

# M M W R

MORBIDITY AND MORTALITY WEEKLY REPORT

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## *Effectiveness in Disease and Injury Prevention*

### **HIV-Infection Prevention Messages for Injecting Drug Users: Sources of Information and Use of Mass Media – Baltimore, 1989**

In many urban areas in the United States, human immunodeficiency virus type 1 (HIV-1) seroprevalence rates for injecting drug users (IDUs) range from 10% to 65% (1). To examine whether the mass media could contribute to IDU-targeted HIV-infection prevention measures, CDC collaborated with investigators at Johns Hopkins University in studying 1) media use by and sources of HIV information for IDUs, 2) the airing of public service announcements (PSAs) that address acquired immunodeficiency syndrome (AIDS), and 3) the acceptability by broadcast media executives of various PSA prevention messages related to HIV and AIDS. This report summarizes findings of these studies.

#### **Sources of Information for IDUs**

From February 1988 through March 1989, a cohort of 2921 IDUs was recruited through clinics, street outreach programs, and word-of-mouth in Baltimore through the AIDS Link to Intravenous Experiences (ALIVE) study. This volunteer cohort study of the natural history of HIV-1 infection in IDUs is one of a limited number of longitudinal evaluations of persons who are considered "street IDUs" (i.e., IDUs who may not be in drug treatment) (2). At the time of enrollment, 24% of the cohort's members were HIV-1 seropositive. Eligibility criteria included residency in the Baltimore metropolitan area, age >17 years, and history of illicit drug injection during the previous 10 years. The median duration of injecting drug use was 12 years; 90% had injected illicit drugs during the year of enrollment, and 77% during the month before enrollment.

Cohort members are evaluated every 6 months. To obtain information on media-related questions, a structured questionnaire was administered to the 353 cohort members who were given a scheduled evaluation from October 30, 1989, through January 2, 1990; all 353 completed the questionnaire. The demographic characteristics of persons completing the media questionnaire were statistically similar to the

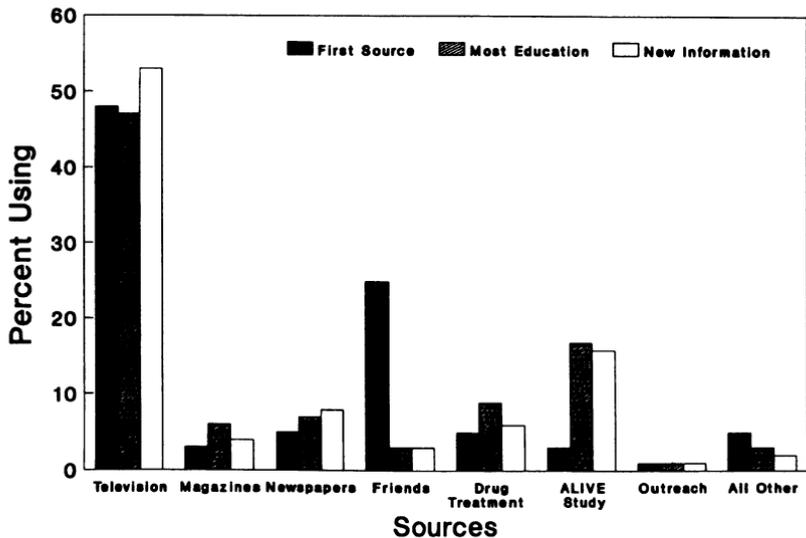
*Prevention Messages – Continued*

composition of the entire cohort: 78% were male; 96%, black; 82%, currently unemployed; and 31%, without a permanent residence during the past year. The median age was 34 years (range: 20–62 years); 61% had a 12th-grade education or less and had not received a high school diploma. During the previous 10 years, 74% had received social welfare assistance, and 74% had been arrested.

**Sources of AIDS Information.** Of the 353 IDUs, 48% first learned about AIDS from television, and 25%, from their friends (Figure 1). Forty-seven percent of all respondents reported that they learned the most about AIDS from television, and 53% listed television as their most frequent current source of AIDS information. Women were more likely than men to have learned about AIDS from friends (31% vs. 23%), drug-treatment programs (9% vs. 4%), or health-care workers (6% vs. 2%), and less likely to have learned about it from television (44% vs. 50%) or newspapers (0% vs. 7%) ( $p < 0.001$ ; chi-square test for distribution).

**Media Used.** Participants watched television a median of 28 hours per week. Employed persons watched less television (21 hours vs. 28 hours;  $p < 0.02$ ). The amount of viewing did not vary with sex, age, level of education, permanent residence status (i.e., whether homeless), receipt of social welfare assistance, or prior incarceration status. Twenty-nine percent most often watched television between 6 a.m. and 4 p.m.; 24%, 4 and 8 p.m.; 32%, 8 and 11 p.m.; and 15%, after 11 p.m. More women than men watched television between 6 a.m. and 4 p.m. (55% vs. 21%); more men watched between 4 and 8 p.m. (27% vs. 12%) and between 8 and 11 p.m. (35%

**FIGURE 1. Sources of AIDS information\* for injecting drug users – Baltimore, Maryland, October 30, 1989–January 2, 1990**



\*For "First Source," percentage of responses to the question "How did you first learn about AIDS? Was it from television, magazines, newspapers, friends, drug treatment, AIDS Link to Intravenous Experiences (ALIVE) study, outreach, or another source?" For "Most Education," percentage of responses to "From which source have you learned the most about AIDS?" For "New Information," percentage of responses to "How do you most often learn new information about AIDS now?"

*Prevention Messages – Continued*

vs. 22%) ( $p < 0.001$  for all three time periods). Viewing times were not associated with age, education level, or permanent residence status.

Eighty-three percent of these IDUs listened to radio (median: 12 hours per week) and preferred "Soul, R & B, Rap" (40%), "Top 40, Rock & Roll" (19%), "Jazz" (13%), or "Talk/News" (7%). Participants were more likely to listen during the daytime and late night/early morning.

**Airing of AIDS PSAs**

PSAs about AIDS have been disseminated by CDC's National AIDS Information and Education Program (the "America Responds to AIDS" campaign [ARTA]), the National Institute on Drug Abuse, and at least 20 nonfederal agencies and organizations (e.g., state health departments, private organizations, and television networks). Data are available on the airing of all AIDS television PSAs from the Broadcast Advertisers Reports of the Arbitron Ratings Corporation.\* The Arbitron report presents the total number of PSAs aired by networks and monthly estimates of PSAs aired by Baltimore area television stations. During October–December 1989, 384 ARTA and 427 non-ARTA PSAs were aired. The PSAs were most frequently aired after 11 p.m. (527 [65%]), followed by 6 a.m.–5 p.m. (213 [26%]) and 8 p.m.–11 p.m. (61 [8%]).

**Acceptability for Airing of Prevention Messages to Media Executives**

Researchers from CDC and ALIVE contacted media executives at the headquarters of four national television networks (ABC, CBS, Fox, and NBC), the nine Baltimore radio stations confirmed to have "contemporary," "rock n'roll," or "black" formats, and the six Baltimore area television stations listed in the Broadcasting Cablecasting Yearbook (3). Each executive was asked about the potential acceptability of various AIDS prevention messages.

Although messages regarding sexual abstinence were acceptable to network executives, executives for some Baltimore radio and television stations considered the messages inappropriate for their stations' audiences (Table 1). Messages concerning condom use were acceptable to two network executives and all local Baltimore radio and television executives. Some messages were viewed as acceptable if aired at times when children were less likely to see them or if aired within news or public service program formats rather than as PSAs. Messages concerning safer drug-use practices were unacceptable to all national networks but acceptable to some Baltimore television executives and all Baltimore radio stations.

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**Editorial Note:** Commercial advertising research suggests that only two to three exposures to a message are needed to enable message recall and induce behavioral responses by some portion of the target audience (4,5); however, similar research has not been directed toward public health messages, such as those concerning AIDS.

\*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.

*Prevention Messages – Continued*

The findings in this report indicate that, during the 3-month study period, most AIDS PSAs were aired at times of low ALIVE participant viewership; however, more than 200 AIDS PSAs were aired during times when a high proportion of participants reported watching television. These data suggest that many IDUs in this cohort had commercially defined "adequate exposure" to AIDS PSAs. Although the content of these AIDS messages was directed at the general public, the messages are also important for IDUs. They provide education about the transmission and treatment of HIV infection, encourage self-risk assessment, solicit community mobilization to support the AIDS prevention effort, and reinforce social norms conducive to AIDS prevention. Because IDUs appear to be accessible through broadcast media, agencies and programs working with IDUs may wish to produce and distribute additional messages that target IDUs and their sex partners.

