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Emerging Infectious Diseases

Introduction

*Despite predictions earlier this century that infectious diseases would soon be eliminated as a public health problem (*1*), infectious diseases remain the major cause of death worldwide and a leading cause of illness and death in the United States. Since the early 1970s, the U.S. public health system has been challenged by a myriad of newly identified pathogens and syndromes (e.g.,* Escherichia coli *O157:H7, hepatitis C virus, human immunodeficiency virus, Legionnaires disease, Lyme disease, and toxic shock syndrome). The incidences of many diseases widely presumed to be under control, such as cholera, malaria, and tuberculosis (TB), have increased in many areas. Furthermore, control and prevention of infectious diseases are undermined by drug resistance in conditions such as gonorrhea, malaria, pneumococcal disease, salmonellosis, shigellosis, TB, and staphylococcal infections (*2*). Emerging infections place a disproportionate burden on immunocompromised persons, those in institutional settings (e.g., hospitals and child day care centers), and minority and underserved populations. The substantial economic burden of emerging infections on the U.S. health-care system could be reduced by more effective surveillance systems and targeted control and prevention programs (*3*).*

This issue of MMWR *introduces a new series, "Emerging Infectious Diseases." Future articles will address these diseases, as well as surveillance, control, and prevention efforts by health-care providers and public health officials. This first article updates the ongoing investigation of an outbreak of* E. coli *O157:H7 in the western United States (*4*).*

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U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES / Public Health Service

Update: Multistate Outbreak of *Escherichia coli* O157:H7 Infections from Hamburgers — Western United States, 1992–1993

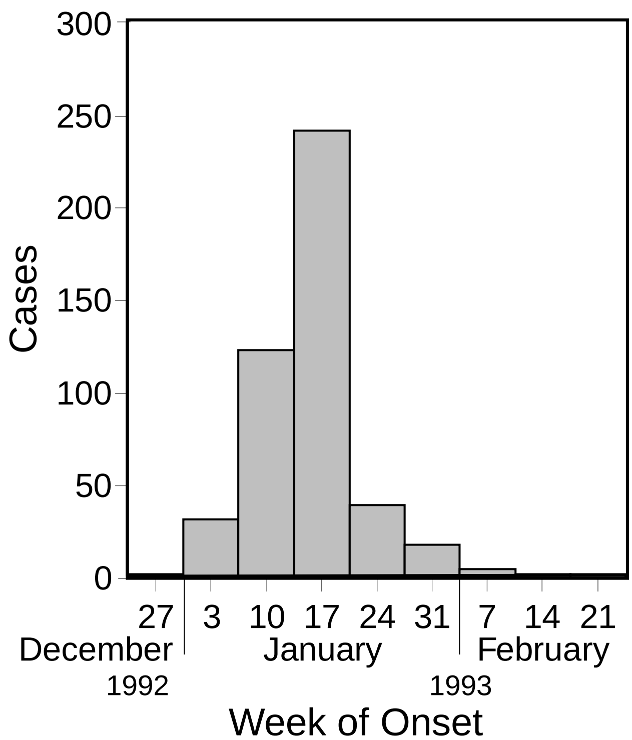
From November 15, 1992, through February 28, 1993, more than 500 laboratory-confirmed infections with *E. coli* O157:H7 and four associated deaths occurred in four states—Washington, Idaho, California, and Nevada. This report summarizes the findings from an ongoing investigation (*1*) that identified a multistate outbreak resulting from consumption of hamburgers from one restaurant chain.

Washington

On January 13, 1993, a physician reported to the Washington Department of Health a cluster of children with hemolytic uremic syndrome (HUS) and an increase in emergency room visits for bloody diarrhea. During January 16–17, a case-control study comparing 16 of the first cases of bloody diarrhea or postdiarrheal HUS identified with age- and neighborhood-matched controls implicated eating at chain A restaurants during the week before symptom onset (matched odds ratio [OR]=undefined; lower confidence limit=3.5). On January 18, a multistate recall of unused hamburger patties from chain A restaurants was initiated.

As a result of publicity and case-finding efforts, during January–February 1993, 602 patients with bloody diarrhea or HUS were reported to the state health department. A total of 477 persons had illnesses meeting the case definition of culture-confirmed *E. coli* O157:H7 infection or postdiarrheal HUS (Figure 1). Of the 477 persons, 52 (11%) had close contact with a person with confirmed *E. coli* O157:H7

FIGURE 1. Cases of *Escherichia coli* O157:H7 meeting the case definition,* by week of onset of illness — Washington, December 27, 1992–February 21, 1993



*Culture-confirmed *E. coli* O157:H7 infection or postdiarrheal hemolytic uremic syndrome.

infection during the week preceding onset of symptoms. Of the remaining 425 persons, 372 (88%) reported eating in a chain A restaurant during the 9 days preceding onset of symptoms. Of the 338 patients who recalled what they ate in a chain A restaurant, 312 (92%) reported eating a regular-sized hamburger patty. Onsets of illness peaked from January 17 through January 20. Of the 477 case-patients, 144 (30%) were hospitalized; 30 developed HUS, and three died. The median age of patients was 7.5 years (range: 0–74 years).

Idaho

Following the outbreak report from Washington, the Division of Health, Idaho Department of Health and Welfare, identified 14 persons with culture-confirmed *E. coli* O157:H7 infection, with illness onset dates from December 11, 1992, through February 16, 1993 (Figure 2A). Four persons were hospitalized; one developed HUS. During the week preceding illness onset, 13 (93%) had eaten at a chain A restaurant.

California

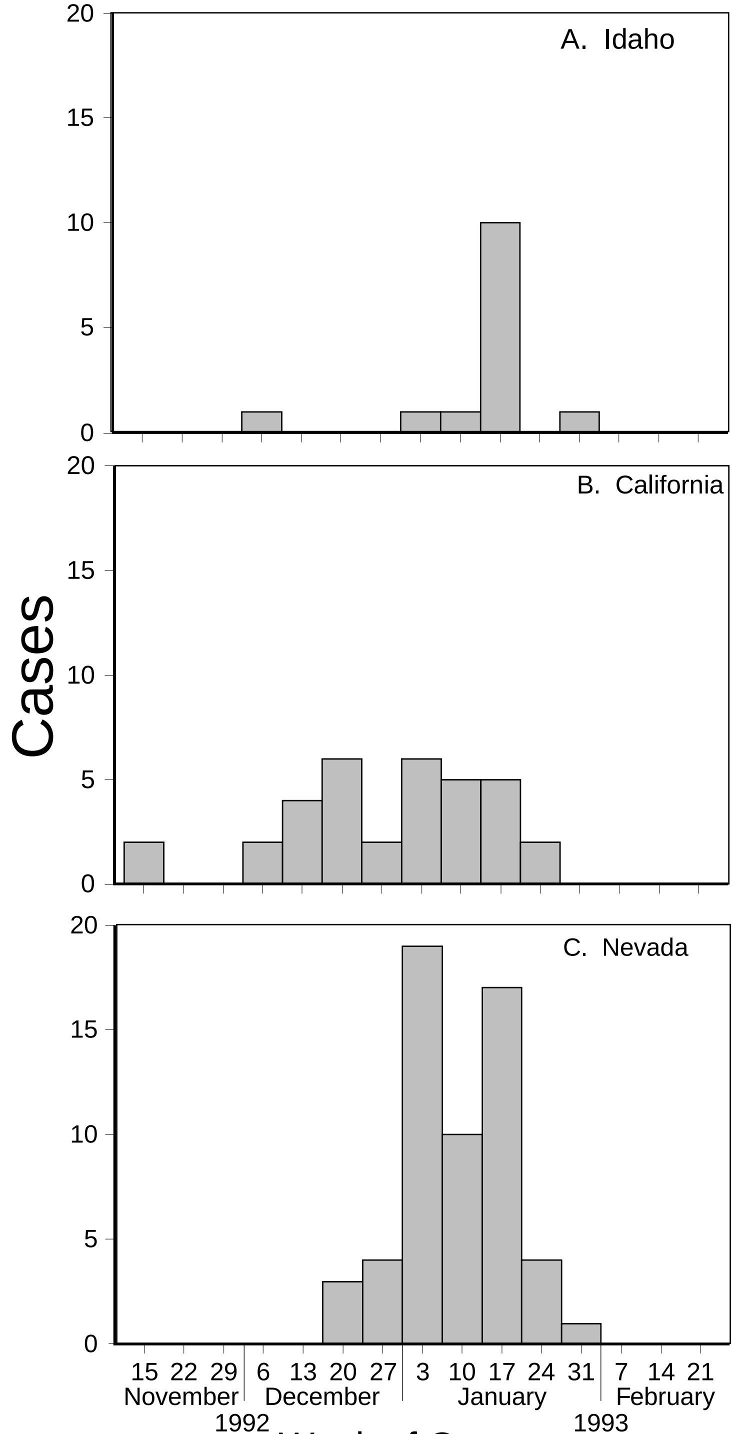
In late December, the San Diego County Department of Health Services was notified of a child with *E. coli* O157:H7 infection who subsequently died. Active surveillance and record review then identified eight other persons with *E. coli* O157:H7 infections or HUS from mid-November through mid-January 1993. Four of the nine reportedly had recently eaten at a chain A restaurant and four at a chain B restaurant in San Diego. After the Washington outbreak was reported, reviews of medical records at five hospitals revealed an overall 27% increase in visits or admissions for diarrhea during December 1992 and January 1993 compared with the same period 1 year earlier. A case was defined as postdiarrheal HUS, bloody diarrhea that was culture negative or not cultured, or any diarrheal illness in which stool culture yielded *E. coli* O157:H7, with onset from November 15, 1992, through January 31, 1993.

Illnesses of 34 patients met the case definition (Figure 2B). The outbreak strain was identified in stool specimens of six patients. Fourteen persons were hospitalized, seven developed HUS, and one child died. The median age of case-patients was 10 years (range: 1–58 years). A case-control study of the first 25 case-patients identified and age- and sex-matched community controls implicated eating at a chain A restaurant in San Diego (matched OR=13; 95% confidence interval [CI]=1.7–99). A study comparing case-patients who ate at chain A restaurants with well meal companions implicated regular-sized hamburger patties (matched OR=undefined; lower confidence limit=1.3). Chain B was not statistically associated with illness.

Nevada

On January 22, after receiving a report of a child with HUS who had eaten at a local chain A restaurant, the Clark County (Las Vegas) Health District issued a press release requesting that persons with recent bloody diarrhea contact the health department. A case was defined as postdiarrheal HUS, bloody diarrhea that was culture negative or not cultured, or any diarrheal illness with a stool culture yielding the Washington strain of *E. coli* O157:H7, with onset from December 1, 1992, through February 7, 1993. Because local laboratories were not using sorbitol MacConkey (SMAC) medium to screen stools for *E. coli* O157:H7, this organism was not identified in any patient. After SMAC medium was distributed, the outbreak strain was detected in the stool of one patient 38 days after illness onset.

FIGURE 2. Cases of *Escherichia coli* O157:H7 meeting the case definition,* by week of onset of illness — Idaho, California, and Nevada, November 15, 1992–February 21, 1993



*For Idaho, a case was defined as culture-confirmed *E. coli* O157:H7 infection from December 11, 1992 through February 16, 1993; for California, a case was defined as postdiarrheal hemolytic uremic syndrome, bloody diarrhea that was culture negative or not cultured, or any diarrheal illness in which stool culture yielded *E. coli* O157:H7 from November 15, 1992, through January 31, 1993; for Nevada, a case was defined the same as for California except the outbreak strain of *E. coli* O157:H7 was specified and the onset dates were from December 1, 1992, through February 7, 1993.

