

# MNWR

MORBIDITY AND MORTALITY WEEKLY REPORT

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## Current Trends

### Teenage Pregnancy and Birth Rates — United States, 1990

In 1990, there were an estimated 1 million pregnancies and 521,626 births to U.S. women aged 15–19 years (1). Because of the adverse health, social, and economic consequences of teenage childbearing, CDC analyzed data on teenage pregnancies and births (1,2). These data will be used to monitor progress toward national goals and to assist in targeting program efforts to reduce teenage pregnancy (2). This report presents pregnancy and birth rates for states by race/ethnicity for 1990 and compares rates with those for 1980 (3).

For this report, teenage pregnancy rates were defined as the sum of live births and legal induced abortions per 1000 women aged 15–19 years. Teenage birth rates were defined as the number of live births per 1000 women in the age group, and abortion rates, as the number of legal induced abortions per 1000 women. Information on births was obtained from 1990 birth certificates, and on abortions, from state reports to CDC. Births were reported by state of residence, and abortions, by state of occurrence. Numbers of women aged 15–19 years were obtained from unpublished tabulations provided by the U.S. Bureau of the Census. Because the numbers of abortions by age of women were not available for 10 states, pregnancy rates for women aged 15–19 years could be calculated for only 40 states and the District of Columbia (DC); birth rates were calculated for all 50 states and DC. For this analysis, pregnancy and birth rates were calculated for white, black, and Hispanic women (pregnancy rates were calculated only for the 30 states where information on abortions was available by race and ethnicity of women)\*; rates for other racial/ethnic groups were not calculated because the numbers of pregnancies and births for other groups were too small at the state level to compute reliable rates. In addition, abortion data were not available for other racial/ethnic groups. Differences in rates for 1980 and 1990 are statistically significant at the 0.05 level.

\*Because of data-collection methods for 1990 abortions, Hispanic origin was not reported separately by race. Abortion data for Hispanics were included with whites for pregnancy rate calculations because 97% of Hispanic women who had a live-born infant in 1990 were white (1). Six states (Kentucky, Louisiana, Maine, Maryland, North Carolina, and South Dakota) did not report Hispanic origin.

## Teenage Pregnancy — Continued

During 1990, pregnancy rates ranged from 56.4 per 1000 women aged 15–19 years (North Dakota) to 110.6 per 1000 (Georgia)<sup>†</sup>; birth rates ranged from 33.0 per 1000 women (New Hampshire) to 81.0 per 1000 (Mississippi) (Table 1).

<sup>†</sup>DC is not included in these comparisons because its pregnancy and abortion rates were higher than for any state, in part because of large numbers of abortions among nonresidents.

**TABLE 1. Pregnancy rates\* and birth rates<sup>†</sup> for 15–19-year-olds, by race/ethnicity<sup>§</sup> and state — United States, 1990**