In Baltimore, the acceptance by media executives of messages regarding IDU-specific topics was substantial and was greater for radio than television. Executives at some Baltimore radio stations were potentially receptive to airing explicit prevention messages, including those concerning safer drug-use habits, in both PSA and longer program formats. Thus, although IDUs do not currently list radio as a principal source of information about AIDS, local radio is a medium that could be used to reach IDUs with more targeted and detailed AIDS prevention messages.

For at least five reasons, the use of mass media for IDU-directed AIDS prevention messages should be further considered and evaluated. First, the findings in Baltimore

**TABLE 1. Number of television and radio executives who considered various AIDS prevention messages directed toward injecting drug users as potentially acceptable\* for broadcasting**

Prevention message	Network television (n = 4)	Baltimore	
		Television (n = 6)	Radio (n = 9)
Sexual abstinence	4	5	7
Use of condoms	2	6 <sup>†</sup>	9
Explicit messages on how to use condoms	1	2 <sup>†</sup>	2 <sup>§†</sup>
HIV counseling/testing	4	6 <sup>†</sup>	9
Drug treatment	4	6	9
Drug-treatment programs in their area	4	6	9
Not sharing needles**	0	4 <sup>†</sup>	9 <sup>†</sup>
Needle exchange, if these existed**	0	2	9 <sup>§</sup>
Needle cleaning**	0	2	9 <sup>§</sup>

\*Includes the executives determining public service announcements airing at four national networks (ABC, CBS, Fox, NBC), six Baltimore area television stations, and nine Baltimore area radio stations specifying a "contemporary," "rock n'roll," or "black" program format.

<sup>†</sup>Qualifiers were sometimes given. These included airing only during certain hours, airing only if materials were federally or locally sponsored and approved, airing only if especially well or sensitively done, and/or airing only if done specifically in relation to AIDS and not contraception.

<sup>§</sup>Some "unacceptable" messages were considered potentially acceptable in nonpublic service announcement formats, such as news or public service programs with disclaimers.

<sup>†</sup>One executive not classified as responding as "acceptable" would have been willing to consider messages dealing explicitly with sexual negotiation skills but not those regarding correct use of condoms.

\*\*All executives giving reasons for unacceptability were concerned that such messages would tacitly imply that illegal drug use is socially acceptable.

*Prevention Messages – Continued*

indicate that the broadcast media are a potentially effective means of reaching IDUs. Second, although alterations of addictive behaviors are difficult to induce, previous studies of another addictive behavior—smoking—can be interpreted as showing an independent effect of the media (6–9); this suggests a potential role for media in promoting sexual and drug-use abstinence and drug treatment for IDUs. Third, commercial research strongly supports the effectiveness of media in altering “brand preference” of consumer products (6). Similarly, although additional messages directed toward safer sex and/or drug-use behaviors may not attempt to stop drug use or promote sexual abstinence, they could lead to decreases in needle-sharing activity by IDUs and the number of sex partners they have—a potentially achievable goal (10). Fourth, use of the broadcast media can be cost-effective, even if the success rate is low, because of the large numbers of persons reached at relatively low cost (7,8). Finally, successful interpersonal communication (e.g., counseling and testing centers and street outreach programs) depends upon IDUs being aware of and having access to such programs. Targeted media messages aired at appropriate times during programs likely to be viewed by IDUs could assist in making IDUs aware of available outreach and health department programs.

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*Perspectives in Disease Prevention and Health Promotion***Enhanced Maternal Mortality Surveillance –  
North Carolina, 1988 and 1989**

Despite dramatic declines in maternal mortality in North Carolina since the late 1940s, public health officials have continued to characterize the magnitude of and risk factors for maternal death in that state (1,2). In 1989 and 1990, the State Center

*Maternal Mortality – Continued*

for Health and Environmental Statistics enhanced its surveillance for maternal mortality by computer-matching birth and fetal-death records with the death certificates of females who had died in 1988 and 1989. This report summarizes the findings of this enhanced surveillance for 1988 and 1989.

The names and dates of birth of females aged 10–50 years who had died in North Carolina during 1988 and 1989 from causes other than cancer or injury were computer-matched to those of females named on birth and fetal-death records during that period. Possible maternal mortality was defined as the death of a female within 1 year of delivering a live infant or within 1 year of a fetal death.

North Carolina's vital statistics system reported 12 maternal deaths in 1988 and seven in 1989, representing rates of 12.3 and 6.9 deaths per 100,000 live births in 1988 and 1989, respectively. The computer-matching process identified an additional 17 possible maternal deaths for 1988; epidemiologic and clinical review of the maternal records by the state's maternal mortality review committee suggested that 16 of these women had died of pregnancy-related causes. For 1989, an additional 19 deaths were identified, of which 13 were determined to be pregnancy-related.

Of the 29 additional maternal deaths identified for the 2-year period, four occurred within 1 day of a pregnancy outcome, 13 occurred within 1 week, and 21 occurred within 6 weeks. Review of the multiple cause-of-death codes for these 29 deaths showed that a codable maternal condition had been listed on the death certificate for two of the females. The adjusted maternal mortality rate for the 2-year period (24.0 deaths per 100,000 live births) was substantially higher than the rate based on vital statistics alone (9.5 per 100,000).

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**Editorial Note:** Findings from previous studies have suggested that many deaths related to pregnancy are not identified through vital records (3–5). The assessment in North Carolina demonstrates that more complete counts of maternal deaths can be obtained by linking birth and fetal-death certificates with death certificates of reproductive-aged women. In particular, this study identified pregnancy-related deaths from preexisting or concurrent disease processes that may be adversely affected by pregnancy (i.e., cardiovascular conditions). In addition, the assessment confirmed that most deaths from traditional causes of maternal mortality (e.g., hemorrhage, pregnancy-induced hypertension, infection, and anesthesia) are being identified through the North Carolina vital records system.

Despite the increased identification through the enhanced surveillance approach in North Carolina, there are at least three reasons that some maternal deaths may not have been identified. First, some deaths are not listed in the computerized record of pregnancy outcome (e.g., ectopic pregnancy, induced abortion, spontaneous abortion before 20 weeks' gestation, or death that occurs during pregnancy). Second, incorrect identifiers (name or date of birth of mother) on either the death certificate or on the birth and fetal-death files may preclude linkage of records. Third, before 1988, the mother's date of birth, a key matching variable, was not recorded on birth and fetal-death certificates in North Carolina; consequently, some deaths in early 1988 may not have been identified as pregnancy-related if the pregnancy outcome occurred in 1987.

*Maternal Mortality – Continued*

The matching approach used in North Carolina may be of the most assistance in states without other enhanced surveillance activities. States and localities with enhanced systems may already be identifying some of the additional deaths. For example, the New York City Department of Health has included a specific question on the death certificate to help identify pregnancy-related deaths and routinely traces back to hospital records and autopsy reports to confirm suspected pregnancy-related deaths; consequently, linkage of death files to fetal-death and live-birth certificates has identified few additional maternal deaths in New York City (6). In Oregon, an intensive cause-of-death query program often results in the reclassification of deaths of reproductive-aged women as maternal deaths; hence, that state's maternal mortality rate reported from vital statistics is more than twice the U.S. rate (5). Since 1945, North Carolina has had an active maternal mortality review committee. About half of the additional 1988–1989 pregnancy-related deaths identified by matching had already been identified through that committee's ongoing surveillance.

