42	9
N. Mex.	1	1	2	6	25	33	1	6	74	71	6	6
Ariz.	-	1	7	12	39	55	79	43	226	300	31	56
Utah	1	1	5	6	16	15	2	4	51	38	4	15
Nev.	2	6	4	6	12	16	13	31	112	100	7	14
PACIFIC	102	102	345	273	606	521	483	548	4,320	4,325	316	388
Wash.	17	10	21	21	93	83	6	15	219	249	6	15
Oreg.	19	17	22	19	113	96	12	21	144	135	5	3
Calif.	65	75	290	220	385	326	463	510	3,722	3,703	297	363
Alaska	-	-	3	3	9	12	-	2	64	69	8	7
Hawaii	1	-	9	10	6	4	2	-	171	169	-	-
Guam	-	-	-	1	1	2	3	8	35	101	-	-
P.R.	-	-	-	1	4	23	124	263	63	162	40	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 November 23, 1996, and November 25, 1995 (47th Week)

Reporting Area	<i>H. influenzae</i> , invasive		Hepatitis (viral), by type				Measles (Rubeola)			
	Cum. 1996*	Cum. 1995	A		B		Indigenous		Imported†	
			Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	1996	Cum. 1996	1996	Cum. 1996
UNITED STATES	879	1,012	26,032	27,277	8,952	8,951	-	415	-	49
NEW ENGLAND	28	38	379	288	179	210	-	11	-	4
Maine	-	3	22	28	2	12	-	-	-	-
N.H.	9	10	24	12	20	20	-	-	-	-
Vt.	1	2	10	5	11	6	-	1	-	1
Mass.	16	12	181	126	60	85	-	9	-	3
R.I.	2	5	22	33	10	8	-	-	-	-
Conn.	-	6	120	84	76	79	-	1	-	-
MID. ATLANTIC	129	154	1,689	1,748	1,300	1,324	-	23	-	5
Upstate N.Y.	10	39	403	443	305	344	-	-	-	-
N.Y. City	36	34	539	816	530	384	-	9	-	3
N.J.	55	26	311	276	227	336	-	3	-	-
Pa.	28	55	436	213	238	260	-	11	-	2
E.N. CENTRAL	148	170	2,205	2,957	905	1,004	-	6	-	7
Ohio	85	89	693	1,657	114	100	-	2	-	3
Ind.	15	20	341	170	137	207	-	-	-	-
Ill.	32	42	557	611	238	259	-	2	-	1
Mich.	8	17	455	342	351	366	-	-	-	3
Wis.	8	2	159	177	65	72	U	2	U	-
W.N. CENTRAL	42	77	2,394	1,757	466	581	-	20	-	2
Minn.	25	42	129	173	59	58	-	16	-	2
Iowa	7	3	325	79	75	43	-	-	-	-
Mo.	7	25	1,200	1,212	247	397	-	3	-	-
N. Dak.	-	-	134	23	2	4	-	-	-	-
S. Dak.	1	1	42	72	5	2	-	-	-	-
Nebr.	1	3	210	49	47	31	-	-	-	-
Kans.	1	3	354	149	31	46	-	1	-	-
S. ATLANTIC	173	198	1,315	1,048	1,377	1,172	-	5	-	9
Del.	2	-	20	9	7	8	-	1	-	-
Md.	56	63	226	198	278	235	-	-	-	2
D.C.	6	-	36	25	31	21	-	1	-	-
Va.	9	28	170	197	129	103	-	-	-	3
W. Va.	10	8	15	24	30	51	-	-	-	-
N.C.	24	28	163	97	312	273	-	3	-	1
S.C.	5	2	50	44	91	49	-	-	-	-
Ga.	39	62	150	54	32	62	-	-	-	2
Fla.	22	7	485	400	467	370	-	-	-	1
E.S. CENTRAL	26	11	1,167	1,915	813	750	-	2	-	-
Ky.	4	5	42	41	60	61	-	-	-	-
Tenn.	12	-	740	1,601	465	589	-	2	-	-
Ala.	9	5	181	78	70	100	-	-	-	-
Miss.	1	1	204	195	218	U	-	-	-	-
W.S. CENTRAL	37	58	5,424	4,044	1,180	1,252	-	26	-	2
Ark.	-	6	480	558	75	66	-	-	-	-
La.	4	1	173	136	136	215	-	-	-	-
Okla.	29	22	2,260	1,143	59	153	-	-	-	-
Tex.	4	29	2,511	2,207	910	818	-	26	-	2
MOUNTAIN	91	109	4,057	3,945	1,037	773	-	153	-	5
Mont.	-	1	110	154	15	21	-	-	-	-
Idaho	1	4	224	319	85	93	-	1	-	-
