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World AIDS Day – 1991

The World Health Organization (WHO) has designated "Sharing the Challenge" as the theme of the fourth annual World AIDS Day, December 1, 1991, to emphasize the importance of a partnership approach to control the epidemic of human immunodeficiency virus (HIV) infection and acquired immunodeficiency syndrome (AIDS). On December 1, WHO, governments, and nongovernmental and community organizations throughout the world will hold special events designed to increase knowledge and understanding about AIDS and to encourage compassion for persons infected with HIV.

In conjunction with this event, the Public Health Service has designated December 1 as National AIDS Awareness Day. Information about HIV infection and AIDS and World AIDS Day is available from CDC's National AIDS Hotline (NAH) and CDC's National AIDS Clearinghouse (NAC). NAH refers callers to services in their community; NAC distributes materials and maintains databases on AIDS service organizations, educational materials, funding sources, and drug trials. The telephone numbers are: NAH, (800) 342-2437 ([800] 342-AIDS; Spanish: [800] 344-7432; or TTY/TDD: [800] 243-7889) and NAC, (800) 458-5231.

Effectiveness in Disease and Injury Prevention

Characteristics of Parents Who Discuss AIDS With Their Children – United States, 1989

In one multisite, primary health-care program in 10 large cities in the United States, 3% of participating adolescents engaged in behaviors that increased their risk for human immunodeficiency virus (HIV) infection (i.e., prostitution, injecting-drug use, male homosexual behavior, or behaviors leading to ulcerative sexually transmitted

Parents Who Discuss AIDS — Continued

diseases [STDs]); 16% of these adolescents had had more than six sex partners or a nonulcerative STD in the previous year (*1*). In the United States, schools are an important setting for education about HIV and acquired immunodeficiency syndrome (AIDS); however, the potential role of parents in educating their children about this problem has not been well characterized. To determine characteristics of parents who reported discussing (or not discussing) AIDS with their 10–17-year-old children, CDC analyzed data from the 1989 National Health Interview Survey, a national multistage probability survey of U.S. households conducted by CDC's National Center for Health Statistics (*2*).

All significance tests and standard errors* were calculated using SESUDAAN (*3*). Variables that differed between parents who did and parents who did not discuss AIDS with their children were further investigated with a logit model to obtain a measure of the variables' relative importance.

Of the 40,979 persons interviewed, 8058 (20%) reported being parents of children aged 10–17 years; 62% of these indicated they had discussed AIDS with their children. The proportion was greater for parents living in metropolitan statistical areas with populations of less than 100,000 persons (73.6%) than for parents in larger cities (62.7%) and did not vary by region.

Overall, mothers were more likely (74.2%) than fathers (48.9%) to have discussed AIDS with their children—a pattern that was similar in both one- and two-parent households. Non-Hispanics (63.4%) were more likely than Hispanics (51.7%) to discuss AIDS with their children; this pattern was consistent for both men and women. Of parents who indicated they knew "a lot" about AIDS, 76.3% discussed AIDS with their children, compared with 19.4% of those who indicated they knew "nothing." Based on the logit model, parental gender was most strongly associated with discussing AIDS (beta coefficient: −1.18), followed by self-assessed knowledge (beta coefficient: 0.54), knowing someone with HIV infection (beta coefficient: 0.45), and one measure of actual knowledge (i.e., knowing that a difference exists between having "the AIDS virus" and having AIDS) (beta coefficient: 0.41).

Parents who discussed AIDS with their children and those who did not were similar regarding their self-assessment for being at no risk for HIV infection (84.0% versus 86.8%), being within a defined risk group (2.0% versus 2.2%), and believing the federal government's information about AIDS (69.0% versus 69.6%) and advice on "how to help keep from getting AIDS" (84.0% versus 82.4%).

Parents who recalled having seen a television public service announcement (PSA) about AIDS in the previous month were more likely (64.1%) to have discussed AIDS with their children than were those who did not (53.4%) ($p<0.01$). The relation was similar for parents who recalled having heard a radio PSA (66.0% versus 58.2%). The greatest difference was for parents who recalled reading an AIDS-related brochure (ever: 76.2% versus never: 57.4%; in the previous month: 70.8% versus not in the previous month: 42.8%).

Reported by: National AIDS Information and Education Program, Office of the Deputy Director (HIV), CDC.

Editorial Note: The effects of parent-child interactions on children's health-related behaviors are complex and vary with family communication patterns and the ages and genders of both children and parents (*4,5*). For example, a review of school-based smoking-prevention programs suggests the involvement of parents in

*All standard errors were <3%.

Parents Who Discuss AIDS — Continued

smoking-prevention programs before their children enter sixth grade may enhance their children's interest in the smoking-prevention programs but may decrease interest in such programs at later grades (*6*). Among third graders exposed to either a school-based or a home-based dietary education and modification program, those in the school-based program reported more knowledge, but those in the home-based program reported more dietary behavior change (*7*).

Previous studies have suggested that parent-child conversations about sexual matters have been associated with delays in initiation of sexual activity and with the increased use of contraceptives by adolescents who engaged in sexual intercourse (*4,8,9*). In one study, previous conversations on sexual issues strongly predicted mother-daughter communication about sexual issues (*10*).

Although the findings in this report indicate that mothers discuss AIDS with their preadolescent and adolescent children, the findings also underscore critical deficiencies in parent-child interactions about AIDS. For example, Hispanic parents are less likely than non-Hispanic parents to discuss AIDS with their children. In addition, parents living in small cities are more likely than those in large cities to discuss AIDS with their children, even though HIV infection is more prevalent in larger metropolitan areas. HIV education and prevention efforts targeted at children might be more effective if also directed through parents. Although peer influence may more directly affect adolescents' sexual behaviors, parents could assist in primary prevention for preadolescents and in elimination of adolescents' misperceptions about HIV transmission.

In this report, most adults indicated they used various media as sources of AIDS information. This finding underscores the need to direct some media messages toward parents and to develop brochures and other educational information for parents to use with children. For example, messages on television and radio could instruct parents about how to obtain brochures and other educational information. Potentially important strategies for preventing transmission of HIV among children include efforts to educate parents about HIV, the importance of discussing HIV with their children, and how to discuss sexual issues with children of different ages.

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Current Trends

Patterns of Sexual Behavior Change Among Homosexual/Bisexual Men — Selected U.S. Sites, 1987–1990

In the United States, human immunodeficiency virus (HIV) transmission has been associated with anal sex without use of condoms (*1,2*). However, surveys of sexual behavior among homosexual/bisexual men (i.e., men who have had sex with men) (*3*) and evaluation results from intervention studies have consistently shown that such risks can be reduced (*4*). Despite such reductions in risk, relapse from safer sex to riskier practices has been documented among homosexual/bisexual men (*5*). Because the serostatus or HIV risk behaviors of any sex partner can be difficult to ascertain, especially for anonymous partners, anal sex with nonsteady partners without using a condom remains a high-risk behavior. This report summarizes an evaluation by CDC of behavior changes among homosexual/bisexual men involving anal sex with nonsteady partners without use of a condom (*1,2*). The evaluation examined community demonstration projects, funded by CDC in 1986, to assess methods of preventing the spread of HIV infection primarily among homosexual/bisexual men.

In four communities (Dallas, Texas; Denver, Colorado; Long Beach, California; and Seattle, Washington) cohorts of men were recruited to be followed prospectively. By August 1990, approximately 3800 cohort participants were recruited through announcements on posters, newspaper advertisements, referrals from health-care providers and community-based organizations, and by word of mouth. Once enrolled, cohort participants at all sites received HIV-antibody testing and pretest/posttest counseling. Follow-up visits were scheduled every 6 months. At each visit, detailed information on sexual activity, attitudes, and drug use was obtained by a self-administered questionnaire.

Based on self-reported information, men were classified at each visit into one of four behavioral stage categories:* precontemplation (PC) (i.e., lacking intention to change relevant sexual behavior); contemplation (C) (i.e., expressing an intention to adopt safer sexual behavior); action (A) (i.e., refraining from anal sex without a condom with nonsteady partners but unsure about maintaining this behavior change); and maintenance (M) (i.e., refraining from the behavior and expressing confidence that they will not engage in this risk behavior under any circumstances).

As of August 1990, data from initial visit through third follow-up visit were available for 303 men (75 [25%] from Dallas, 107 [35%] from Denver, 23 [8%] from Long Beach, and 98 [32%] from Seattle). These men were primarily white (91%) and 26–40 years of age (50%) (median age: 31 years). Of the 303 men, 29 (10%) were seropositive for HIV antibody at their initial visit. Three initially seronegative men were seropositive at a subsequent visit.

The patterns of behavioral change within the categories were statistically similar for cohorts in each of the cities. On average, at any given visit, 8% of the men were classified into stage PC (range: 6%–10%); 11%, stage C (range: 7%–19%); 16%, stage A (range: 14%–20%); and 65%, stage M (range: 55%–70%). From any given visit to the next visit, some men remained in the same behavioral category while others were

*These categories represent four distinct stages of behavior change that have been applied primarily to other health behaviors and only recently to sexual behavior (*6*).

Sexual Behavior Change — Continued

classified in a different category (Table 1). For example, on average, of men in stage M at a previous visit, 11% (range: 8%–14%) were in the PC or C stages at the next visit, indicating relapse to the risky behavior; of men in stage C at a previous visit, 30% remained in stage C at the next visit.