Of 58 persons whose illnesses met the case definition (Figure 2C), nine were hospitalized; three developed HUS. The median age was 30.5 years (range: 0–83 years). Analysis of the first 21 patients identified and age- and sex-matched community controls implicated eating at a chain A restaurant during the week preceding illness onset (matched OR=undefined; lower confidence limit=4.9). A case-control study using well meal companions of case-patients also implicated eating hamburgers at chain A (matched OR=6.0; 95% CI=0.7–49.8).

Other Investigation Findings

During the outbreak, chain A restaurants in Washington linked with cases primarily were serving regular-sized hamburger patties produced on November 19, 1992; some of the same meat was used in "jumbo" patties produced on November 20, 1992. The outbreak strain of *E. coli* O157:H7 was isolated from 11 lots of patties produced on those two dates; these lots had been distributed to restaurants in all states where illness occurred. Approximately 272,672 (20%) of the implicated patties were recovered by the recall.

A meat traceback by a CDC team identified five slaughter plants in the United States and one in Canada as the likely sources of carcasses used in the contaminated lots of meat and identified potential control points for reducing the likelihood of contamination. The animals slaughtered in domestic slaughter plants were traced to farms and auctions in six western states. No one slaughter plant or farm was identified as the source.

Further investigation of cases related to secondary transmission in families and child day care settings is ongoing.

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Editorial Note: *E. coli* O157:H7 is a pathogenic gram-negative bacterium first identified as a cause of illness in 1982 during an outbreak of severe bloody diarrhea traced to contaminated hamburgers (*2*). This pathogen has since emerged as an important cause of both bloody diarrhea and HUS, the most common cause of acute renal failure in children. Outbreak investigations have linked most cases with the consumption of undercooked ground beef, although other food vehicles, including roast beef, raw milk, and apple cider, also have been implicated (*3*). Preliminary data from a CDC

2-year, nationwide, multicenter study revealed that when stools were routinely cultured for *E. coli* O157:H7 that organism was isolated more frequently than *Shigella* in four of 10 participating hospitals and was isolated from 7.8% of all bloody stools, a higher rate than for any other pathogen.

Infection with *E. coli* O157:H7 often is not recognized because most clinical laboratories do not routinely culture stools for this organism on SMAC medium, and many clinicians are unaware of the spectrum of illnesses associated with infection (*4*). The usual clinical manifestations are diarrhea (often bloody) and abdominal cramps; fever is infrequent. Younger age groups and the elderly are at highest risk for clinical manifestations and complications. Illness usually resolves after 6–8 days, but 2%–7% of patients develop HUS, which is characterized by hemolytic anemia, thrombocytopenia, renal failure, and a death rate of 3%–5%.

This report illustrates the difficulties in recognizing community outbreaks of *E. coli* O157:H7 in the absence of routine surveillance. Despite the magnitude of this outbreak, the problem may not have been recognized in three states if the epidemiologic link had not been established in Washington (*1*). Clinical laboratories should routinely culture stool specimens from persons with bloody diarrhea or HUS for *E. coli* O157:H7 using SMAC agar (*5*). When infections with *E. coli* O157:H7 are identified, they should be reported to local health departments for further evaluation and, if necessary, public health action to prevent further cases.

E. coli O157:H7 lives in the intestines of healthy cattle, and can contaminate meat during slaughter. CDC is collaborating with the U.S. Department of Agriculture's Food Safety Inspection Service to identify critical control points in processing as a component of a program to reduce the likelihood of pathogens such as *E. coli* O157:H7 entering the meat supply. Because slaughtering practices can result in contamination of raw meat with pathogens, and because the process of grinding beef may transfer pathogens from the surface of the meat to the interior, ground beef is likely to be internally contaminated. The optimal food protection practice is to cook ground beef thoroughly until the interior is no longer pink, and the juices are clear. In this outbreak, undercooking of hamburger patties likely played an important role. The Food and Drug Administration (FDA) has issued interim recommendations to increase the internal temperature for cooked hamburgers to 155 F (86.1 C) (FDA, personal communication, 1993).

Regulatory actions stimulated by the outbreak described in this report and the recovery of thousands of contaminated patties before they could be consumed emphasize the value of rapid public health investigations of outbreaks. The public health impact and increasing frequency of isolation of this pathogen underscore the need for improved surveillance for infections caused by *E. coli* O157:H7 and for HUS to better define the epidemiology of *E. coli* O157:H7.

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Current Trends

Use of Smokeless Tobacco Among Adults — United States, 1991

Consumption of moist snuff and other smokeless tobacco products in the United States almost tripled from 1972 through 1991 (*1*). Long-term use of smokeless tobacco is associated with nicotine addiction and increased risk of oral cancer (*2*)—the incidence of which could increase if young persons who currently use smokeless tobacco continue to use these products frequently (*1*). To monitor trends in the prevalence of use of smokeless tobacco products, CDC's 1991 National Health Interview Survey–Health Promotion and Disease Prevention supplement (NHIS-HPDP) collected information on snuff and chewing tobacco use and smoking from a representative sample of the U.S. civilian, noninstitutionalized population aged ≥18 years. This report summarizes findings from this survey.

The 1991 NHIS-HPDP supplement asked "Have you used snuff at least 20 times in your entire life?" and "Do you use snuff now?" Similar questions were asked about chewing tobacco use and cigarette smoking. Current users of smokeless tobacco were defined as those who reported snuff or chewing tobacco use at least 20 times and who reported using snuff or chewing tobacco at the time of the interview; former users were defined as those who reported having used snuff or chewing tobacco at least 20 times and not using either at the time of the interview. Ever users of smokeless tobacco included current and former users. Current smokers were defined as those who reported smoking at least 100 cigarettes and who were currently smoking and former smokers as those who reported having smoked at least 100 cigarettes and who were not smoking now. Ever smokers included current and former smokers. Data on smokeless tobacco use were available for 43,732 persons aged ≥18 years and were adjusted for nonresponse and weighted to provide national estimates. Confidence intervals (CIs) were calculated by using standard errors generated by the Software for Survey Data Analysis (SUDAAN) (*3*).

In 1991, an estimated 5.3 million (2.9%) U.S. adults were current users of smokeless tobacco, including 4.8 million (5.6%) men and 533,000 (0.6%) women. For all categories of comparison, the prevalence of smokeless tobacco use was substantially higher among men. For men, the prevalence of use was highest among those aged 18–24 years (Table 1); for women, the prevalence was highest among those aged ≥75 years. The prevalence of smokeless tobacco use among men was highest among American Indians/Alaskan Natives and whites; the prevalence among women was highest among American Indians/Alaskan Natives and blacks. Among both men and women, prevalence of smokeless tobacco use declined with increasing education. Prevalence was substantially higher among residents of the southern United States and in rural areas. Although the prevalence of smokeless tobacco use was higher among men and

Smokeless Tobacco — Continued

women below the poverty level,* this difference was significant only for women ($p<0.05$) (Table 1).

*Poverty statistics are based on definitions developed by the Social Security Administration that include a set of income thresholds that vary by family size and composition.

TABLE 1. Percentage of adults who reported current use of smokeless tobacco,* by sex and by age group, race, Hispanic origin, education, region, urban/rural residence, and poverty status — United States, National Health Interview Survey–Health Promotion and Disease Prevention Supplement, 1991

	Men		Women		Total	
Category	**%**	**(95% CI†)**	**%**	**(95% CI)**	**%**	**(95% CI)**
Age group (yrs)						
18–24	8.2	(6.9– 9.6)	0.2	(0.0–0.5)	**4.2**	**(3.5–4.8)**
25–44	5.8	(5.2– 6.4)	0.1	(0.1–0.2)	**2.9**	**(2.6–3.2)**
45–64	3.6	(3.0– 4.2)	0.6	(0.4–0.9)	**2.1**	**(1.8–2.4)**
65–74	5.4	(4.2– 6.6)	1.3	(0.8–1.8)	**3.1**	**(2.5–3.8)**
≥75	5.8	(4.3– 7.4)	2.3	(1.6–2.9)	**3.6**	**(2.9–4.3)**
Race						
White	6.2	(5.7– 6.7)	0.3	(0.2–0.4)	**3.1**	**(2.9–3.4)**
Black	2.2	(1.4– 3.0)	2.3	(1.6–3.1)	**2.3**	**(1.7–2.8)**
Asian/Pacific Islander	1.4	(0.1– 2.7)	0.0	—	**0.7**	**(0.0–1.4)**
American Indian/ Alaskan Native§	8.1	(1.9–14.3)	2.5	(1.2–3.8)	**5.4**	**(2.1–8.8)**
Hispanic origin						
Hispanic	1.5	(1.0– 2.2)	0.2	(0.0–0.4)	**0.9**	**(0.5–1.2)**
Non-Hispanic	5.9	(5.5– 6.4)	0.6	(0.5–0.7)	**3.1**	**(2.9–3.4)**
Education (yrs)						
<12	7.7	(6.6– 8.8)	2.0	(1.5–2.4)	**4.6**	**(4.0–5.2)**
12	6.6	(5.8– 7.3)	0.3	(0.2–0.4)	**3.1**	**(2.8–3.5)**
13–15	5.2	(4.3– 6.0)	0.1	(0.0–0.2)	**2.5**	**(2.1–2.9)**
≥16	2.5	(2.1– 3.0)	0.0	(0.0–0.1)	**1.4**	**(1.1–1.7)**
Region						
Northeast	2.7	(2.0– 3.3)	0.0	(0.0–0.1)	**1.3**	**(1.0–1.6)**
Midwest	5.7	(4.9– 6.4)	0.2	(0.1–0.3)	**2.8**	**(2.5–3.2)**
South	8.4	(7.5– 9.3)	1.4	(1.1–1.7)	**4.6**	**(4.1–5.1)**
West	4.0	(3.3– 4.8)	0.2	(0.0–0.4)	**2.1**	**(1.7–2.4)**
Residence						
Urban	4.0	(3.6– 4.4)	0.3	(0.2–0.4)	**2.1**	**(1.9–2.3)**
Rural	11.2	(11.0–11.4)	1.5	(1.1–2.0)	**6.0**	**(5.4–6.7)**
Poverty status¶						
At/above poverty level	5.4	(4.9– 5.8)	0.3	(0.2–0.4)	**2.8**	**(2.5–3.0)**
Below poverty level	6.6	(5.2– 8.1)	1.9	(1.4–2.3)	**3.7**	**(3.0–4.4)**
Unknown	6.4	(4.7– 8.2)	1.5	(0.7–2.3)	**3.6**	**(2.7–4.4)**
Total	**5.6**	**(5.1– 6.0)**	**0.6**	**(0.4–0.7)**	**2.9**	**(2.7–3.2)**

*Snuff or chewing tobacco use at least 20 times and use at the time of the interview.
† Confidence interval.
§ Estimates should be interpreted with caution because of the small number of cases (n=339).
¶ Poverty statistics are based on definitions developed by the Social Security Administration that include a set of income thresholds that vary by family size and composition.

Smokeless Tobacco — Continued

Among men, the prevalence of current use of snuff was highest among those aged 18–44 years but varied considerably by age; the prevalence of use of chewing tobacco was more evenly distributed by age group (Table 2). Although women rarely used smokeless tobacco, the prevalence of snuff use was highest among those aged ≥75 years.

An estimated 7.9 million (4.4% [95% CI=4.1–4.6]) adults reported being former smokeless tobacco users. Among ever users, the proportion who were former smokeless tobacco users was 59.9% (95% CI=57.7–62.1). Among persons aged 18–24 years, the proportion of former users was lower among snuff users (56.2% [95% CI=49.4–63.0]) than among chewing tobacco users (70.4% [95% CI=64.2–76.6]). Among persons aged 45–64 years, the proportion of former users was similar for snuff (68.9% [95% CI=63.1–74.7]) and chewing tobacco (73.5% [95% CI=68.9–78.1]).