Wyo.	35	8	33	101	44	26	-	1	-	-
Colo.	15	16	463	469	125	121	-	4	-	3
N. Mex.	10	14	330	743	376	282	-	17	-	-
Ariz.	14	26	1,567	1,234	222	109	-	8	-	-
Utah	8	11	961	646	95	63	-	117	-	2
Nev.	8	29	369	279	75	58	-	5	-	-
PACIFIC	205	197	7,402	9,575	1,695	1,885	-	169	-	15
Wash.	4	9	668	788	95	177	-	51	-	-
Oreg.	27	26	789	2,546	110	112	-	10	-	-
Calif.	169	157	5,814	6,037	1,460	1,570	-	38	-	8
Alaska	2	1	41	46	18	11	-	63	-	-
Hawaii	3	4	90	158	12	15	-	7	-	7
Guam	-	-	2	8	-	5	-	-	-	-
P.R.	1	3	127	98	337	585	1	8	-	-
V.I.	-	-	-	8	-	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 208 cases among children aged <5 years, serotype was reported for 50 and of those, 17 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 November 23, 1996, and November 25, 1995 (47th Week)

Reporting Area	Measles (Rubeola), cont'd.		Mumps			Pertussis			Rubella		
	Total		1996	Cum. 1996	Cum. 1995	1996	Cum. 1996	Cum. 1995	1996	Cum. 1996	Cum. 1995
	Cum. 1996	Cum. 1995									
UNITED STATES	464	292	8	583	776	153	5,287	4,073	-	202	116
NEW ENGLAND	15	10	-	2	11	62	1,177	585	-	27	48
Maine	-	-	-	-	4	-	20	43	-	-	-
N.H.	-	-	-	-	1	7	134	45	-	-	1
Vt.	2	-	-	-	-	13	166	72	-	2	-
Mass.	12	3	-	2	2	42	795	393	-	21	8
R.I.	-	5	-	-	1	-	30	4	-	-	-
Conn.	1	2	-	-	3	-	32	28	-	4	39
MID. ATLANTIC	28	12	-	79	112	46	500	371	-	13	15
Upstate N.Y.	-	1	-	25	25	41	316	195	-	5	4
N.Y. City	12	5	-	17	16	5	47	49	-	5	8
N.J.	3	6	-	3	19	-	19	18	-	2	3
Pa.	13	-	-	34	52	-	118	109	-	1	-
E.N. CENTRAL	13	15	-	93	158	17	566	540	-	3	4
Ohio	5	2	-	41	51	9	255	151	-	-	-
Ind.	-	-	-	9	9	3	105	55	-	-	-
Ill.	3	2	-	20	46	3	152	110	-	1	-
Mich.	3	5	-	22	52	2	49	97	-	2	4
Wis.	2	6	U	1	-	U	5	127	U	-	-
W.N. CENTRAL	22	2	-	18	44	2	366	252	-	-	1
Minn.	18	-	-	6	6	-	288	125	-	-	-
Iowa	-	-	-	2	10	-	20	11	-	-	-
Mo.	3	1	-	7	23	2	40	61	-	-	-
N. Dak.	-	-	-	2	1	-	1	8	-	-	-
S. Dak.	-	-	-	-	-	-	4	12	-	-	-
Nebr.	-	-	-	-	4	-	9	13	-	-	-
Kans.	1	1	-	1	-	-	4	22	-	-	1
S. ATLANTIC	14	19	3	100	118	7	606	338	-	93	10
Del.	1	-	-	-	-	2	17	10	-	-	-
Md.	2	1	1	28	34	-	235	45	-	-	1
D.C.	1	-	-	1	-	-	4	6	-	2	-
Va.	3	-	1	16	25	3	98	31	-	2	-
W. Va.	-	-	-	-	-	-	2	-	-	-	-
N.C.	4	-	-	20	16	-	100	110	-	78	1
S.C.	-	-	-	7	11	1	42	27	-	1	-
Ga.	2	4	-	3	10	-	17	25	-	-	-
Fla.	1	14	1	25	22	1	91	84	-	10	8
E.S. CENTRAL	2	-	-	21	14	-	176	269	-	2	1
Ky.	-	-	-	-	-	-	122	25	-	-	-
Tenn.	2	-	-	3	5	-	21	207	-	-	1
Ala.	-	-	-	3	4	-	24	35	-	2	-
Miss.	-	-	-	15	5	-	9	2	N	N	N
W.S. CENTRAL	28	34	2	36	51	3	118	288	-	3	7
Ark.	-	2	-	2	7	1	13	39	-	-	-
La.	-	18	-	13	13	-	9	19	-	1	-
Okla.	-	-	-	1	-	2	19	31	-	-	-
Tex.	28	14	2	20	31	-	77	199	-	2	7
MOUNTAIN	158	70	-	22	30	5	398	594	-	6	4
Mont.	-	-	-	-	1	-	34	9	-	-	-
Idaho	1	2	-	-	3	-	101	104	-	2	-