Positive behavior change (i.e., positive transition through the stages of behavior change) was associated with positive change in three psychosocial factors: 1) perceived self-efficacy (i.e., confidence that one can practice safer sexual behavior even in difficult circumstances, such as when under the influence of drugs or alcohol or in the company of a new sex partner) (odds ratio [OR] = 1.5; 95% confidence interval [CI] = 1.1–2.0), 2) safer sex skills (i.e., ability to use condoms and ability to talk to sex partners about sex and using condoms) (OR = 1.5; 95% CI = 1.1–2.1), and 3) perceived peer support for safer sex (i.e., among other homosexual/bisexual men known by the respondent) (OR = 1.4; 95% CI = 1.0–2.0). Four other variables were not associated with positive change: age, HIV serostatus, a steady sex partner, and belief that safer sex reduces the chance for HIV transmission.

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Editorial Note: The findings in this report underscore that, among men included in the four-city evaluation, positive changes in behavior may be associated with training in safer sex skills, enhancing a person's self-confidence in practicing those skills, and identifying and promoting peer support for HIV-risk reduction. Although not associated with positive change, the belief that safer sex reduces the risk for HIV transmission was prevalent; this belief is considered an important element of intervention to induce HIV-risk reduction (*7*). The findings also indicate that intention to reduce sexual behavior risk sometimes may not lead to immediate or complete behavior change, and the factors important for inducing positive change may differ from those necessary to maintain that change. Therefore, interventions to promote change may differ from interventions required to maintain positive behavior change. For example,

TABLE 1. Average transition percentages within four stages of behavior change for unprotected anal sex with nonsteady partners among homosexual/bisexual men — AIDS Community Demonstration Projects: Dallas, Texas; Denver, Colorado; Long Beach, California; and Seattle, Washington, 1987–1990*

Stage at previous visit	Stage at next visit			
	PC†	C§	A¶	M**
PC	15	8	18	59
C	11	30	13	46
A	10	7	41	42
M	7	4	9	80

*Reported at 6-month intervals.
†Precontemplation (i.e., lacking intention to change relevant sexual behavior).
§Contemplation (i.e., expressing an intention to adopt safer sexual behavior).
¶Action (i.e., adopting the safer behavior of refraining from anal sex without a condom with nonsteady partners, but unsure about maintaining this behavior change).
**Maintenance (i.e., refraining from the behavior and expressing confidence that they will not engage in this risk behavior under any circumstances).

Sexual Behavior Change — Continued

maintenance intervention should include reinforcing the self-confidence of men who have made positive behavior change.

Although the evaluation in the four cities indicated the occurrence of relapse to riskier sexual behavior, these findings are subject to at least two potential constraints: 1) the study did not incorporate an experimental design, and 2) the analysis is specific to one behavior and to a select population and therefore cannot be generalized. Nonetheless, the findings underscore the dynamic nature of sexual behavior change among homosexual/bisexual men—in particular, relative to anal intercourse without a condom with nonsteady partners. Because of continuing potential for HIV transmission associated with this behavior, public health agencies should continue to both monitor and target intervention efforts toward sexual health behaviors among homosexual/bisexual men.

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HIV/AIDS Knowledge and Awareness of Testing and Treatment — Behavioral Risk Factor Surveillance System, 1990

Public health agencies and other organizations offer programs for prevention, counseling, testing, and early intervention for human immunodeficiency virus (HIV) infection and acquired immunodeficiency syndrome (AIDS). For these programs to be effective, persons who may require their services must have knowledge of the programs and services (*1,2*). To assess the knowledge and awareness of persons in the United States about HIV/AIDS testing and treatment, the 1990 Behavioral Risk Factor Surveillance System (BRFSS) questionnaire included questions on knowledge about HIV/AIDS, treatment, and sources of testing.

In 1990, 44 states and the District of Columbia participated in monthly random-digit–dialed telephone interviews of adults aged ≥18 years (*3*). Eleven questions were added to the BRFSS questionnaire regarding HIV/AIDS knowledge and awareness. Total sample sizes for states in 1990 ranged from 831 to 3420, for a total of 81,556 survey respondents. The median percentage of eligible respondents contacted providing complete interviews was 82%.

Respondents were asked, "Have you ever heard the AIDS virus called HIV?", "Do you think a person who is infected with the AIDS virus can look and feel well and healthy?", and "To your knowledge, are there drugs available which can lengthen the

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life of a person with the AIDS virus?" In every state, most respondents had heard the AIDS virus referred to as HIV (range: 74.7% [Kentucky] to 94.7% [Washington]; median: 83.0%) (Table 1). Most respondents also knew that HIV-infected persons

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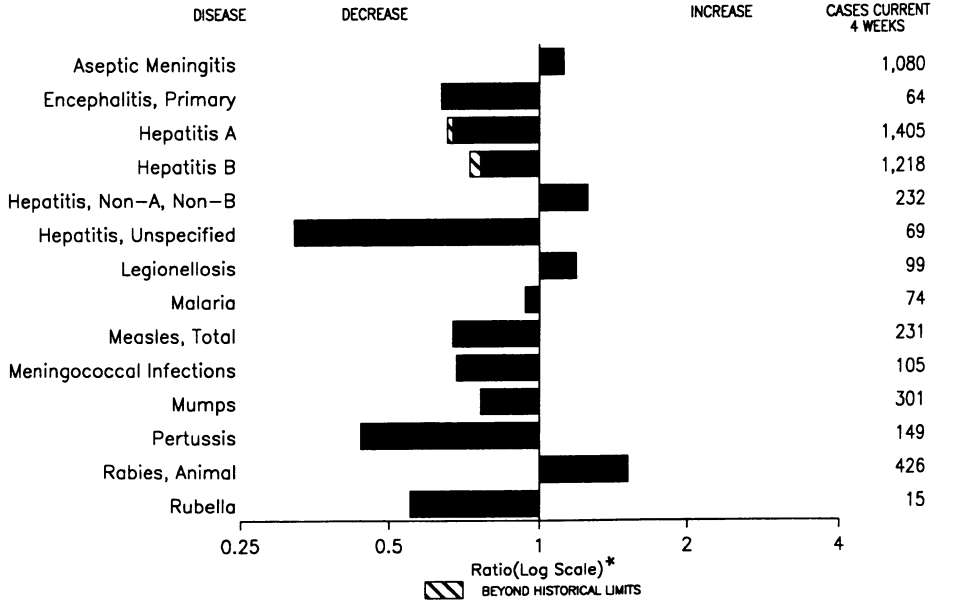
TABLE 1. Percentage of respondents* having knowledge and awareness of HIV/AIDS, by area — Behavioral Risk Factor Surveillance System, 1990