Among current users of smokeless tobacco, 22.9% (95% CI=19.9–26.0) currently smoked, 33.3% (95% CI=30.0–36.5) formerly smoked, and 43.8% (95% CI=39.9–47.7) never smoked. In comparison, among current smokers, 2.6% (95% CI=2.3–3.0) were current users of smokeless tobacco.

Daily use of smokeless tobacco was more common among snuff users (67.3% [95% CI=63.2–71.4]) than among chewing tobacco users (45.1% [95% CI=40.6–49.6]).

Reported by: Office on Smoking and Health, National Center for Chronic Disease Prevention and Health Promotion; Div of Health Interview Statistics, National Center for Health Statistics, CDC.

Editorial Note: The findings in this report indicate that the use of smokeless tobacco was highest among young males. Adolescent and young adult males, in particular, are the target of marketing strategies by tobacco companies that link smokeless tobacco with athletic performance and virility. Use of oral snuff has risen markedly among professional baseball players, encouraging this behavior among adolescent and young adult males and increasing their risk for nicotine addiction, oral cancer, and other mouth disorders (*4*).

Differences in the prevalence of smokeless tobacco use among racial/ethnic groups may be influenced by differences in educational levels and socioeconomic status as well as social and cultural phenomena that require further explanation. For example, targeted marketing practices may play a role in maintaining or increasing prevalence among some groups, and affecting the differential initiation of smokeless tobacco use by young persons (*5,6*).

TABLE 2. Percentage of adults who reported using chewing tobacco or snuff, by sex and age group — United States, 1991

Age group (yrs)	Men				Women			
	Chewing tobacco		Snuff		Chewing tobacco		Snuff	
	%	(95% CI*)	%	(95% CI)	%	(95% CI)	%	(95% CI)
18–24	4.1	(3.1–5.1)	6.2	(4.9–7.5)	0.1	(0.0–0.2)	0.2	(0.0–0.4)
25–44	2.8	(2.4–3.2)	3.9	(3.4–4.4)	0.1	(0.0–0.2)	0.1	(0.0–0.2)
45–64	2.4	(1.9–3.0)	1.4	(1.1–1.8)	0.4	(0.2–0.6)	0.3	(0.1–0.5)
65–74	3.9	(2.8–5.0)	2.1	(1.4–2.8)	0.6	(0.3–1.0)	0.9	(0.5–1.3)
≥75	3.9	(2.7–5.1)	2.3	(1.3–3.3)	0.6	(0.2–1.0)	2.0	(1.3–2.7)
Total	**3.1**	**(2.8–3.4)**	**3.3**	**(3.0–3.7)**	**0.3**	**(0.2–0.7)**	**0.4**	**(0.3–0.5)**

*Confidence interval.

Smokeless Tobacco — Continued

In this report, one concern is that nearly one fourth of current smokeless tobacco users also smoke cigarettes. In the 1991 NHIS-HPDP, the prevalence of cigarette smoking was higher among former smokeless tobacco users than among current and never smokeless tobacco users. In a previous study among college students, 18% of current smokeless tobacco users smoked occasionally (*7*). In addition, approximately 7% of adults who formerly smoked reported substituting other tobacco products for cigarettes in an effort to stop smoking (*8*). Health-care providers should recognize the potential health implications of concurrent smokeless tobacco and cigarette use.

The national health objectives for the year 2000 have established special population target groups for the reduction of the prevalence of smokeless tobacco use, including males aged 12–24 years (to no more than 4% by the year 2000 [objective 3.9]) and American Indian/Alaskan Native youth (to no more than 10% by the year 2000 [objective 3.9a]) (*9*). Strategies to lower the prevalence of smokeless tobacco use include continued monitoring of smokeless tobacco use, integrating smoking and smokeless tobacco-control efforts, enforcing laws that restrict minors' access to tobacco, making excise taxes commensurate with those on cigarettes, encouraging health-care providers to routinely provide cessation advice and follow-up, providing school-based prevention and cessation interventions, and adopting policies that prohibit tobacco use on school property and at school-sponsored events (*5*).

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Gonorrhea — Colorado, 1985–1992

The number of reported cases of gonorrhea in Colorado increased 19.9% from 1991 to 1992 after declining steadily during the 1980s. In comparison, in the United States, reported cases of gonorrhea in 1992 continued an overall decreasing trend (*1*). This report summarizes an analysis of the increase in gonorrhea in Colorado in 1992 and characterizes trends in the occurrence of this disease from 1985 through 1992.

In 1992, 4679 cases of gonorrhea were reported to the Colorado Department of Health (CDH) compared with 3901 cases reported in 1991. During 1992, reported cases increased 22.7% and 17.5% among females and males, respectively (Table 1). Similar increases occurred among blacks, whites, and Hispanics (15.6%, 15.1%, and 15.9%, respectively); however, the number of reported cases with race not specified increased 88% from 1991 to 1992 and constituted 9.7% of all reported cases in 1992. Although the largest proportional increases by age groups occurred among persons aged 35–44 years (80.4%) and ≥45 years (87.7%), these age groups accounted for only 11.0% of all reported cases in 1992. Persons in the 15–19-year age group accounted for the largest number of reported cases of gonorrhea during 1992 and the highest age group-specific rate (639 per 100,000).

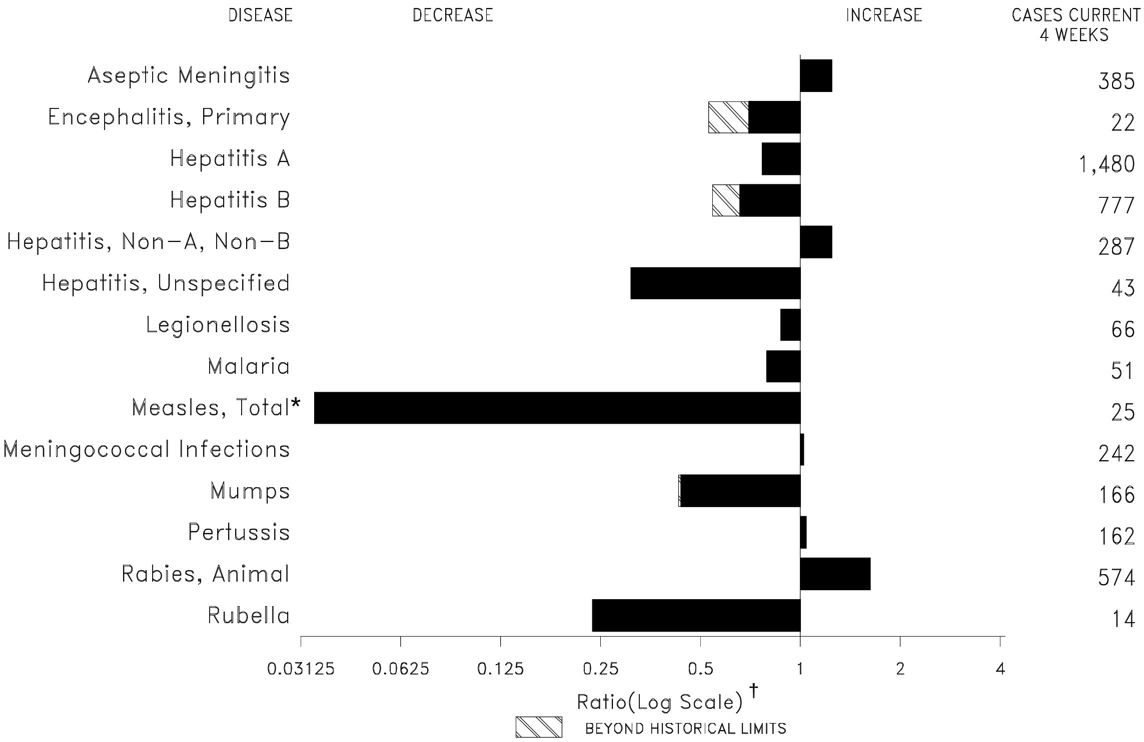
TABLE 1. Characteristics of persons with reported gonorrhea, 1992, and percent change in number of cases, 1991 to 1992 — Colorado

	1992 Reported cases			% Change
Category	**No.**	**(%)**	**Rate***	**1991 to 1992**
Sex				
Male	2426	(51.8)	148.0	17.5
Female	2253	(48.2)	134.8	22.7
Age group (yrs)				
15–19	1456	(31.1)	639.4	9.1
20–24	1417	(30.3)	587.9	16.1
25–34	1166	(24.9)	189.7	19.2
35–44	395	(8.4)	69.5	80.4
≥45	122	(2.6)	13.3	87.7
Race/Ethnicity				
Black	2637	(56.4)	1935.5	15.6
White	902	(19.3)	33.8	15.1
Hispanic	642	(13.7)	155.7	15.9
Asian/Pacific Islander	28	(0.6)	45.3	–9.7
American Indian/ Alaskan Native	17	(0.4)	57.7	70.0
Not specified	453	(9.7)	—	88.0
Region				
Metropolitan Denver†	3728	(79.7)	228.8	32.9
Nonmetropolitan Denver	951	(20.3)	56.6	–13.2
Total	**4679**	**(100.0)**	**141.3**	**19.9**

*Per 100,000 population; 1990 population estimates from Demographic Section, Colorado Department of Local Affairs.
† Metropolitan Denver region includes Adams, Arapahoe, Denver, Douglas, and Jefferson counties (1990 population: 1,629,466).

(Continued on page 273)

FIGURE I. Notifiable disease reports, comparison of 4-week totals ending April 10, 1993, with historical data — United States



*The large apparent decrease in reported cases of measles(total) reflects dramatic fluctuations in the historical baseline.

† 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 thehatched area begins is based on the mean and two standard deviations of these 4-week totals.

TABLE I. Summary — cases of specified notifiable diseases, United States, cumulative, week ending April 10, 1993 (14th Week)

	Cum. 1993		Cum. 1993
AIDS*	10,300	Measles: imported	12
Anthrax	-	indigenous	71
Botulism: Foodborne	1	Plague	-
Infant	12	Poliomyelitis, Paralytic§	-
Other	1	Psittacosis	16
Brucellosis	17	Rabies, human	-
Cholera	7	Syphilis, primary & secondary	7,333
Congenital rubella syndrome	3	Syphilis, congenital, age < 1 year	-
Diphtheria	-	Tetanus	4
Encephalitis, post-infectious	47	Toxic shock syndrome	68
Gonorrhea	98,633	Trichinosis	7
Haemophilus influenzae (invasive disease)†	363	Tuberculosis	4,457
Hansen Disease	36	Tularemia	14
Leptospirosis	10	Typhoid fever	76
Lyme Disease	688	Typhus fever, tickborne (RMSF)	22

*Updated monthly; last update February 27, 1993.
†Of 337 cases of known age, 122 (36%) were reported among children less than 5 years of age.
§No cases of suspected poliomyelitis have been reported in 1993; 4 cases of suspected poliomyelitis were reported in 1992; 6 of the 9 suspected cases with onset in 1991 were confirmed; all were vaccine associated.