Wyo.	1	-	-	1	-	1	8	1	-	-	-
Colo.	7	26	-	3	2	3	105	104	-	2	-
N. Mex.	17	31	N	N	N	-	61	132	-	-	-
Ariz.	8	10	-	1	2	1	29	153	-	1	3
Utah	119	-	-	2	11	-	22	27	-	-	1
Nev.	5	1	-	15	11	-	38	64	-	1	-
PACIFIC	184	130	3	212	238	11	1,380	836	-	55	26
Wash.	51	19	1	20	13	11	653	303	-	2	1
Oreg.	10	1	-	-	-	-	35	59	-	1	-
Calif.	46	108	2	160	203	-	660	415	-	49	20
Alaska	63	-	-	3	12	-	4	1	-	-	-
Hawaii	14	2	-	29	10	-	28	58	-	3	5
Guam	-	-	-	5	4	-	1	2	-	-	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
November 23, 1996 (47th Week)**

Reporting Area	All Causes, By Age (Years)						P&J† Total	Reporting Area	All Causes, By Age (Years)						P&J† Total
	All Ages	>65	45-64	25-44	1-24	<1			All Ages	>65	45-64	25-44	1-24	<1	
NEW ENGLAND	588	443	84	34	15	11	42	S. ATLANTIC	1,410	852	306	159	57	36	61
Boston, Mass.	186	140	20	12	7	6	5	Atlanta, Ga.	166	101	31	26	3	5	5
Bridgeport, Conn.	32	25	4	2	1	-	2	Baltimore, Md.	190	120	38	23	5	4	14
Cambridge, Mass.	15	13	1	1	-	-	1	Charlotte, N.C.	U	U	U	U	U	U	U
Fall River, Mass.	27	24	2	-	-	1	-	Jacksonville, Fla.	124	83	23	10	8	-	1
Hartford, Conn.	50	34	7	6	1	2	1	Miami, Fla.	102	62	26	9	3	2	-
Lowell, Mass.	24	18	5	1	-	-	3	Norfolk, Va.	56	37	12	1	4	2	4
Lynn, Mass.	10	7	3	-	-	-	-	Richmond, Va.	74	46	20	2	3	3	5
New Bedford, Mass.	14	11	2	-	1	-	-	Savannah, Ga.	48	34	10	3	-	1	4
New Haven, Conn.	40	26	7	6	1	-	5	St. Petersburg, Fla.	52	44	5	2	1	-	2
Providence, R.I.	55	43	11	1	-	-	4	Tampa, Fla.	154	103	25	18	6	2	19
Somerville, Mass.	5	4	1	-	-	-	1	Washington, D.C.	434	216	115	62	24	17	7
Springfield, Mass.	36	23	8	2	2	1	2	Wilmington, Del.	10	6	1	3	-	-	-
Waterbury, Conn.	31	27	3	1	-	-	5	E.S. CENTRAL	750	503	154	57	16	17	53
Worcester, Mass.	63	48	10	2	2	1	13	Birmingham, Ala.	132	79	27	17	5	2	4
MID. ATLANTIC	2,503	1,730	470	216	51	36	117	Chattanooga, Tenn.	68	48	14	5	-	1	7
Albany, N.Y.	46	33	7	3	-	3	-	Knoxville, Tenn.	56	44	8	1	2	1	7
Allentown, Pa.	27	21	6	-	-	-	1	Lexington, Ky.	73	49	13	8	-	2	9
Buffalo, N.Y.	74	50	17	5	-	2	7	Memphis, Tenn.	156	103	36	11	2	4	10
Camden, N.J.	30	17	8	5	-	-	-	Mobile, Ala.	64	45	12	3	3	1	2
Elizabeth, N.J.	28	18	4	4	2	-	-	Montgomery, Ala.	71	55	11	1	1	3	7
Erie, Pa.‡	47	36	7	4	-	-	2	Nashville, Tenn.	130	80	33	11	3	3	7
Jersey City, N.J.	62	32	20	9	1	-	-	W.S. CENTRAL	1,421	905	285	132	55	40	76
New York City, N.Y.	1,334	923	247	119	28	17	50	Austin, Tex.	65	40	13	7	3	2	4
Newark, N.J.	U	U	U	U	U	U	U	Baton Rouge, La.	12	4	4	2	2	-	-
Paterson, N.J.	25	18	2	4	1	-	1	Corpus Christi, Tex.	53	35	11	2	4	1	-
Philadelphia, Pa.	397	263	71	44	15	4	23	Dallas, Tex.	196	120	44	20	10	2	2
Pittsburgh, Pa.‡	80	58	17	4	-	1	6	El Paso, Tex.	83	51	13	8	6	4	7
Reading, Pa.	10	9	1	-	-	-	5	Ft. Worth, Tex.	129	80	33	5	3	8	6