Area	Sample size	Have heard the AIDS virus called HIV		Are aware that drugs can lengthen life		Are aware that infected person can look healthy		Erroneously believe they can be infected by giving blood		Erroneously believe they can be infected by insect bites	
		%	(95% CI†)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
Alabama	2140	81.1	(±1.9)	41.7	(±2.4)	61.4	(±2.4)	29.2	(±2.1)	19.1	(±1.9)
Arizona	1500	82.2	(±2.2)	52.4	(±2.8)	73.0	(±2.4)	26.2	(±2.4)	14.4	(±2.0)
California	2701	87.9	(±1.5)	54.2	(±2.2)	69.1	(±2.1)	35.4	(±2.1)	18.6	(±1.7)
Colorado	1724	82.7	(±2.0)	54.7	(±2.7)	74.8	(±2.2)	29.4	(±2.5)	16.1	(±2.0)
Connecticut	1865	83.3	(±2.0)	54.5	(±2.6)	72.0	(±2.3)	25.7	(±2.2)	16.2	(±1.9)
Delaware	1503	90.6	(±1.6)	45.8	(±2.8)	66.5	(±2.8)	21.5	(±2.4)	18.8	(±2.3)
District of Columbia	1493	81.6	(±2.3)	41.7	(±2.9)	55.7	(±3.1)	23.8	(±2.6)	9.3	(±1.7)
Florida	2143	82.0	(±1.8)	42.8	(±2.3)	62.5	(±2.4)	35.4	(±2.5)	20.9	(±2.0)
Georgia	1801	82.2	(±2.0)	37.0	(±2.4)	63.6	(±2.5)	30.6	(±2.3)	17.5	(±2.1)
Hawaii	1870	86.2	(±1.9)	46.2	(±2.7)	65.7	(±2.7)	41.2	(±2.7)	16.5	(±2.1)
Idaho	1800	88.6	(±1.7)	42.8	(±2.6)	64.7	(±2.5)	24.6	(±2.2)	12.6	(±1.7)
Illinois	1796	78.4	(±2.2)	42.7	(±2.5)	64.7	(±2.5)	22.9	(±2.1)	17.1	(±2.0)
Indiana	2413	77.1	(±1.9)	43.8	(±2.2)	70.4	(±1.9)	29.5	(±2.0)	16.3	(±1.6)
Iowa	1512	76.1	(±2.4)	46.6	(±2.8)	69.1	(±2.5)	24.2	(±2.4)	12.3	(±1.9)
Kentucky	1800	74.7	(±2.4)	39.8	(±2.5)	61.1	(±2.5)	27.5	(±2.3)	20.8	(±2.2)
Louisiana	831	94.4	(±1.8)	38.4	(±4.1)	64.1	(±3.7)	31.0	(±4.1)	19.1	(±3.2)
Maine	1260	82.2	(±2.4)	46.5	(±3.2)	68.8	(±2.9)	25.4	(±2.8)	13.5	(±2.1)
Maryland	1668	91.2	(±1.6)	55.3	(±2.8)	71.9	(±2.6)	21.7	(±2.4)	13.2	(±2.1)
Massachusetts	1296	83.6	(±2.4)	58.3	(±3.0)	73.7	(±2.8)	25.8	(±2.8)	15.2	(±2.3)
Michigan	2388	79.1	(±1.8)	47.4	(±2.2)	70.8	(±2.0)	20.1	(±1.8)	17.7	(±1.7)
Minnesota	3420	80.6	(±1.5)	59.4	(±1.8)	75.5	(±1.5)	33.2	(±1.7)	13.2	(±1.2)
Mississippi	1581	87.1	(±2.0)	31.4	(±2.7)	53.3	(±3.0)	31.7	(±2.7)	23.6	(±2.5)
Missouri	1508	87.9	(±1.9)	44.0	(±2.9)	66.7	(±2.6)	30.6	(±2.6)	19.8	(±2.2)
Montana	1188	77.6	(±2.8)	49.5	(±3.0)	76.4	(±2.7)	23.9	(±2.7)	15.3	(±2.4)
Nebraska	1612	89.2	(±1.7)	48.0	(±2.7)	70.6	(±2.5)	26.7	(±2.4)	13.6	(±1.9)
New Hampshire	1500	82.1	(±2.2)	55.4	(±2.8)	77.6	(±2.3)	23.8	(±2.4)	12.0	(±1.8)
New Mexico	1189	81.3	(±2.5)	43.7	(±3.2)	65.4	(±3.0)	27.1	(±2.8)	15.0	(±2.2)
New York	1399	83.1	(±2.3)	53.9	(±3.0)	65.5	(±2.9)	31.4	(±2.8)	14.8	(±2.1)
North Carolina	2130	83.0	(±2.0)	50.7	(±2.5)	62.3	(±2.4)	30.8	(±2.2)	20.2	(±2.0)
North Dakota	1620	86.3	(±1.8)	42.6	(±2.8)	69.3	(±2.6)	29.5	(±2.4)	13.3	(±1.8)
Ohio	1319	80.5	(±2.4)	47.2	(±3.2)	66.3	(±2.8)	27.5	(±2.7)	16.1	(±2.4)
Oklahoma	1375	88.7	(±1.9)	44.6	(±3.0)	61.9	(±2.9)	28.2	(±2.5)	14.3	(±2.1)
Oregon	3308	91.6	(±1.0)	52.6	(±1.9)	74.4	(±1.6)	18.9	(±1.5)	13.7	(±1.3)
Pennsylvania	2468	80.1	(±1.8)	48.9	(±2.2)	67.7	(±2.0)	30.0	(±2.0)	18.9	(±1.7)
Rhode Island	1805	87.3	(±1.8)	54.4	(±2.6)	71.5	(±2.4)	27.8	(±2.4)	16.6	(±2.0)
South Carolina	2236	90.0	(±1.4)	34.2	(±2.3)	59.9	(±2.4)	25.0	(±2.2)	16.6	(±1.9)
South Dakota	1799	78.5	(±2.1)	41.2	(±2.6)	66.8	(±2.4)	21.7	(±2.1)	11.2	(±1.6)
Tennessee	2697	88.4	(±1.3)	39.8	(±2.0)	57.9	(±2.2)	28.0	(±1.9)	18.1	(±1.7)
Texas	1497	90.7	(±1.7)	45.7	(±2.8)	64.3	(±3.0)	33.1	(±2.7)	18.2	(±2.2)
Utah	1793	82.4	(±2.0)	55.8	(±2.6)	79.6	(±1.9)	32.3	(±2.4)	14.4	(±1.9)
Vermont	1111	85.9	(±2.4)	53.8	(±3.5)	74.9	(±2.9)	18.3	(±2.7)	9.5	(±2.0)
Virginia	1764	89.7	(±1.6)	52.6	(±2.7)	69.3	(±2.5)	31.4	(±2.4)	19.7	(±2.2)
Washington	2101	94.7	(±1.1)	50.2	(±2.4)	73.0	(±2.1)	23.8	(±2.1)	12.9	(±1.6)
West Virginia	2372	81.2	(±1.8)	36.1	(±2.2)	60.9	(±2.2)	28.9	(±2.0)	19.3	(±1.8)
Wisconsin	1260	78.1	(±2.5)	51.1	(±3.0)	70.1	(±2.8)	31.8	(±2.8)	16.1	(±2.2)
Median		**83.0**		**46.6**		**67.7**		**27.8**		**16.1**	

*Aged ≥18 years.
†Confidence interval.

FIGURE I. Notifiable disease reports, comparison of 4-week totals ending November 16, 1991, with historical data — United States



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

TABLE I. Summary — cases of specified notifiable diseases, United States, cumulative, week ending November 16, 1991 (46th Week)

	Cum. 1991		Cum. 1991
AIDS	38,731	Measles: imported	202
Anthrax	-	indigenous	8,943
Botulism: Foodborne	21	Plague	10
Infant	68	Poliomyelitis, Paralytic*	-
Other	3	Psittacosis	73
Brucellosis	72	Rabies, human	3
Cholera	21	Syphilis, primary & secondary	36,795
Congenital rubella syndrome	19	Syphilis, congenital, age < 1 year†	1,669
Diphtheria	2	Tetanus	43
Encephalitis, post-infectious	72	Toxic shock syndrome	250
Gonorrhea	528,713	Trichinosis	61
Haemophilus influenzae (invasive disease)	2,384	Tuberculosis	20,189
Hansen Disease	125	Tularemia	177
Leptospirosis	50	Typhoid fever	408
Lyme Disease	8,118	Typhus fever, tickborne (RMSF)	604

*Four suspected cases of poliomyelitis have been reported in 1991; none of the 8 suspected cases in 1990 have been confirmed to date. Five of 13 suspected cases in 1989 were confirmed and all were vaccine associated.
†Includes updates for first two quarters of 1991.

TABLE II. Cases of selected notifiable diseases, United States, weeks ending November 16, 1991, and November 17, 1990 (46th 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. 1991	Cum. 1991	Cum. 1990	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991
UNITED STATES	38,731	12,895	824	72	528,713	597,202	20,477	14,779	2,687	1,030	1,088	8,118
NEW ENGLAND	1,592	1,455	29	3	12,771	16,314	508	730	60	28	75	1,579
Maine	51	153	3	-	147	192	19	27	4	-	4	-
N.H.	38	165	5	2	174	264	30	31	7	-	9	35
Vt.	18	229	5	-	49	46	23	15	7	1	4	7
Mass.	912	486	13	1	5,458	6,832	247	500	29	24	53	263
R.I.	78	415	1	-	1,102	1,102	90	23	11	3	5	157
Conn.	495	7	2	-	5,841	7,878	99	134	2	-	-	1,117
MID. ATLANTIC	10,369	2,462	60	11	62,332	78,721	2,135	1,510	316	19	300	4,818
Upstate N.Y.	1,404	1,235	31	7	11,745	12,971	780	518	178	10	104	3,117
N.Y. City	5,849	349	1	-	23,438	31,809	762	253	9	-	51	-
N.J.	2,059	-	-	-	10,288	13,124	245	348	85	-	31	795
Pa.	1,057	878	28	4	16,861	20,817	348	391	44	9	114	906
E.N. CENTRAL	2,871	2,502	241	7	101,188	113,541	2,653	1,711	412	71	218	297
Ohio	526	938	82	2	31,029	33,223	337	360	161	19	108	157
Ind.	279	187	22	1	10,551	10,117	355	184	1	1	17	11
Ill.	1,345	449	78	4	30,546	34,852	1,135	260	65	7	22	25
Mich.	528	813	54	-	23,330	27,452	263	561	123	44	40	104
Wis.	193	115	5	-	5,732	7,897	563	346	62	-	31	-
W.N. CENTRAL	1,048	638	60	7	25,806	30,338	2,054	649	277	23	57	292
Minn.	201	127	37	-	2,822	3,660	380	78	11	2	12	82
Iowa	92	150	-	4	1,714	2,059	47	40	10	4	11	19
Mo.	609	246	13	3	15,863	18,229	556	433	245	12	15	171
N. Dak.	4	9	2	-	75	123	42	4	5	1	1	1
S. Dak.	3	11	4	-	329	268	758	7	1	-	3	1
Nebr.	55	27	2	-	1,581	1,627	191	36	1	-	10	-
Kans.	84	68	2	-	3,422	4,372	80	51	4	4	5	18
S. ATLANTIC	9,057	2,337	161	30	156,641	170,256	1,632	3,090	345	199	177	643
Del.	67	68	4	-	2,588	2,836	8	43	5	2	2	65
Md.	808	298	22	1	17,743	21,170	254	345	45	13	35	261
D.C.	574	72	2	-	8,110	11,950	68	141	1	1	9	4
Va.	651	403	40	3	16,148	16,702	178	201	29	128	15	136
W. Va.	53	45	31	-	1,152	1,198	21	61	3	15	3	42
N.C.	475	313	29	-	31,365	26,431	155	485	104	-	24	77
S.C.	306	40	-	-	12,895	13,225	37	627	16	4	35	10
Ga.	1,325	306	9	2	35,049	36,714	204	480	75	-	17	27
Fla.	4,798	792	24	24	31,591	40,030	707	707	67	36	37	21
E.S. CENTRAL	935	769	39	1	52,391	52,821	223	1,194	366	3	53	102
Ky.	148	182	13	-	5,375	5,778	55	159	7	2	18	41
Tenn.	296	227	17	-	17,582	16,514	122	880	331	-	18	45
Ala.	304	283	9	1	16,629	17,728	36	143	23	1	16	16
Miss.	187	77	-	-	12,805	12,801	10	12	5	-	1	-
W.S. CENTRAL	3,744	1,253	108	4	59,187	64,860	2,628	1,956	111	197	43	73
Ark.	163	61	32	-	7,040	7,529	239	118	3	6	7	27
La.	650	130	17	-	13,574	11,821	118	286	6	8	8	3
Okla.	163	4	9	3	6,110	5,732	249	188	43	16	18	31
Tex.	2,768	1,058	50	1	32,463	39,778	2,022	1,364	59	167	10	12
MOUNTAIN	1,092	257	20	3	10,538	12,399	3,197	878	182	133	77	18
Mont.	25	18	1	-	86	194	78	68	5	5	5	-
Idaho	20	-	-	-	142	129	90	67	3	1	5	2
Wyo.	15	-	-	-	88	147	102	11	3	-	-	8
Colo.	375	102	8	1	2,894	3,618	581	129	93	25	14	-
N. Mex.	95	20	1	-	918	1,094	762	209	17	29	3	-
Ariz.	216	66	10	2	3,961	4,671	1,015	156	19	58	32	-
Utah	105	17	-	-	282	351	268	67	14	14	7	2
Nev.	241	34	-	-	2,167	2,195	301	171	28	1	11	6
PACIFIC	8,023	1,222	106	6	47,859	57,952	5,447	3,061	618	357	88	296
Wash.	455	-	10	1	4,089	5,016	488	388	134	19	10	3
Oreg.	235	-	-	-	1,790	2,253	357	264	113	9	3	-
Calif.	7,148	1,130	94	5	40,528	49,063	4,468	2,330	354	328	73	293
Alaska	19	47	2	-	797	1,062	89	36	13	1	-	-
Hawaii	166	45	-	-	655	558	45	43	4	-	2	-
Guam	2	1	-	2	27	269	-	-	-	-	-	-
P.R.	1,483	218	2	4	484	667	136	451	144	44	-	-
V.I.	13	-	-	-	332	406	1	10	-	-	-	-
Amer. Samoa	-	-	-	41	32	73	4	-	-	-	-	-
C.N.M.I.	-	-	-	135	58	176	3	6	-	-	-	-