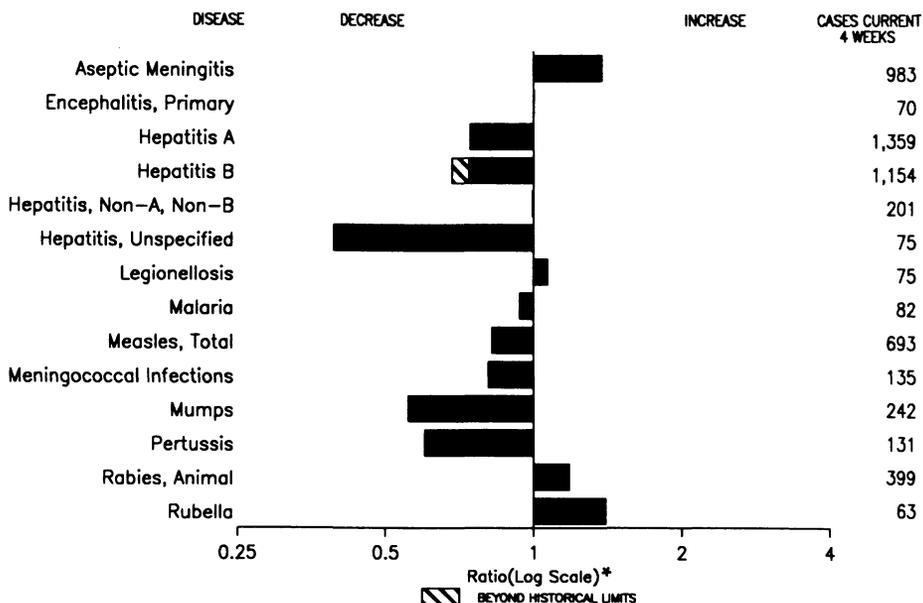
In the United States, the national vital records system adheres to the World Health Organization definition and classification rules for maternal deaths, which are more restrictive than those used by most states in their maternal surveillance activities; therefore, results from a broader surveillance system may differ from national vital statistics. Enhanced maternal mortality surveillance can augment and expand the important core information routinely available from the vital statistics system (7). At the same time, to increase the accuracy of maternal mortality rates, efforts should be made to promote more complete and accurate certification of cause of death on death certificates (8). Findings from further studies of the etiology of these deaths could be applied to state-based prevention programs.

For additional information regarding the enhanced maternal mortality surveillance system in North Carolina, contact Paul A. Buescher, Ph.D., State Center for Health and Environmental Statistics, P.O. Box 27687, Raleigh, NC 27611-7687; telephone (919) 733-4728.

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**FIGURE I. Notifiable disease reports, comparison of 4-week totals ending July 13, 1991, with historical data — United States**



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

**TABLE I. Summary — cases of specified notifiable diseases, United States, cumulative, week ending July 13, 1991 (28th Week)**

	Cum. 1991		Cum. 1991
AIDS	22,516	Measles: imported	114
Anthrax	-	indigenous	7,163
Botulism: Foodborne	11	Plague	-
Infant	31	Poliomyelitis, Paralytic*	-
Other	4	Psittacosis	54
Brucellosis	35	Rabies, human	-
Cholera	14	Syphilis, primary & secondary	22,564
Congenital rubella syndrome	11	Syphilis, congenital, age < 1 year	12
Diphtheria	1	Tetanus	16
Encephalitis, post-infectious	47	Toxic shock syndrome	169
Gonorrhea	309,622	Trichinosis	12
<i>Haemophilus influenzae</i> (invasive disease)	1,833	Tuberculosis	11,582
Hansen Disease	72	Tularemia	61
Leptospirosis	34	Typhoid fever	180
Lyme Disease	2,772	Typhus fever, tickborne (RMSF)	214

\*No cases of suspected poliomyelitis have been reported in 1991; none of the 6 suspected cases in 1990 have been confirmed to date. Five of the 13 suspected cases in 1989 were confirmed and all were vaccine associated.

TABLE II. Cases of selected notifiable diseases, United States, weeks ending July 13, 1991, and July 14, 1990 (28th Week)

Reporting Area	AIDS	Aseptic Meningitis	Encephalitis		Gonorrhea		Hepatitis (Viral), by type				Legionellosis	Lyme Disease
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
			Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1990	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991		
UNITED STATES	22,516	3,665	357	47	309,622	361,099	13,027	8,803	1,578	727	598	2,772
NEW ENGLAND	932	218	16	1	7,567	9,701	309	446	51	24	42	140
Maine	32	9	3	-	87	125	13	15	2	-	-	-
N.H.	20	14	2	-	154	112	23	17	5	-	3	16
Vt.	11	87	1	-	26	32	14	5	-	-	2	3
Mass.	539	58	8	1	3,125	3,920	153	337	27	22	34	51
R.I.	36	43	-	-	615	581	59	16	10	2	3	58
Conn.	294	7	2	-	3,560	4,931	47	56	2	-	3	12
MID. ATLANTIC	6,016	418	27	10	37,181	50,357	1,192	784	159	13	174	1,912
Upstate N.Y.	752	202	13	6	6,670	7,383	517	310	96	7	59	1,222
N.Y. City	3,311	94	-	-	13,855	21,728	352	94	5	-	18	-
N.J.	1,301	-	-	-	6,288	8,377	154	195	33	-	20	354
Pa.	652	122	14	4	10,368	12,869	169	185	25	6	77	336
E.N. CENTRAL	1,570	637	106	6	56,482	68,233	1,576	1,047	256	34	113	108
Ohio	326	199	38	2	17,454	20,688	236	245	115	14	57	62
Ind.	152	76	12	1	5,957	5,856	242	135	1	1	10	6
Ill.	715	107	25	3	16,795	21,080	622	133	28	1	5	1
Mich.	262	240	28	-	13,010	15,975	194	330	72	18	31	39
Wis.	115	15	3	-	3,266	4,634	282	204	40	-	10	-
W.N. CENTRAL	553	228	15	6	15,110	18,457	1,335	385	171	13	31	127
Minn.	108	36	10	-	1,554	2,245	207	37	12	2	4	18
Iowa	60	51	-	4	1,064	1,364	33	24	7	3	8	8
Mo.	291	97	3	2	9,223	10,969	347	260	148	5	12	97
N. Dak.	4	1	-	-	22	70	28	3	2	1	1	-
S. Dak.	1	4	2	-	178	124	506	2	-	-	3	-
Nebr.	37	12	-	-	982	931	162	22	1	-	3	-
Kans.	52	27	-	-	2,087	2,754	52	37	1	2	-	4
S. ATLANTIC	5,502	850	70	17	94,167	102,867	932	1,846	229	155	99	203
Del.	45	15	1	-	1,297	1,665	6	29	4	2	2	21
Md.	510	69	12	1	9,773	11,032	167	239	39	13	19	69
D.C.	351	24	1	-	5,288	7,021	49	84	1	1	-	-
Va.	360	135	19	3	9,277	9,437	105	111	21	110	7	48
W. Va.	24	4	1	-	617	666	13	34	1	7	-	13
N.C.	260	99	21	-	18,279	16,973	98	270	84	-	12	35
S.C.	187	28	-	-	7,234	8,345	27	417	16	3	19	3
Ga.	805	111	6	2	23,058	22,878	108	268	28	-	12	7
Fla.	2,960	365	9	11	19,344	24,850	359	394	35	19	28	7
E.S. CENTRAL	548	307	19	-	28,916	28,416	128	731	196	3	34	63
Ky.	91	50	3	-	3,107	3,479	17	95	5	2	13	23
Tenn.	172	93	11	-	10,290	8,914	78	544	176	-	10	30
Ala.	176	136	5	-	8,128	8,839	27	84	11	1	10	10
Miss.	109	28	-	-	7,391	7,184	6	8	4	-	1	-
W.S. CENTRAL	2,272	451	35	1	36,441	39,146	1,880	1,140	53	133	23	40
Ark.	94	41	3	-	4,139	4,673	184	61	1	5	5	12
La.	391	51	9	-	8,405	7,485	81	154	4	4	5	-
Okla.	91	1	3	-	3,539	3,367	166	123	20	9	6	22
Tex.	1,696	358	20	1	20,358	23,621	1,449	802	28	115	7	6
MOUNTAIN	622	89	11	2	6,496	7,371	2,112	551	86	95	41	8
Mont.	19	2	1	-	60	100	58	43	3	5	1	-
Idaho	12	-	-	-	80	72	51	46	1	-	3	-
Wyo.	9	-	-	-	54	106	75	5	-	-	-	6
Colo.	239	33	2	1	1,852	1,790	315	80	34	17	8	-
N. Mex.	54	10	-	-	613	675	577	126	7	27	1	-
Ariz.	111	23	8	1	2,457	2,938	681	106	12	37	15	-
Utah	59	8	-	-	178	233	152	31	11	9	4	-
Nev.	119	13	-	-	1,202	1,457	203	114	18	-	9	2
PACIFIC	4,501	467	58	4	27,262	36,551	3,563	1,873	377	257	41	171
Wash.	297	-	6	-	2,332	3,243	342	259	90	14	1	-
Oreg.	135	-	-	-	1,088	1,368	224	171	70	7	1	-
Calif.	3,955	421	50	4	22,974	30,883	2,896	1,396	203	235	37	171
Alaska	13	19	2	-	438	661	82	20	12	1	-	-
Hawaii	101	27	-	-	430	396	19	27	2	-	2	-
Guam	2	-	-	-	-	144	-	-	-	-	-	-
P.R.	859	157	-	2	345	460	60	257	104	34	-	-
V.I.	4	-	-	-	256	234	-	5	-	-	-	-
Amer. Samoa	-	-	-	-	-	51	-	-	-	-	-	-
C.N.M.I.	-	-	-	-	-	125	-	-	-	-	-	-