State	Pregnancy rate				Birth rate			
	White <sup>¶</sup>	Black	Hispanic	Total <sup>**</sup>	White	Black	Hispanic	Total <sup>**</sup>
Alabama	††	††	††	††	55.3	105.3	33.8	71.0
Alaska	††	††	††	††	53.8	§§	§§	65.3
Arizona	96.3	147.7	142.1	100.3	72.3	115.1	123.3	75.5
Arkansas	82.6	157.1	§§	98.3	66.2	131.9	§§	80.1
California	††	††	††	††	73.9	101.0	112.3	70.6
Colorado	¶¶	¶¶	¶¶	82.0	52.1	105.9	110.6	54.5
Connecticut	††	††	††	††	30.5	102.5	121.9	38.8
Delaware	††	††	††	††	37.4	120.4	§§	54.5
District of Columbia	††	††	††	252.0	11.8	121.4	88.7	93.1
Florida	††	††	††	††	52.9	135.0	60.2	69.1
Georgia	86.0	162.2	87.5	110.6	56.6	116.2	73.0	75.5
Hawaii	¶¶	¶¶	¶¶	88.2	42.0	§§	§§	61.2
Idaho	58.5	§§	126.0	58.8	50.3	§§	118.6	50.6
Illinois	††	††	††	††	44.3	144.2	94.8	62.9
Indiana	65.1	157.2	76.4	74.3	51.9	122.4	64.5	58.6
Iowa	††	††	††	††	38.5	119.1	79.9	40.5
Kansas	74.3	180.9	99.3	81.1	50.8	131.9	86.1	56.1
Kentucky	84.1	163.6	††	90.9	63.5	115.8	§§	67.6
Louisiana	68.5	128.5***	††	92.0	52.1	109.1	20.9	74.2
Maine	67.5	§§	††	68.3	42.7	§§	§§	43.0
Maryland	61.1	141.2	††	84.7	36.0	95.5	46.0	53.2
Massachusetts	††	††	††	70.9	30.9	89.5	121.1	35.1
Michigan	††	††	††	85.1	43.1	131.1	94.4	59.0
Minnesota	54.6	217.9	89.9	61.9	30.6	151.7	79.4	36.3
Mississippi	71.6	130.5	§§	97.8	55.5	112.7	§§	81.0
Missouri	64.7	197.4	57.0	82.6	50.3	143.9	46.4	62.8
Montana	¶¶	¶¶	¶¶	81.7	39.7	§§	¶¶	48.4
Nebraska	††	††	††	74.2	36.9	135.1	81.7	42.3
Nevada	105.6	156.8	112.8	107.4	68.9	129.3	107.5	73.3
New Hampshire	††	††	††	††	33.1	§§	†††	33.0
New Jersey	52.6	181.3	114.9	75.3	28.1	99.6	79.9	40.5
New Mexico	99.5	115.5	122.1	100.4	75.6	94.6	96.9	78.2
New York	74.6	162.4	134.3	92.4	36.7	75.6	81.6	43.6
North Carolina	84.9	155.1	106.1	105.8	52.0	106.6	106.1	67.6
North Dakota	50.4	§§	§§	56.4	29.2	§§	§§	35.4
Ohio	58.2	162.7	81.5	73.2	47.7	129.4	73.9	57.9
Oklahoma	††	††	††	††	60.2	116.0	†††	66.8
Oregon	87.4	175.5	133.2	89.0	54.0	108.0	113.9	54.6
Pennsylvania	††	††	††	74.6	35.1	124.8	126.1	44.9
Rhode Island	79.9	198.3	134.9	87.7	38.7	114.3	129.8	43.9
South Carolina	76.6	127.0	84.5	95.0	54.3	101.1	66.8	71.3
South Dakota	46.0	§§	††	56.9	35.0	§§	§§	46.8
Tennessee	86.0	165.1	56.2	101.8	60.3	121.3	40.9	72.3
Texas	96.0	153.4	124.5	102.7	70.6	114.0	103.8	75.3
Utah	62.0	§§	128.7	62.9	47.8	§§	115.0	48.5
Vermont	72.4	§§	§§	72.1	34.3	§§	§§	34.0
Virginia	70.2	148.8	74.4	86.4	41.1	98.5	55.5	52.9
Washington	¶¶	¶¶	¶¶	95.4	52.2	94.3	113.4	53.1
West Virginia	66.4	103.9	§§	67.4	57.1	74.4	§§	57.3
Wisconsin	††	††	††	66.5	31.2	174.7	90.4	42.6
Wyoming	††	††	††	62.2	54.5	§§	94.2	56.3

\*The sum of live births and legal induced abortions per 1000 women aged 15–19 years.

<sup>†</sup> Live births per 1000 women aged 15–19 years.

<sup>§</sup> Persons of Hispanic origin may be of any race.