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 November 16, 1991, and November 17, 1990 (46th Week)

Reporting Area	Malaria	Measles (Rubeola)					Menin-gococcal Infections	Mumps		Pertussis			Rubella		
		Indigenous		Imported*		Total									
	Cum. 1991	1991	Cum. 1991	1991	Cum. 1991	Cum. 1990	Cum. 1991	1991	Cum. 1991	1991	Cum. 1991	Cum. 1990	1991	Cum. 1991	Cum. 1990
UNITED STATES	1,058	50	8,943	-	202	25,279	1,763	138	3,598	39	2,305	3,830	2	1,296	1,043
NEW ENGLAND	67	-	64	-	17	294	140	-	27	5	262	384	-	4	8
Maine	1	-	7	-	-	30	12	-	-	-	52	20	-	-	1
N.H.	2	-	-	-	-	9	13	-	5	-	18	59	-	1	1
Vt.	4	-	5	-	-	1	15	-	4	-	4	7	-	-	-
Mass.	32	-	28	-	11	30	78	-	2	5	165	266	-	2	2
R.I.	7	-	3	-	1	30	1	-	4	-	-	7	-	-	1
Conn.	21	-	21	-	5	194	21	-	12	-	23	25	-	1	3
MID. ATLANTIC	197	25	4,688	-	7	1,621	190	1	271	2	198	517	-	562	11
Upstate N.Y.	46	-	334	-	4	318	96	1	97	2	123	313	-	539	10
N.Y. City	83	25	1,800	-	-	503	16	-	-	-	7	-	-	-	-
N.J.	53	-	1,013	-	2	411	39	-	65	-	6	36	-	-	-
Pa.	15	-	1,541	-	1	389	39	-	109	-	62	168	-	23	1
E.N. CENTRAL	85	-	75	-	20	3,540	299	9	355	1	362	970	-	317	162
Ohio	20	-	4	-	7	539	90	5	91	1	102	210	-	283	131
Ind.	3	-	1	-	5	418	37	-	8	-	69	136	-	2	-
Ill.	33	-	25	-	1	1,358	83	-	124	-	58	344	-	6	19
Mich.	26	-	43	-	-	473	66	4	107	-	37	79	-	25	9
Wis.	3	-	2	-	7	752	23	-	25	-	96	201	-	1	3
W.N. CENTRAL	36	-	39	-	16	872	104	2	112	1	187	201	-	19	40
Minn.	11	-	12	-	15	381	21	1	21	-	71	40	-	6	34
Iowa	7	-	17	-	-	26	14	-	21	-	23	18	-	6	4
Mo.	8	-	-	-	1	102	33	1	35	1	66	107	-	5	-
N. Dak.	1	-	-	-	-	-	1	-	2	-	3	3	-	1	1
S. Dak.	2	-	-	-	-	23	3	-	2	-	4	1	-	-	-
Nebr.	1	-	1	-	-	106	8	-	6	-	9	7	-	-	1
Kans.	6	-	9	-	-	234	24	-	25	-	11	25	-	1	-
S. ATLANTIC	216	9	528	-	23	1,307	313	116	1,342	-	230	307	-	10	21
Del.	3	-	21	-	-	11	2	-	6	-	-	9	-	-	-
Md.	59	-	173	-	3	212	32	3	236	-	55	63	-	1	2
D.C.	14	-	-	-	-	23	13	-	24	-	1	15	-	1	1
Va.	47	-	25	-	5	86	32	-	59	-	22	24	-	-	1
W. Va.	3	-	-	-	-	6	13	2	27	-	9	29	-	-	-
N.C.	13	-	40	-	4	35	53	-	241	-	38	76	-	2	1
S.C.	10	-	13	-	-	4	29	18	376	-	13	5	-	-	-
Ga.	21	-	10	-	5	358	65	-	71	-	46	38	-	-	1
Fla.	46	9	246	-	6	572	74	93	302	-	46	48	-	6	15
E.S. CENTRAL	20	-	29	-	3	199	109	1	227	2	94	152	-	100	4
Ky.	2	-	23	-	1	43	39	-	-	-	-	-	-	-	1
Tenn.	11	-	5	-	1	104	36	1	194	-	38	79	-	100	3
Ala.	7	-	1	-	1	25	32	-	13	2	54	65	-	-	-
Miss.	-	-	-	-	-	27	2	-	20	-	2	8	-	-	-
W.S. CENTRAL	66	12	198	-	14	4,295	121	5	299	4	143	187	-	7	66
Ark.	10	-	-	-	5	48	20	-	43	1	12	22	-	1	3
La.	17	U	-	U	-	10	34	U	29	U	16	32	U	-	-
Okla.	7	-	-	-	-	174	13	-	16	2	41	53	-	-	1
Tex.	32	12	198	-	9	4,063	54	5	211	1	74	80	-	6	62
MOUNTAIN	44	1	1,255	-	19	967	67	1	290	10	323	313	1	30	110
Mont.	1	-	-	-	-	1	10	-	-	1	5	35	1	4	15
Idaho	3	1	445	-	2	26	7	-	8	-	27	56	-	-	49
Wyo.	-	-	1	-	2	15	1	-	4	-	3	-	-	-	-
Colo.	13	-	1	-	5	138	14	1	133	2	130	115	-	2	4
N. Mex.	6	-	117	-	5	93	8	N	N	-	50	18	-	4	-
Ariz.	15	-	453	-	-	312	21	-	114	7	69	54	-	2	32
Utah	5	-	220	-	4	147	-	-	13	-	37	31	-	11	2
Nev.	1	-	18	-	1	235	6	-	18	-	2	4	-	7	8
PACIFIC	327	3	2,067	-	83	12,184	420	3	675	14	506	799	1	247	621
Wash.	23	-	46	-	15	254	58	-	167	-	128	206	-	8	-
Oreg.	11	-	52	-	41	212	53	N	N	1	67	105	-	3	74
Calif.	289	3	1,959	-	15	11,600	298	3	471	12	243	387	1	230	531
Alaska	-	-	2	-	3	80	9	-	12	-	13	7	-	1	-
Hawaii	4	-	8	-	9	38	2	-	25	1	55	94	-	5	16
Guam	-	U	-	U	-	1	-	U	-	U	-	1	U	-	-
P.R.	1	-	94	-	-	1,665	19	1	12	-	50	16	-	-	-
V.I.	2	U	-	U	2	24	-	U	9	U	-	-	U	-	-
Amer. Samoa	-	U	-	U	-	566	-	U	2	U	-	-	U	-	-
C.N.M.I.	1	U	-	U	-	65	-	U	-	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 selected notifiable diseases, United States, weeks ending November 16, 1991, and November 17, 1990 (46th 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	36,795	43,530	250	20,189	20,568	177	408	604	5,779
NEW ENGLAND	909	1,490	14	567	530	5	32	9	121
Maine	3	7	4	33	18	-	1	-	-
N.H.	12	49	3	5	3	-	1	-	2
Vt.	2	2	-	9	8	-	-	-	-
Mass.	435	600	7	308	290	5	27	8	14
R.I.	45	23	-	69	62	-	-	-	-
Conn.	412	809	-	143	149	-	3	1	105
MID. ATLANTIC	6,295	8,514	40	4,635	4,892	2	99	23	2,011
Upstate N.Y.	138	813	19	284	340	1	19	12	823
N.Y. City	3,604	3,906	2	2,929	3,061	-	56	1	-
N.J.	1,126	1,343	-	800	838	1	17	6	894
Pa.	1,427	2,452	19	622	653	-	7	4	294
E.N. CENTRAL	4,438	3,176	47	2,020	1,974	8	35	42	168
Ohio	569	482	21	330	349	2	3	24	19
Ind.	154	95	-	209	196	-	-	10	28
Ill.	2,162	1,300	15	1,035	977	4	15	5	35
Mich.	1,032	932	11	360	381	2	12	3	33
Wis.	521	367	-	86	71	-	5	-	53
W.N. CENTRAL	759	472	39	451	540	50	6	38	770
Minn.	60	82	8	87	105	1	2	-	276
Iowa	63	69	7	55	57	-	-	1	148
Mo.	489	253	13	206	271	40	1	26	20
N. Dak.	-	1	-	6	17	-	-	-	91
S. Dak.	1	3	1	30	13	5	-	1	165
Nebr.	15	14	1	18	16	1	3	5	17
Kans.	131	50	9	49	61	3	-	5	53
S. ATLANTIC	10,726	13,788	23	3,783	3,780	4	69	275	1,341
Del.	150	166	1	30	33	-	-	-	158
Md.	875	1,059	1	360	310	-	10	27	510
D.C.	638	1,004	1	163	142	-	2	-	19
Va.	793	827	5	290	342	-	10	19	228
W. Va.	26	18	-	63	68	-	1	4	47
N.C.	1,782	1,548	10	493	519	1	4	152	23
S.C.	1,372	945	2	372	420	1	4	35	97
Ga.	2,584	3,490	-	725	620	1	5	35	231
Fla.	2,506	4,731	3	1,287	1,326	1	33	3	28
E.S. CENTRAL	4,074	4,005	11	1,429	1,506	19	2	98	144
Ky.	97	103	4	304	333	4	2	28	44
Tenn.	1,321	1,666	5	509	437	14	-	54	29
Ala.	1,494	1,214	2	334	433	1	-	16	71
Miss.	1,162	1,022	-	282	303	-	-	-	-
W.S. CENTRAL	6,634	7,553	14	2,426	2,426	54	25	109	559
Ark.	581	502	3	209	294	41	-	28	47
La.	2,421	2,364	-	197	251	-	5	-	5
Okla.	179	224	4	154	182	12	3	79	160
Tex.	3,453	4,463	7	1,866	1,699	1	17	2	347
MOUNTAIN	548	770	30	546	490	29	12	8	234
Mont.	6	-	1	6	22	9	-	6	38
Idaho	4	6	-	9	11	-	-	-	6
Wyo.	9	3	-	4	5	1	-	-	83
Colo.	78	48	5	56	45	9	2	2	25
N. Mex.	28	40	7	62	92	2	2	-	6
Ariz.	320	547	5	282	221	2	7	-	46
Utah	6	17	12	40	38	6	-	-	19
Nev.	97	109	-	87	56	-	1	-	11
PACIFIC	2,412	3,762	32	4,332	4,430	6	128	2	431
Wash.	166	345	4	272	247	2	6	1	1
Oreg.	80	123	-	108	115	2	5	1	5
Calif.	2,154	3,259	28	3,710	3,855	2	106	-	421
Alaska	4	17	-	52	57	-	-	-	3
Hawaii	8	18	-	190	156	-	11	-	1
Guam	1	2	-	8	40	-	-	-	-
P.R.	378	302	-	203	102	-	9	-	60
V.I.	89	12	-	3	4	-	-	-	-
Amer. Samoa	-	-	-	1	15	-	-	-	-
C.N.M.I.	3	5	-	12	50	-	-	-	-

