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*Progress in Chronic Disease Prevention*

## Factors Related to Cholesterol Screening and Cholesterol Level Awareness — United States, 1989

Since November 1985, when the National Cholesterol Education Program (NCEP) was initiated by the National Heart, Lung, and Blood Institute, cholesterol screening and awareness of cholesterol levels have increased substantially in the United States (*1,2*). However, cholesterol screening and awareness patterns vary by state (*2*). To assess whether these variations may be related to demographic differences between states, data from the Behavioral Risk Factor Surveillance System (BRFSS) for 1989 were analyzed. Differences in cholesterol screening and awareness in relation to cardiovascular disease (CVD) risk factors other than elevated cholesterol level were also evaluated.

Health departments in the 39 participating states and the District of Columbia use a standardized questionnaire when conducting monthly random-digit–dialed telephone surveys of persons ≥18 years of age (*3*). In 1989, respondents were asked whether they had ever had their cholesterol "checked." If so, they were asked to provide the duration since their last test and whether they had been told their cholesterol level. Persons who reported being told their cholesterol level were asked to state their level; those who reported a number from 100 mg/dL through 450 mg/dL were considered to know their cholesterol level.

The state-specific survey results were weighted according to the age, sex, and race distribution of adults in each state. Combined data were also weighted according to the population size in each state and are therefore representative of the total population in the participating states. To allow comparisons between states and within demographic categories, state-specific and combined results were standardized by age, sex, race, and educational attainment using 1980 U.S. census data. SESUDAAN, a computer software program for analyzing complex sample survey data, was used to calculate standard errors for the prevalence estimates (*4*).

The overall percentage of adults who reported ever having had their cholesterol level checked ranged from 48% in Alabama and New Mexico to 64% in Connecticut, Florida, and Washington (Table 1). The percentage of adults who reported knowing

*Cholesterol — Continued*

**TABLE 1. Cholesterol screening and awareness of cholesterol levels, by state* — Behavioral Risk Factor Surveillance System (BRFSS), 1989**

| | | Respondents having had their cholesterol level checked | | | | Respondents knowing their cholesterol level | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Overall | | Standardized† | | Overall | | Standardized† | |
| State | Sample size | (%) | 95% CI§ | (%) | 95% CI | (%) | 95% CI | (%) | 95% CI |
| Alabama | 1788 | (48) | ±3 | (47) | ±3 | (16) | ±2 | (16) | ±2 |
| Arizona | 1409 | (58) | ±3 | (54) | ±3 | (26) | ±3 | (23) | ±3 |
| California | 1980 | (63) | ±2 | (56) | ±3 | (27) | ±2 | (22) | ±2 |
| Connecticut | 1315 | (64) | ±3 | (61) | ±3 | (28) | ±3 | (24) | ±3 |
| District of Columbia | 1434 | (50) | ±3 | (44) | ±6 | (12) | ±2 | (11) | ±3 |
| Florida | 1647 | (64) | ±3 | (56) | ±3 | (25) | ±2 | (19) | ±2 |
| Georgia | 1591 | (52) | ±3 | (51) | ±3 | (16) | ±2 | (16) | ±2 |
| Hawaii | 750 | (53) | ±4 | (53) | ±4 | (22) | ±3 | (22) | ±4 |
| Idaho | 1702 | (55) | ±3 | (54) | ±3 | (22) | ±2 | (19) | ±2 |
| Illinois | 1714 | (57) | ±3 | (54) | ±3 | (23) | ±2 | (21) | ±2 |
| Indiana | 2141 | (51) | ±2 | (49) | ±2 | (19) | ±2 | (17) | ±2 |
| Iowa | 1271 | (58) | ±3 | (54) | ±3 | (28) | ±3 | (25) | ±2 |
| Kentucky | 1782 | (53) | ±3 | (52) | ±2 | (21) | ±2 | (20) | ±2 |
| Maine | 1241 | (59) | ±3 | (57) | ±3 | (26) | ±3 | (23) | ±3 |
| Maryland | 1653 | (63) | ±3 | (60) | ±3 | (20) | ±2 | (18) | ±2 |
| Massachusetts | 1191 | (61) | ±3 | (57) | ±3 | (28) | ±3 | (24) | ±3 |
| Michigan | 2300 | (60) | ±2 | (58) | ±2 | (27) | ±2 | (25) | ±2 |
| Minnesota | 3350 | (61) | ±2 | (59) | ±2 | (29) | ±2 | (25) | ±2 |
| Missouri | 1471 | (50) | ±3 | (47) | ±3 | (21) | ±2 | (19) | ±2 |
| Montana | 1145 | (55) | ±3 | (52) | ±3 | (25) | ±3 | (22) | ±3 |
| Nebraska | 1414 | (53) | ±3 | (50) | ±3 | (25) | ±2 | (22) | ±2 |
| New Hampshire | 1343 | (58) | ±3 | (56) | ±3 | (27) | ±3 | (24) | ±3 |
| New Mexico | 1116 | (48) | ±3 | (45) | ±3 | (19) | ±3 | (15) | ±2 |
| New York | 1248 | (56) | ±3 | (53) | ±3 | (22) | ±3 | (19) | ±2 |
| North Carolina | 1719 | (54) | ±3 | (54) | ±2 | (22) | ±2 | (22) | ±2 |
| North Dakota | 1591 | (56) | ±3 | (52) | ±3 | (28) | ±2 | (26) | ±2 |
| Ohio | 1407 | (53) | ±3 | (51) | ±3 | (22) | ±2 | (19) | ±2 |
| Oklahoma | 1128 | (54) | ±3 | (49) | ±3 | (21) | ±3 | (18) | ±2 |
| Oregon | 1635 | (63) | ±3 | (60) | ±3 | (30) | ±2 | (24) | ±2 |
| Pennsylvania | 1793 | (59) | ±3 | (55) | ±2 | (25) | ±2 | (22) | ±2 |
| Rhode Island | 1752 | (61) | ±3 | (57) | ±3 | (27) | ±2 | (23) | ±2 |
| South Carolina | 1839 | (53) | ±3 | (54) | ±3 | (18) | ±2 | (19) | ±2 |
| South Dakota | 1726 | (53) | ±3 | (50) | ±3 | (24) | ±2 | (21) | ±2 |
| Tennessee | 2368 | (55) | ±2 | (53) | ±2 | (19) | ±2 | (18) | ±2 |
| Texas | 1431 | (56) | ±3 | (54) | ±3 | (21) | ±2 | (18) | ±2 |
| Utah | 1740 | (52) | ±3 | (52) | ±3 | (21) | ±2 | (20) | ±2 |
| Virginia | 1381 | (58) | ±3 | (54) | ±3 | (21) | ±2 | (19) | ±2 |
| Washington | 1452 | (64) | ±3 | (60) | ±3 | (33) | ±3 | (28) | ±3 |
| West Virginia | 1704 | (50) | ±3 | (50) | ±2 | (18) | ±2 | (17) | ±2 |
| Wisconsin | 1251 | (57) | ±3 | (54) | ±3 | (30) | ±3 | (27) | ±3 |
| Median | | 56% | | 54% | | 23% | | 21% | |
| Range | | 48%–64% | | 44%–61% | | 12%–33% | | 11%–28% | |

*For the BRFSS, the District of Columbia is considered a state.
†Standardized for age, sex, race, and educational attainment using 1980 U.S. census data.
§Confidence interval.

*Cholesterol — Continued*

their cholesterol level ranged from 12% in the District of Columbia to 33% in Washington. After standardization of the state-specific estimates for age, sex, race, and educational attainment using 1980 census data, cholesterol screening and awareness still varied between states.

Cholesterol screening and awareness were slightly higher among women than among men (Table 2). Younger persons (18–34 years of age), blacks, and persons with lower educational attainment (≤12 years of education) were less likely to have had their cholesterol level checked and were less likely to report knowing their cholesterol level. Differences by race declined after standardization for age, sex, and educational attainment. However, differences by sex, age, and educational attainment remained unchanged or increased when standardized by the other demographic factors.

Persons with diabetes, hypertension, or obesity were more likely to have had their cholesterol level checked and were more likely to know their cholesterol level than were persons who did not report having these risk factors for CVD (Table 3). However, cholesterol screening and awareness were lower among persons who reported having a sedentary lifestyle and among persons who reported smoking than among

**TABLE 2. Cholesterol screening and awareness of cholesterol levels, by demographic category — Behavioral Risk Factor Surveillance System (BRFSS), 1989***

| | | Respondents having had their cholesterol level checked | | | | Respondents knowing their cholesterol level | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Overall | | Standardized† | | Overall | | Standardized† | |
| Category | Sample size | (%) | 95% CI§ | (%) | 95% CI | (%) | 95% CI | (%) | 95% CI |
| **Sex** | | | | | | | | | |
| Male¶ | 26,519 | (56) | ±1 | (52) | ±1 | (23) | ±1 | (19) | ±1 |
| Female | 37,394 | (59)** | ±1 | (55)** | ±1 | (24) | ±1 | (21) | ±1 |
| **Age (yrs)** | | | | | | | | | |
| 18–34¶ | 22,091 | (37) | ±1 | (33) | ±1 | (12) | ±1 | ( 9) | ±1 |
| 35–49 | 17,736 | (61)** | ±1 | (55)** | ±1 | (27)** | ±1 | (23)** | ±1 |
| 50–64 | 11,519 | (75)** | ±1 | (73)** | ±1 | (35)** | ±1 | (33)** | ±1 |
| ≥65 | 12,567 | (77)** | ±1 | (78)** | ±1 | (31)** | ±1 | (31)** | ±1 |
| **Race** | | | | | | | | | |
| White¶ | 57,998 | (58) | ±1 | (54) | ±1 | (25) | ±1 | (21) | ±1 |
| Black | 5,915 | (50)** | ±2 | (50)** | ±2 | ( 9)** | ±1 | ( 8)** | ±1 |
| **Education (yrs)††** | | | | | | | | | |
| <12 | 10,921 | (53)** | ±1 | (44)** | ±2 | (14)** | ±1 | (12)** | ±1 |
| 12 | 21,736 | (53)** | ±1 | (53)** | ±1 | (21)** | ±1 | (21)** | ±1 |
| >12¶ | 31,099 | (62) | ±1 | (64) | ±1 | (29) | ±1 | (29) | ±1 |

*Based on data from 39 states and the District of Columbia.
†Standardized for other demographic variables using 1980 U.S. census data. For example, age is adjusted for sex, race, and educational attainment.
§Confidence interval.
¶Referent group.
**Differs significantly from the referent group ($p<0.05$, z-test).
††Level unknown for 157 BRFSS respondents.