<sup>¶</sup> For calculation of pregnancy rates, abortions by white race included women of Hispanic origin. Six states (Kentucky, Louisiana, Maine, Maryland, North Carolina, and South Dakota) did not report abortion data by Hispanic origin.

\*\* Includes all racial/ethnic groups.

†† Because abortion data were not available, pregnancy rates could not be calculated.

§§ Rates are not calculated for states with 20 or fewer births to women aged 15–19 years in 1990, or 1000 or fewer women aged 15–19 years in respective racial/ethnic group.

¶¶ Rates not calculated because 15% or more of the abortions were to women of unknown race/ethnicity.

\*\*\* Abortions include all races other than white.

††† Hispanic origin was not reported on the birth certificate.



*Teenage Pregnancy — Continued*

13 states<sup>§</sup>; in eight of these states, the decrease was more than 10%. In contrast, birth rates increased significantly in 29 states and in DC.<sup>¶</sup> Rates in 20 areas increased more than 10%; of these, rates in nine increased more than 20%.

*Reported by: Behavioral Epidemiology and Demographic Research Br, Statistics and Computer Resources Br, Women's Health and Fertility Br, Div of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion; Natality, Marriage, and Divorce Statistics Br, Div of Vital Statistics, National Center for Health Statistics, CDC.*

**Editorial Note:** Despite national goals to reduce teenage pregnancy in the United States (2), pregnancy and birth rates in the United States in 1990 exceeded those in most developed countries (Alan Guttmacher Institute, unpublished data, 1988; 4). Small declines in pregnancy and birth rates during the early 1980s subsequently reversed, resulting in little net change in the U.S. teenage pregnancy rate over the decade (1,5). From 1986 through 1990, the U.S. birth rate increased nearly 20%, suggesting that a larger proportion of teenage pregnancies resulted in live births (1,6). Other factors that may have affected pregnancy and birth rates included trends in sexual experience among teenagers and variations in the accessibility and use of family-planning and abortion services.

In 1990, teenage pregnancy rates in 10 states could not be calculated because those states did not collect data on the age of women obtaining abortions. However, these 10 states accounted for approximately 39% of all U.S. abortions in 1990. Births alone cannot be used as a surrogate for monitoring overall pregnancies. Because so many teenage pregnancies end in abortion and the rates vary widely by state, states that fail to collect abortion data by age will be unable to adequately monitor their trends in teenage pregnancy.

Differences in teenage pregnancy and birth rates by race/ethnicity may reflect differences in factors such as socioeconomic status, access to family-planning and abortion services, and the use of contraception. For example, during 1983–1988, Hispanic and black women were less likely to use contraception during their first reported premarital sexual intercourse than were white women (32% and 58% versus 70%) (7).

The personal and societal impact of teenage pregnancy in the United States is enormous; an estimated 84% of teenage pregnancies are unintended (i.e., they occur sooner than desired or are not wanted at any time) (2). From 1985 through 1990, the public costs (e.g., Aid to Families with Dependent Children, Medicaid, and food stamps) related to teenage childbearing totaled \$120.3 billion (8). Of this amount, an estimated \$48.1 billion could have been saved if each birth had been postponed until the mother was at least 20 years old. For every public dollar spent on family-planning services for all women, an average of \$4.40 is saved by averting expenditures on medical services, welfare, and nutritional services (9).

More than 70 national health and social welfare organizations support age-appropriate comprehensive school health-education programs to reduce teenage pregnancy (10). These programs counsel abstinence as well as provide teenagers

<sup>§</sup>Idaho, Iowa, Kentucky, Maine, Mississippi, Nebraska, North Dakota, Oklahoma, South Dakota, Utah, Vermont, West Virginia, and Wyoming.

<sup>¶</sup>Alabama, Arizona, Arkansas, California, Colorado, Connecticut, DC, Florida, Georgia, Hawaii, Illinois, Maryland, Massachusetts, Michigan, Missouri, Nevada, New Jersey, New Mexico, New York, North Carolina, Ohio, Oregon, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Virginia, Washington, and Wisconsin.