U: Unavailable

TABLE III. Deaths in 121 U.S. cities,* week ending November 16, 1991 (46th Week)

Reporting Area	All Causes, By Age (Years)						P&I†
	All Ages	≥65	45-64	25-44	1-24	<1	Total
NEW ENGLAND	644	439	108	57	12	28	33
Boston, Mass.	189	114	30	33	2	10	12
Bridgeport, Conn.	41	31	5	2	2	1	3
Cambridge, Mass.	21	18	2	1	-	-	-
Fall River, Mass.	29	25	2	2	-	-	-
Hartford, Conn.	57	38	12	2	-	5	-
Lowell, Mass.	25	20	2	-	2	1	2
Lynn, Mass.	15	11	1	2	1	-	1
New Bedford, Mass.	25	16	7	1	1	-	2
New Haven, Conn.	43	31	8	2	1	1	1
Providence, R.I.	49	35	11	2	1	-	1
Somerville, Mass.	8	6	1	1	-	-	1
Springfield, Mass.	47	30	13	2	-	2	2
Waterbury, Conn.	36	26	7	2	1	-	5
Worcester, Mass.	59	38	7	5	1	8	3
MID. ATLANTIC	2,408	1,579	430	257	71	71	138
Albany, N.Y.	44	28	10	2	1	3	1
Allentown, Pa.	21	18	2	1	-	-	2
Buffalo, N.Y.	102	70	16	10	4	2	2
Camden, N.J.	32	16	9	4	1	2	4
Elizabeth, N.J.	34	21	11	2	-	-	1
Erie, Pa.§	43	30	9	1	1	2	3
Jersey City, N.J.	35	26	5	2	1	1	2
New York City, N.Y.	1,230	780	221	158	39	32	61
Newark, N.J.	70	34	16	13	3	4	9
Paterson, N.J.	26	15	5	6	-	-	-
Philadelphia, Pa.	300	198	49	30	12	11	10
Pittsburgh, Pa.§	88	54	19	7	2	6	8
Reading, Pa.	50	37	11	2	-	-	13
Rochester, N.Y.	116	93	7	10	2	4	5
Schenectady, N.Y.	30	20	7	2	1	-	-
Scranton, Pa.§	31	24	5	2	-	-	2
Syracuse, N.Y.	82	57	15	3	4	3	7
Trenton, N.J.	20	15	3	1	-	1	2
Utica, N.Y.	23	20	3	-	-	-	3
Yonkers, N.Y.	31	23	7	1	-	-	3
E.N. CENTRAL	2,047	1,203	418	216	127	83	109
Akron, Ohio	43	32	6	2	-	3	2
Canton, Ohio	32	21	9	1	1	-	3
Chicago, Ill.	530	189	116	114	92	19	20
Cincinnati, Ohio	107	66	28	6	3	4	11
Cleveland, Ohio	128	77	29	12	3	7	4
Columbus, Ohio	103	77	16	7	2	1	5
Dayton, Ohio	115	84	23	4	1	3	6
Detroit, Mich.	278	172	50	21	10	25	6
Evansville, Ind.	66	49	12	4	-	1	5
Fort Wayne, Ind.	58	40	11	2	4	1	3
Gary, Ind.	15	7	5	3	-	-	-
Grand Rapids, Mich.	59	42	12	3	-	2	4
Indianapolis, Ind.	190	115	44	17	7	7	14
Madison, Wis.	60	36	13	7	1	3	4
Milwaukee, Wis.	110	78	22	7	2	1	10
Peoria, Ill.	47	35	10	1	-	1	3
Rockford, Ill.	50	38	4	4	1	3	4
South Bend, Ind.	56	45	8	1	-	2	5
Toledo, Ohio	U	U	U	U	U	U	U
Youngstown, Ohio	U	U	U	U	U	U	U
W.N. CENTRAL	849	617	140	48	21	23	34
Des Moines, Iowa	50	35	8	2	2	3	4
Duluth, Minn.	29	28	1	-	-	-	-
Kansas City, Kans.	26	17	5	4	-	-	-
Kansas City, Mo.	150	107	25	9	6	3	5
Lincoln, Nebr.	22	18	2	1	-	1	1
Minneapolis, Minn.	213	164	31	8	5	5	18
Omaha, Nebr.	109	75	22	7	2	3	2
St. Louis, Mo.	153	108	25	10	6	4	1
St. Paul, Minn.	51	34	11	2	-	4	3
Wichita, Kans.	46	31	10	5	-	-	-
S. ATLANTIC	1,208	712	275	132	45	43	53
Atlanta, Ga.	172	102	38	23	5	4	5
Baltimore, Md.	168	91	45	22	3	7	10
Charlotte, N.C.	71	51	12	4	2	2	3
Jacksonville, Fla.	137	78	36	12	7	4	5
Miami, Fla.	105	57	24	17	4	2	3
Norfolk, Va.	58	30	13	8	3	4	4
Richmond, Va.	78	51	11	13	2	1	6
Savannah, Ga.	44	32	7	1	1	3	4
St. Petersburg, Fla.	61	43	11	1	2	4	-
Tampa, Fla.	160	100	38	10	7	5	10
Washington, D.C.	128	59	35	18	9	7	3
Wilmington, Del.	26	18	5	3	-	-	-
E.S. CENTRAL	722	479	151	51	27	14	48
Birmingham, Ala.	97	59	19	12	6	1	1
Chattanooga, Tenn.	66	46	14	3	1	2	6
Knoxville, Tenn.	71	52	11	5	2	1	7
Louisville, Ky.	90	53	22	7	5	3	4
Memphis, Tenn.	180	124	38	11	4	3	16
Mobile, Ala.	69	42	19	4	3	1	3
Montgomery, Ala.	43	25	11	2	3	2	1
Nashville, Tenn.	106	78	17	7	3	1	10
W.S. CENTRAL	1,251	768	267	142	43	31	72
Austin, Tex.	58	37	10	7	2	2	2
Baton Rouge, La.	55	32	14	5	4	-	-
Corpus Christi, Tex.	39	27	4	7	-	1	4
Dallas, Tex.	180	106	35	25	12	2	3
El Paso, Tex.	69	44	16	8	-	1	6
Ft. Worth, Tex.	100	68	16	5	6	5	6
Houston, Tex.	322	175	90	39	9	9	29
Little Rock, Ark.	48	31	11	2	2	2	3
New Orleans, La.	92	47	19	20	3	3	-
San Antonio, Tex.	162	114	26	14	2	6	10
Shreveport, La.	46	27	13	5	1	-	4
Tulsa, Okla.	80	60	13	5	2	-	5
MOUNTAIN	584	397	103	52	17	15	38
Albuquerque, N.M.	U	U	U	U	U	U	U
Colo. Springs, Colo.	42	33	4	4	-	1	3
Denver, Colo.	97	60	16	13	4	4	6
Las Vegas, Nev.	97	60	22	9	4	2	8
Ogden, Utah	28	23	3	1	1	-	1
Phoenix, Ariz.	126	84	29	7	3	3	7
Pueblo, Colo.	30	22	5	2	1	-	6
Salt Lake City, Utah	57	36	8	7	1	5	4
Tucson, Ariz.	107	79	16	9	3	-	3
PACIFIC	1,612	1,064	301	154	50	36	83
Berkeley, Calif.	17	11	4	1	-	1	1
Fresno, Calif.	47	35	10	2	-	-	8
Glendale, Calif.	19	15	2	1	1	-	1
Honolulu, Hawaii	U	U	U	U	U	U	U
Long Beach, Calif.	66	42	11	6	3	4	13
Los Angeles, Calif.	388	244	73	48	15	2	12
Pasadena, Calif.	40	29	4	4	-	3	1
Portland, Oreg.	106	76	19	7	2	2	4
Sacramento, Calif.	160	101	42	9	3	5	11
San Diego, Calif.	123	82	21	13	5	2	9
San Francisco, Calif.	186	110	37	30	5	3	5
San Jose, Calif.	167	111	30	12	6	8	7
Santa Cruz, Calif.	25	19	3	2	1	-	1
Seattle, Wash.	129	86	21	13	5	4	4
Spokane, Wash.	49	35	10	2	2	-	4
Tacoma, Wash.	90	68	14	4	2	2	2
TOTAL	11,325¶	7,258	2,193	1,109	413	344	608