TABLE II. Cases of selected notifiable diseases, United States, weeks ending April 10, 1993, and April 4, 1992 (14th Week)

Reporting Area	AIDS*	Aseptic Menin-gitis	Encephalitis		Gonorrhea		Hepatitis (Viral), by type				Legionel-losis	Lyme Disease
			Primary	Post-in-fectious			A	B	NA,NB	Unspeci-fied		
	Cum. 1993	Cum. 1993	Cum. 1993	Cum. 1993	Cum. 1993	Cum. 1992	Cum. 1993	Cum. 1993	Cum. 1993	Cum. 1993	Cum. 1993	Cum. 1993
UNITED STATES	10,300	1,636	135	47	98,633	133,226	5,503	2,782	1,090	152	278	688
NEW ENGLAND	679	40	3	1	2,190	2,898	165	113	4	5	11	66
Maine	8	6	1	-	27	32	8	3	-	-	2	-
N.H.	47	3	-	-	12	39	4	13	-	-	-	6
Vt.	3	5	-	-	9	6	3	2	-	-	-	-
Mass.	403	22	2	1	817	1,037	92	84	1	5	8	22
R.I.	29	4	-	-	109	224	39	11	3	-	1	19
Conn.	189	-	-	-	1,216	1,560	19	-	-	-	-	19
MID. ATLANTIC	2,506	127	5	4	10,582	13,900	255	309	71	3	56	488
Upstate N.Y.	236	64	-	1	1,953	2,066	96	99	33	1	13	320
N.Y. City	1,841	5	-	-	3,355	5,714	10	1	-	-	-	-
N.J.	195	-	-	-	1,836	2,139	96	97	25	-	8	47
Pa.	234	58	5	3	3,438	3,981	53	112	13	2	35	121
E.N. CENTRAL	787	250	41	10	20,974	25,078	596	298	209	2	77	7
Ohio	137	78	15	1	6,295	7,573	103	73	22	-	42	7
Ind.	277	37	2	4	2,140	2,349	320	52	4	-	10	-
Ill.	106	51	6	-	6,960	7,938	108	40	4	1	1	-
Mich.	224	76	16	5	4,408	6,203	62	131	175	1	20	-
Wis.	43	8	2	-	1,171	1,015	3	2	4	-	4	-
W.N. CENTRAL	377	87	4	-	4,693	7,014	815	219	47	2	12	20
Minn.	209	16	2	-	320	928	103	18	1	1	-	2
Iowa	40	23	-	-	437	479	8	6	2	1	-	1
Mo.	40	21	-	-	2,708	3,969	549	175	31	-	3	3
N. Dak.	-	1	1	-	10	28	17	-	-	-	-	-
S. Dak.	17	4	1	-	52	52	8	-	-	-	-	-
Nebr.	26	1	-	-	141	8	95	5	7	-	7	-
Kans.	45	21	-	-	1,025	1,550	35	15	6	-	2	14
S. ATLANTIC	2,357	419	23	21	27,638	43,567	329	434	159	20	55	66
Del.	120	2	1	-	363	474	2	42	51	-	6	46
Md.	222	37	7	-	4,584	4,388	56	77	5	1	14	7
D.C.	176	12	-	-	1,728	2,276	2	7	-	-	7	1
Va.	20	51	7	3	2,389	5,207	50	41	11	10	2	5
W. Va.	3	5	5	-	179	247	-	9	9	-	-	2
N.C.	57	31	2	-	5,890	5,524	12	35	15	-	5	3
S.C.	54	2	-	-	2,337	3,179	4	10	-	-	1	-
Ga.	268	26	1	-	3,853	14,935	33	26	20	-	12	-
Fla.	1,437	253	-	18	6,315	7,337	170	187	48	9	8	2
E.S. CENTRAL	613	92	7	3	11,313	12,604	70	322	261	-	16	3
Ky.	53	43	2	3	1,266	1,341	35	31	4	-	4	-
Tenn.	196	22	4	-	3,715	4,141	16	258	253	-	10	2
Ala.	230	21	1	-	3,653	4,254	17	31	2	-	-	1
Miss.	134	6	-	-	2,679	2,868	2	2	2	-	2	-
W.S. CENTRAL	950	82	10	-	11,958	12,155	378	315	41	36	7	9
Ark.	127	7	-	-	1,528	2,349	13	14	2	-	-	1
La.	172	3	-	-	3,020	1,752	18	34	17	-	2	-
Okla.	108	-	3	-	838	1,326	27	51	12	4	5	5
Tex.	543	72	7	-	6,572	6,728	320	216	10	32	-	3
MOUNTAIN	695	87	8	3	2,749	3,108	1,151	161	78	31	24	2
Mont.	3	-	-	1	13	19	43	4	-	-	2	-
Idaho	20	2	-	-	33	36	72	13	-	1	1	-
Wyo.	18	-	-	-	23	12	4	6	20	-	2	2
Colo.	303	25	3	-	902	1,306	298	19	12	16	1	-
N. Mex.	78	14	2	2	288	249	83	68	24	1	-	-
Ariz.	31	26	2	-	935	940	345	27	6	5	6	-
Utah	77	4	1	-	84	52	289	8	12	8	2	-
Nev.	165	16	-	-	471	494	17	16	4	-	10	-
PACIFIC	1,336	452	34	5	6,536	12,902	1,744	611	220	53	20	27
Wash.	85	-	-	-	974	1,128	196	52	49	5	2	-
Oreg.	88	-	-	-	424	385	32	16	3	-	-	-
Calif.	1,149	426	31	5	4,895	11,053	1,258	533	165	47	16	27
Alaska	4	4	2	-	133	210	232	4	1	-	-	-
Hawaii	10	22	1	-	110	126	26	6	2	1	2	-
Guam	-	-	-	-	12	29	-	1	-	1	-	-
P.R.	522	14	-	-	134	15	13	56	12	-	-	-
V.I.	33	-	-	-	22	26	-	1	-	-	-	-
Amer. Samoa	-	-	-	-	7	10	5	-	-	-	-	-
C.N.M.I.	-	2	-	-	17	11	-	-	-	-	-	-

N: Not notifiable U: Unavailable C.N.M.I.: Commonwealth of Northern Mariana Islands

*Updated monthly; last update February 27, 1993.

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending April 10, 1993, and April 4, 1992 (14th Week)

Reporting Area	Malaria	Measles (Rubeola)					Menin-gococcal Infections	Mumps		Pertussis			Rubella		
		Indigenous		Imported*		Total									
	Cum. 1993	1993	Cum. 1993	1993	Cum. 1993	Cum. 1992	Cum. 1993	1993	Cum. 1993	1993	Cum. 1993	Cum. 1992	1993	Cum. 1993	Cum. 1992
UNITED STATES	197	9	71	3	12	518	737	28	461	22	658	313	-	35	39
NEW ENGLAND	22	9	40	2	4	7	49	-	4	9	182	32	-	1	4
Maine	-	-	-	-	-	-	3	-	-	-	5	2	-	1	-
N.H.	2	-	-	-	-	-	7	-	-	8	115	13	-	-	-
Vt.	-	2	25	-	1	-	4	-	-	-	28	-	-	-	-
Mass.	10	7	7	2†	2	5	26	-	1	1	25	16	-	-	-
R.I.	1	-	-	-	1	-	1	-	2	-	2	-	-	-	4
Conn.	9	-	8	-	-	2	8	-	1	-	7	1	-	-	-
MID. ATLANTIC	27	-	4	-	-	92	86	-	42	-	110	59	-	6	4
Upstate N.Y.	13	-	1	-	-	26	37	-	13	-	42	19	-	1	2
N.Y. City	2	-	-	-	-	26	3	-	-	-	-	5	-	-	-
N.J.	7	-	3	-	-	37	10	-	6	-	20	16	-	4	2
Pa.	5	-	-	-	-	3	36	-	23	-	48	19	-	1	-
E.N. CENTRAL	17	-	-	-	-	10	109	2	75	4	97	26	-	-	6
Ohio	5	-	-	-	-	3	32	2	36	3	72	3	-	-	-
Ind.	3	-	-	-	-	4	20	-	-	-	9	8	-	-	-
Ill.	7	-	-	-	-	2	36	-	20	-	4	5	-	-	6
Mich.	2	-	-	-	-	-	20	-	19	1	11	1	-	-	-
Wis.	-	-	-	-	-	1	1	-	-	-	1	9	-	-	-
W.N. CENTRAL	3	-	-	1	1	3	41	1	14	-	26	23	-	1	2
Minn.	-	-	-	-	-	3	2	-	-	-	-	8	-	-	-
Iowa	1	-	-	-	-	-	4	-	3	-	-	1	-	-	-
Mo.	1	-	-	-	-	-	18	-	6	-	11	9	-	1	-
N. Dak.	-	-	-	-	-	-	-	-	4	-	1	2	-	-	-
S. Dak.	1	-	-	-	-	-	2	-	-	-	1	1	-	-	-
Nebr.	-	-	-	-	-	-	2	1	1	-	4	2	-	-	-
Kans.	-	-	-	1†	1	-	13	-	-	-	9	-	-	-	2
S. ATLANTIC	42	-	12	-	2	60	146	8	120	5	49	33	-	2	2
Del.	1	-	-	-	-	1	6	-	3	-	-	-	-	-	-
Md.	6	-	-	-	1	3	14	2	23	-	20	11	-	1	-
D.C.	5	-	-	-	-	-	4	-	-	-	-	-	-	-	-
Va.	3	-	-	-	1	6	13	1	12	-	5	2	-	-	-
W. Va.	2	-	-	-	-	-	4	1	3	-	1	-	-	-	-
N.C.	12	-	-	-	-	19	24	-	57	-	8	6	-	-	-
S.C.	-	-	-	-	-	-	13	3	11	3	5	7	-	-	-
Ga.	2	-	-	-	-	-	40	-	-	-	3	-	-	-	-
Fla.	11	-	12	-	-	31	28	1	11	2	7	7	-	1	2
E.S. CENTRAL	4	-	-	-	-	232	48	-	15	-	26	2	-	-	-
Ky.	-	-	-	-	-	216	9	-	-	-	3	-	-	-	-
Tenn.	1	-	-	-	-	-	13	-	7	-	16	1	-	-	-
Ala.	2	-	-	-	-	-	15	-	5	-	7	1	-	-	-
Miss.	1	-	-	-	-	16	11	-	3	-	-	-	-	-	-
W.S. CENTRAL	6	-	1	-	-	62	60	9	72	-	15	13	-	8	-
Ark.	1	-	-	-	-	-	4	-	3	-	1	7	-	-	-
La.	-	-	1	-	-	-	15	-	5	-	4	-	-	-	-
Okla.	2	-	-	-	-	-	6	-	2	-	10	6	-	1	-
Tex.	3	-	-	-	-	62	35	9	62	-	-	-	-	7	-
MOUNTAIN	6	-	3	-	-	1	71	-	37	1	51	41	-	2	-
Mont.	1	-	-	-	-	-	5	-	-	-	-	-	-	-	-
Idaho	-	-	-	-	-	-	3	-	3	1	10	8	-	1	-
Wyo.	-	-	-	-	-	1	2	-	1	-	1	-	-	-	-
Colo.	3	-	2	-	-	-	9	-	4	-	20	18	-	-	-
N. Mex.	2	-	-	-	-	-	4	N	N	-	13	10	-	-	-
Ariz.	-	-	1	-	-	-	41	-	20	-	3	-	-	-	-
Utah	-	-	-	-	-	-	3	-	3	-	4	5	-	1	-
Nev.	-	-	-	-	-	-	4	-	6	-	-	-	-	-	-
PACIFIC	70	-	11	-	5	51	127	8	82	3	102	84	-	15	21
Wash.	5	-	-	-	-	7	18	-	6	-	7	22	-	-	-
Oreg.	2	-	-	-	-	1	13	N	N	-	-	7	-	1	-
Calif.	62	-	5	-	-	34	87	6	66	3	90	53	-	9	21
Alaska	-	-	-	-	-	9	4	1	4	-	1	-	-	1	-
Hawaii	1	-	6	-	5	-	5	1	6	-	4	2	-	4	-
Guam	-	U	-	U	-	4	-	U	4	U	-	-	U	-	-
P.R.	-	-	72	-	-	35	5	-	-	-	-	6	-	-	-
V.I.	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
Amer. Samoa	-	U	1	U	-	-	-	U	-	U	2	-	U	-	-
C.N.M.I.	-	-	-	-	-	-	-	1	9	-	-	1	-	-	-