*Cholesterol — Continued*

persons who did not report having these CVD risk factors. Differences were less marked after standardization for age, sex, race, and educational attainment but remained statistically significant ($p<0.05$, z-test).

*Reported by: the following state BRFSS coordinators: L Eldrige, Alabama; J Contreras, Arizona; W Wright, California; M Adams, Connecticut; A Peruga, District of Columbia; S Hoecherl, Florida; J Smith, Georgia; A Villafuerte, Hawaii; J Mitten, Idaho; B Steiner, Illinois; S Joseph, Indiana; S Schoon, Iowa; K Bramblett, Kentucky; J Sheridan, Maine; A Weinstein, Maryland; L Koumjian, Massachusetts; J Thrush, Michigan; N Salem, Minnesota; J Jackson-Thompson, Missouri; M McFarland, Montana; S Spanke, Nebraska; K Zaso, L Powers, New Hampshire; L Pendley, New Mexico; J Marin, O Munshi, New York; C Washington, North Carolina; M Maetzold, North Dakota; E Capwell, Ohio; N Hann, Oklahoma; J Grant-Worley, Oregon; C Becker, Pennsylvania; R Cabrel, Rhode Island; M Mace, South Carolina; S Moritz, South Dakota; D Riding, Tennessee; J Fellows, Texas; L Post-Nilson, Utah; J Bowie, Virginia; K Tollestrup, Washington; D Porter, West Virginia; M Soref, Wisconsin. Behavioral Surveillance Br, Office of Surveillance and Analysis and Div of Chronic Disease Control and Community Intervention, Center for Chronic Disease Prevention and Health Promotion, CDC.*

**Editorial Note:** BRFSS data for 1989 indicate that cholesterol screening and awareness of cholesterol levels continue to increase in the United States. Among states participating in the BRFSS, the median proportion of adults who reported having had their cholesterol tested increased from 47% in 1987 to 56% in 1989. Similarly, the median proportion of adults who reported knowing their cholesterol level increased from 6% in 1987 to 21% in 1989.

**TABLE 3. Awareness of cholesterol levels in relation to other cardiovascular disease risk factors — Behavioral Risk Factor Surveillance System (BRFSS), 1989***

| | | Respondents having had their cholesterol level checked | | | | Respondents knowing their cholesterol level | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Overall | | Standardized† | | Overall | | Standardized† | |
| Risk factor | Sample size§ | (%) | 95% CI¶ | (%) | 95% CI | (%) | 95% CI | (%) | 95% CI |
| Diabetes | 3,223 | (77)** | ±2 | (64)** | ±3 | (28)** | ±2 | (22) | ±2 |
| No diabetes | 58,960 | (56) | ±1 | (53) | ±1 | (23) | ±1 | (20) | ±1 |
| Hypertension†† | 11,923 | (78)** | ±1 | (66)** | ±2 | (33)** | ±1 | (27)** | ±2 |
| No hypertension | 51,773 | (53) | ±1 | (51) | ±1 | (21) | ±1 | (19) | ±1 |
| Overweight§§ | 13,471 | (64)** | ±1 | (58)** | ±1 | (26)** | ±1 | (23)** | ±1 |
| Not overweight | 47,637 | (56) | ±1 | (53) | ±1 | (23) | ±1 | (20) | ±1 |
| Sedentary¶¶ | 37,832 | (54)** | ±1 | (51)** | ±1 | (20)** | ±1 | (18)** | ±1 |
| Not sedentary | 26,004 | (62) | ±1 | (59) | ±1 | (28) | ±1 | (24) | ±1 |
| Smoking*** | 15,510 | (49)** | ±1 | (49)** | ±1 | (16)** | ±1 | (16)** | ±1 |
| Not smoking | 48,267 | (60) | ±1 | (55) | ±1 | (26) | ±1 | (22) | ±1 |

*Based on data from 39 states and the District of Columbia.
†Standardized for age, sex, race, and educational attainment using 1980 U.S. census data.
§Risk factor information unknown for some BRFSS respondents.
¶Confidence interval.
**Differs significantly from persons who did not report having the risk factor ($p<0.05$, z-test).
††Persons who reported one or more of the following: 1) being told they had hypertension on two or more occasions, 2) having an antihypertensive medication currently prescribed, or 3) having high blood pressure at the time of the survey.
§§Body mass index (weight [kg] ÷ height [m$^2$]) $\geq$27.8 for men and $\geq$27.3 for women.
¶¶Persons who reported leisure-time physical activity fewer than three times per week and/or $<$20 minutes per session.
***Current cigarette smoker.

*Cholesterol — Continued*

In this analysis, cholesterol screening and awareness were strongly associated with age, race, and educational attainment, and variations by state persisted after adjustment for demographic differences between states. Thus, other factors were likely to be associated with variations by state, including differences in 1) time of implementation and intensity of cholesterol education and screening programs and 2) availability and quality of clinical preventive services.

NCEP goals are for all adults to 1) have their cholesterol level measured at least once every 5 years, 2) know their cholesterol level, and 3) take steps to lower their cholesterol level if it is elevated (*5*). The lower level of cholesterol testing and awareness among the youngest age group (18–34 years of age) is of particular concern: considerable evidence suggests that atherosclerosis is present by early adulthood (*6–8*) and that early atherosclerotic lesions may be related to elevated cholesterol levels during childhood and adolescence (*9*). Through identification and treatment of high blood cholesterol in early adulthood, younger persons may be able to prevent or delay the development of atherosclerosis. Increased identification and treatment of high blood cholesterol among blacks and persons in low socioeconomic groups is also important.

Multiple CVD risk factors increase the risk for CVD-related morbidity and mortality. For example, hypertensive smokers have a three to six times greater risk for CVD-related mortality than do normotensive nonsmokers (*5*). Additionally, a given reduction in blood cholesterol may produce a greater reduction in risk for CVD among persons with multiple CVD risk factors than among persons without these risk factors (*5*). Therefore, persons with risk factors for CVD should have their cholesterol level tested. These persons can substantially reduce their risk for CVD by working with their health-care provider to reduce an elevated cholesterol level and other CVD risk factors. Since cholesterol screening and awareness were lower among smokers and those with a sedentary lifestyle, special efforts are needed to reach these high-risk populations. In an effort to increase federal, state, and local activities supporting cholesterol awareness, September 1990 has been designated National Cholesterol Education Month by the NCEP Coordinating Committee.

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*International Notes*

# Tuberculin Reactions in Apparently Healthy HIV-Seropositive and HIV-Seronegative Women — Uganda

Persons latently infected with *Mycobacterium tuberculosis* are at substantially increased risk for developing clinically apparent tuberculosis (TB) if they become infected with human immunodeficiency virus (HIV) (*1,2*). Although skin testing with purified protein derivative (PPD) by the Mantoux method is a standard method of screening for tuberculous infection, this method may be hampered by nonreactivity to skin tests of persons who become immunosuppressed because of progressive HIV infection. In Uganda, a continuing study of HIV infection in postpartum women, conducted by the Ministry of Health in collaboration with Case Western Reserve University, provided an opportunity to study the tuberculin reactivity of apparently healthy women of known HIV serologic status. This report presents data from the Uganda study.

In 1988–89, approximately 95% of 2000 pregnant women presenting to Mulago Hospital in Kampala for uncomplicated delivery volunteered to participate in a prospective study of HIV infection. Serum specimens obtained from these participants were tested for HIV antibody by enzyme-linked immunosorbent assay (ELISA) using Recombigen-HIV EIA Kits* (Cambridge BioScience, Worcester, Massachusetts). All seropositive women and a random sample of seronegative women were then enrolled in the study.

During the postpartum period, women were tuberculin tested by the Mantoux technique using Old Tuberculin (OT) 1:2000 (equivalent to 5 tuberculin units [TU] of PPD) with Tuberculin "GT"* (Behringwerke AG, Marburg, Federal Republic of Germany) (this preparation is used by the Tuberculosis Control Program of Uganda). All tuberculin tests were applied and read by the same trained technician who did not know the HIV status of participants. All reactions were measured at 48 hours with a millimeter rule and recorded as the mean of two perpendicularly intersecting diameters of induration. Results were available for analysis for 94 women (33 HIV-seronegative and 61 HIV-seropositive), all of whom appeared healthy and had no signs or symptoms attributable to HIV infection or opportunistic infection.

Of the 33 HIV-seronegative women, 27 (82%) had tuberculin skin test reaction sizes $\geq$3 mm (the diameter the Ministry of Health selected as a cutpoint), and the median reaction size for this group was 10.6 mm (Figure 1). Of the 61 HIV-seropositive women, 29 (48%) had reactions $\geq$3 mm, and the median reaction size was 7.5 mm ($p<0.05$ for frequency of reactions $\geq$3 mm, chi-square test; $p<0.01$ for difference in medians, Mann-Whitney U test) (Figure 1).

All but one patient were examined for a BCG (Bacillus of Calmette and Guérin) vaccination scar. Of 32 HIV-seronegative women, 18 (56%) had a BCG scar; of the 61 HIV-seropositive women, 28 (46%) had a BCG scar. For both HIV-seronegative and HIV-seropositive women, tuberculin nonreactivity was more likely among those without a BCG scar. Among the HIV-seronegative women, two (11%) of 18 with a BCG scar had no detectable tuberculin reaction, compared with four (29%) of 14 without a BCG scar ($p=0.17$, Fisher's exact test). Among the HIV-seropositive women, seven

*Use of trade names is for identification only and does not imply endorsement by the Public Health Service or the U.S. Department of Health and Human Services.

*Tuberculin Reactions — Continued*

(25%) of 28 with a BCG scar had no reaction to tuberculin, compared with 25 (76%) of 33 without a BCG scar (p=0.05, Fisher's exact test). However, for HIV-seropositive women with and without BCG scars, the relative risk for tuberculin nonreactivity was similar (2.3 and 2.6, respectively).