*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

†Pneumonia and influenza.

§Because of changes in reporting methods in these 3 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

¶Total includes unknown ages.

U: Unavailable

HIV/AIDS Knowledge and Awareness — Continued

could look and feel healthy (range: 53.3% [Mississippi] to 79.6% [Utah]; median: 67.7%). In most states, a limited proportion of respondents were aware of drugs that can lengthen the life of persons with AIDS (range: 31.4% [Mississippi] to 59.4% [Minnesota]; median: 46.6%).

Respondents were asked, "There has been a lot of talk about how you can and cannot get infected with the AIDS virus. Do you think you can get infected from: a) giving blood; b) mosquitoes or other insects?" The percentage of respondents who erroneously believed that a person could become infected by donating blood ranged from 18.3% (Vermont) to 41.2% (Hawaii) (median: 27.8%). The percentage of persons who erroneously believed that infection can result from the bites of mosquitoes or other insects ranged from 9.3% (District of Columbia) to 23.6% (Mississippi) (median: 16.1%).

Respondents were asked, "Where could you go to be tested for the AIDS virus infection?"; if a response was given to this question, respondents were asked, "Where else could you go?" The most frequently specified sources in response to these two questions were "private doctor/health maintenance organization" (range: 40.1 [Vermont] to 70.3% [Arizona]; median: 58.8%), "hospital/emergency room" (range: 23.5% [Oklahoma] to 69.0% [Maine]; median: 39.7%), and "health department" (range: 2.3% [Maine] to 54.6% [Georgia]; median: 21.1%) (Table 2). A limited number of respondents specified the public programs that offer counseling and testing, including "AIDS clinic/testing site" (range: 1.4% [Vermont] to 15.0% [Hawaii]; median: 6.1%); "blood bank/plasma center/Red Cross" (range: 1.6% [Vermont] to 12.0% [Delaware]; median: 5.1%); "family planning clinic" (range: 0.4% [Kentucky] to 23.2% [North Dakota]; median: 1.5%); and "sexually transmitted diseases (STD) clinic" (range: 0.3% [Mississippi, Oregon, Pennsylvania, Tennessee, and West Virginia] to 4.9% [District of Columbia]; median: 1.1%).

Reported by the following state BRFSS coordinators: L Eldridge, Alabama; J Contreras, Arizona; W Wright, California; C Garrett, Colorado; M Adams, Connecticut; F Breukelman, Delaware; L Jones, District of Columbia; S Hoescherl, Florida; J Smith, Georgia; A Villafuerte, Hawaii; J Mitten, Idaho; B Steiner, Illinois; S Joseph, Indiana; S Schoon, Iowa; K Bramblett, Kentucky; S Kirkconnell, Louisiana; J Sheridan, Maine; A Weinstein, Maryland; R Lederman, Massachusetts; J Thrush, Michigan; N Salem, Minnesota; E Jones, Mississippi; J Jackson-Thompson, Missouri; M McFarland, Montana; S Spanhake, Nebraska; K Zaso, New Hampshire; M Watson, New Mexico; 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 Cabral, Rhode Island; M Mace, South Carolina; S Moritz, South Dakota; D Ridings, Tennessee; J Fellows, Texas; L Post-Nilson, Utah; S Rosenstreich, Vermont; J Bowie, Virginia; K Tollestrup, Washington; R Barker, West Virginia; E Cautley, Wisconsin. Behavioral Surveillance Br, Office of Surveillance and Analysis, National Center for Chronic Disease Prevention and Health Promotion; Behavioral and Prevention Research Br, Div of Sexually Transmitted Diseases and HIV Prevention, National Center for Prevention Svcs, CDC.

Editorial Note: The BRFSS results indicate that more than half of all respondents in most of the states surveyed were unaware of drugs that can benefit persons infected with HIV. In general, persons who are unaware of therapies for HIV may be reluctant to seek counseling, testing, and treatment.

The findings in this report regarding misconceptions about transmission of HIV are consistent with previous reports (*4–6*)—in particular, a substantial proportion of persons erroneously believed that HIV infection can be transmitted through insect bites or blood donation. Although such beliefs do not increase risks directly for HIV infection, erroneous beliefs about blood donation hold the potential for exacerbating shortages of blood supplies. In addition, in some states, substantial proportions of

TABLE 2. Percentage of respondents* having knowledge of sources† Behavioral Risk Factor Surveillance System, United States, 1990