N: Not notifiable

U: Unavailable

C.N.M.I.: Commonwealth of the Northern Mariana Islands

**TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending July 13, 1991, and July 14, 1990 (28th Week)**

Reporting Area	Malaria		Measles (Rubeola)				Menin- gococcal Infections	Mumps		Pertussis			Rubella		
	Cum. 1991	1991	Indigenous		Imported*			Cum. 1991	1991	Cum. 1991	1991	Cum. 1991	Cum. 1990	1991	Cum. 1991
			1991	Cum. 1991	1991	Cum. 1991	Total Cum. 1990								
UNITED STATES	539	161	7,163	2	114	15,787	1,294	63	2,657	29	1,097	1,713	5	1,017	653
NEW ENGLAND	35	-	44	-	10	261	89	-	20	11	181	204	1	3	7
Maine	1	U	-	U	-	29	6	U	-	U	44	6	U	-	-
N.H.	2	-	-	-	-	8	8	-	3	-	12	12	-	1	1
Vt.	1	-	5	-	1	10	10	-	2	-	3	6	-	-	-
Mass.	17	-	19	-	8	19	51	-	11	109	168	1	2	2	2
R.I.	7	-	2	-	-	30	-	-	3	-	-	2	-	-	1
Conn.	7	-	18	-	2	174	14	-	12	-	13	10	-	-	3
MID. ATLANTIC	76	29	3,835	-	6	1,105	138	4	193	1	92	317	-	556	4
Upstate N.Y.	19	-	302	-	4	305	76	-	73	1	63	249	-	535	3
N.Y. City	26	25	1,525	-	-	222	8	-	-	-	-	-	-	-	-
N.J.	24	-	491	-	1	230	27	-	54	-	1	19	-	-	-
Pa.	7	4	1,517	-	1	348	27	4	66	-	28	49	-	21	1
E.N. CENTRAL	49	-	65	-	9	3,335	197	2	251	-	186	434	-	164	30
Ohio	11	-	-	-	1	439	68	-	56	-	71	80	-	147	1
Ind.	2	-	-	-	1	407	11	-	6	-	44	65	-	1	-
Ill.	18	-	24	-	-	1,284	55	-	97	-	32	156	-	4	18
Mich.	16	-	39	-	-	457	44	2	77	-	23	39	-	11	9
Wis.	2	-	2	-	7	748	19	-	15	-	16	94	-	1	2
W.N. CENTRAL	18	-	33	-	2	755	78	-	75	2	72	57	-	15	6
Minn.	6	-	8	-	2	307	16	-	9	-	22	7	-	6	1
Iowa	3	-	15	-	-	24	7	-	14	1	8	7	-	5	4
Mo.	4	-	-	-	-	89	29	-	23	1	28	36	-	4	-
N. Dak.	1	-	-	-	-	-	1	-	1	-	1	1	-	-	1
S. Dak.	-	-	-	-	-	23	2	-	-	-	2	1	-	-	-
Nebr.	-	-	1	-	-	106	6	-	4	-	5	2	-	-	-
Kans.	4	-	9	-	-	206	17	-	24	-	6	3	-	-	-
S. ATLANTIC	107	2	404	1	17	959	239	13	969	3	102	145	-	11	14
Del.	1	-	21	-	-	11	1	-	6	-	-	4	-	-	-
Md.	30	-	167	-	-	199	26	-	181	1	17	37	-	6	1
D.C.	7	-	-	-	-	17	7	-	21	-	-	14	-	1	1
Va.	20	-	21	-	4	68	27	4	42	1	12	14	-	-	1
W. Va.	1	-	-	-	-	6	11	-	16	-	6	10	-	-	-
N.C.	3	2	32	15	3	29	45	3	198	-	18	32	-	1	-
S.C.	7	-	12	-	-	4	24	6	325	-	9	5	-	-	-
Ga.	14	-	10	-	4	107	49	-	31	-	22	13	-	-	-
Fla.	24	-	141	-	6	518	49	-	149	1	18	16	-	3	11
E.S. CENTRAL	10	-	6	-	1	110	91	20	159	6	40	84	-	100	1
Ky.	2	-	1	-	1	25	33	-	-	-	-	-	-	-	-
Tenn.	5	-	5	-	-	40	26	20	133	1	16	34	-	100	1
Ala.	3	-	-	-	-	19	31	-	8	5	24	45	-	-	-
Miss.	-	-	-	-	-	26	1	-	18	-	-	5	-	-	-
W.S. CENTRAL	33	-	115	-	12	3,870	90	9	285	-	29	35	-	5	2
Ark.	3	-	-	-	5	42	15	1	39	-	3	2	-	1	1
La.	8	-	-	-	-	10	21	-	19	-	9	12	-	-	-
Okla.	2	-	-	-	-	153	12	-	7	-	11	21	-	-	1
Tex.	20	-	115	-	7	3,665	42	8	220	-	6	-	-	4	-
MOUNTAIN	21	59	870	-	15	754	53	9	258	5	134	164	-	4	100
Mont.	1	-	-	-	-	1	9	-	-	-	-	24	-	-	13
Idaho	1	42	338	-	2	21	7	-	7	-	20	32	-	2	48
Wyo.	-	-	-	-	-	15	1	-	3	-	3	-	-	-	-
Colo.	6	-	1	-	4	116	10	4	104	-	66	58	-	-	4
N. Mex.	5	3	116	-	5	90	7	N	N	1	17	9	-	-	-
Ariz.	6	-	274	-	-	261	14	5	121	-	8	27	-	-	-
Utah	1	14	125	-	4	58	-	-	13	4	18	10	-	-	30
Nev.	1	-	16	-	-	192	5	-	10	-	2	4	-	2	4
PACIFIC	190	71	1,791	1	42	4,638	319	6	447	1	261	273	4	159	489
Wash.	16	-	1	-	3	254	37	-	88	-	67	63	-	-	-
Oreg.	5	-	34	-	26	197	40	N	N	-	37	23	-	2	8
Calif.	165	71	1,752	11	10	4,098	234	6	334	-	117	162	4	155	471
Alaska	-	-	-	-	1	80	7	-	9	1	10	4	-	-	-
Hawaii	4	-	4	-	2	9	1	-	16	-	30	21	-	2	10
Guam	-	U	-	U	-	1	-	U	-	U	-	-	U	-	-
P.R.	1	-	80	-	1	914	15	-	8	2	27	5	-	1	-
V.I.	-	-	-	-	-	21	-	-	7	-	-	-	-	-	-
Amer. Samoa	-	U	-	U	-	268	-	U	-	U	-	-	U	-	-
C.N.M.I.	-	U	-	U	-	-	-	U	-	U	-	-	U	-	-

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

N: Not notifiable U: Unavailable <sup>1</sup>International <sup>2</sup>Out-of-state

**TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending July 13, 1991, and July 14, 1990 (28th Week)**

Reporting Area	Syphilis (Primary & Secondary)		Toxic- shock Syndrome	Tuberculosis		Tula- remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1991	Cum. 1990	Cum. 1991	Cum. 1991	Cum. 1990	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991
UNITED STATES	22,564	26,196	169	11,582	12,035	61	180	214	3,170
NEW ENGLAND	597	966	8	297	263	-	16	5	18
Maine	-	5	3	11	-	-	1	-	-
N.H.	12	40	1	5	3	-	-	-	1
Vt.	1	1	-	3	7	-	-	-	-
Mass.	280	376	4	155	141	-	14	4	-
R.I.	33	7	-	27	39	-	-	-	-
Conn.	271	537	-	96	73	-	1	1	17
MID. ATLANTIC	3,868	5,549	28	2,633	2,889	-	36	4	1,009
Upstate N.Y.	103	447	13	183	246	-	6	3	346
N.Y. City	1,975	2,483	1	1,635	1,763	-	18	-	-
N.J.	771	888	-	476	486	-	9	1	470
Pa.	1,019	1,731	14	339	394	-	3	-	193
E.N. CENTRAL	2,545	1,757	32	1,153	1,153	2	13	15	62
Ohio	338	273	20	162	179	-	2	9	9
Ind.	70	34	-	86	103	-	-	5	5
Ill.	1,231	670	6	616	578	-	3	1	10
Mich.	653	572	6	235	245	2	7	-	9
Wis.	253	208	-	54	48	-	1	-	29
W.N. CENTRAL	388	250	30	289	300	19	2	14	487
Minn.	44	49	7	57	55	-	2	-	173
Iowa	35	33	6	41	34	-	-	1	90
Mo.	264	125	8	124	138	17	-	6	7
N. Dak.	-	1	-	3	13	-	-	-	59
S. Dak.	1	1	1	23	9	1	-	1	123
Nebr.	9	8	1	11	15	-	-	2	10
Kans.	35	33	7	30	36	1	-	4	25
S. ATLANTIC	6,741	8,417	15	2,168	2,206	4	33	90	766
Del.	84	100	1	16	26	-	-	-	89
Md.	557	641	-	201	176	-	7	11	279
D.C.	419	533	1	114	83	-	2	-	6
Va.	536	469	3	191	181	-	7	5	154
W. Va.	18	7	-	40	38	-	1	1	32
N.C.	1,028	962	7	290	276	1	-	44	-
S.C.	836	515	-	226	270	1	-	19	59
Ga.	1,657	2,143	-	426	330	1	4	9	127
Fla.	1,606	3,047	3	664	826	1	12	1	20
E.S. CENTRAL	2,445	2,180	8	831	891	7	2	37	100
Ky.	44	42	4	173	213	2	2	10	25
Tenn.	858	847	4	266	234	5	-	19	29
Ala.	868	683	-	206	275	-	-	8	46
Miss.	675	608	-	186	169	-	-	-	-
W.S. CENTRAL	4,180	4,243	6	1,355	1,455	21	8	45	401
Ark.	339	290	3	108	170	14	-	8	23
La.	1,346	1,302	-	109	191	-	1	-	4
Okla.	99	126	3	91	110	7	-	37	119
Tex.	2,396	2,525	-	1,047	984	-	7	-	255
MOUNTAIN	308	471	22	312	260	6	5	2	99
Mont.	2	-	-	3	10	5	-	2	19
Idaho	3	6	-	4	6	-	-	-	1
Wyo.	3	1	-	3	4	1	-	-	51
Colo.	51	28	4	33	13	-	1	-	4
N. Mex.	19	24	6	38	48	-	-	-	1
Ariz.	199	335	4	166	130	-	3	-	17
Utah	4	4	8	25	18	-	-	-	2
Nev.	27	73	-	40	31	-	1	-	4
PACIFIC	1,492	2,363	20	2,544	2,618	2	65	2	228
Wash.	95	242	3	159	141	1	2	1	1
Oreg.	44	80	-	59	66	-	3	1	1
Calif.	1,346	2,015	17	2,188	2,289	1	58	-	222
Alaska	3	11	-	31	28	-	-	-	3
Hawaii	4	15	-	107	94	-	2	-	1
Guam	-	1	-	-	23	-	-	-	-
P.R.	253	204	-	99	66	-	8	-	25
V.I.	69	2	-	1	4	-	-	-	-
Amer. Samoa	-	-	-	-	11	-	-	-	-
C.N.M.I.	-	1	-	-	30	-	-	-	-

U: Unavailable

**TABLE III. Deaths in 121 U.S. cities,\* week ending July 13, 1991 (28th Week)**

Reporting Area	All Causes, By Age (Years)						P&I**	Reporting Area	All Causes, By Age (Years)						P&I**
	All Ages	≥65	45-64	25-44	1-24	<1			Total	All Ages	≥65	45-64	25-44	1-24	
NEW ENGLAND	622	437	96	62	12	15	34	S. ATLANTIC	1,363	814	285	176	50	38	61
Boston, Mass.	185	108	39	24	6	8	6	Atlanta, Ga.	159	93	38	22	-	6	3
Bridgeport, Conn.	38	25	8	5	-	-	6	Baltimore, Md.	165	97	32	28	6	2	11
Cambridge, Mass.	21	17	3	1	-	-	2	Charlotte, N.C.	112	68	18	20	3	3	3
Fall River, Mass.	24	20	2	1	1	-	3	Jacksonville, Fla.	134	83	34	14	2	1	10
Hartford, Conn.	50	31	10	5	-	4	3	Miami, Fla.	110	61	27	17	4	1	3
Lowell, Mass.	10	6	1	2	1	-	3	Norfolk, Va.	62	32	6	14	7	3	1
Lynn, Mass.	15	11	3	1	-	-	3	Richmond, Va.	102	69	21	6	4	2	6
New Bedford, Mass.	21	16	3	2	-	-	1	Savannah, Ga.	63	37	12	10	1	3	4
New Haven, Conn.	37	30	2	2	2	1	5	St. Petersburg, Fla.	72	55	10	5	2	-	6
Providence, R.I.	63	50	7	4	1	1	2	Tampa, Fla.	155	105	30	10	7	3	7
Somerville, Mass.	7	6	-	1	-	-	5	Washington, D.C.	205	92	56	30	14	13	3
Springfield, Mass.	57	43	6	7	-	1	5	Wilmington, Del.	24	22	1	-	-	1	4
Waterbury, Conn.	28	22	-	5	1	-	5	E.S. CENTRAL	762	494	154	55	33	25	45
Worcester, Mass.	66	52	12	2	-	-	5	Birmingham, Ala.	129	78	29	13	4	5	5
MID. ATLANTIC	1,120	710	197	135	29	49	79	Chattanooga, Tenn.	49	33	11	2	1	2	5
Albany, N.Y.	64	50	6	1	3	4	6	Knoxville, Tenn.	64	40	13	5	4	2	2
Allentown, Pa.	15	12	3	-	-	-	2	Louisville, Ky.	81	52	16	5	2	6	4
Buffalo, N.Y.	105	75	21	4	1	4	5	Memphis, Tenn.	194	125	37	15	11	5	11
Camden, N.J.	32	17	4	8	1	2	2	Mobile, Ala.	103	73	20	6	3	1	10
Elizabeth, N.J.	24	15	4	3	2	-	2	Montgomery, Ala.	46	31	10	1	3	1	8
Erie, Pa.†	32	27	3	2	-	-	5	Nashville, Tenn.	96	62	18	8	5	3	8
Jersey City, N.J.	53	30	8	11	1	3	1	W.S. CENTRAL	1,508	874	322	184	75	53	71
New York City, N.Y.§	U	U	U	U	U	U	U	Austin, Tex.	72	45	14	9	2	2	2
Newark, N.J.	73	24	13	25	5	6	9	Baton Rouge, La.	30	21	4	2	2	1	2
Paterson, N.J.	35	21	5	5	2	2	9	Corpus Christi, Tex.	39	33	4	1	-	1	7
Philadelphia, Pa.	309	180	67	36	9	17	18	Dallas, Tex.	208	117	47	29	8	7	2
Pittsburgh, Pa.†	76	44	21	8	1	2	7	El Paso, Tex.	85	57	17	6	4	1	2
Reading, Pa.	36	26	8	2	-	-	7	Ft. Worth, Tex.	82	43	22	8	8	1	5
Rochester, N.Y.	130	88	20	16	1	5	6	Houston, Tex.	414	205	98	69	23	19	26
Schenectady, N.Y.	25	20	2	2	-	-	1	Little Rock, Ark.	64	34	19	5	4	2	1
Scranton, Pa.†	24	18	4	2	1	-	3	New Orleans, La.	148	76	32	22	13	5	-
Syracuse, N.Y.§	U	U	U	U	U	U	U	San Antonio, Tex.	177	108	37	19	7	6	11
Trenton, N.J.	42	27	4	7	1	3	6	Shreveport, La.	60	44	11	2	1	2	9
Utica, N.Y.	21	16	3	1	1	-	6	Tulsa, Okla.	129	91	17	12	3	6	4
Yonkers, N.Y.	24	20	1	2	-	1	1	MOUNTAIN	767	482	141	81	34	28	27
E.N. CENTRAL	2,384	1,443	462	275	132	72	106	Albuquerque, N.M.	76	51	14	9	1	-	1
Akron, Ohio	65	47	12	4	1	1	1	Colo. Springs, Colo.	54	33	13	2	4	2	4
Canton, Ohio	42	32	8	-	1	1	1	Denver, Colo.	125	74	27	18	2	4	4
Chicago, Ill.	552	226	105	125	84	12	16	Las Vegas, Nev.	113	71	28	7	6	1	3
Cincinnati, Ohio	101	66	20	8	3	4	9	Ogden, Utah	58	38	5	7	4	4	2
Cleveland, Ohio	175	105	42	10	3	15	7	Phoenix, Ariz.	133	72	27	16	7	11	2
Columbus, Ohio	233	149	48	30	4	2	5	Pueblo, Colo.	27	18	5	2	2	-	1
Dayton, Ohio	121	87	21	11	1	1	6	Salt Lake City, Utah	58	38	5	7	4	4	2
Detroit, Mich.	274	151	60	36	15	12	8	Tucson, Ariz.	123	87	17	13	4	2	8
Evansville, Ind.	46	34	7	5	-	-	4	PACIFIC	2,073	1,331	360	237	89	51	95
Fort Wayne, Ind.	49	37	8	1	1	2	1	Berkeley, Calif.	17	9	5	1	-	-	4
Gary, Ind.	23	13	3	5	2	-	4	Fresno, Calif.	82	52	17	5	3	5	6
Grand Rapids, Mich.	48	34	8	3	-	-	6	Glendale, Calif.	14	10	2	2	-	-	-
Indianapolis, Ind.	202	140	37	14	1	10	4	Honolulu, Hawaii	91	63	13	11	3	1	5
Madison, Wis.	43	24	8	5	5	1	4	Long Beach, Calif.	90	55	17	13	1	4	3
Milwaukee, Wis.	161	124	28	4	3	2	18	Los Angeles, Calif.	541	332	90	70	42	6	17
Peoria, Ill.	51	30	9	5	2	5	4	Oakland, Calif.§	U	U	U	U	U	U	U
Rockford, Ill.	59	40	15	3	1	-	6	Pasadena, Calif.	51	32	8	4	4	3	2
South Bend, Ind.§	U	U	U	U	U	U	U	Portland, Oreg.	121	78	16	19	2	6	4
Toledo, Ohio	88	61	17	4	5	1	3	Sacramento, Calif.	176	108	33	22	9	4	8
Youngstown, Ohio	51	43	6	2	-	-	4	San Diego, Calif.	171	114	27	17	5	6	10
W.N. CENTRAL	777	561	128	42	24	22	34	San Francisco, Calif.	178	122	26	25	1	4	9
Des Moines, Iowa	73	53	9	4	4	3	3	San Jose, Calif.	210	148	37	14	7	4	16
Duluth, Minn.	34	27	5	1	1	-	-	Seattle, Wash.	199	125	41	25	5	3	3
Kansas City, Kans.	33	19	8	3	3	-	-	Spokane, Wash.	59	34	15	4	5	1	4
Kansas City, Mo.	83	51	18	8	3	3	4	Tacoma, Wash.	73	49	13	5	2	4	4
Lincoln, Nebr.	26	21	4	1	-	-	3	TOTAL	11,376 <sup>††</sup>	7,146	2,145	1,247	478	353	552
Minneapolis, Minn.	201	151	30	10	2	8	12								
Omaha, Nebr.	84	56	17	4	3	4	6								
St. Louis, Mo.	140	106	20	5	5	4	2								
St. Paul, Minn.	57	42	14	1	-	-	4								