*Reported by: A Okwera, MD, PP Eriki, MD, Ministry of Health, Kampala, Uganda. LA Guay, MD, P Ball, TM Daniel, MD, Case Western Reserve Univ, Cleveland, Ohio. Div of Tuberculosis Control, Center for Prevention Svcs; Div of HIV/AIDS, Center for Infectious Diseases, CDC.*

**Editorial Note:** The interaction between HIV and the tubercle bacillus has dramatically affected the incidence of TB throughout the world. The recent interruption in the decline of TB cases in the United States is attributed in large part to the occurrence of TB among persons also infected with HIV (*3*). In some countries in central Africa, where more than half the adult population is infected with the tubercle bacillus, the HIV epidemic has been associated with sharp increases in TB morbidity (*4*). Based on the frequency of HIV and tuberculous coinfection in Uganda, an estimated excess of 250,000 TB cases could occur in that country during the next 5 years (*5*). An important intervention to control HIV-associated TB is the administration of isoniazid preventive therapy to coinfected persons. However, the occurrence of HIV-induced anergy to tuberculin hampers both the diagnosis of tuberculous infection and the identification of coinfected persons.

The number of women tested in the Uganda study was relatively small, and data to evaluate comparability between HIV-seropositive and HIV-seronegative women regarding other characteristics (e.g., age) were not available. However, the findings

*(Continued on page 645)*

**FIGURE 1. Tuberculin reactions in apparently healthy HIV-seronegative and HIV-seropositive women, by diameter of induration — Kampala, Uganda, 1988–89**

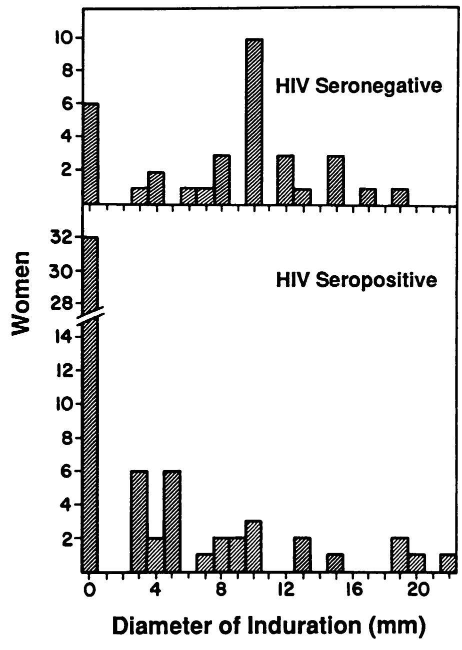
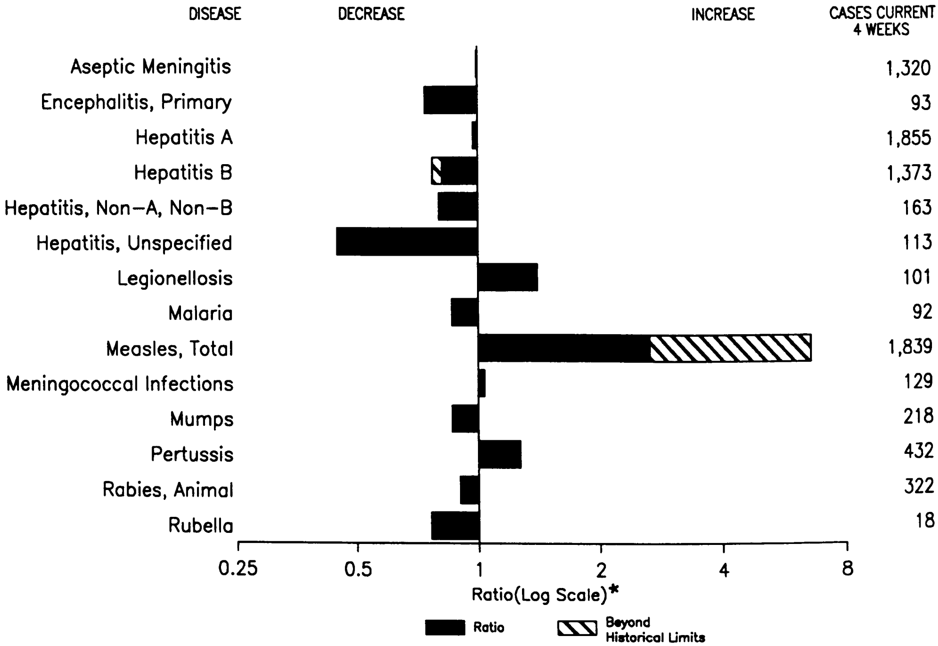


**FIGURE I. Notifiable disease reports, comparison of 4-week totals ending September 15, 1990, with historical data — United States**




*Ratio of current 4-week total to mean of 15 4-week totals (from comparable, previous, and subsequent 4-week periods for past 5 years).

**TABLE I. Summary — cases of specified notifiable diseases, United States, cumulative, week ending September 15, 1990 (37th Week)**

| | Cum. 1990 | | Cum. 1990 |
|---|---|---|---|
| AIDS | 29,252 | Plague | 1 |
| Anthrax | - | Poliomyelitis, Paralytic* | - |
| Botulism: Foodborne | 9 | Psittacosis | 82 |
| Infant | 46 | Rabies, human | 1 |
| Other | 5 | Syphilis: civilian | 33,663 |
| Brucellosis | 54 | military | 174 |
| Cholera | 4 | Syphilis, congenital, age < 1 year | 685 |
| Congenital rubella syndrome | 3 | Tetanus | 38 |
| Diphtheria | 2 | Toxic shock syndrome | 227 |
| Encephalitis, post-infectious | 72 | Trichinosis | 22 |
| Gonorrhea: civilian | 470,416 | Tuberculosis | 16,424 |
| military | 6,329 | Tularemia | 96 |
| Leprosy | 149 | Typhoid fever | 315 |
| Leptospirosis | 34 | Typhus fever, tickborne (RMSF) | 453 |
| Measles: imported | 1,035 | | |
| indigenous | 20,008 | | |

*Three cases of suspected poliomyelitis have been reported in 1990; five of 13 suspected cases in 1989 were confirmed and all were vaccine-associated.

## TABLE II. Cases of specified notifiable diseases, United States, weeks ending September 15, 1990, and September 16, 1989 (37th Week)