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

N: Not notifiable U: Unavailable † International § Out-of-state

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending April 10, 1993, and April 4, 1992 (14th Week)

Reporting Area	Syphilis (Primary & Secondary)		Toxic-Shock Syndrome	Tuberculosis		Tula-remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1993	Cum. 1992	Cum. 1993	Cum. 1993	Cum. 1992	Cum. 1993	Cum. 1993	Cum. 1993	Cum. 1993
UNITED STATES	7,333	9,519	68	4,457	4,935	14	76	22	1,821
NEW ENGLAND	114	197	8	71	68	-	8	2	335
Maine	2	-	1	7	3	-	-	-	-
N.H.	4	14	2	1	-	-	-	-	12
Vt.	-	1	-	1	-	-	-	-	6
Mass.	59	83	4	25	44	-	6	2	105
R.I.	3	12	1	16	-	-	-	-	-
Conn.	46	87	-	21	21	-	2	-	212
MID. ATLANTIC	622	1,352	14	940	1,139	-	10	2	577
Upstate N.Y.	64	106	8	71	139	-	4	-	406
N.Y. City	399	703	-	607	638	-	2	-	-
N.J.	104	196	-	138	184	-	2	2	93
Pa.	55	347	6	124	178	-	2	-	78
E.N. CENTRAL	1,152	1,283	22	513	502	2	9	-	10
Ohio	311	159	12	72	85	-	3	-	-
Ind.	104	57	1	51	43	1	1	-	-
Ill.	434	575	1	267	248	-	3	-	-
Mich.	192	271	8	104	106	1	2	-	-
Wis.	111	221	-	19	20	-	-	-	10
W.N. CENTRAL	453	340	5	74	108	2	-	-	89
Minn.	14	28	2	-	33	-	-	-	17
Iowa	26	9	2	5	7	-	-	-	11
Mo.	341	255	-	43	40	1	-	-	1
N. Dak.	-	1	-	1	3	-	-	-	17
S. Dak.	-	-	-	6	8	-	-	-	10
Nebr.	7	1	-	5	5	-	-	-	1
Kans.	65	46	1	14	12	1	-	-	32
S. ATLANTIC	2,086	2,708	7	699	968	-	10	4	497
Del.	34	62	-	-	15	-	-	-	45
Md.	110	212	-	110	69	-	3	-	142
D.C.	264	141	-	43	41	-	-	-	4
Va.	165	211	-	133	99	-	1	-	87
W. Va.	9	3	-	22	16	-	-	-	23
N.C.	468	638	3	114	126	-	-	3	8
S.C.	316	350	-	89	103	-	-	-	38
Ga.	357	606	-	188	194	-	1	1	130
Fla.	363	485	4	-	305	-	5	-	20
E.S. CENTRAL	900	1,343	2	292	283	3	1	3	25
Ky.	72	42	1	81	91	-	-	2	4
Tenn.	251	301	1	53	-	2	-	-	-
Ala.	213	655	-	113	110	1	1	-	21
Miss.	364	345	-	45	82	-	-	1	-
W.S. CENTRAL	1,700	1,448	1	367	352	4	1	11	135
Ark.	260	208	-	27	33	3	-	-	2
La.	682	660	-	-	7	-	1	-	-
Okla.	102	71	1	34	30	-	-	11	25
Tex.	656	509	-	306	282	1	-	-	108
MOUNTAIN	61	140	2	121	132	-	3	-	18
Mont.	-	2	-	5	-	-	-	-	3
Idaho	-	1	-	2	7	-	-	-	-
Wyo.	1	-	-	1	-	-	-	-	2
Colo.	20	22	1	8	17	-	2	-	-
N. Mex.	12	16	-	10	20	-	-	-	2
Ariz.	27	60	-	61	47	-	1	-	11
Utah	1	2	1	9	19	-	-	-	-
Nev.	-	37	-	25	22	-	-	-	-
PACIFIC	245	708	7	1,380	1,383	3	34	-	135
Wash.	12	34	-	64	76	1	2	-	-
Oreg.	43	13	-	18	23	-	-	-	-
Calif.	185	657	7	1,212	1,206	2	30	-	121
Alaska	2	1	-	8	20	-	-	-	14
Hawaii	3	3	-	78	58	-	2	-	-
Guam	-	1	-	11	11	-	-	-	-
P.R.	157	56	-	44	40	-	-	-	16
V.I.	15	16	-	2	1	-	-	-	-
Amer. Samoa	-	-	-	1	-	-	-	-	-
C.N.M.I.	-	2	-	6	8	-	-	-	-

U: Unavailable

TABLE III. Deaths in 121 U.S. cities,* week ending April 10, 1993 (14th Week)

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	629	445	105	51	11	17	74
Boston, Mass.	173	99	40	21	6	7	25
Bridgeport, Conn.	54	37	9	5	-	3	7
Cambridge, Mass.	31	24	6	1	-	-	3
Fall River, Mass.	31	25	5	1	-	-	-
Hartford, Conn.	53	39	8	4	-	2	1
Lowell, Mass.	24	19	2	1	1	1	5
Lynn, Mass.	13	10	1	2	-	-	5
New Bedford, Mass.	22	16	5	1	-	-	1
New Haven, Conn.	38	27	5	2	2	2	3
Providence, R.I.	40	30	6	3	1	-	1
Somerville, Mass.	8	6	1	1	-	-	-
Springfield, Mass.	44	31	7	5	-	1	7
Waterbury, Conn.	25	20	4	1	-	-	2
Worcester, Mass.	73	62	6	3	1	1	14
MID. ATLANTIC	2,599	1,720	480	269	73	56	145
Albany, N.Y.	44	30	7	4	2	1	4
Allentown, Pa.	22	19	2	1	-	-	7
Buffalo, N.Y.	U	U	U	U	U	U	U
Camden, N.J.	35	20	9	3	2	1	5
Elizabeth, N.J.	20	14	2	3	1	-	1
Erie, Pa.§	49	43	3	1	1	1	5
Jersey City, N.J.	48	27	7	12	-	2	4
New York City, N.Y.	1,445	922	278	171	45	29	57
Newark, N.J.	66	29	20	11	1	5	7
Paterson, N.J.	19	10	1	6	1	1	1
Philadelphia, Pa.	397	267	81	26	14	8	29
Pittsburgh, Pa.§	54	36	8	7	-	3	4
Reading, Pa.	14	12	-	2	-	-	1
Rochester, N.Y.	165	126	22	11	2	4	13
Schenectady, N.Y.	42	37	3	1	1	-	1
Scranton, Pa.§	24	19	3	1	1	-	-
Syracuse, N.Y.	96	65	25	5	1	-	4
Trenton, N.J.	19	9	5	3	1	1	-
Utica, N.Y.	22	20	1	1	-	-	-
Yonkers, N.Y.	18	15	3	-	-	-	2
E.N. CENTRAL	2,013	1,348	376	166	76	47	149
Akron, Ohio	81	64	12	4	-	1	2
Canton, Ohio	39	29	8	1	-	1	4
Chicago, Ill.	224	92	49	46	31	6	12
Cincinnati, Ohio	135	98	23	5	4	5	15
Cleveland, Ohio	128	85	29	9	1	4	2
Columbus, Ohio	192	128	34	20	5	5	10
Dayton, Ohio	121	97	14	8	1	1	9
Detroit, Mich.	258	155	60	26	11	6	12
Evansville, Ind.	37	35	2	-	-	-	-
Fort Wayne, Ind.	51	32	13	5	1	-	5
Gary, Ind.	25	15	7	2	1	-	-
Grand Rapids, Mich.	71	51	12	1	3	4	12
Indianapolis, Ind.	201	132	43	17	6	3	25
Madison, Wis.	30	22	6	2	-	-	1
Milwaukee, Wis.	112	85	18	6	1	2	8
Peoria, Ill.	59	41	11	3	3	1	9
Rockford, Ill.	40	29	7	-	1	3	6
South Bend, Ind.	34	25	4	2	2	1	4
Toledo, Ohio	119	86	19	7	4	3	10
Youngstown, Ohio	56	47	5	2	1	1	3
W.N. CENTRAL	786	575	130	51	11	19	66
Des Moines, Iowa	84	65	13	3	2	1	5
Duluth, Minn.	25	20	3	1	-	1	2
Kansas City, Kans.	23	16	3	2	-	2	2
Kansas City, Mo.	110	75	24	7	2	2	13
Lincoln, Nebr.	35	29	5	-	-	1	4
Minneapolis, Minn.	183	130	30	14	1	8	18
Omaha, Nebr.	97	71	14	7	3	2	4
St. Louis, Mo.	125	91	18	13	2	1	11
St. Paul, Minn.	55	43	8	2	1	1	6
Wichita, Kans.	49	35	12	2	-	-	1
S. ATLANTIC	1,168	797	216	104	29	22	83
Atlanta, Ga.	207	138	38	25	4	2	10
Baltimore, Md.	259	172	43	29	7	8	34
Charlotte, N.C.	73	52	16	3	2	-	4
Jacksonville, Fla.	125	77	31	13	1	3	7
Miami, Fla.	116	79	22	7	6	2	1
Norfolk, Va.	58	43	8	4	1	2	4
Richmond, Va.	U	U	U	U	U	U	U
Savannah, Ga.	56	39	11	4	-	2	2
St. Petersburg, Fla.	52	36	10	4	1	1	3
Tampa, Fla.	193	135	35	15	6	2	18
Washington, D.C.	U	U	U	U	U	U	U
Wilmington, Del.	29	26	2	-	1	-	-
E.S. CENTRAL	862	582	173	65	20	22	78
Birmingham, Ala.	173	114	35	12	7	5	12
Chattanooga, Tenn.	73	53	11	3	1	5	5
Knoxville, Tenn.	90	68	13	9	-	-	5
Lexington, Ky.	77	54	15	8	-	-	12
Memphis, Tenn.	184	114	43	11	9	7	17
Mobile, Ala.	84	55	17	10	1	1	9
Montgomery, Ala.	49	38	10	1	-	-	5
Nashville, Tenn.	132	86	29	11	2	4	13
W.S. CENTRAL	1,442	889	284	164	61	41	89
Austin, Tex.	57	28	13	9	3	4	5
Baton Rouge, La.	57	37	10	7	3	-	3
Corpus Christi, Tex.	47	33	6	3	3	2	2
Dallas, Tex.	196	119	42	21	9	5	7
El Paso, Tex.	82	56	13	6	3	4	4
Ft. Worth, Tex.	104	64	19	11	7	3	4
Houston, Tex.	341	190	75	56	8	12	31
Little Rock, Ark.	65	35	19	7	2	2	5
New Orleans, La.	160	99	24	20	11	3	-
San Antonio, Tex.	181	117	37	15	7	5	13
Shreveport, La.	68	50	10	5	3	-	8
Tulsa, Okla.	84	61	16	4	2	1	7
MOUNTAIN	871	578	142	87	33	31	76
Albuquerque, N.M.	103	63	16	17	7	-	5
Colo. Springs, Colo.	37	23	5	5	2	2	5
Denver, Colo.	105	59	21	15	-	10	12
Las Vegas, Nev.	157	114	26	11	4	2	7
Ogden, Utah	13	8	4	1	-	-	-
Phoenix, Ariz.	193	126	32	17	7	11	19
Pueblo, Colo.	31	27	2	1	1	-	3
Salt Lake City, Utah	93	62	14	6	7	4	11
Tucson, Ariz.	139	96	22	14	5	2	14
PACIFIC	2,067	1,363	364	226	63	40	136
Berkeley, Calif.	25	20	2	1	-	2	7
Fresno, Calif.	118	83	19	7	3	6	11
Glendale, Calif.	24	22	1	1	-	-	1
Honolulu, Hawaii	52	38	6	3	1	4	1
Long Beach, Calif.	84	61	12	5	4	2	14
Los Angeles, Calif.	632	399	110	82	26	5	24
Pasadena, Calif.	27	22	2	2	1	-	4
Portland, Oreg.	127	94	21	10	1	1	5
Sacramento, Calif.	169	93	46	22	4	4	13
San Diego, Calif.	140	83	24	23	5	5	9
San Francisco, Calif.	175	98	34	33	4	5	3
San Jose, Calif.	165	117	28	12	5	3	17
Santa Cruz, Calif.	32	25	5	2	-	-	5
Seattle, Wash.	152	101	26	19	4	2	8
Spokane, Wash.	59	45	7	1	5	1	7
Tacoma, Wash.	86	62	21	3	-	-	7
TOTAL	12,437¶	8,297	2,270	1,183	377	295	896

*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.
U: Unavailable.