Rochester, N.Y.	128	90	28	4	1	5	12	Houston, Tex.	322	196	71	38	9	8	29
Schenectady, N.Y.	30	28	2	-	-	-	2	Little Rock, Ark.	83	49	17	9	5	3	4
Scranton, Pa.‡	34	25	5	4	-	-	-	New Orleans, La.	127	73	33	14	2	2	-
Syracuse, N.Y.	90	69	15	2	1	3	3	San Antonio, Tex.	165	116	23	13	8	5	12
Trenton, N.J.	30	17	7	5	-	1	3	Shreveport, La.	79	58	10	6	3	2	6
Utica, N.Y.	13	12	-	-	1	-	-	Tulsa, Okla.	107	83	13	8	-	3	6
Yonkers, N.Y.	18	11	6	-	1	-	2	MOUNTAIN	961	644	180	83	25	25	75
E.N. CENTRAL	2,395	1,583	482	201	58	70	107	Albuquerque, N.M.	113	81	20	6	5	1	3
Akron, Ohio	62	44	8	3	2	5	3	Colo. Springs, Colo.	56	40	11	4	-	1	7
Canton, Ohio	47	35	9	2	1	-	4	Denver, Colo.	114	70	17	19	2	6	10
Chicago, Ill.	457	249	109	58	22	18	23	Las Vegas, Nev.	200	132	45	13	6	4	16
Cincinnati, Ohio	187	133	30	15	2	7	16	Ogden, Utah	24	15	3	3	-	3	4
Cleveland, Ohio	160	104	35	14	2	5	1	Phoenix, Ariz.	182	111	42	18	8	3	20
Columbus, Ohio	172	116	34	13	2	7	11	Pueblo, Colo.	18	14	3	1	-	-	2
Dayton, Ohio	146	105	24	13	2	2	8	Salt Lake City, Utah	114	80	18	10	-	6	6
Detroit, Mich.	249	144	71	27	3	4	5	Tucson, Ariz.	140	101	21	9	4	1	7
Evansville, Ind.	53	44	8	1	-	-	1	PACIFIC	1,613	1,149	273	124	32	35	149
Fort Wayne, Ind.	65	40	19	4	1	1	1	Berkeley, Calif.	20	12	6	2	-	-	-
Gary, Ind.	U	U	U	U	U	U	U	Fresno, Calif.	57	38	5	4	2	8	2
Grand Rapids, Mich.	60	40	13	4	1	2	3	Glendale, Calif.	29	20	6	2	-	1	4
Indianapolis, Ind.	242	155	56	20	8	3	-	Honolulu, Hawaii	79	53	18	3	2	3	5
Madison, Wis.	49	34	8	4	2	1	5	Long Beach, Calif.	79	57	12	8	2	-	12
Milwaukee, Wis.	119	90	20	5	2	2	3	Los Angeles, Calif.	412	290	67	39	9	7	26
Peoria, Ill.	35	31	2	1	-	1	2	Pasadena, Calif.	30	21	3	6	-	-	6
Rockford, Ill.	57	39	8	4	2	4	6	Portland, Ore.	147	113	19	12	2	1	6
South Bend, Ind.	49	44	3	-	-	2	1	Sacramento, Calif.	U	U	U	U	U	U	U
Toledo, Ohio	110	85	11	7	4	3	11	San Diego, Calif.	156	114	21	16	2	3	21
Youngstown, Ohio	76	51	14	6	2	3	3	San Francisco, Calif.	122	81	25	14	2	-	17
W.N. CENTRAL	808	605	106	50	16	23	38	San Jose, Calif.	212	157	38	6	6	5	22
Des Moines, Iowa	85	67	7	3	3	5	6	Santa Cruz, Calif.	38	29	5	3	-	1	5
Duluth, Minn.	33	27	3	1	2	-	2	Seattle, Wash.	121	86	23	5	4	3	7
Kansas City, Kans.	37	22	11	4	-	-	-	Spokane, Wash.	38	31	5	1	1	-	4
Kansas City, Mo.	86	46	17	9	2	4	4	Tacoma, Wash.	73	47	20	3	-	3	12
Lincoln, Nebr.	42	31	8	2	1	-	1	TOTAL	12,449 [§]	8,414	2,340	1,056	325	293	718
Minneapolis, Minn.	209	167	28	11	2	1	18								
Omaha, Nebr.	70	55	7	6	-	2	3								
St. Louis, Mo.	109	86	11	4	2	6	-								
St. Paul, Minn.	62	46	7	6	3	-	1								
Wichita, Kans.	75	58	7	4	1	5	3								

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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