| Reporting Area | AIDS | Aseptic Menin-gitis | Encephalitis | | Gonorrhea (Civilian) | | Hepatitis (Viral), by type | | | | Legionel-losis | Leprosy |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Primary | Post-in-fectious | | | A | B | NA,NB | Unspeci-fied | | |
| | Cum. 1990 | Cum. 1990 | Cum. 1990 | Cum. 1990 | Cum. 1990 | Cum. 1989 | Cum. 1990 | Cum. 1990 | Cum. 1990 | Cum. 1990 | Cum. 1990 | Cum. 1990 |
| UNITED STATES | 29,252 | 5,797 | 563 | 72 | 470,416 | 489,943 | 20,318 | 14,286 | 1,562 | 1,177 | 868 | 149 |
| NEW ENGLAND | 1,096 | 240 | 19 | - | 13,175 | 14,157 | 428 | 756 | 52 | 49 | 39 | 10 |
| Maine | 43 | 8 | 3 | - | 142 | 182 | 7 | 24 | 4 | 1 | 5 | - |
| N.H. | 48 | 24 | - | - | 119 | 119 | 7 | 35 | 4 | 3 | 4 | - |
| Vt. | 13 | 22 | 2 | - | 42 | 44 | 5 | 37 | 4 | - | 5 | - |
| Mass. | 637 | 83 | 8 | - | 5,561 | 5,510 | 295 | 476 | 30 | 43 | 18 | 9 |
| R.I. | 56 | 74 | 1 | - | 814 | 1,021 | 45 | 32 | - | 2 | 7 | 1 |
| Conn. | 299 | 29 | 5 | - | 6,497 | 7,281 | 69 | 152 | 10 | - | - | - |
| MID. ATLANTIC | 8,681 | 546 | 35 | 6 | 62,561 | 72,368 | 2,896 | 1,927 | 166 | 82 | 280 | 18 |
| Upstate N.Y. | 1,071 | 293 | 29 | 1 | 9,772 | 10,861 | 799 | 520 | 51 | 20 | 104 | 1 |
| N.Y. City | 4,975 | 113 | 3 | 2 | 25,967 | 29,656 | 435 | 520 | 23 | 43 | 74 | 12 |
| N.J. | 1,735 | - | 1 | - | 10,404 | 10,868 | 332 | 423 | 33 | - | 44 | 4 |
| Pa. | 900 | 140 | 2 | 3 | 16,418 | 20,983 | 1,330 | 464 | 59 | 19 | 58 | 1 |
| E.N. CENTRAL | 2,068 | 1,185 | 144 | 12 | 89,346 | 88,628 | 1,580 | 1,662 | 133 | 73 | 208 | 2 |
| Ohio | 505 | 262 | 44 | 4 | 26,475 | 23,365 | 149 | 297' | 53 | 11 | 67 | - |
| Ind. | 177 | 169 | 4 | 6 | 7,959 | 6,386 | 112 | 293 | 9 | 15 | 32 | - |
| Ill. | 844 | 181 | 45 | 2 | 28,414 | 28,436 | 765 | 328 | 32 | 15 | 15 | 1 |
| Mich. | 368 | 524 | 46 | - | 21,080 | 22,871 | 284 | 473 | 26 | 32 | 62 | 1 |
| Wis. | 174 | 49 | 5 | - | 5,418 | 7,570 | 270 | 271 | 13 | - | 32 | - |
| W.N. CENTRAL | 690 | 297 | 48 | 2 | 24,619 | 22,062 | 1,196 | 664 | 99 | 28 | 41 | 1 |
| Minn. | 133 | 38 | 17 | 1 | 3,092 | 2,498 | 172 | 86 | 21 | - | 1 | - |
| Iowa | 25 | 47 | 5 | - | 1,801 | 1,963 | 228 | 47 | 8 | 4 | 4 | - |
| Mo. | 396 | 141 | 7 | 1 | 14,768 | 13,525 | 361 | 410 | 46 | 20 | 24 | - |
| N. Dak. | 2 | 12 | - | - | 76 | 107 | 14 | 5 | 2 | 1 | - | - |
| S. Dak. | 2 | 5 | 2 | - | 169 | 185 | 176 | 7 | 3 | - | - | - |
| Nebr. | 43 | 23 | 7 | - | 1,296 | 930 | 71 | 26 | 4 | - | 7 | 1 |
| Kans. | 89 | 31 | 10 | - | 3,417 | 2,854 | 174 | 83 | 15 | 3 | 5 | - |
| S. ATLANTIC | 5,974 | 1,184 | 129 | 20 | 134,724 | 132,376 | 2,411 | 2,705 | 230 | 175 | 133 | 5 |
| Del. | 72 | 29 | 3 | - | 2,166 | 2,266 | 92 | 71 | 6 | 2 | 8 | - |
| Md. | 642 | 150 | 17 | 1 | 15,649 | 15,459 | 811 | 378 | 36 | 9 | 53 | 3 |
| D.C. | 513 | 2 | - | - | 9,498 | 8,287 | 12 | 28 | 4 | - | - | - |
| Va. | 542 | 200 | 36 | 1 | 12,720 | 11,150 | 210 | 170 | 32 | 126 | 11 | - |
| W. Va. | 50 | 38 | 29 | - | 830 | 1,026 | 16 | 61 | 4 | 6 | 3 | - |
| N.C. | 406 | 140 | 29 | - | 20,346 | 19,984 | 529 | 770 | 87 | - | 20 | 1 |
| S.C. | 258 | 15 | 1 | - | 10,738 | 12,243 | 31 | 439 | 14 | 8 | 15 | - |
| Ga. | 770 | 218 | 4 | 1 | 29,570 | 25,459 | 281 | 306 | 8 | 7 | 14 | - |
| Fla. | 2,721 | 392 | 10 | 17 | 33,207 | 36,502 | 429 | 482 | 39 | 17 | 9 | 1 |
| E.S. CENTRAL | 755 | 471 | 46 | 2 | 40,817 | 38,579 | 275 | 1,121 | 130 | 5 | 48 | - |
| Ky. | 136 | 112 | 19 | - | 4,294 | 3,740 | 68 | 391 | 39 | 3 | 19 | - |
| Tenn. | 237 | 85 | 20 | 2 | 12,225 | 13,015 | 128 | 601 | 75 | - | 16 | - |
| Ala. | 167 | 190 | 7 | - | 14,222 | 12,096 | 78 | 125 | 14 | 1 | 13 | - |
| Miss. | 215 | 84 | - | - | 10,076 | 9,728 | 1 | 4 | 2 | 1 | - | - |
| W.S. CENTRAL | 3,144 | 544 | 31 | 7 | 50,305 | 51,411 | 2,122 | 1,510 | 65 | 199 | 40 | 30 |
| Ark. | 168 | 11 | 1 | - | 6,252 | 5,998 | 382 | 59 | 7 | 16 | 7 | - |
| La. | 476 | 69 | 6 | - | 9,039 | 10,852 | 138 | 227 | 4 | 7 | 13 | - |
| Okla. | 158 | 52 | 3 | 6 | 4,420 | 4,410 | 402 | 113 | 19 | 23 | 13 | - |
| Tex. | 2,342 | 412 | 21 | 1 | 30,594 | 30,151 | 1,200 | 1,111 | 35 | 153 | 7 | 30 |
| MOUNTAIN | 801 | 262 | 19 | 2 | 9,426 | 10,219 | 3,291 | 1,081 | 153 | 89 | 32 | - |
| Mont. | 9 | 4 | - | - | 127 | 138 | 98 | 52 | 6 | 4 | 3 | - |
| Idaho | 19 | 7 | - | - | 102 | 136 | 76 | 62 | 8 | - | 3 | - |
| Wyo. | 2 | 1 | 1 | - | 115 | 71 | 48 | 13 | 5 | 1 | - | - |
| Colo. | 250 | 58 | 4 | - | 2,150 | 2,174 | 208 | 118 | 34 | 31 | 5 | - |
| N. Mex. | 68 | 12 | - | - | 905 | 970 | 667 | 147 | 9 | 7 | 3 | - |
| Ariz. | 264 | 132 | 7 | - | 3,848 | 4,109 | 1,560 | 382 | 60 | 32 | 10 | - |
| Utah | 75 | 25 | 3 | - | 300 | 327 | 390 | 82 | 21 | 5 | 3 | - |
| Nev. | 114 | 23 | 4 | 2 | 1,879 | 2,294 | 244 | 225 | 10 | 9 | 5 | - |
| PACIFIC | 6,043 | 1,068 | 92 | 21 | 45,443 | 60,143 | 6,119 | 2,860 | 534 | 477 | 47 | 83 |
| Wash. | 436 | - | 6 | 1 | 3,773 | 4,709 | 1,024 | 416 | 91 | 27 | 11 | 5 |
| Oreg. | 230 | - | - | - | 1,811 | 2,240 | 635 | 296 | 41 | 7 | - | - |
| Calif. | 5,260 | 904 | 79 | 19 | 38,768 | 52,152 | 4,249 | 2,054 | 388 | 436 | 35 | 65 |
| Alaska | 23 | 96 | 6 | - | 739 | 659 | 148 | 44 | 5 | 2 | - | - |
| Hawaii | 94 | 68 | 1 | 1 | 352 | 383 | 63 | 50 | 9 | 5 | 1 | 13 |
| Guam | 2 | 2 | - | - | 162 | 120 | 11 | 2 | - | 10 | - | - |
| P.R. | 1,222 | 45 | 6 | - | 460 | 794 | 116 | 212 | 5 | 22 | - | - |
| V.I. | 10 | - | - | - | 292 | 491 | 1 | 9 | - | - | - | - |
| Amer. Samoa | - | 1 | - | - | 49 | 36 | 26 | - | - | - | - | 10 |
| C.N.M.I. | - | - | - | - | 148 | 72 | 10 | 9 | - | 15 | - | 4 |

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

**TABLE II. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending September 15, 1990, and September 16, 1989 (37th Week)**