Gonorrhea — Continued

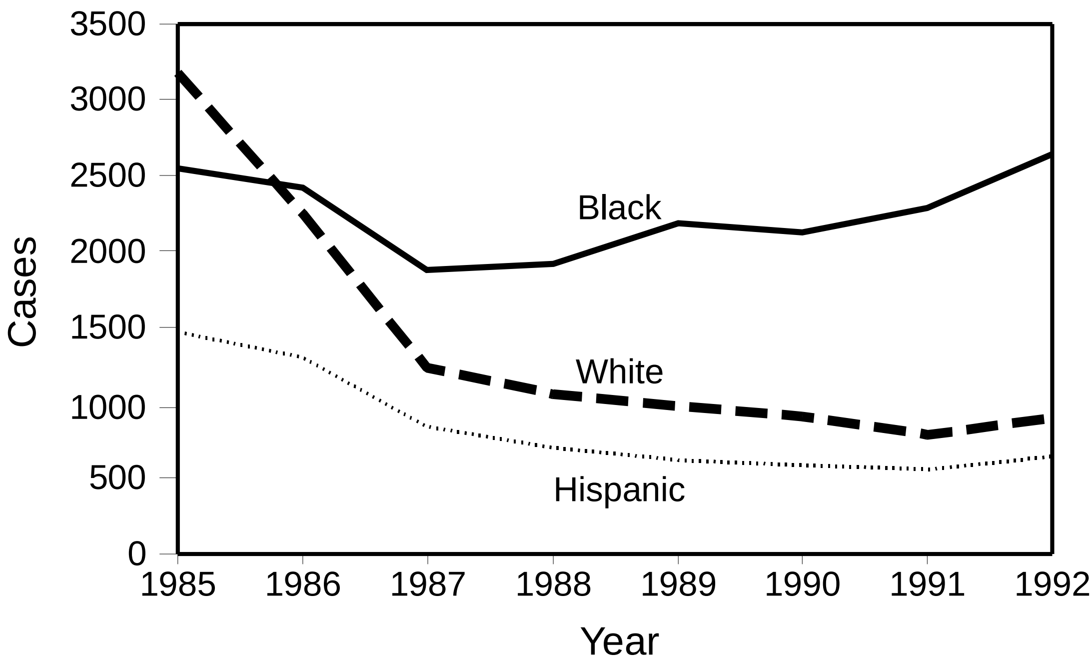
Reported cases of gonorrhea increased 32.9% in the five-county Denver metropolitan area (1990 population: 1,629,466) but decreased elsewhere in the state (Table 1). Half the cases of gonorrhea in the Denver metropolitan area occurred in 8.4% (34) of the census tracts; these represent neighborhoods considered by sexually transmitted diseases (STDs)/acquired immunodeficiency syndrome (AIDS) field staff to be the focus of gang and drug activity.

When compared with 1991, the number of gonorrhea cases diagnosed among men in the Denver Metro Health Clinic (DMHC, the primary public STD clinic in the Denver metropolitan area) increased 33% in 1992, and the number of visits by males to the clinic increased 2.4%. Concurrently, the number of cases diagnosed among women increased by 1%. Among self-identified heterosexual men, the number of gonorrhea cases diagnosed at DMHC increased 33% and comprised 94% of all cases diagnosed in males, while the number of cases diagnosed among self-identified homosexual men remained low (71 and 74 in 1991 and 1992, respectively).

Four selected laboratories in the metropolitan Denver area (i.e., HMO, university hospital, nonprofit family planning, and commercial) were contacted to determine whether gonorrhea culture-positivity rates increased. Gonorrhea culture-positivity rates in three of four laboratories contacted increased 23%–33% from 1991 to 1992, while the rate was virtually unchanged in the fourth (i.e., nonprofit family planning).

From 1985 through 1991, reported cases of gonorrhea among whites and Hispanics in Colorado decreased; in comparison, reported cases among blacks increased since 1988 (Figure 1). During 1988–1992, the population in Colorado increased 9.9% for blacks, 9.8% for Hispanics, and 4.5% for whites. In 1992, the gonorrhea rate for blacks (1935 per 100,000 persons) was 57 times that for whites (34 per 100,000) and 12 times that for Hispanics (156 per 100,000) (Table 1). Among black females, reported cases of gonorrhea increased from 1988 through 1992 in the 15–19-year age group; among

FIGURE 1. Reported cases of gonorrhea, by race/ethnicity* — Colorado, 1985–1992



* For each year, the number of cases of gonorrhea among Asian/Pacific Islanders and American Indians/Alaskan natives was <50.

Gonorrhea — Continued

black males, cases increased from 1989 through 1992 in both the 15–19- and 20–24-year age groups.

Reported by: KA Gershman, MD, JM Finn, NE Spencer, MSPH, STD/AIDS Program; RE Hoffman, MD, State Epidemiologist, Colorado Dept of Health. JM Douglas, MD, Denver Dept of Health and Hospitals. Surveillance and Information Systems Br, Div of Sexually Transmitted Diseases and HIV Prevention, National Center for Prevention Svcs, CDC.

Editorial Note: The increase in reported gonorrhea cases in Colorado in 1992 may represent an overall increase in the occurrence of this disease or more complete reporting stimulated by visitations to laboratories by CDH surveillance staff during 1991–1992. The increases in confirmed gonorrhea cases at DMHC and in culture-positivity rates in three of four laboratories suggest a real increase in gonorrhea rather than a reporting artifact. However, the stable culture-positivity rate in the nonprofit family planning laboratory (which serves a network of clinics statewide) indicates that the gonorrhea increase did not uniformly affect all segments of the population.

One possible explanation for the increased occurrence of gonorrhea in Colorado may be gang- and drug-related sexual behavior, as implicated in a recent outbreak of drug-resistant gonorrhea and other STDs in Colorado Springs (*2*). Although the high morbidity census tracts in the Denver metropolitan area coincide with areas of gang and drug activity, this hypothesis requires further assessment. To examine the possible role of drug use—implicated previously as a factor contributing to the national increase in syphilis (*3–6*)—the CDH STD/AIDS program is collecting information from all persons in whom gonorrhea is diagnosed regarding drug use, exchange of sex for money or drugs, and gang affiliation.

The gonorrhea rate for blacks in Colorado substantially exceeds the national health objective for the year 2000 (1300 per 100,000) (objective 19.1a) (*7*). Race is likely a risk marker rather than a risk factor for gonorrhea and other STDs. Risk markers may be useful for identifying groups at greatest risk for STDs and for targeting prevention efforts. Moreover, race-specific variation in STD rates may reflect differences in factors such as socioeconomic status, access to medical care, and high-risk behaviors.

In response to the increased occurrence of gonorrhea in Colorado, interventions initiated by the CDH STD/AIDS program include 1) targeting partner notification in the Denver metropolitan area to persons in groups at increased risk (e.g., 15–19-year-old black females and 20–24-year-old black males); 2) implementing a media campaign (e.g., public service radio announcements, signs on city buses, newspaper advertisements, and posters in schools and clinics) to promote awareness of STD risk and prevention targeted primarily at high-risk groups, and 3) developing teams of peer educators to perform educational outreach in high-risk neighborhoods. The educational interventions are being developed and implemented with the assistance of members of the target groups and with input from a forum of community leaders and health-care providers.

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Gonorrhea — Continued

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Effectiveness in Disease and Injury Prevention

Impact of Adult Safety-Belt Use on Restraint Use Among Children <11 Years of Age — Selected States, 1988 and 1989

Motor-vehicle crashes are the leading cause of death among children and young adults in the United States and account for more than 1 million years of potential life lost before age 65 annually (*1*). Child safety seats and safety belts can substantially reduce this loss (*2*). From 1977 through 1985, all 50 states passed legislation requiring the use of child safety seats or safety belts for children. Although these laws reduce injuries to young children by an estimated 8%–59% (*3,4*), motor-vehicle crash-related injuries remain a major cause of disability and death among U.S. children (*1*), while the use of occupant restraints among children decreases inversely with age (84% usage for those aged 0–4 years; 57%, aged 5–11 years; and 29%, aged 12–18 years) (*5*). In addition, parents who do not use safety belts themselves are less likely to use restraints for their children (*6*). To characterize the association between adult safety-belt use and adult-reported consistent use of occupant restraints for the youngest child aged <11 years within a household, CDC analyzed data obtained from the Behavioral Risk Factor Surveillance System (BRFSS) during 1988 and 1989. This report summarizes the findings from this study.

Data were available for 20,905 respondents aged ≥18 years in 11 states* that participated in BRFSS—a population-based, random-digit–dialed telephone survey—and administered a standard Injury Control and Child Safety Module developed by CDC. Of these respondents, 5499 (26%) had a child aged <11 years in their household. Each respondent was asked to specify the child's age and the frequency of restraint use for that child. The two categories of child restraint and adult safety-belt use in this analysis were 1) consistent use (i.e., always buckle up) and 2) less than consistent use (i.e., almost always, sometimes, rarely, or never buckle up). Data were weighted to provide estimates representative of each state. Software for Survey Data Analysis (SUDAAN) (*7*) was used to calculate point estimates and confidence intervals. Statistically significant differences were defined by p values of <0.05.

Each of the 11 states had some type of child restraint law. Of these, six (Arizona, Kentucky, Maine, Nebraska, Rhode Island, and West Virginia) had no law requiring adults to use safety belts; four (Idaho, Maryland, Pennsylvania, and Washington) had a secondary enforcement mandatory safety-belt law (i.e., a vehicle had to be stopped

*Arizona, Idaho, Kentucky, Maine, Maryland, Nebraska, New York, Pennsylvania, Rhode Island, Washington, and West Virginia.