*Teenage Pregnancy — Continued*

with the knowledge and skills they need to avoid unplanned pregnancy. In addition to health education efforts, family-planning services for sexually active teenagers are essential for reducing teenage pregnancy.

*References*

1. NCHS. Advance report of final natality statistics, 1990. Hyattsville, Maryland: US Department of Health and Human Services, Public Health Service, CDC, 1993. (Monthly vital statistics report; vol 41, no. 9, suppl).
2. NCHS. Health, United States, 1992. Hyattsville, Maryland: US Department of Health and Human Services, Public Health Service, CDC, 1993.
3. CDC. Teenage pregnancy and fertility in the United States: 1970, 1974, and 1980: regional and state variations and unintended fertility. Atlanta: US Department of Health and Human Services, Public Health Service, 1987.
4. United Nations. 1990 Demographic yearbook. New York: United Nations, Department of International Economic and Social Affairs, Statistical Office, 1992 (no. 42).
5. Ventura SJ, Taffel SM, Mosher WD, Henshaw S. Trends in pregnancies and pregnancy rates, United States, 1980–88. Hyattsville, Maryland: US Department of Health and Human Services, Public Health Service, CDC, 1993. (Monthly vital statistics report; vol 41, no. 6, suppl).
6. CDC. Abortion surveillance: preliminary data—United States, 1990. *MMWR* 1992;41:936–8.
7. Mosher WD, McNally JW. Contraceptive use at first premarital intercourse: United States, 1965–1988. *Fam Plann Perspect* 1991;23:108–16.
8. Center for Population Options. Teenage pregnancy and too-early childbearing: public costs, personal consequences. 6th ed. Washington, DC: Center for Population Options, 1992.
9. Forrest JD, Singh S. Public-sector savings resulting from expenditures for contraceptive services. *Fam Plann Perspect* 1990;22:6–15.
10. The National Coalition to Support Sexuality Education. Fact sheet #2 on comprehensive sexuality education. The SIECUS Report 1992;20:22–3.

*Current Trends*

### **Mammography and Clinical Breast Examinations Among Women Aged 50 Years and Older — Behavioral Risk Factor Surveillance System, 1992**

Breast cancer is the most commonly diagnosed cancer and the second leading cause of cancer deaths among women in the United States (1). A national health objective for the year 2000 is to reduce breast cancer deaths to no more than 20.6 per 100,000 women (age-adjusted baseline: 22.9 per 100,000 women in 1987) (objective 16.3) (2). To increase early detection of breast cancer, CDC's National Breast and Cervical Cancer Early Detection Program recommends use of mammography and clinical breast examinations at prescribed intervals, especially for older, minority, poor, and less educated women. For asymptomatic women aged  $\geq 50$  years, the American Cancer Society (ACS) and the National Cancer Institute (NCI) recommend both an annual screening mammogram and an annual screening clinical breast examination as essential elements of routine preventive health services (3). This report summarizes state-specific and state-aggregate findings from CDC's 1992 Behavioral Risk Factor Surveillance System (BRFSS) regarding use of screening mammography, screening clinical breast examination, and both examinations among women aged  $\geq 50$  years.

In 1992, health departments in 48 states and the District of Columbia participated in the BRFSS using a standard questionnaire to conduct random-digit-dialed telephone

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surveys in which each state selected a multistage probability sample of adults aged  $\geq 18$  years (4); this report presents state-specific and state-aggregate results for female respondents aged  $\geq 50$  years. The questionnaire included questions about clinical breast examination (defined as an examination during which a doctor, nurse, or other medical professional felt the breast for lumps) and mammography. This report is restricted to screening examinations (defined as an examination that was part of a routine check-up). Women who reported that they had ever had a mammogram or clinical breast examination were asked the duration since their last examination and whether the last examination was part of a routine check-up, because of a breast problem other than cancer, or because of previously diagnosed breast cancer.