| Reporting Area | Malaria | Measles (Rubeola) | | | | | Menin-gococcal Infections | Mumps | | Pertussis | | | Rubella | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Indigenous | | Imported* | | Total | | | | | | | | | |
| | Cum. 1990 | 1990 | Cum. 1990 | 1990 | Cum. 1990 | Cum. 1989 | Cum. 1990 | 1990 | Cum. 1990 | 1990 | Cum. 1990 | Cum. 1989 | 1990 | Cum. 1990 | Cum. 1989 |
| UNITED STATES | 824 | 742 | 20,008 | 40 | 1,035 | 12,237 | 1,809 | 64 | 4,004 | 90 | 2,532 | 2,459 | 1 | 797 | 299 |
| NEW ENGLAND | 71 | 1 | 256 | - | 25 | 322 | 136 | - | 36 | 17 | 294 | 280 | - | 9 | 6 |
| Maine | 1 | - | 27 | - | 2 | 1 | 12 | - | - | - | 10 | 16 | - | 2 | - |
| N.H. | 4 | - | - | - | 8 | 15 | 10 | - | 8 | - | 40 | 5 | - | 1 | 4 |
| Vt. | 6 | - | - | - | 1 | 3 | 10 | - | 1 | - | 6 | 6 | - | - | 1 |
| Mass. | 36 | 1 | 19 | - | 7 | 49 | 62 | - | 11 | 15 | 219 | 227 | - | 2 | 1 |
| R.I. | 7 | - | 27 | - | 3 | 41 | 12 | - | 5 | 1 | 3 | 11 | - | 1 | - |
| Conn. | 17 | - | 183 | - | 4 | 213 | 30 | - | 11 | 1 | 16 | 15 | - | 3 | - |
| MID. ATLANTIC | 175 | - | 1,116 | - | 154 | 927 | 266 | 2 | 253 | 1 | 410 | 134 | - | 11 | 29 |
| Upstate N.Y. | 33 | - | 200 | - | 110 | 140 | 100 | 1 | 106 | - | 283 | 45 | - | 10 | 12 |
| N.Y. City | 63 | - | 322 | - | 21 | 96 | 39 | - | - | - | - | 5 | - | - | 15 |
| N.J. | 56 | - | 228 | - | 14 | 430 | 60 | - | 62 | - | 21 | 26 | - | - | 2 |
| Pa. | 23 | - | 366 | - | 9 | 261 | 67 | 1 | 85 | 1 | 106 | 58 | - | 1 | - |
| E.N. CENTRAL | 49 | 4 | 3,225 | - | 143 | 4,091 | 243 | 2 | 427 | 1 | 489 | 351 | - | 31 | 25 |
| Ohio | 7 | - | 549 | - | 3 | 1,014 | 75 | - | 89 | - | 154 | 45 | - | 1 | 3 |
| Ind. | 2 | 4 | 323 | - | 1 | 78 | 25 | 2 | 18 | - | 90 | 19 | - | - | - |
| Ill. | 21 | - | 1,262 | - | 10 | 2,458 | 64 | - | 150 | - | 99 | 116 | - | 18 | 20 |
| Mich. | 15 | - | 348 | - | 125 | 317 | 58 | - | 128 | 1 | 65 | 35 | - | 9 | 1 |
| Wis. | 4 | - | 743 | - | 4 | 224 | 21 | - | 42 | - | 81 | 136 | - | 3 | 1 |
| W.N. CENTRAL | 15 | 48 | 853 | - | 13 | 647 | 58 | 5 | 129 | 9 | 142 | 175 | - | 22 | 6 |
| Minn. | 4 | 42 | 392 | - | 3 | 17 | 11 | - | 14 | - | 31 | 46 | - | 17 | - |
| Iowa | 2 | - | 25 | - | 1 | 9 | 1 | 1 | 18 | - | 17 | 13 | - | 4 | 1 |
| Mo. | 8 | - | 96 | - | - | 368 | 23 | 1 | 53 | 5 | 72 | 105 | - | - | 4 |
| N. Dak. | - | - | - | - | - | - | 1 | - | - | - | 2 | 2 | - | 1 | - |
| S. Dak. | - | - | 15 | - | 8 | - | 2 | - | - | - | 1 | 1 | - | - | - |
| Nebr. | - | - | 97 | - | 1 | 113 | 5 | - | 4 | 1 | 7 | 5 | - | - | - |
| Kans. | 1 | 6 | 228 | - | - | 140 | 15 | 3 | 40 | 3 | 12 | 3 | - | - | 1 |
| S. ATLANTIC | 168 | 19 | 886 | 39 | 354 | 566 | 324 | 40 | 1,665 | 8 | 225 | 226 | - | 18 | 9 |
| Del. | 3 | - | 8 | - | 3 | 39 | 3 | - | 4 | - | 5 | 1 | - | - | - |
| Md. | 47 | 2 | 195 | - | 18 | 81 | 38 | 7 | 929 | 1 | 54 | 37 | - | 2 | 2 |
| D.C. | 10 | - | 15 | - | 7 | 40 | 11 | - | 32 | - | 14 | - | - | 1 | - |
| Va. | 42 | 9 | 82 | - | 2 | 22 | 40 | 5 | 95 | 2 | 17 | 28 | - | 1 | - |
| W. Va. | 2 | - | 6 | - | - | 51 | 13 | - | 40 | 1 | 17 | 24 | - | - | - |
| N.C. | 13 | - | 9 | - | 15 | 168 | 48 | 25 | 280 | 4 | 62 | 40 | - | - | 1 |
| S.C. | - | - | 4 | - | - | 3 | 23 | 2 | 49 | - | 5 | - | - | - | - |
| Ga. | 15 | 1 | 82 | 38§ | 239 | 2 | 56 | - | 82 | - | 24 | 31 | - | - | - |
| Fla. | 36 | 7 | 485 | 1§ | 70 | 160 | 92 | 1 | 154 | - | 27 | 65 | - | 14 | 6 |
| E.S. CENTRAL | 18 | 16 | 177 | - | 3 | 228 | 110 | 1 | 87 | 10 | 130 | 170 | - | 5 | 3 |
| Ky. | 2 | 6 | 40 | - | 1 | 40 | 33 | - | - | - | - | 1 | - | 1 | - |
| Tenn. | 9 | 7 | 88 | - | - | 139 | 46 | 1 | 49 | 7 | 59 | 104 | - | 4 | 2 |
| Ala. | 7 | 3 | 23 | - | 2 | 49 | 29 | - | 14 | 3 | 64 | 56 | - | - | 1 |
| Miss. | - | - | 26 | - | - | - | 2 | - | 24 | - | 7 | 9 | - | - | - |
| W.S. CENTRAL | 45 | 1 | 4,004 | - | 88 | 3,134 | 127 | 6 | 609 | 14 | 112 | 245 | - | 66 | 36 |
| Ark. | 2 | - | 12 | - | 28 | 15 | 16 | - | 133 | 5 | 13 | 21 | - | 3 | - |
| La. | 3 | - | 10 | - | - | 11 | 29 | - | 102 | 4 | 26 | 15 | - | - | 5 |
| Okla. | 9 | 1 | 175 | - | - | 106 | 16 | 2 | 107 | 5 | 42 | 46 | - | 1 | 1 |
| Tex. | 31 | - | 3,807 | - | 60 | 3,002 | 66 | 4 | 267 | - | 31 | 163 | - | 62 | 30 |
| MOUNTAIN | 22 | 4 | 811 | - | 99 | 387 | 56 | 3 | 310 | 5 | 226 | 522 | 1 | 109 | 35 |
| Mont. | 1 | - | - | - | 1 | 13 | 10 | - | 1 | 3 | 29 | 33 | 1 | 14 | 1 |
| Idaho | 4 | - | 16 | - | 10 | 2 | 5 | - | 142 | 2 | 38 | 65 | - | 49 | 32 |
| Wyo. | 1 | - | - | - | 15 | - | - | - | 2 | - | - | - | - | - | 1 |
| Colo. | 2 | U | 90 | U | 46 | 82 | 17 | U | 23 | U | 63 | 45 | U | 4 | - |
| N. Mex. | 4 | - | 81 | - | 12 | 31 | 7 | N | N | - | 17 | 24 | - | - | - |
| Ariz. | 9 | 4 | 284 | - | 12 | 141 | 5 | 3 | 118 | - | 49 | 341 | - | 32 | - |
| Utah | - | - | 126 | - | - | 114 | 6 | - | 9 | - | 26 | 13 | - | 2 | - |
| Nev. | 1 | - | 214 | - | 3 | 4 | 6 | - | 15 | - | 4 | 1 | - | 8 | 1 |
| PACIFIC | 261 | 649 | 8,680 | 1 | 156 | 1,935 | 489 | 5 | 488 | 25 | 504 | 356 | - | 526 | 150 |
| Wash. | 19 | - | 202 | - | 69 | 54 | 60 | 1 | 43 | 15 | 137 | 147 | - | - | - |
| Oreg. | 12 | - | 168 | - | 44 | 29 | 53 | N | N | 1 | 58 | 9 | - | 10 | 4 |
| Calif. | 224 | 648 | 8,223 | 1 | 37 | 1,824 | 363 | 4 | 423 | 9 | 267 | 184 | - | 503 | 125 |
| Alaska | 2 | - | 78 | - | 2 | 1 | 8 | - | 4 | - | 4 | 1 | - | - | - |
| Hawaii | 4 | 1 | 9 | - | 4 | 30 | 5 | - | 18 | - | 38 | 15 | - | 13 | 21 |
| Guam | 3 | U | - | U | 1 | 4 | - | U | 3 | U | - | 1 | U | - | - |
| P.R. | 2 | - | 1,634 | - | - | 513 | 9 | - | 7 | - | 6 | 4 | - | - | 8 |
| V.I. | - | U | 21 | U | 3 | 4 | - | U | 8 | U | - | - | U | - | - |
| Amer. Samoa | 35 | U | 190 | U | - | - | - | U | 19 | U | - | - | U | - | - |
| C.N.M.I. | - | U | - | U | - | - | - | U | 8 | U | 4 | - | U | - | - |

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

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

## TABLE II. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending September 15, 1990, and September 16, 1989 (37th Week)

| Reporting Area | Syphilis (Civilian) (Primary & Secondary) | | Toxic-shock Syndrome | Tuberculosis | | Tula-remia | Typhoid Fever | Typhus Fever (Tick-borne) (RMSF) | Rabies, Animal |
|---|---|---|---|---|---|---|---|---|---|
| | Cum. 1990 | Cum. 1989 | Cum. 1990 | Cum. 1990 | Cum. 1989 | Cum. 1990 | Cum. 1990 | Cum. 1990 | Cum. 1990 |
| UNITED STATES | 33,663 | 30,273 | 227 | 16,424 | 14,895 | 96 | 315 | 453 | 3,060 |
| NEW ENGLAND | 1,222 | 1,210 | 18 | 385 | 406 | 3 | 22 | 14 | 5 |
| Maine | 7 | 8 | 7 | - | 12 | - | - | - | - |
| N.H. | 40 | 10 | 1 | 3 | 19 | - | - | - | 2 |
| Vt. | 1 | - | - | 7 | 7 | - | - | - | - |
| Mass. | 481 | 369 | 8 | 211 | 208 | 3 | 21 | 13 | - |
| R.I. | 15 | 23 | 1 | 49 | 47 | - | - | - | - |
| Conn. | 678 | 800 | 1 | 115 | 113 | - | 1 | 1 | 3 |
| MID. ATLANTIC | 6,815 | 6,209 | 22 | 3,965 | 2,883 | 1 | 71 | 20 | 681 |
| Upstate N.Y. | 615 | 616 | 8 | 298 | 235 | - | 14 | 10 | 91 |
| N.Y. City | 3,206 | 2,758 | 5 | 2,492 | 1,588 | - | 39 | - | - |
| N.J. | 1,125 | 991 | - | 657 | 573 | 1 | 15 | 7 | 225 |
| Pa. | 1,869 | 1,844 | 9 | 518 | 487 | - | 3 | 3 | 365 |
| E.N. CENTRAL | 2,391 | 1,264 | 52 | 1,584 | 1,526 | 2 | 24 | 41 | 137 |
| Ohio | 385 | 105 | 19 | 275 | 268 | 1 | 5 | 31 | 9 |
| Ind. | 62 | 46 | 1 | 138 | 137 | 1 | 1 | 1 | 9 |
| Ill. | 975 | 556 | 8 | 796 | 699 | - | 13 | 2 | 24 |
| Mich. | 739 | 444 | 24 | 312 | 335 | - | 4 | 7 | 44 |
| Wis. | 230 | 113 | - | 63 | 87 | - | 1 | - | 51 |
| W.N. CENTRAL | 368 | 242 | 25 | 421 | 372 | 35 | 4 | 45 | 496 |
| Minn. | 71 | 37 | 2 | 73 | 72 | - | - | - | 188 |
| Iowa | 50 | 29 | 6 | 43 | 28 | - | 1 | 1 | 17 |
| Mo. | 194 | 123 | 8 | 218 | 176 | 26 | 3 | 29 | 19 |
| N. Dak. | 1 | 3 | - | 15 | 12 | - | - | - | 70 |
| S. Dak. | 1 | 1 | - | 9 | 18 | 4 | - | 2 | 160 |
| Nebr. | 9 | 21 | 3 | 14 | 18 | 3 | - | 1 | 4 |
| Kans. | 42 | 28 | 6 | 49 | 48 | 2 | - | 12 | 38 |
| S. ATLANTIC | 11,073 | 10,955 | 21 | 3,062 | 3,154 | 3 | 44 | 191 | 852 |
| Del. | 131 | 135 | 1 | 26 | 30 | - | - | 1 | 20 |
| Md. | 834 | 558 | 1 | 233 | 260 | - | 18 | 13 | 313 |
| D.C. | 754 | 608 | 1 | 117 | 138 | - | - | - | - |
| Va. | 611 | 383 | 2 | 260 | 252 | 1 | 3 | 18 | 142 |
| W. Va. | 57 | 13 | - | 52 | 54 | - | 1 | 1 | 30 |
| N.C. | 1,234 | 742 | 10 | 394 | 399 | 1 | 2 | 112 | 7 |
| S.C. | 736 | 601 | 2 | 340 | 354 | 1 | 1 | 35 | 102 |
| Ga. | 2,868 | 2,737 | 1 | 506 | 477 | - | 2 | 9 | 158 |
| Fla. | 3,848 | 5,178 | 3 | 1,134 | 1,190 | - | 17 | 2 | 80 |
| E.S. CENTRAL | 3,054 | 1,970 | 12 | 1,179 | 1,184 | 7 | 2 | 62 | 132 |
| Ky. | 63 | 41 | 2 | 281 | 287 | 1 | 1 | 9 | 37 |
| Tenn. | 1,209 | 821 | 8 | 315 | 354 | 6 | - | 45 | 27 |
| Ala. | 958 | 626 | 2 | 368 | 337 | - | 1 | 8 | 65 |
| Miss. | 824 | 482 | - | 215 | 206 | - | - | - | 3 |
| W.S. CENTRAL | 5,151 | 4,146 | 11 | 1,918 | 1,789 | 30 | 11 | 63 | 368 |
| Ark. | 362 | 264 | - | 254 | 185 | 22 | - | 15 | 39 |
| La. | 1,171 | 996 | 1 | 170 | 249 | - | - | 2 | 28 |
| Okla. | 169 | 69 | 7 | 144 | 155 | 8 | 2 | 41 | 103 |
| Tex. | 3,449 | 2,817 | 3 | 1,350 | 1,200 | - | 9 | 5 | 198 |
| MOUNTAIN | 628 | 438 | 24 | 394 | 330 | 12 | 18 | 10 | 158 |
| Mont. | - | 1 | - | 22 | 11 | - | - | 4 | 39 |
| Idaho | 6 | 1 | 2 | 11 | 21 | - | - | - | 5 |
| Wyo. | - | 6 | 2 | 3 | - | 3 | - | - | 45 |
| Colo. | 37 | 57 | 7 | 21 | 39 | 3 | - | 1 | 10 |
| N. Mex. | 32 | 21 | 3 | 84 | 61 | 4 | - | 1 | 7 |
| Ariz. | 454 | 186 | 7 | 172 | 138 | - | 16 | 1 | 27 |
| Utah | 8 | 13 | 3 | 32 | 26 | 2 | - | 3 | 9 |
| Nev. | 91 | 153 | - | 49 | 34 | - | 2 | - | 16 |
| PACIFIC | 2,961 | 3,839 | 42 | 3,516 | 3,251 | 3 | 119 | 7 | 231 |
| Wash. | 252 | 326 | 4 | 193 | 168 | 1 | 20 | - | - |
| Oreg. | 101 | 178 | 2 | 91 | 103 | - | 4 | 1 | 1 |
| Calif. | 2,589 | 3,323 | 35 | 3,068 | 2,808 | - | 91 | 1 | 208 |
| Alaska | 11 | 3 | - | 30 | 46 | 2 | - | - | 22 |
| Hawaii | 8 | 9 | 1 | 134 | 126 | - | 4 | 5 | - |
| Guam | 2 | 4 | - | 33 | 60 | - | - | - | - |
| P.R. | 204 | 385 | - | 66 | 210 | - | - | - | 33 |
| V.I. | 8 | 8 | - | 4 | 4 | - | - | - | - |
| Amer. Samoa | - | - | - | 11 | 7 | - | 1 | - | - |
| C.N.M.I. | 3 | 8 | - | 40 | 19 | - | 4 | - | - |