\*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.

§Report for this week is unavailable (U).

## Current Trends

### **Cardiovascular Disease, Motor-Vehicle–Related Injury, and Use of Clinical Preventive Services – Behavioral Risk Factor Surveillance System, 1989**

CDC's Behavioral Risk Factor Surveillance System (BRFSS), a state-based method for risk factor surveillance, was implemented in 1984. By 1989, 39 states and the District of Columbia participated in monthly random-digit–dialed telephone interviews of adults  $\geq 18$  years of age (1). A total of 66,867 interviews were conducted in 1989; state-specific sample sizes ranged from 1171 to 3415 (mean: 1672). This report summarizes results of the 1989 survey and compares them with 1988 for risk factors associated with cardiovascular disease, motor-vehicle–related injury, and use of clinical preventive services.

#### **Cardiovascular Diseases**

In 1989, the prevalences of two risk factors—overweight and sedentary lifestyle—for cardiovascular disease varied widely by state (Table 1). The proportion of persons who reported being overweight (i.e., body mass index  $\geq 27.8$  for males and  $\geq 27.3$  for females) ranged from 15.6% in New Mexico to 26.6% in Pennsylvania (median: 20.4%). For three states (California, Missouri, and Wisconsin), the percentage of persons who reported being overweight was lower than in 1988 ( $p < 0.05$ ); for Iowa and Montana, this percentage was higher ( $p < 0.05$ ). The proportion of respondents who reported sedentary lifestyle ranged from 44.7% in New Hampshire to 74.7% in the District of Columbia (median: 58.7%). For New Hampshire and Rhode Island, the reported prevalence of sedentary lifestyle decreased in 1989 ( $p < 0.05$ ); for the District of Columbia, Idaho, Minnesota, and Oklahoma, it increased ( $p < 0.05$ ).

#### **Motor-Vehicle–Related Injuries**

In almost all states, the prevalence of drinking and driving and of seatbelt nonuse declined or did not change in 1989 (Table 2). The proportion of persons who reported drinking and driving in 1989 ranged from 1.1% in Maryland to 5.9% in North Dakota (median: 2.9%). For Minnesota and North Carolina, this percentage was lower ( $p < 0.05$ ) in 1989 than in 1988. The proportion of persons who reported seatbelt nonuse ranged from 6.3% in Hawaii to 61.9% in South Dakota (median: 29.6%). For 11 states, this percentage was lower than in 1988 ( $p < 0.05$ ); for the District of Columbia, Nebraska, and Wisconsin, it was higher ( $p < 0.05$ ).

#### **Use of Clinical Preventive Services**

BRFSS respondents were asked about cholesterol levels and about use of screening mammograms. The proportion of persons who reported ever having had their cholesterol level checked ranged from 48.0% in Alabama to 63.7% in Connecticut (median: 55.1%) (Table 3). For 24 of the 37 states for which data were available for both 1988 and 1989, the percentage of persons who reported ever having had their cholesterol level checked was higher in 1989 ( $p < 0.05$ ). The proportion of women  $\geq 40$  years of age who reported ever having had a mammogram ranged from 52.0% in Nebraska to 79.0% in the District of Columbia (median: 62.6%) (Table 3). For three of the 17 states that collected data in 1988 (Indiana, Nebraska, and South Carolina), the reported prevalence of ever having had a mammogram increased in 1989 ( $p < 0.05$ ).