Impact of Adult Safety-Belt Use — Continued

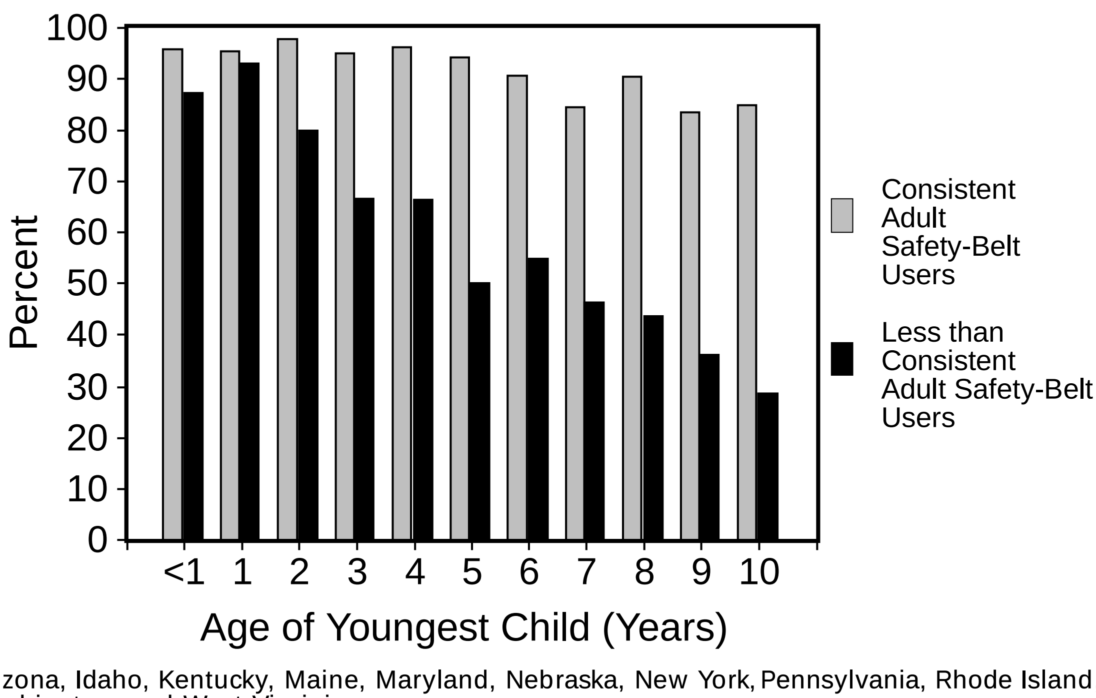
for a traffic violation before a citation for nonuse of safety belts could be issued); and one state (New York) had a primary enforcement mandatory safety-belt law (i.e., vehicles could be stopped for a safety-belt law violation alone). In nine states, child-passenger protection laws included all children aged <5 years, but the other two states used both age and size of the child as criteria for mandatory restraint use. The analysis in this report subgrouped states into 1) those having a law requiring adult safety-belt use (law states), and 2) those without such a law (no-law states).

Overall, 21% of children aged <11 years reportedly were not consistently restrained during automobile travel. Both child restraint use and adult restraint use were significantly higher ($p<0.05$, chi-square test) in law states than in no-law states (81.1% versus 74.3% and 58.7% versus 43.2%, respectively).

High rates of restraint use for children aged ≤1 year were reported by both adults indicating consistent and less than consistent safety-belt use (Figure 1). Adults with consistent use reported high rates of child-occupant restraint use regardless of the child's age (range: 95.5% for 1-year-olds to 84.7% for 10-year-olds). In comparison, for adults reporting less than consistent safety-belt use, the rate of child-occupant restraint use declined sharply by the age of the child (range: 93.1% for 1-year-olds to 28.8% for 10-year-olds). When comparing children of consistent adult safety-belt users with children of less than consistent adult safety-belt users, 95% confidence intervals overlap for the two youngest age groups (i.e., aged <1 and 1 year).

Reported child-occupant restraint use in law states generally exceeded that in no-law states, regardless of age of child (Table 1). In addition, higher adult educational attainment was significantly associated with increased restraint use for children, a factor that has also been associated with increased adult safety-belt use (*8*).

FIGURE 1. Percentage of consistent occupant restraint use for children, by child age and adult safety-belt use — 11 states,* 1988 and 1989



*Arizona, Idaho, Kentucky, Maine, Maryland, Nebraska, New York, Pennsylvania, Rhode Island, Washington, and West Virginia.

Impact of Adult Safety-Belt Use — Continued

TABLE 1. Prevalence of child restraint use, by adult safety-belt use, child age, and adult educational attainment in law states and no-law states* — 11 states,† 1988 and 1989§

Self-reported characteristic¶	Law states		No-law states	
	%	(95% CI**)	%	(95% CI)
Safety-belt use among adults				
Always	92.9	(90.9–94.9)	92.7	(90.7–94.6)
Almost always	76.1	(71.0–81.1)	71.1	(65.4–76.8)
Sometimes	59.8	(51.9–67.7)	59.8	(54.4–65.3)
Rarely	57.3	(46.5–68.2)	50.2	(42.7–57.7)
Never	51.3	(40.1–62.5)	57.4	(51.3–63.6)
Age (yrs) of youngest child				
0– 1	91.6	(87.3–96.0)	95.8	(93.9–97.7)
2– 3	87.6	(84.1–91.2)	83.6	(80.1–87.2)
4– 5	79.2	(73.9–84.5)	71.1	(65.8–76.3)
6–10	69.5	(65.5–73.4)	56.2	(52.2–60.3)
Adult educational attainment				
Less than high school	73.7	(65.1–82.2)	62.5	(55.8–69.2)
High school/ Technical school graduate	78.2	(74.8–81.6)	73.6	(70.5–76.7)
More than high school	85.3	(82.4–88.1)	78.8	(75.8–81.8)

*States with or states without a law requiring adult safety-belt use.
†Arizona, Idaho, Kentucky, Maine, Maryland, Nebraska, New York, Pennsylvania, Rhode Island, Washington, and West Virginia.
§Sample size=5449 adult respondents with a child aged <11 years in their household.
¶A significant association was found between child-restraint use and each characteristic in both law and no-law states (p<0.05, chi-square test).
**Confidence interval.

Reported by: National Center for Injury Prevention and Control; National Center for Chronic Disease Prevention and Health Promotion, CDC.

Editorial Note: The findings in this report are consistent with others indicating that adults who do not use safety belts themselves are less likely to employ occupant restraints for their children (*6,9*). Because these nonbelted adults are at increased risk of crashing and more likely to exhibit other risk-taking behaviors, children traveling with them may be at greater risk for motor-vehicle injury (*10*).

Educational attainment of adult respondents was inversely associated with child restraint use in this report. Accordingly, occupant-protection programs should be promoted among parents with low educational attainment. Because low educational attainment is often associated with low socioeconomic status, such programs should be offered to adults through health-care facilities that serve low-income communities or through federal programs (i.e., Head Start) that are directed at parents with young children.

Injury-prevention programs emphasize restraining young children. In addition, however, efforts must be intensified to protect child occupants as they become older. Parents, especially those with low educational attainment, those who do not consistently wear safety belts, and those from states that do not have mandatory safety-belt use laws, should be encouraged to wear safety belts and to protect their children by using approved child safety seats and safety belts. Finally, the increased use of restraints among children may increase their likelihood of using safety belts when they become teenagers—the age group characterized by the lowest rate of safety-belt use and the highest rate of fatal crashes (*5*).

Impact of Adult Safety-Belt Use — Continued

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Surveillance Summaries

Publication of *CDC Surveillance Summaries*

Since 1983, CDC has published the *CDC Surveillance Summaries* under separate cover as part of the *MMWR* series. Each report published in the *CDC Surveillance Summaries* focuses on public health surveillance; surveillance findings are reported for a broad range of risk factors and health conditions.

Summaries for each of the reports published in the most recent (March 19, 1993) issue of the *CDC Surveillance Summaries* (*1*) are provided below. All subscribers to *MMWR* receive the *CDC Surveillance Summaries*, as well as the *MMWR Recommendations and Reports*, as part of their subscriptions.

SURVEILLANCE FOR AND COMPARISON OF BIRTH DEFECT PREVALENCES IN TWO GEOGRAPHIC AREAS — UNITED STATES, 1983–88

Problem/Condition: CDC and some states have developed surveillance systems to monitor the birth prevalence of major defects.

Reporting Period Covered: This report covers birth defects surveillance in metropolitan Atlanta, Georgia, and selected jurisdictions in California for the years 1983–1988.

Description of System: The California Birth Defects Monitoring Program and the Metropolitan Atlanta Congenital Defects Program are two population-based surveillance systems that employ similar data collection methods. The prevalence estimates for 44 diagnostic categories were based on data for 1983–1988 for 639,837 births in California and 152,970 births in metropolitan Atlanta. The prevalences in the two areas were compared, adjusting for race, sex, and maternal age by using Poisson regression.

Results: Regional differences in the prevalence of aortic stenosis, fetal alcohol syndrome, hip dislocation/dysplasia, microcephalus, obstruction of the kidney/ureter, and scoliosis/lordosis may be attributable to general diagnostic variability. However, differences in the prevalences of arm/hand limb reduction, encephalocele, spina bifida, or trisomy 21 (Down syndrome) are probably not attributable to differences in ascertainment, because these defects are relatively easy to diagnose.

Interpretation: Regional differences in prenatal diagnosis and pregnancy termination may affect prevalences of trisomy 21 and spina bifida. However, the reason for differences in arm/hand reduction is unknown, but may be related to variability in environmental exposure, heterogeneity in the gene pool, or random variation.

Actions Taken: Because of the similarities of these data bases, several collaborative studies are being implemented. In particular, the differences in the birth prevalence of spina bifida and Down syndrome will focus attention on the impact of prenatal diagnosis.

Authors: Jane Schulman, Ph.D., Nancy Jensvold, M.P.H, Gary M. Shaw, Dr.P.H., California Birth Defects Monitoring Program, March of Dimes Birth Defects Foundation. Larry D. Edmonds, M.S.P.H., Anne B. McClearn, Division of Birth Defects and Developmental Disabilities, National Center for Environmental Health, CDC.

INFLUENZA — UNITED STATES, 1988–89

Problem/Condition: CDC monitors the emergence and spread of new influenza virus variants and the impact of influenza on morbidity and mortality annually from October through May.

Reporting Period Covered: This report covers U.S. influenza surveillance conducted from October 1988 through May 1989.

Description of System: Weekly reports from the vital statistics offices of 121 cities provided an index of influenza's impact on mortality; 58 WHO collaborating laboratories reported weekly identification of influenza viruses; weekly morbidity reports were received both from the state and territorial epidemiologists and from 153 sentinel family practice physicians. Nonsystematic reports of outbreaks and unusual illnesses were received throughout the year.

Results: During the 1988–89 influenza season, influenza A(H1N1) and B viruses were identified in the United States with essentially equal frequency overall, although both regional and temporal patterns of predominance shifted over the course of the season. Throughout the season increases in the indices of influenza morbidity in regions where influenza A(H1N1) predominated were similar to increases in regions where influenza B predominated. Only 7% of identified viruses were influenza A(H3N2), but isolations of this subtype increased as the season waned, and it subsequently predominated during the 1989–90 season. During the 1988–89 season outbreaks in nursing homes were reported in association with influenza B and A(H3N2) but not influenza A(H1N1).

Interpretation: The alternating temporal and geographic predominance of influenza strains A(H1N1) and B during the 1988–89 season emphasizes the importance of continual attention to regional viral strain surveillance, since amantadine is effective only for treatment and prophylaxis of influenza A.

Actions Taken: Weekly interim analyses of surveillance data produced throughout the season allow physicians and public health officials to make informed choices regarding appropriate use of amantadine. CDC's annual surveillance allows the observed viral variants to be assessed as candidates for inclusion as components in vaccines used in subsequent influenza seasons.