U: Unavailable

## TABLE III. Deaths in 121 U.S. cities,* week ending September 15, 1990 (37th Week)

| Reporting Area | All Causes, By Age (Years) | | | | | | P&I** |
|---|---|---|---|---|---|---|---|
| | All Ages | ≥65 | 45-64 | 25-44 | 1-24 | <1 | Total |
| NEW ENGLAND | 624 | 443 | 111 | 40 | 13 | 17 | 42 |
| Boston, Mass. | 180 | 120 | 41 | 10 | 2 | 7 | 14 |
| Bridgeport, Conn. | 47 | 28 | 9 | 7 | 2 | 1 | 1 |
| Cambridge, Mass. | 16 | 16 | - | - | - | - | 1 |
| Fall River, Mass. | 26 | 24 | - | 2 | - | - | - |
| Hartford, Conn. | 67 | 44 | 10 | 7 | 4 | 2 | 3 |
| Lowell, Mass. | 26 | 20 | 3 | 1 | - | 2 | 1 |
| Lynn, Mass. | 9 | 7 | 2 | - | - | - | 1 |
| New Bedford, Mass. | 28 | 24 | 3 | 1 | - | - | - |
| New Haven, Conn. | 36 | 20 | 10 | 5 | 1 | - | 2 |
| Providence, R.I. | 31 | 23 | 6 | 2 | - | - | 3 |
| Somerville, Mass. | 11 | 10 | - | - | 1 | - | 1 |
| Springfield, Mass. | 50 | 37 | 10 | 1 | 1 | 1 | 8 |
| Waterbury, Conn. | 36 | 24 | 7 | 3 | 2 | - | 2 |
| Worcester, Mass. | 61 | 46 | 10 | 1 | - | 4 | 5 |
| MID. ATLANTIC | 2,567 | 1,655 | 510 | 280 | 62 | 60 | 140 |
| Albany, N.Y. | 32 | 19 | 8 | 3 | 1 | 1 | 3 |
| Allentown, Pa. | 21 | 14 | 7 | - | - | - | 2 |
| Buffalo, N.Y. | 90 | 55 | 21 | 8 | 3 | 3 | 3 |
| Camden, N.J. | 40 | 19 | 13 | 3 | 5 | - | - |
| Elizabeth, N.J. | 19 | 13 | 5 | 1 | - | - | 3 |
| Erie, Pa.† | 43 | 36 | 6 | - | - | 1 | 7 |
| Jersey City, N.J. | 73 | 37 | 19 | 10 | 3 | 4 | 4 |
| N.Y. City, N.Y. | 1,305 | 824 | 249 | 180 | 37 | 15 | 58 |
| Newark, N.J. | 63 | 19 | 23 | 12 | 1 | 8 | 1 |
| Paterson, N.J. | 24 | 16 | 3 | 1 | - | 4 | - |
| Philadelphia, Pa. | 393 | 258 | 79 | 38 | 10 | 8 | 21 |
| Pittsburgh, Pa.† | 85 | 52 | 19 | 7 | - | 7 | 4 |
| Reading, Pa. | 41 | 35 | 5 | 1 | - | - | 7 |
| Rochester, N.Y. | 111 | 91 | 10 | 4 | 1 | 5 | 12 |
| Schenectady, N.Y. | 28 | 20 | 7 | - | - | 1 | 2 |
| Scranton, Pa.† | 27 | 21 | 5 | - | 1 | - | 2 |
| Syracuse, N.Y. | 95 | 67 | 22 | 3 | - | 3 | 4 |
| Trenton, N.J. | 38 | 26 | 4 | 8 | - | - | 4 |
| Utica, N.Y. | 16 | 14 | 2 | - | - | - | - |
| Yonkers, N.Y. | 23 | 19 | 3 | 1 | - | - | 3 |
| E.N. CENTRAL | 2,263 | 1,476 | 468 | 175 | 65 | 79 | 80 |
| Akron, Ohio | 52 | 33 | 14 | 3 | 2 | - | - |
| Canton, Ohio | 32 | 23 | 6 | 3 | - | - | 2 |
| Chicago, Ill.§ | 564 | 362 | 125 | 45 | 10 | 22 | 16 |
| Cincinnati, Ohio | 113 | 77 | 19 | 8 | 5 | 4 | 8 |
| Cleveland, Ohio | 128 | 85 | 26 | 8 | 4 | 5 | 1 |
| Columbus, Ohio | 168 | 104 | 42 | 15 | 4 | 3 | 4 |
| Dayton, Ohio | 98 | 64 | 22 | 5 | 5 | 2 | 3 |
| Detroit, Mich. | 271 | 144 | 66 | 27 | 15 | 19 | 3 |
| Evansville, Ind. | 39 | 29 | 5 | 5 | - | - | - |
| Fort Wayne, Ind. | 65 | 46 | 12 | 4 | - | 3 | 7 |
| Gary, Ind. | 17 | 9 | 1 | 5 | 1 | 1 | - |
| Grand Rapids, Mich. | 67 | 46 | 10 | 4 | 2 | 5 | 4 |
| Indianapolis, Ind. | 175 | 115 | 35 | 13 | 5 | 7 | 5 |
| Madison, Wis. | 38 | 26 | 5 | 4 | 2 | 1 | 3 |
| Milwaukee, Wis. | 140 | 104 | 21 | 11 | 2 | 2 | 4 |
| Peoria, Ill. | 58 | 44 | 8 | 4 | 2 | - | 4 |
| Rockford, Ill. | 37 | 29 | 6 | - | - | 2 | 2 |
| South Bend, Ind. | 57 | 37 | 11 | 5 | 2 | 2 | 3 |
| Toledo, Ohio | 98 | 68 | 23 | 4 | 3 | - | 6 |
| Youngstown, Ohio | 46 | 31 | 11 | 2 | 1 | 1 | 5 |
| W.N. CENTRAL | 851 | 580 | 144 | 68 | 35 | 24 | 42 |
| Des Moines, Iowa | 69 | 41 | 14 | - | 9 | 5 | 3 |
| Duluth, Minn. | 31 | 20 | 4 | 5 | 2 | - | 1 |
| Kansas City, Kans. | 25 | 18 | 7 | - | - | - | - |
| Kansas City, Mo. | 105 | 76 | 18 | 7 | 3 | 1 | 9 |
| Lincoln, Nebr. | 34 | 28 | 6 | - | - | - | 3 |
| Minneapolis, Minn. | 221 | 151 | 34 | 24 | 5 | 7 | 13 |
| Omaha, Nebr. | 103 | 59 | 21 | 14 | 8 | 1 | 5 |
| St. Louis, Mo. | 144 | 95 | 25 | 12 | 4 | 8 | 4 |
| St. Paul, Minn. | 78 | 63 | 6 | 6 | 3 | - | 3 |
| Wichita, Kans. | 41 | 29 | 9 | - | 1 | 2 | 1 |
| S. ATLANTIC | 1,267 | 749 | 268 | 156 | 51 | 43 | 58 |
| Atlanta, Ga. | 175 | 103 | 41 | 25 | 5 | 1 | 2 |
| Baltimore, Md. | 238 | 144 | 45 | 33 | 9 | 7 | 14 |
| Charlotte, N.C. | 83 | 51 | 16 | 10 | 3 | 3 | 2 |
| Jacksonville, Fla. | 114 | 71 | 25 | 10 | 5 | 3 | 11 |
| Miami, Fla. | 126 | 59 | 40 | 20 | 5 | 2 | 2 |
| Norfolk, Va. | 58 | 33 | 10 | 7 | 3 | 5 | 4 |
| Richmond, Va. | 90 | 51 | 16 | 5 | 6 | 12 | 8 |
| Savannah, Ga. | 47 | 28 | 10 | 6 | 2 | 1 | 3 |
| St. Petersburg, Fla. | 62 | 47 | 8 | 3 | 1 | 3 | 5 |
| Tampa, Fla. | 83 | 59 | 12 | 7 | 2 | 3 | 3 |
| Washington, D.C. | 169 | 89 | 39 | 28 | 10 | 3 | 4 |
| Wilmington, Del. | 22 | 14 | 6 | 2 | - | - | - |
| E.S. CENTRAL | 747 | 474 | 165 | 54 | 24 | 30 | 47 |
| Birmingham, Ala. | 98 | 59 | 24 | 8 | 2 | 5 | 1 |
| Chattanooga, Tenn. | 72 | 48 | 19 | 5 | - | - | 7 |
| Knoxville, Tenn. | 67 | 44 | 15 | 1 | 3 | 4 | 7 |
| Louisville, Ky. | 91 | 58 | 19 | 9 | 4 | 1 | 6 |
| Memphis, Tenn. | 166 | 93 | 37 | 14 | 8 | 14 | 15 |
| Mobile, Ala.§ | 96 | 64 | 16 | 9 | 5 | 2 | 3 |
| Montgomery, Ala.§ | 41 | 31 | 6 | 2 | 1 | 1 | 2 |
| Nashville, Tenn. | 116 | 77 | 29 | 6 | 1 | 3 | 6 |
| W.S. CENTRAL | 1,722 | 1,066 | 357 | 184 | 69 | 46 | 62 |
| Austin, Tex. | 46 | 34 | 6 | 2 | 3 | 1 | 6 |
| Baton Rouge, La. | 55 | 36 | 12 | 5 | 2 | - | 5 |
| Corpus Christi, Tex.§ | 43 | 33 | 8 | 2 | - | - | 3 |
| Dallas, Tex. | 178 | 103 | 38 | 19 | 7 | 11 | 7 |
| El Paso, Tex. | 74 | 56 | 10 | 5 | 1 | 2 | 4 |
| Fort Worth, Tex | 88 | 48 | 21 | 10 | 4 | 5 | 3 |
| Houston, Tex.§ | 734 | 436 | 169 | 89 | 24 | 16 | 18 |
| Little Rock, Ark. | 80 | 56 | 12 | 4 | 2 | 6 | 4 |
| New Orleans, La. | 103 | 63 | 15 | 12 | 12 | 1 | - |
| San Antonio, Tex. | 170 | 101 | 37 | 24 | 6 | 2 | 5 |
| Shreveport, La. | 26 | 16 | 5 | 2 | 3 | - | 1 |
| Tulsa, Okla. | 125 | 84 | 24 | 10 | 5 | 2 | 6 |
| MOUNTAIN | 685 | 441 | 117 | 76 | 27 | 24 | 35 |
| Albuquerque, N. Mex. | 89 | 56 | 14 | 15 | 4 | - | 6 |
| Colo. Springs, Colo. | 43 | 34 | 4 | 4 | 1 | - | 4 |
| Denver, Colo. | 96 | 58 | 11 | 11 | 5 | 11 | 7 |
| Las Vegas, Nev. | 122 | 78 | 23 | 10 | 9 | 2 | 9 |
| Ogden, Utah | 19 | 14 | 3 | 2 | - | - | 2 |
| Phoenix, Ariz. | 130 | 73 | 32 | 14 | 3 | 8 | 1 |
| Pueblo, Colo. | 23 | 16 | 4 | 3 | - | - | 3 |
| Salt Lake City, Utah | 44 | 28 | 3 | 6 | 4 | 3 | 1 |
| Tucson, Ariz. | 119 | 84 | 23 | 11 | 1 | - | 2 |
| PACIFIC | 1,898 | 1,213 | 339 | 205 | 77 | 59 | 92 |
| Berkeley, Calif. | 16 | 14 | - | 1 | 1 | - | 1 |
| Fresno, Calif. | 42 | 28 | 7 | 6 | 1 | - | 1 |
| Glendale, Calif. | 21 | 17 | 1 | 2 | - | 1 | 2 |
| Honolulu, Hawaii | 68 | 48 | 12 | 4 | 3 | 1 | 9 |
| Long Beach, Calif. | 77 | 52 | 13 | 8 | 2 | 2 | 10 |
| Los Angeles Calif. | 519 | 301 | 89 | 78 | 29 | 18 | 10 |
| Oakland, Calif. | 68 | 38 | 16 | 7 | 5 | 2 | 2 |
| Pasadena, Calif. | 51 | 36 | 5 | 5 | 1 | 4 | 2 |
| Portland, Oreg. | 152 | 105 | 27 | 11 | 4 | 5 | 5 |
| Sacramento, Calif. | 145 | 96 | 25 | 13 | 3 | 8 | 16 |
| San Diego, Calif. | 174 | 113 | 28 | 15 | 10 | 8 | 17 |
| San Francisco, Calif. | 169 | 100 | 44 | 18 | 1 | 5 | 4 |
| San Jose, Calif. | 161 | 109 | 27 | 15 | 9 | 1 | 7 |
| Seattle, Wash. | 150 | 93 | 32 | 16 | 7 | 2 | 1 |
| Spokane, Wash. | 48 | 36 | 6 | 5 | - | 1 | 3 |
| Tacoma, Wash. | 37 | 27 | 7 | 1 | 1 | 1 | 2 |
| TOTAL | 12,624†† | 8,097 | 2,479 | 1,238 | 423 | 382 | 598 |