Area	Private doctor/ HMO§		Blood bank/ Plasma center/ Red Cross		Health department		AIDS clinic/ testing site		Hospital/ Emergency room	
	%	(95% CI**)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
Alabama	67.5	(±2.3)	3.1	(±0.8)	54.4	(±2.4)	2.7	(±0.8)	29.0	(±2.2)
Arizona	70.3	(±2.6)	5.4	(±1.2)	26.4	(±2.5)	7.9	(±1.7)	26.3	(±2.4)
California	58.8	(±2.2)	7.6	(±1.1)	18.9	(±1.7)	10.4	(±1.3)	34.8	(±2.1)
Colorado	62.9	(±2.5)	7.7	(±1.5)	23.4	(±2.3)	5.8	(±1.3)	49.6	(±2.7)
Connecticut	56.3	(±2.5)	6.1	(±1.2)	7.6	(±1.3)	8.7	(±1.4)	46.7	(±2.6)
Delaware	66.8	(±2.8)	12.0	(±1.9)	6.9	(±1.3)	5.1	(±1.2)	52.3	(±2.9)
District of Columbia	56.3	(±3.1)	3.3	(±1.0)	6.7	(±1.4)	11.5	(±1.8)	28.7	(±2.8)
Florida	66.5	(±2.3)	6.3	(±1.2)	33.3	(±2.3)	10.8	(±1.5)	39.7	(±2.4)
Georgia	66.8	(±2.5)	2.9	(±0.9)	54.6	(±2.5)	6.2	(±1.2)	40.3	(±2.5)
Hawaii	56.4	(±2.7)	5.2	(±1.2)	21.9	(±2.1)	15.0	(±2.0)	25.6	(±2.4)
Idaho	61.9	(±2.6)	2.7	(±0.9)	32.9	(±2.6)	3.7	(±1.0)	32.6	(±2.7)
Illinois	58.7	(±2.5)	2.5	(±0.8)	17.3	(±1.9)	7.3	(±1.5)	46.7	(±2.7)
Indiana	58.8	(±2.2)	5.0	(±1.0)	14.4	(±1.6)	6.0	(±1.1)	50.2	(±2.2)
Iowa	69.1	(±2.6)	7.6	(±1.5)	5.1	(±1.1)	5.3	(±1.4)	61.7	(±2.8)
Kentucky	52.4	(±2.7)	4.5	(±1.1)	42.7	(±2.7)	6.0	(±1.3)	40.7	(±2.7)
Louisiana	59.8	(±4.3)	4.5	(±1.8)	24.2	(±3.8)	4.8	(±1.9)	39.5	(±4.3)
Maine	58.3	(±3.2)	5.4	(±1.4)	2.3	(±0.8)	10.7	(±1.9)	69.0	(±2.9)
Maryland	58.8	(±2.9)	5.1	(±1.2)	27.1	(±2.6)	6.1	(±1.3)	39.3	(±2.9)
Massachusetts	49.4	(±3.1)	5.9	(±1.5)	6.1	(±1.5)	7.7	(±1.6)	57.2	(±3.0)
Michigan	64.6	(±2.2)	4.4	(±0.9)	29.6	(±2.0)	4.0	(±0.9)	35.6	(±2.2)
Minnesota	57.7	(±1.9)	4.9	(±0.8)	10.7	(±1.1)	6.2	(±0.9)	37.0	(±1.8)
Mississippi	57.5	(±2.8)	2.7	(±1.1)	53.0	(±3.0)	2.1	(±0.7)	31.3	(±2.7)
Missouri	61.9	(±2.8)	7.0	(±1.4)	15.0	(±1.8)	4.1	(±1.1)	50.8	(±2.8)
Montana	57.8	(±3.3)	2.7	(±1.0)	29.9	(±2.9)	6.1	(±1.6)	47.4	(±3.2)
Nebraska	63.9	(±2.6)	6.5	(±1.4)	13.4	(±1.9)	8.6	(±1.5)	35.4	(±2.6)
New Hampshire	56.3	(±2.8)	6.8	(±1.4)	6.6	(±1.3)	9.0	(±1.6)	61.6	(±2.7)
New Mexico	57.6	(±3.1)	4.8	(±1.3)	21.1	(±2.7)	8.5	(±1.9)	38.0	(±3.1)
New York	50.5	(±3.1)	4.9	(±1.3)	21.1	(±2.5)	13.1	(±1.9)	48.2	(±3.1)
North Carolina	63.9	(±2.3)	3.0	(±0.8)	54.1	(±2.5)	5.5	(±1.1)	33.2	(±2.2)
North Dakota	45.0	(±2.7)	5.9	(±1.4)	13.5	(±1.8)	3.0	(±0.9)	39.9	(±2.8)
Ohio	68.8	(±2.9)	5.8	(±1.5)	17.8	(±2.4)	11.8	(±2.0)	46.7	(±3.2)

where HIV/AIDS test could be obtained, by area —

Family planning clinic		STD clinic[1]		Community health clinic		Industry/ Employer		Military induction	
%	(96% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
0.5	(±1.2)	0.4	(±0.3)	5.9	(±1.2)	0.2	(±0.2)	1.0	(±0.5)
4.6	(±1.8)	1.4	(±0.7)	10.9	(±1.8)	1.0	(±0.5)	0.8	(±0.5)
3.4	(±1.6)	4.0	(±0.8)	15.8	(±1.6)	0.3	(±0.2)	0.8	(±0.4)
3.3	(±2.0)	1.2	(±0.7)	15.2	(±2.0)	0.5	(±0.4)	1.1	(±0.6)
1.4	(±1.4)	1.5	(±0.6)	9.2	(±1.4)	0.5	(±0.4)	0.3	(±0.2)
1.5	(±2.3)	0.9	(±0.6)	20.9	(±2.3)	0.6	(±0.4)	0.8	(±0.5)
3.9	(±1.5)	4.9	(±1.3)	6.1	(±1.5)	2.4	(±0.9)	2.2	(±0.9)
0.9	(±0.6)	0.8	(±0.4)	1.8	(±0.6)	0.5	(±0.4)	1.2	(±0.5)
0.8	(±0.7)	0.8	(±0.5)	1.7	(±0.7)	0.1	(±0.1)	1.0	(±0.6)
2.6	(±1.7)	2.5	(±0.8)	9.8	(±1.7)	0.7	(±0.4)	3.9	(±1.0)
0.6	(±1.9)	0.4	(±0.4)	13.1	(±1.9)	0.2	(±0.2)	0.6	(±0.4)
1.0	(±1.4)	1.4	(±0.6)	7.3	(±1.4)	0.7	(±0.4)	0.3	(±0.4)
2.3	(±1.5)	1.3	(±0.5)	13.5	(±1.5)	0.5	(±0.3)	0.2	(±0.2)
2.4	(±2.0)	0.6	(±0.4)	14.5	(±2.0)	0.2	(±0.3)	0.3	(±0.3)
0.4	(±0.7)	1.5	(±0.7)	2.0	(±0.7)	0.1	(±0.2)	0.7	(±0.5)
1.0	(±2.2)	0.7	(±0.6)	7.5	(±2.2)	0.1	(±0.2)	1.0	(±1.1)
4.0	(±1.7)	1.7	(±0.7)	8.5	(±1.7)	0.5	(±0.4)	1.4	(±0.8)
1.6	(±1.7)	1.3	(±0.7)	9.2	(±1.7)	0.7	(±0.5)	0.8	(±0.4)
1.2	(±1.9)	2.7	(±1.0)	10.5	(±1.9)	0.6	(±0.5)	0.5	(±0.4)
1.6	(±1.4)	1.0	(±0.5)	11.9	(±1.4)	0.3	(±0.3)	0.3	(±0.2)
1.1	(±1.8)	1.0	(±0.4)	35.1	(±1.8)	0.1	(±0.1)	0.7	(±0.3)
1.6	(±0.9)	0.3	(±0.3)	2.4	(±0.9)	0.1	(±0.1)	1.0	(±0.7)
2.2	(±1.9)	1.6	(±0.7)	13.0	(±1.9)	0.1	(±0.1)	0.8	(±0.5)
4.9	(±1.6)	0.7	(±0.5)	7.2	(±1.6)	0.5	(±0.5)	1.3	(±0.7)
1.2	(±1.4)	3.6	(±1.0)	6.7	(±1.4)	0.2	(±0.2)	0.8	(±0.5)
2.6	(±2.2)	1.1	(±0.5)	17.5	(±2.2)	0.2	(±0.2)	0.3	(±0.2)
4.0	(±2.0)	1.0	(±0.6)	9.6	(±2.0)	0.6	(±0.4)	2.6	(±1.0)
1.2	(±1.0)	1.8	(±0.8)	3.3	(±1.0)	0.2	(±0.2)	0.4	(±0.3)
0.9	(±0.6)	1.0	(±0.5)	2.0	(±0.6)	0.6	(±0.3)	0.7	(±0.4)
23.2	(±1.9)	1.4	(±0.7)	11.7	(±1.9)	0.2	(±0.2)	2.5	(±1.0)
4.7	(±1.1)	2.5	(±1.1)	3.0	(±1.1)	0.7	(±0.5)	0.6	(±0.4)

Oklahoma	62.8	(±2.9)	6.6	(±1.5)	40.5	(±2.8)	4.8	(±1.3)	23.5	(±2.5)	1.4	(±1.6)	0.4	(±0.4)	5.7	(±1.6)	0.4	(±0.3)	1.4	(±0.7)
Oregon	68.9	(±1.8)	5.8	(±0.9)	29.5	(±1.7)	3.7	(±0.7)	36.3	(±1.8)	0.5	(±1.3)	0.3	(±0.2)	13.9	(±1.3)	0.2	(±0.2)	0.1	(±0.1)
Pennsylvania	51.1	(±2.2)	6.4	(±1.1)	7.3	(±1.1)	4.9	(±1.0)	59.4	(±2.2)	0.9	(±1.2)	0.3	(±0.3)	8.6	(±1.2)	0.2	(±0.2)	0.3	(±0.2)
Rhode Island	42.6	(±2.5)	9.4	(±1.4)	15.0	(±1.7)	10.1	(±1.5)	53.2	(±2.6)	1.7	(±1.6)	1.4	(±0.6)	10.7	(±1.6)	0.5	(±0.4)	0.4	(±0.3)
South Carolina	67.9	(±2.2)	2.7	(±0.8)	48.9	(±2.4)	1.6	(±0.6)	32.1	(±2.4)	1.7	(±0.9)	0.4	(±0.3)	3.9	(±0.9)	0.2	(±0.2)	1.5	(±0.6)
South Dakota	52.1	(±2.6)	4.3	(±1.0)	7.1	(±1.3)	2.8	(±0.9)	47.0	(±2.8)	1.2	(±2.4)	0.7	(±0.4)	27.4	(±2.4)	0.2	(±0.2)	2.3	(±0.9)
Tennessee	67.4	(±2.0)	3.3	(±0.8)	47.5	(±2.2)	2.5	(±0.7)	30.4	(±2.0)	1.7	(±0.7)	0.3	(±0.2)	2.3	(±0.7)	0.2	(±0.2)	0.7	(±0.4)
Texas	61.5	(±2.8)	6.1	(±1.2)	15.6	(±2.1)	9.6	(±1.7)	34.2	(±2.7)	1.2	(±2.4)	2.3	(±1.0)	18.7	(±2.4)	0.7	(±0.5)	1.2	(±0.7)
Utah	59.4	(±2.6)	5.2	(±1.1)	30.5	(±2.3)	2.4	(±0.8)	49.4	(±2.7)	1.2	(±2.0)	2.1	(±0.8)	16.4	(±2.0)	0.5	(±0.3)	0.7	(±0.4)
Vermont	40.1	(±3.4)	1.6	(±0.8)	3.9	(±1.6)	1.4	(±0.7)	38.3	(±3.4)	0.9	(±1.1)	0.4	(±0.5)	2.3	(±1.1)	0.0	(±0.0)	0.6	(±0.6)
Virgina	61.5	(±2.6)	4.0	(±1.0)	28.1	(±2.4)	9.0	(±1.5)	37.7	(±2.5)	2.1	(±1.2)	3.1	(±0.9)	5.7	(±1.2)	0.6	(±0.4)	3.2	(±1.0)
Washington	68.2	(±2.2)	6.6	(±1.3)	29.7	(±2.1)	2.8	(±0.8)	29.8	(±2.2)	0.7	(±1.9)	0.8	(±0.4)	19.8	(±1.9)	0.2	(±0.2)	1.0	(±0.5)
West Virginia	54.2	(±2.2)	3.2	(±0.9)	26.0	(±2.1)	6.7	(±1.1)	55.5	(±2.3)	1.3	(±0.8)	0.3	(±0.3)	3.6	(±0.8)	0.2	(±0.2)	0.2	(±0.2)
Wisconsin	58.2	(±3.0)	4.4	(±1.2)	8.0	(±1.6)	6.8	(±1.4)	40.5	(±3.0)	1.9	(±2.1)	1.7	(±0.7)	14.4	(±2.1)	0.4	(±0.3)	0.3	(±0.3)
Median	**58.8**		**5.1**		**21.1**		**6.1**		**39.7**		**1.5**		**1.1**		**9.2**		**0.3**		**0.8**	