In 1992, the percentages of women aged  $\geq 50$  years who reported receiving screening examinations for breast cancer during the year preceding the interview varied widely among the states (Table 1). The percentage of women who reported having had a mammogram ranged from 32.4% to 60.2% (median: 45.1%); a clinical breast examination, from 37.6% to 72.9% (median: 56.9%); and both examinations, from 22.8% to 55.0% (median: 38.8%) (Table 1). Overall, 39.8% of women reported having had both examinations during the year preceding the interview (Table 2).

Respondents were more likely to report having had a clinical breast examination (57.5%) than a mammogram (46.1%) during the year preceding the interview (Table 2). Of women who reported having had a clinical breast examination, 30.8% had that procedure only; of those who reported having had a mammogram, 13.7% had that procedure only. The percentage of women reporting having had either or both examinations during the year preceding the interview increased with years of education and with income but decreased with age (Table 2). There were no differences across racial/ethnic groups in the prevalence of breast cancer screening.

*Reported by the following BRFSS coordinators: L Eldridge, Alabama; P Owen, Alaska; J Contreras, Arizona; L Lund, California; M Leff, Colorado; M Adams, Connecticut; F Breukelman, Delaware; C Mitchell, District of Columbia; D McTague, Florida; E Pledger, Georgia; VF Ah Cook, Hawaii; J Mitten, Idaho; B Steiner, Illinois; R Guest, Indiana; S Schoon, Iowa; K Pippert, Kansas; K Bramblett, Kentucky; S Kirkconnell, Louisiana; R Schwartz, Maine; A Weinstein, Maryland; R Lederman, Massachusetts; H McGee, Michigan; N Salem, Minnesota; E Jones, Mississippi; J Jackson-Thompson, Missouri; P Smith, Montana; S Huffman, Nebraska; M Atherton, Nevada; K Zaso, New Hampshire; G Boeselager, New Jersey; L Pendley, New Mexico; C Baker, New York; CR Washington, North Carolina; M Maetzold, North Dakota; E Capwell, Ohio; N Hann, Oklahoma; J Grant-Worley, Oregon; C Becker, Pennsylvania; J Buechner, Rhode Island; M Lane, South Carolina; B Miller, South Dakota; D Ridings, Tennessee; R Diamond, Texas; R Giles, Utah; P Brozicevic, Vermont; R Schaeffer, Virginia; T Jennings, Washington; F King, West Virginia; E Cautley, Wisconsin. Disease Surveillance Br, and Behavioral Risk Factor Surveillance Br, Office of Surveillance and Analysis, and Div of Cancer Prevention and Control, and Office of the Director, National Center for Chronic Disease Prevention and Health Promotion, CDC.*

**Editorial Note:** Mammography and clinical breast examination combined are more effective in detecting breast cancer than either examination alone (5), and ACS and NCI guidelines for breast cancer screening recommend that women aged  $\geq 50$  years receive both examinations annually. The BRFSS findings described in this report indicate that, during the year preceding the survey, approximately 64% of the women aged  $\geq 50$  years reported having had either a screening clinical breast examination or a screening mammogram; however, a substantially lower percentage reported having both examinations. The prevalence of incomplete screening may reflect the practices of respondents' physicians, differential recall by respondents of having had

## Mammography — Continued

examinations, or differential compliance by respondents. In addition, women who had clinical breast examinations were more likely to have had that procedure only than women who had mammograms; the most important factor in influencing women to have a mammogram is encouragement from physicians (6), but the medical specialty, age, and sex of the physician may influence provision of screening services (7).