*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.

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

*Tuberculin Reactions — Continued*

suggest that HIV infection can depress tuberculin reactions before signs and symptoms develop. Because additional diagnostic studies (e.g., CD4 cell counts, anergy test panels, β-2-microglobulin, p-24 antigen levels, or other measures of the stage of HIV disease) were not done in these women, the investigators could not determine whether nonreactivity to tuberculin was associated with more advanced HIV disease.

However, a recent study in Florida of patients who were reported as having both TB and acquired immunodeficiency syndrome (AIDS) indicated that the probability of tuberculin anergy was inversely related to the interval between diagnosis of TB and diagnosis of AIDS (*6*). Tuberculin skin testing in asymptomatic HIV-seropositive and HIV-seronegative intravenous-drug users in Switzerland and in prisoners in Italy also detected lower rates of PPD reactivity among those with HIV infection (*7,8*). In Italy, the mean CD4 count for those with HIV infection was 569/mm$^3$, and the CD4:CD8 ratio was 0.6:1.0; both of these values were lower than normal. Thus, the reliability of tuberculin skin tests in screening for TB and tuberculous infection may be lower in HIV-infected persons, especially those with low CD4 counts.

An important finding in Uganda is that the prior administration of BCG appears to maintain tuberculin reactivity at higher levels than in persons with "natural" mycobacterial infection. Therefore, prior BCG vaccination complicates the interpretation of skin test results and decisions about preventive therapy (*9*).

The Adivsory Committee for Elimination of Tuberculosis and the American Thoracic Society recommend that tuberculin reactions ≥5 mm be considered positive in HIV-seropositive persons (regardless of BCG vaccination status) and that such persons be considered for isoniazid prophylaxis (*2*). Based on the data from Uganda and the other sources cited above, persons with HIV infection and tuberculin skin test reaction sizes <5 mm who have evidence of immunosuppression (e.g., CD4 count <400/mm$^3$ and/or anergy to other delayed-type hypersensitivity skin test antigens) may also need to be considered for isoniazid preventive therapy; such consideration should also be based on individual clinical and epidemiologic assessments of the likelihood of *M. tuberculosis* infection.

The problem of HIV-related tuberculin anergy among persons in the United States requires further evaluation, and a more sensitive and specific method for diagnosing tuberculous infection among immunosuppressed persons is needed. Studies of the usefulness of CD4 counts or other laboratory parameters in predicting anergy and of the optimal method of determining anergy (e.g., single antigen or anergy panel) are particularly important. CDC will be developing more specific recommendations on anergy testing and the administration of preventive therapy for immunosuppressed persons.

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## *Health Objectives for the Nation*

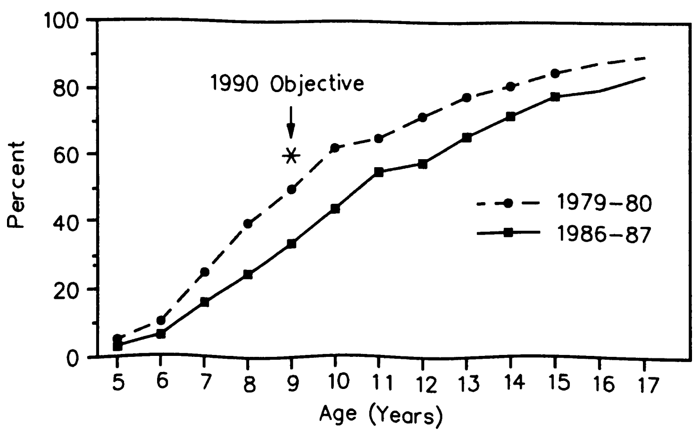
# Progress Toward Achieving the 1990 Objectives for the Nation for Fluoridation and Dental Health

Twelve of the 1990 Health Objectives for the Nation addressed fluoridation and dental health (*1*). Progress has been made toward the two objectives that specified development of an integrated, comprehensive system for surveillance of oral health status and programs (*2*). However, published data are insufficient to assess achievement of four objectives—those concerning childhood gingivitis, limitation of access to foods that promote tooth decay, use of mouth guards in contact sports, and school water fluoridation. This report summarizes progress toward the remaining six dental health objectives.