BRFSS – Continued

**TABLE 1. State-specific prevalences and percent changes of selected risk factors for cardiovascular disease – Behavioral Risk Factor Surveillance System, 1989**

State	Overweight*		Sedentary lifestyle†	
	% Prevalence (±95% CI) <sup>‡</sup>	% Change from 1988	% Prevalence (±95% CI)	% Change from 1988
Alabama	19.6 (2.0)	-2.9	59.2 (2.6)	1.3
Arizona	19.2 (2.3)	-0.9	49.1 (2.9)	-3.9
California	17.6 (1.8)	-3.3 <sup>§</sup>	52.1 (2.4)	3.3
Connecticut	18.4 (2.5)	-1.3	56.9 (2.9)	-0.7
District of Columbia	23.7 (2.4)	0.7	74.7 (2.6)	8.0 <sup>§</sup>
Florida	21.4 (2.1)	-0.9	51.6 (2.6)	-1.0
Georgia	19.2 (2.2)	0.4	63.6 (2.7)	1.9
Hawaii	17.0 (2.3)	0.6	53.9 (2.8)	0.5
Idaho	17.3 (1.9)	-0.5	57.6 (2.6)	6.6 <sup>§</sup>
Illinois	23.2 (2.2)	0.5	61.5 (2.9)	3.7
Indiana	23.9 (1.9)	-0.3	61.6 (2.3)	1.4
Iowa	25.3 (2.6)	5.2 <sup>§</sup>	63.0 (3.1)	4.7
Kentucky	22.6 (2.2)	-0.4	69.0 (2.4)	2.0
Maine	20.5 (2.4)	-1.0	63.8 (2.9)	5.2
Maryland	19.0 (2.1)	0.3	61.8 (2.9)	-2.6
Massachusetts	20.1 (2.5)	-1.3	54.6 (3.1)	1.7
Michigan	24.7 (1.9)	0.7	60.4 (2.1)	NA**
Minnesota	21.4 (1.5)	0.4	58.7 (1.9)	5.2 <sup>§</sup>
Missouri	19.4 (2.1)	-3.6 <sup>§</sup>	62.3 (2.8)	3.3
Montana	18.5 (2.4)	4.0 <sup>§</sup>	49.8 (3.0)	3.1
Nebraska	21.8 (2.3)	-0.6	61.3 (2.8)	0.8
New Hampshire	18.8 (2.2)	-0.8	44.7 (2.8)	-10.7 <sup>§</sup>
New Mexico	15.6 (2.5)	0.9	56.3 (2.8)	4.5
New York	17.6 (2.4)	-3.3	73.1 (2.8)	-0.5
North Carolina	21.1 (2.2)	0.6	62.8 (2.9)	-0.9
North Dakota	23.0 (2.2)	-0.3	55.6 (3.0)	-1.9
Ohio	21.4 (2.5)	-0.5	63.4 (2.8)	0.4
Oklahoma	20.3 (2.7)	2.3	71.2 (3.0)	11.5 <sup>§</sup>
Oregon	21.0 (2.1)	NA	46.5 (2.6)	NA
Pennsylvania	26.6 (2.3)	NA	57.2 (2.7)	NA
Rhode Island	19.0 (2.2)	0.8	58.7 (2.6)	-6.1 <sup>§</sup>
South Carolina	20.6 (2.1)	-0.9	68.2 (2.7)	2.8
South Dakota	21.5 (2.0)	-1.4	54.1 (2.7)	-2.7
Tennessee	20.0 (1.8)	-0.1	64.3 (2.9)	-3.0
Texas	18.2 (2.3)	-0.4	53.0 (2.7)	-6.7
Utah	16.6 (1.8)	-1.6	49.1 (2.7)	-1.2
Virginia	21.9 (2.6)	NA	57.7 (3.0)	NA
Washington	20.0 (2.1)	-0.4	49.9 (2.7)	4.6
West Virginia	23.6 (2.3)	-0.7	66.2 (2.7)	0.2
Wisconsin	22.8 (2.5)	-5.3 <sup>§</sup>	57.7 (2.9)	2.2

\*Defined as body mass index  $\geq 27.8$  for males and  $\geq 27.3$  for females.†Defined as adults reporting  $< 20$  minutes of leisure-time physical activity three times per week.

‡Confidence interval.

§Difference in percent prevalence between 1988 and 1989 statistically significant when using

$$Z_{(p<0.05)} = \text{abs} \left( \frac{1989\% - 1988\%}{\sqrt{(SE_{1988}^2) + (SE_{1989}^2)}} \right) > 1.96$$

where SE is standard error of percent prevalence.

\*\*Not available.

BRFSS — Continued

**TABLE 2. State-specific prevalences and percent changes of selected risk factors for motor-vehicle-related injury — Behavioral Risk Factor Surveillance System, 1989**

State	Drinking and driving*		Seatbelt nonuse†	
	% Prevalence (±95% CI‡)	% Change from 1988	% Prevalence (±95% CI)	% Change from 1988
Alabama	2.1 (0.8)	0.4	42.6 (2.5)	-5.3 <sup>§</sup>
Arizona	3.4 (1.1)	0.5	33.1 (2.9)	-2.7
California	3.6 (1.0)	-0.4	16.4 (1.8)	-2.0
Connecticut	3.1 (1.0)	-0.7	24.7 (2.6)	-0.5
District of Columbia	2.5 (0.9)	0.3	26.5 (2.6)	-5.7 <sup>¶</sup>
Florida	2.6 (0.9)	0.1	17.8 (2.1)	-3.7 <sup>¶</sup>
Georgia	2.2 (0.9)	-0.9	25.0 (2.5)	-8.8 <sup>¶</sup>
Hawaii	4.0 (1.1)	0.4	6.3 (1.5)	-0.2
Idaho	2.2 (0.9)	-1.1	31.8 (2.6)	-5.7 <sup>¶</sup>
Illinois	2.8 (0.9)	-0.1	30.9 (2.5)	-1.5
Indiana	2.2 (0.7)	-1.3	30.7 (2.2)	0.6
Iowa	4.2 (1.4)	0.9	23.2 (2.7)	-0.5
Kentucky	1.6 (0.7)	0.2	47.9 (2.7)	-4.7 <sup>¶</sup>
Maine	2.0 (0.8)	-0.9	46.4 (3.0)	-2.8
Maryland	1.1 (0.7)	-0.4	16.1 (2.0)	-2.8
Massachusetts	3.3 (1.1)	-1.3	48.5 (3.2)	-1.1
Michigan	4.4 (1.0)	-0.5	20.3 (1.9)	-2.0
Minnesota	3.8 (0.7)	-2.1 <sup>¶</sup>	23.9 (1.6)	-2.8 <sup>¶</sup>
Missouri	2.6 (0.9)	-0.1	28.1 (2.6)	3.1
Montana	5.0 (1.6)	-3.9	27.8 (3.0)	-1.0
Nebraska	4.4 (1.3)	0.1	56.6 (2.8)	5.2 <sup>¶</sup>
New Hampshire	3.5 (1.2)	0	48.2 (2.9)	-4.3
New Mexico	4.0 (1.4)	1.0	14.7 (2.3)	-5.5 <sup>¶</sup>
New York	1.3 (0.7)	-0.5	18.5 (2.5)	-5.6 <sup>¶</sup>
North Carolina	1.6 (0.8)	-1.5 <sup>¶</sup>	15.3 (2.0)	2.2
North Dakota	5.9 (1.4)	0	58.2 (2.8)	-2.3
Ohio	2.8 (1.2)	-0.8	28.0 (2.8)	0.3
Oklahoma	2.3 (0.9)	-1.1	29.2 (3.1)	-4.4
Oregon	3.5 (1.1)	NA**	34.8 (2.6)	NA
Pennsylvania	3.7 (1.0)	NA	30.3 (2.4)	NA
Rhode Island	3.0 (1.0)	0.4	47.1 (2.6)	0
South Carolina	2.4 (0.9)	1.0	38.7 (2.7)	-10.0 <sup>¶</sup>
South Dakota	4.9 (1.2)	-1.1	61.9 (2.6)	-5.5 <sup>¶</sup>
Tennessee	1.7 (0.6)	-0.5	29.1 (2.1)	-3.4 <sup>¶</sup>
Texas	5.6 (1.4)	1.7	15.0 (2.1)	-0.4
Utah	1.5 (0.7)	0	34.6 (2.7)	1.3
Virginia	2.9 (1.0)	NA	16.1 (2.5)	NA
Washington	2.6 (0.9)	-1.4	15.1 (2.0)	-0.9
West Virginia	1.5 (0.8)	0.1	52.1 (2.9)	-3.9
Wisconsin	5.7 (1.4)	-0.5	27.6 (2.7)	4.2 <sup>¶</sup>

\*Defined as driving at least once in the past month after having too much to drink.

†Defined as sometimes, seldom, or never use seatbelts.

‡Confidence interval.

§Difference in percent prevalence between 1988 and 1989 statistically significant ( $p < 0.05$ ).

\*\*Not available.