*Aged ≥18 years.
†Respondents were asked, "Where could you go to be tested for the AIDS virus infection?"; if a response was given to this question, respondents were asked, "Where else could you go?" Respondents could provide 0–2 answers.
§Health maintenance organization.
¶Sexually transmitted diseases.
**Confidence interval.

HIV/AIDS Knowledge and Awareness — Continued

participants did not believe that persons infected with HIV could not look or feel healthy; this belief could cause some persons at risk for HIV infection to delay seeking testing and treatment. Thus, the BRFSS results may be of particular use to public information programs in states where misperceptions of AIDS transmission were high and in which the incidence of AIDS is high.

BRFSS findings are also consistent with results of CDC's National Health Interview Survey (NHIS) regarding knowledge of sources for HIV testing. In June 1990, among respondents to the NHIS, the two most frequently specified sources where HIV tests could be obtained were private doctors/health maintenance organizations and hospitals/emergency rooms (*6*). Only a limited proportion of BRFSS and NHIS respondents specified AIDS clinics and counseling and testing sites, STD clinics, family planning clinics, and public health departments. However, approximately 20% of the nearly 1 million persons estimated to be infected with HIV have been identified by federally funded testing programs (*7*); in 1990, these sites performed most of the publicly funded HIV tests and counseling sessions reported to CDC (*8,9*).

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Epidemiologic Notes and Reports

Foodborne Nosocomial Outbreak of *Salmonella reading* — Connecticut

This report describes an outbreak of nosocomial salmonellosis associated with consumption of improperly thawed and cooked turkey. Although the outbreak occurred 1 year ago, this report is a timely reminder of the importance of proper cooking and handling of turkey—especially during the holiday season.

On November 13, 1990, an acute-care hospital in Connecticut submitted three isolates of group B *Salmonella* to the Connecticut State Department of Health Services Laboratory for serotyping: two isolates were from patients and one was from a hospital food-service employee. Stool had been cultured from one patient on November 3 (12 days after admission) because of diarrhea, and from the other patient

Salmonella reading — *Continued*

on November 4 (3 days after admission) because of an episode of loose stools. The hospital food-service employee had had onset of diarrhea on November 4 and stool had been cultured on November 6. All three isolates were serotyped as *S. reading.*

To identify other potential cases of *S. reading* infection, the hospital's infection-control department interviewed and obtained stool cultures from all 82 food-service employees, all 26 symptomatic nonfood-service employees, and a convenience sample of 24 asymptomatic nonfood-service employees. In addition, stool cultures were obtained from all 75 hospital inpatients who had had diarrhea or other symptoms suggestive of salmonellosis from November 1 through December 1.

S. reading was isolated from 20 (24%) food-service employees, four (8%) symptomatic nonfood-service employees, and three (4%) hospital inpatients. Onset of illness in symptomatic persons occurred from October 29 through November 12. Most persons had mild diarrhea, with a median duration of 2 days. The Connecticut State Department of Health Services had received no reports of other isolates of *S. reading* from the area or surrounding communities.

Analysis of stool-culture findings and a food-preference questionnaire administered to food-service employees implicated consumption of turkey as the likely source of salmonellosis. Of the 29 food-service employees who reported they regularly ate turkey in the hospital cafeteria, stool cultures from 19 (66%) yielded *S. reading,* compared with one from the 53 (2%) employees who ate turkey infrequently (relative risk = 34.7; 95% confidence interval 4.9–246.3). The three hospital inpatients and the four nonfood-service employees who were culture-positive all reported eating turkey in the hospital during October 29–November 3.

Turkey salad, turkey sandwiches, and chef's salad with turkey were served in the hospital cafeteria and were on the inpatient menu every day. Frozen 18–20-pound turkey breasts were routinely cooked in a slow roaster oven for 5 hours at 250 F (121 C), then for 10 hours at 160 F (71 C); however, core temperatures were not measured. After cooking, turkey dishes were kept refrigerated for up to 72 hours.

On November 21, 1990, the hospital instituted proper cooking procedures for turkey (i.e., thawing frozen turkey before cooking in a standard oven to a core temperature of 165 F [74 C]). No additional cases of *S. reading* infection have been reported.

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Editorial Note: Because age and underlying medical conditions may predispose hospital patients to severe outcomes from *Salmonella* infection (*1*), the occurrence of even one case of suspected nosocomially acquired salmonellosis requires prompt investigation to determine the source. The investigation of this outbreak detected an improper cooking procedure for a frequently prepared food and resulted in the implementation of standard preventive measures.

Transmission of *Salmonella* is more likely to be associated with contaminated food that has been improperly prepared than with contamination of food by asymptomatically infected food handlers (*2*). For example, in this outbreak, 12 asymptomatically infected food-service employees prepared food (until culture results were obtained) and were potential sources for nosocomial infection; however, the investigation suggested that infection and illness were more likely to have been

Salmonella reading — *Continued*

associated with consumption of improperly prepared turkey. Cooking procedures were not thoroughly reviewed until turkey was epidemiologically implicated by the infection-control department during the outbreak investigation.

A thorough review of food-preparation procedures—especially for foods at high risk for contamination with *Salmonella* (e.g., poultry, meat, and eggs)—during inspection or internal monitoring can reduce the potential for foodborne outbreaks in hospitals and other health-care facilities. In addition, employees with symptoms of gastrointestinal illness should be excluded from food-preparation activities or direct patient care. Employees asymptomatically infected with bacterial pathogens should be allowed to return to jobs involving food preparation only after negative stool cultures have been obtained.

From 1973 through 1987, eight foodborne outbreaks of *S. reading* infection were reported to CDC's Foodborne Disease Outbreak Surveillance System. Turkey was implicated as the source of infection in six of these outbreaks. In 1989, *S. reading* was the seventh most frequently isolated serotype from nonhuman sources; 627 (83%) of 757 *S. reading* isolates were from turkey (*3*). In addition, *S. reading* isolates from turkeys were reported to the National *Salmonella* Surveillance System each year from 1977 through 1986 but less frequently from other nonhuman sources, suggesting a turkey reservoir exists for this serotype (*4*).

During the holiday season, foodborne disease outbreaks caused by *Salmonella* and other pathogens associated with turkey may occur in a variety of settings. Food handlers, whether in institutions, restaurants, or homes, should thaw turkey under refrigeration, cook it thoroughly, and then hold it at an appropriate temperature until consumed. Cooked turkey should be held at temperatures too hot (≥140 F [≥60 C]) or too cold (≤40 F [≤4 C]) to permit multiplication of bacterial pathogens. Additional information on cooking and handling turkey is available from the U.S. Department of Agriculture Meat and Poultry Hotline ([800] 535-4555).

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Notices to Readers

Workshop on Energy-Related Epidemiologic Research Agenda

On December 3–4, 1991, CDC and the Agency for Toxic Substances and Disease Registry will cosponsor the "Workshop on Energy-Related Epidemiologic Research Agenda." The purpose of the workshop is to obtain input from scientists and representatives of both workers and the public about epidemiologic research needs regarding Department of Energy facilities and other energy-related issues. Topics will include environmental and occupational exposure assessment, environmental and occupational epidemiology, and communications and public involvement.

Notices to Readers — Continued

Additional information is available from Radiation Studies Branch, National Center for Environmental Health and Injury Control, Mailstop F-28, CDC, 1600 Clifton Road, NE, Atlanta, GA 30333; telephone (404) 488-4613.

Change in Table III: Deaths in 121 U.S. Cities

Beginning with this issue, reports from Santa Cruz, California, will be included under the Pacific reporting area heading in Table III, Deaths in 121 U.S. cities. Reports from Oakland, California, are no longer available.

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