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Reference

1. CDC. CDC surveillance summaries (March 19). MMWR 1993;42(no. SS-1).

Notices to Readers

Warnings on Interaction Between Air Bags and Rear-Facing Child Restraints

Air bags and child safety seats are effective in preventing deaths and serious injuries from motor-vehicle crashes (*1,2*), and child safety seats are required by law in all 50 states. However, laboratory crash test data indicate a potential for injury if a child is placed in a rear-facing restraint in the front seat of any vehicle equipped with a passenger-side air bag. Although no children have been injured in this way, parents should not use a rear-facing restraint in this manner.

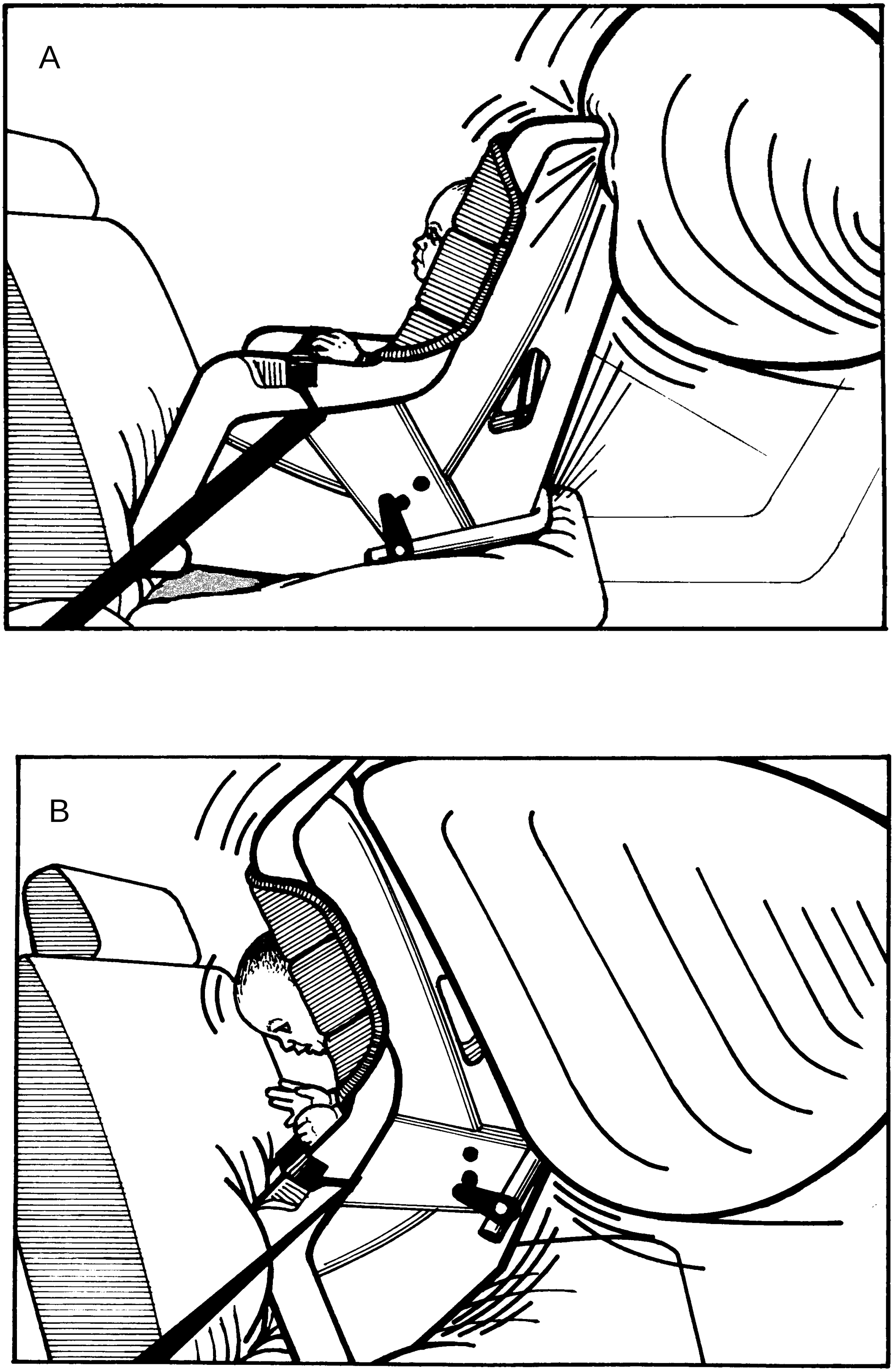
In a crash, a rear-facing child restraint with its back close to the instrument panel could be struck by the rapidly inflating air bag, and a child in the restraint could be seriously injured (Figures 1A and 1B). Rear-facing child restraints must be used in the rear seat of vehicles with passenger-side air bags. To be properly protected, infants *must* ride in a rear-facing child restraint until they weigh 20 pounds or are approximately 1 year of age. Those vehicles with passenger-side air bags and without back seats are therefore not suitable for rear-facing child restraints. This consideration should be addressed when a family car is purchased or rented.

Parents should always read and follow the child restraint instructions and the vehicle owner's manual for specific directions on where and how to install a particular child restraint in a particular vehicle. Although all children should travel in the back seat of vehicles, forward-facing child restraints may be used in the front seat of a vehicle equipped with a passenger-side air bag if the child's age and weight meet the restraint manufacturer's requirements; the vehicle seat should be moved as far back as possible so the child is positioned similar to a restrained adult.

Industry is pursuing technologic solutions to reduce the compatibility problem. Government, industry, and professional organizations are developing public information strategies to advise the public of the necessary precautions.

Notices to Readers — Continued

FIGURE 1. Interaction of child safety seat and airbag



Notices to Readers — Continued

Reported by: American Academy of Pediatrics, Elk Grove Village, Illinois. Child Restraint and Air Bag Interaction Task Force, Society of Automotive Engineers. National Center for Injury Prevention and Control, CDC.

References

1. Kahane CJ. Evaluation of the effectiveness of occupant protection: federal motor vehicle safety standard 208—interim report. Washington, DC: US Department of Transportation, National Highway Traffic Safety Administration, June 1992; report no. DOT-HS-807-843.
2. Kahane CJ. An evaluation of child passenger safety: the effectiveness and benefits of safety seats. Washington, DC: US Department of Transportation, National Highway Traffic Safety Administration, 1986; report no. DOT-HS-806-890.

Training on the Clinical Laboratory Improvement Amendments of 1988

CDC, the Association of State and Territorial Public Health Laboratory Directors, the National Laboratory Training Network, and the Florida Department of Health and Rehabilitative Services are cosponsoring a training course titled "Directing the Laboratory Performing Moderate Complexity Tests: Quality Laboratory Management for Meeting CLIA '88 Requirements" on June 9, 16, and 23. The course will provide physicians with knowledge of principles of laboratory practice. Although the course was designed for physicians practicing in the public health sector who will direct or supervise laboratory testing, other physicians are invited to participate.

The course will consist of self-study printed materials and three live, interactive videoconferences broadcast nationwide via satellite. The course manual will include guidelines needed to operate laboratories in compliance with CLIA '88 standards. Twenty continuing medical education credits will be awarded to registrants who attend all three videoconferences and complete the self-study materials.

Registration for the course will continue through May 15, 1993. Registration packets, course materials, and information about videoconference locations are available from the Association of State and Territorial Public Health Laboratory Directors, 1211 Connecticut Avenue, NW, Suite 608, Washington, DC 20036; fax (202) 887-5098.

Workshop on Engineering Controls for Preventing Airborne Infections in Workers in Health Care and Related Facilities

CDC's National Institute for Occupational Safety and Health (NIOSH) is convening a "Workshop on Engineering Controls for Preventing Airborne Infections in Workers in Health Care and Related Facilities" to be held July 14–16, 1993, in Cincinnati. Attendance will be limited to 400.

The purpose of the workshop is to review the nature and extent of airborne transmission of infections in workers in health-care and related facilities; review current data and new findings regarding the engineering control of airborne infections that may have relevance to occupational exposures in health-care and other institutions; identify gaps in knowledge that might be filled by directed research; and recommend a national research agenda that, if implemented, would close the gaps and permit reliable recommendations for protecting workers. The workshop format will include

Notices to Readers — Continued

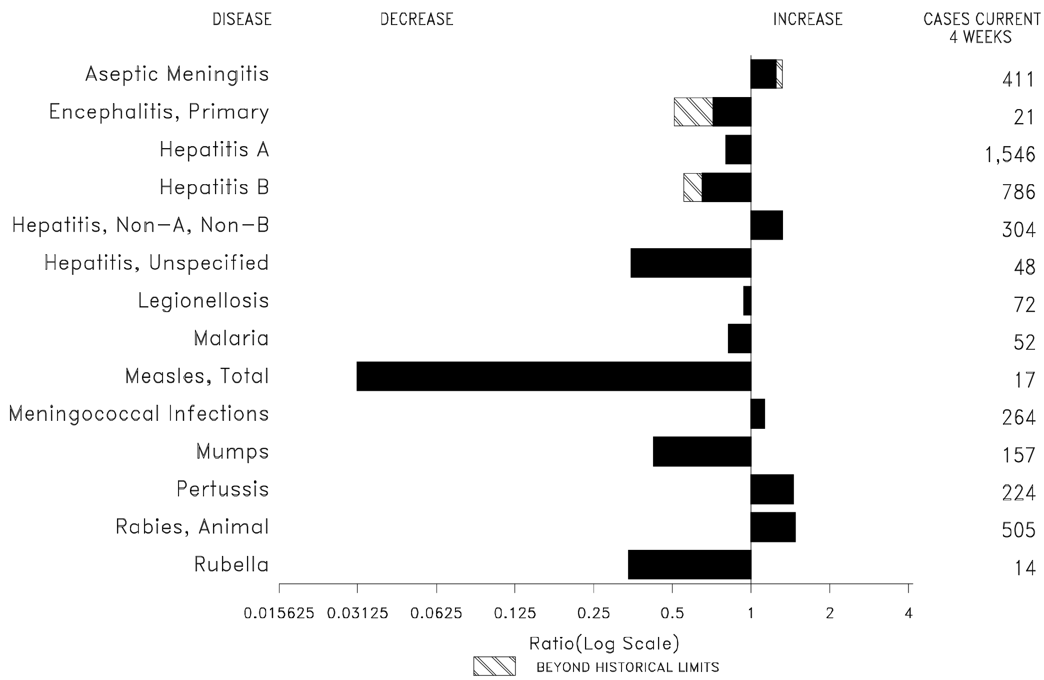
speakers and panel discussions addressing 1) aerosol characterization, 2) source characterization and control, 3) building designs, and 4) ventilation designs.

Additional information and registration forms are available from the Project Coordinator (R-2), Engineering Controls Workshop, NIOSH, CDC, 4676 Columbia Parkway, Cincinnati, OH 45226; telephone (513) 841-4321.

Erratum: Vol. 42, No. 13

On page 244, Figure I, Notifiable disease reports, comparison of 4-week totals ending April 3, 1993, with historical data—United States, is incorrect. The graph below is correct for the week ending April 3, 1993.

FIGURE I. Notifiable disease reports, comparison of 4–week totals ending April 3, 1993, with historical data – United States



The *Morbidity and Mortality Weekly Report (MMWR)* Series is prepared by the Centers for Disease Control and Prevention (CDC) and is available on a paid subscription basis from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402; telephone (202) 783-3238.

The data in the weekly *MMWR* are provisional, based on weekly reports to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday. Inquiries about the *MMWR* Series, including material to be considered for publication, should be directed to: Editor, *MMWR* Series, Mailstop C-08, Centers for Disease Control and Prevention, Atlanta, GA 30333; telephone (404) 332-4555.

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