BRFSS — Continued

**TABLE 3. State-specific prevalences and percent changes of use of selected clinical preventive screening measures — Behavioral Risk Factor Surveillance System, 1989**

State	Cholesterol ever checked*		Women ever having had a mammogram†	
	% Prevalence (±95% CI) <sup>§</sup>	% Change from 1988	% Prevalence (±95% CI)	% Change from 1988
Alabama	48.0 (2.6)	1.8	54.6 (4.4)	NA <sup>¶</sup>
Arizona	57.5 (2.9)	3.9	61.4 (5.0)	NA
California	58.1 (2.3)	4.3**	68.0 (4.5)	-1.0
Connecticut	63.7 (2.9)	10.3**	73.1 (4.6)	NA
District of Columbia	49.5 (3.1)	-4.0	79.0 (4.3)	11.5
Florida	63.4 (2.7)	6.7**	61.6 (4.2)	NA
Georgia	51.6 (2.9)	2.5	63.0 (4.8)	NA
Hawaii	52.8 (2.7)	4.8**	69.2 (4.6)	NA
Idaho	54.9 (2.7)	8.1**	59.4 (4.3)	NA
Illinois	56.1 (2.5)	6.4**	61.8 (4.4)	3.9
Indiana	50.8 (2.4)	2.4	57.2 (4.0)	12.3**
Iowa	57.6 (3.1)	5.7**	55.8 (5.1)	NA
Kentucky	52.5 (2.7)	6.4**	58.0 (4.1)	5.8
Maine	59.2 (3.0)	1.0	63.2 (5.1)	0.4
Maryland	62.2 (2.8)	7.4**	67.2 (4.3)	3.1
Massachusetts	60.3 (3.2)	8.3**	71.4 (5.5)	NA
Michigan	60.3 (2.2)	2.7	74.0 (3.4)	NA
Minnesota	60.8 (1.8)	8.1**	73.0 (2.9)	NA
Missouri	50.2 (2.9)	4.5**	53.3 (4.6)	NA
Montana	55.1 (3.1)	14.6**	60.1 (5.2)	5.2
Nebraska	53.2 (2.8)	5.8**	52.0 (4.9)	7.2**
New Hampshire	58.1 (2.9)	3.4	68.3 (5.0)	-1.1
New Mexico	48.3 (3.3)	7.0**	62.2 (5.8)	8.0
New York	55.0 (3.3)	5.2**	62.1 (5.4)	3.7
North Carolina	53.7 (2.8)	2.4	61.2 (4.5)	3.8
North Dakota	55.0 (2.7)	5.3**	65.3 (4.4)	NA
Ohio	53.2 (3.2)	4.6**	64.0 (4.6)	NA
Oklahoma	54.2 (3.3)	1.8	59.8 (5.0)	6.3
Oregon	62.1 (2.6)	NA	70.4 (3.9)	NA
Pennsylvania	58.4 (2.6)	NA	61.7 (4.2)	NA
Rhode Island	60.7 (2.6)	10.1**	76.2 (4.9)	NA
South Carolina	53.2 (2.6)	8.8**	71.5 (5.3)	19.3**
South Dakota	52.7 (2.7)	5.1**	67.2 (5.9)	NA
Tennessee	54.8 (2.4)	5.4**	69.3 (5.1)	NA
Texas	56.0 (2.9)	6.4**	68.3 (6.3)	NA
Utah	51.2 (2.8)	0.7	61.8 (6.5)	NA
Virginia	57.8 (3.0)	NA	64.3 (7.0)	NA
Washington	63.4 (2.7)	6.9**	67.1 (6.1)	5.2
West Virginia	50.3 (2.9)	1.9	69.8 (6.0)	NA
Wisconsin	56.9 (3.0)	0.5	63.8 (7.8)	2.6

\*Defined as ever having had cholesterol checked.

†Defined as women ≥40 years of age who have ever had a mammogram.

§Confidence interval.

¶Not available.

\*\*Difference in percent prevalence between 1988 and 1989 statistically significant ( $p < 0.05$ ).

*BRFSS — Continued*

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**Editorial Note:** In 1989, the prevalences of self-reported behavioral risk factors varied widely among states participating in the BRFSS. This finding is consistent with previous reports (1–4) and underscores the need for state-specific data for establishing and measuring public health objectives at the state level.

Because of the well-documented changes in other cardiovascular disease risks, the static prevalences of overweight and sedentary lifestyle in 1989 are of particular concern. However, substantial reductions in the prevalences of overweight and sedentary lifestyle may be difficult to achieve because modification of these risk behaviors requires modification of a variety of related behaviors.

The modest reductions in drinking and driving from 1988 to 1989 are important because the risk for a fatal crash is eight times greater for an intoxicated driver (5). In addition, the current median prevalence of 2.9% for drinking and driving is lower than the 1981–1983 BRFSS estimate of 6.1% (6). The substantial increase in seatbelt use is most likely associated with increased awareness among adults of seatbelts preventing motor-vehicle-related injury and the passage of mandatory seatbelt-use laws by 29 of the 39 participating states and the District of Columbia.

The increased proportion of states in which the reported prevalence of persons ever having had cholesterol checked appears to extend a trend noted in 1987 (7) and is consistent with findings reported by the National Heart, Lung, and Blood Institute (8). Possible explanations for this increase include greater public and provider awareness of cholesterol as a modifiable risk factor for cardiovascular disease (8,9) and increased availability of screening services. Finally, the prevalence of women who had ever had a mammogram indicates progress in efforts to promote use of mammography screening as the most important measure for increasing breast cancer survival rates (10).

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*BRFSS – Continued*

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Notices to Readers**Publication of Recommendations for Preventing Transmission of HIV and Hepatitis B Virus to Patients During Exposure-Prone Invasive Procedures**

CDC has published *Recommendations for Preventing Transmission of Human Immunodeficiency Virus and Hepatitis B Virus to Patients During Exposure-Prone Invasive Procedures* in the July 12, 1991, issue of *MMWR Recommendations and Reports* (volume 40, number RR-8). This document was developed to update recommendations for prevention of transmission of human immunodeficiency virus and hepatitis B virus in the health-care setting and provides guidance for prevention of transmission to patients during invasive procedures that are considered exposure-prone. Single copies of this publication are available through the National AIDS Information Clearinghouse, P.O. Box 6003, Rockville, MD 20850; telephone (800) 458-5231.

**Report on Health-Care Visits by Adolescents**

CDC's National Center for Health Statistics' (NCHS) National Ambulatory Medical Care Survey has released a report that examines statistics from 1985 on health care provided to adolescents (patients 11–20 years of age) by office-based physicians. Data are available by physician specialty, patient's reason for visit, diagnostic services, physician's diagnosis, and medication and nonmedication therapy.

Copies of the report, *Office Visits by Adolescents*, are available free of charge from the Scientific and Technical Information Branch, NCHS, CDC, Room 1064, 6525 Belcrest Road, Hyattsville, MD 20782; telephone (301) 436-8500.

**Annual Report on Hospital Use Statistics**

CDC's National Center for Health Statistics (NCHS) has released an update of statistics on in-patient hospital use during 1989. NCHS's National Hospital Discharge Survey, a continuous survey conducted since 1965, abstracts data from approximately 233,000 medical records from 408 short-stay nonfederal hospitals. The number, rate, and average length of stay of patients discharged are shown by age, geographic region, and sex. Use by diagnosis and procedures is also included.

Copies of the report, *1989 Summary: National Hospital Discharge Survey*, are available free of charge from the Scientific and Technical Information Branch, NCHS, CDC, Room 1064, 6525 Belcrest Road, Hyattsville, MD 20782; telephone (301) 436-8500.

*Notices to Readers – Continued*

**Publication on AIDS-Related Knowledge and Behavior  
Among Women 15–44 Years of Age**

CDC's National Center for Health Statistics (NCHS) has released the report *AIDS-Related Knowledge and Behavior Among Women 15–44 Years of Age: United States, 1988*. This report is based on data from NCHS's National Survey of Family Growth, Cycle IV, conducted in 1988. The data represent responses given by women aged 15–44 years to questions concerning their knowledge of human immunodeficiency virus (HIV) transmission, changes in sexual behavior to avoid HIV infection, and a woman's own estimate of her chance of becoming infected.

Copies of the report are available free of charge from the Scientific and Technical Information Branch, NCHS, CDC, Room 1064, 6525 Belcrest Road, Hyattsville, MD 20782; telephone (301) 436-8500.

The *Morbidity and Mortality Weekly Report* is prepared by the Centers for Disease Control, Atlanta, Georgia, and is available on a paid subscription basis from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, (202) 783-3238.

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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