**By 1990, the proportion of nine-year-old children who have experienced dental caries in their permanent teeth should be decreased to 60 percent.**

This objective has been met. In 1986–87, a survey of school children in the United States (*3*) determined that 35% of 9-year-olds had histories of dental caries in permanent teeth, a decline of 14 percentage points from 1979–80 (Figure 1). (Data for 1979–80 were unavailable when the objective was established.)

**FIGURE 1. Percentage of children with dental caries of permanent teeth — United States, 1979–80 and 1986–87**




Source: National Institute of Dental Research, National Institutes of Health (*3*).

*Fluoridation and Dental Health — Continued*

**By 1990, in adults the prevalence of gingivitis and destructive periodontal disease should be decreased to 20 percent and 21 percent, respectively.**

This objective has been partially met. In 1985–86, 8% of employed adults aged ≥18 years and 34% of retired adults aged ≥65 years had at least one periodontal site with ≥6 mm loss of attachment (*4*). Gingival bleeding occurred in at least one site among 44% of employed adults and 47% of retired adults. Because the 1985–86 survey used more precise measurements than earlier assessments of periodontal health, these values cannot be compared with data from prior national surveys.

**By 1990, at least 95 percent of school children and their parents should be able to identify the principal risk factors related to dental diseases and be aware of the importance of fluoridation and other measures in controlling these diseases.**

This objective is unlikely to be met. In the 1985 National Health Interview Survey (NHIS) (*5*), 78% and 89% of adults identified fluoridated water and fluoride toothpaste or rinse, respectively, as "definitely" or "probably" important in preventing tooth decay. In the same survey, 22% of respondents had heard of dental sealant, the specific measure to prevent dental decay that occurs on tooth surfaces with pits and grooves—the most prevalent form of dental decay among children (*3*).

**By 1990, at least 75 percent of adults should be aware of the necessity for both thorough personal oral hygiene and regular professional care in the prevention and control of periodontal disease.**

This objective has been met. In 1985, the NHIS determined that 83% of respondents believed brushing and flossing regularly were "definitely important" to prevent "gum disease" and that 82% believed seeing a dentist regularly was "definitely important" (*5*). In 1986, 57% of all respondents indicated that they had visited a dentist for professional care within the preceding year (*6*). For those with higher family incomes, private dental insurance, or natural dentitions, the proportion reporting recent dental visits was higher; for example, 74% of those with family incomes >$35,000 had visited a dentist within the preceding year.

**By 1990, at least 95 percent of the population on community water systems should be receiving the benefits of optimally fluoridated water.**

This objective will not be met. In 1988, 61% of the population served by public water supplies had access to water with fluoride levels sufficient to prevent dental decay (i.e., ≥0.7 ppm); of these, 7% received water containing fluoride naturally, and the remainder lived in communities where the water fluoride concentration was adjusted to an optimum level (0.7–1.2 mg/L) (*7*). Although community water fluoridation results in dental-care cost savings (*8*), this preventive measure has not been implemented in some areas. Consequently, in five states (California, Hawaii, Nevada, New Jersey, and Utah), only 2%–18% of the population using public water supplies consumed optimally fluoridated water (*7*).

**By 1990, at least 65 percent of school children should be proficient in personal oral hygiene practices and should be receiving other needed preventive dental services in addition to fluoridation.**

There are no data regarding the proficiency of schoolchildren in personal oral hygiene practices. However, in the 1986 NHIS, 93% of adults indicated that their children used toothpaste with fluoride (*9*). Approximately 20% of schoolchildren <12 years of age reportedly had participated in fluoride mouth-rinse programs at school.

*Fluoridation and Dental Health — Continued*

Other dental-care preventive services, especially those dependent on family disposable income (e.g., the use of dental sealant), varied markedly among groups of children (Figure 2) (*9*). Regular visits for dental services—crucial to secondary prevention of oral diseases and conditions—also varied by income level and ethnic group (Figure 3) (*6*).

*Reported by: Office of Disease Prevention and Health Promotion, Office of the Assistant Secretary for Health, Public Health Service, US Department of Health and Human Svcs. Dental Disease Prevention Activity, Center for Prevention Svcs, CDC.*

**Editorial Note:** Both dental caries and destructive periodontal diseases are unique microbial infections; once established, they persist, progress, and do not heal without

**FIGURE 2. Percentage of children aged 9–11 years with dental sealant — United States, 1986**

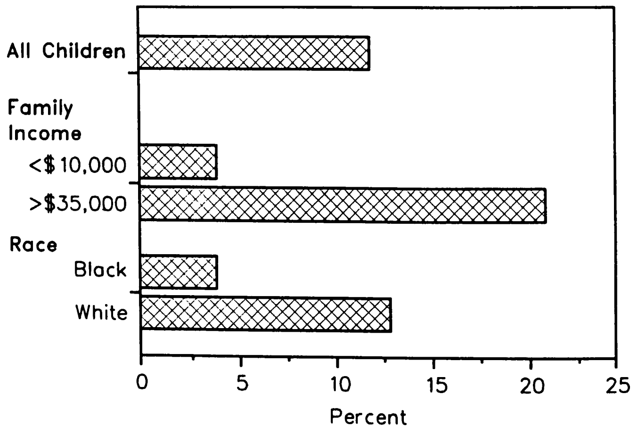
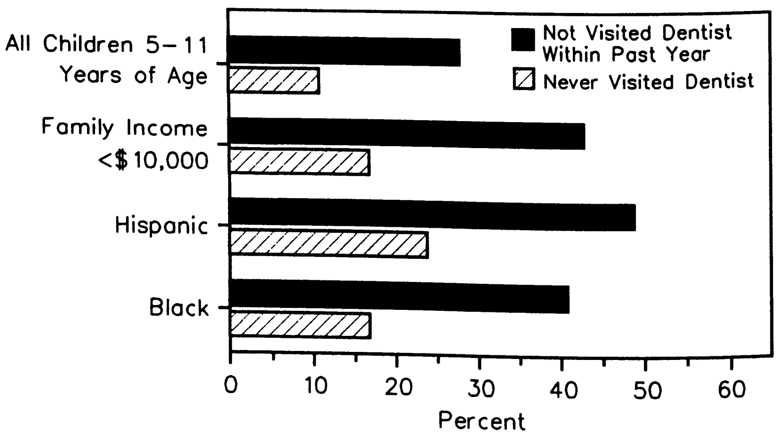



**FIGURE 3. Percentage of selected groups of children without a recent dental visit — United States, 1986**



*Fluoridation and Dental Health — Continued*

treatment. If postponed, treatment often becomes more complex, painful, and expensive. Consequently, access to and use of oral health services are essential to sustain declines in disease levels. As adults retain an increasing number of functional teeth with age (*4*), oral health services will become more important among older adults.

Although dental caries among 9-year-old children have declined markedly, the overall decline obscures higher levels of disease among Native American youth (*10*), children living in rural areas (*3*), and children whose parents had no education beyond high school (*11*). In addition, 9-year-old children have only about half their permanent teeth; of 15-year-olds with full permanent dentition, 78% had histories of dental caries—a prevalence more than twice that of 9-year-olds (Figure 1) (*3*). Studies have indicated that a small proportion of children account for the majority of total dental disease burden (*12*) and that children from low-income families have substantially higher levels of untreated disease (*13*).

Among some groups of young children, including Native Americans, "baby bottle tooth decay" (BBTD) (extensive tooth decay of the primary teeth in a characteristic pattern) has emerged as an important problem (*14*). BBTD occurs secondary to inappropriate feeding practices. Thus, prevention of BBTD requires intervention by dental professionals and other segments of the community (including primary-care physicians, public health nurses, and Women, Infants, and Children program counselors).

Recent data regarding the pathogenesis and epidemiology of major oral diseases indicate that some population subgroups suffer disproportionately from dental caries, destructive periodontal diseases, cancer of the oral cavity and pharynx, and their sequelae. During the 1990s, further improvements in oral health can be achieved by concentrating public health disease prevention efforts on those groups most susceptible to oral diseases.

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## *Epidemiologic Notes and Reports*

# Update: Arboviral Surveillance — Florida, 1990

During the summer of 1990, surveillance of St. Louis encephalitis (SLE) and eastern equine encephalitis viruses in vector mosquitoes and avian hosts indicated a high level of viral transmission in nature and a potential for epidemic transmission in several states (*1*). The Florida Department of Health and Rehabilitative Services initiated weekly active surveillance of county public health units, hospitals, and clinical laboratories in August after rising seroconversion rates were detected in sentinel chickens. Since September 7, epidemic transmission of SLE in central Florida has led to 12 additional confirmed or presumptive cases in humans, bringing the total number of laboratory-documented cases to 18; 52 additional suspected cases are under investigation.

Suspected and laboratory-documented cases have been reported from 13 counties, with most reports from Indian River (51%), Orange (12%), Brevard (10%), and Lake (7%) counties. The earliest onset date for a laboratory-documented case was July 28, and onset of illness for the most recent presumptive case was September 6. Public warnings have been issued, and larviciding and aerial and ground-based adulticiding have been intensified in the affected areas.

*Reported by: DL Wells, MD, E Buff, AL Lewis, RA Calder, MD, State Epidemiologist, Florida Dept of Health and Rehabilitative Svcs. Div of Vector-Borne Infectious Diseases, Center for Infectious Diseases; Div of Field Svcs, Epidemiology Program Office, CDC.*

**Editorial Note:** The 18 laboratory-documented SLE cases reported from Florida in 1990 constitute the largest outbreak in the state since 1977, when 110 laboratory-documented cases were reported from the same central counties (*2*). Additional cases may occur because SLE viral transmission in Florida usually peaks in early October (*3*). Furthermore, in the fall, the principal mosquito vector of SLE in the state, *Culex nigripalpus*, shifts its host feeding preference from avians to mammals (*4*).

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*Arboviral Surveillance — Continued*


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The data in this report are provisional, based on weekly reports to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday. Accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials, as well as matters pertaining to editorial or other textual considerations should be addressed to: Editor, *Morbidity and Mortality Weekly Report*, Mailstop C-08, Centers for Disease Control, Atlanta, Georgia 30333; telephone (404) 332-4555.



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