**TABLE 1. Percentage of women aged  $\geq 50$  years who reported having had a screening\* mammogram, a screening clinical breast examination,<sup>†</sup> or both during the year preceding the interview, by state — Behavioral Risk Factor Surveillance System, 1992<sup>‡</sup>**

State	Mammogram		Clinical breast examination		Both examinations	
	%	(95% CI <sup>§</sup> )	%	(95% CI)	%	(95% CI)
Alabama	49.6	(± 5.0)	59.7	(± 4.9)	42.1	(± 5.1)
Alaska	53.7	(±10.7)	66.3	(±10.1)	48.2	(±11.0)
Arizona	40.7	(± 6.8)	51.1	(± 6.4)	34.3	(± 6.1)
California	53.7	(± 4.0)	58.5	(± 4.0)	45.3	(± 4.0)
Colorado	51.0	(± 5.8)	67.3	(± 5.4)	44.3	(± 6.0)
Connecticut	54.0	(± 5.2)	64.8	(± 4.9)	46.4	(± 5.3)
Delaware	48.9	(± 5.6)	60.6	(± 5.5)	44.3	(± 5.4)
District of Columbia	60.2	(± 6.1)	72.9	(± 5.3)	55.0	(± 6.1)
Florida	46.9	(± 4.0)	58.9	(± 3.9)	40.3	(± 3.9)
Georgia	42.3	(± 5.0)	57.7	(± 5.6)	38.0	(± 5.0)
Hawaii	45.1	(± 6.2)	37.6	(± 6.4)	22.8	(± 5.4)
Idaho	36.0	(± 5.4)	55.3	(± 5.5)	33.7	(± 5.3)
Illinois	46.4	(± 4.7)	66.4	(± 4.7)	44.6	(± 4.7)
Indiana	38.4	(± 4.5)	47.7	(± 4.5)	31.2	(± 4.2)
Iowa	43.3	(± 5.0)	54.3	(± 5.0)	39.5	(± 4.8)
Kansas	42.0	(± 5.8)	54.1	(± 5.9)	37.7	(± 5.7)
Kentucky	36.8	(± 4.4)	46.7	(± 4.6)	32.9	(± 4.3)
Louisiana	41.8	(± 5.7)	45.6	(± 5.5)	33.9	(± 5.3)
Maine	53.8	(± 6.4)	64.9	(± 6.2)	49.5	(± 6.4)
Maryland	51.3	(± 5.4)	68.5	(± 5.1)	48.4	(± 5.4)
Massachusetts	50.0	(± 6.5)	56.9	(± 6.5)	40.3	(± 6.4)
Michigan	50.6	(± 4.6)	53.0	(± 4.4)	41.2	(± 4.5)
Minnesota	50.5	(± 3.8)	57.4	(± 3.9)	43.3	(± 3.8)
Mississippi	32.4	(± 5.1)	49.0	(± 5.4)	27.0	(± 4.7)
Missouri	45.2	(± 5.9)	59.8	(± 5.4)	40.1	(± 5.7)
Montana	42.3	(± 6.3)	58.2	(± 6.3)	36.2	(± 6.2)
Nebraska	34.3	(± 5.1)	49.0	(± 5.3)	29.8	(± 4.9)
Nevada	43.2	(± 5.8)	49.9	(± 5.9)	33.5	(± 5.5)
New Hampshire	49.4	(± 6.2)	52.6	(± 6.2)	40.2	(± 6.1)
New Jersey	41.0	(± 5.8)	55.1	(± 6.0)	36.9	(± 5.7)
New Mexico	50.1	(± 6.4)	55.3	(± 6.8)	40.4	(± 6.5)
New York	44.8	(± 5.1)	60.2	(± 4.7)	40.4	(± 4.9)
North Carolina	45.8	(± 4.8)	65.0	(± 4.6)	42.6	(± 4.7)
North Dakota	43.2	(± 5.4)	52.5	(± 5.4)	36.9	(± 5.2)
Ohio	42.8	(± 5.9)	59.8	(± 5.8)	38.8	(± 5.8)
Oklahoma	41.3	(± 5.0)	58.4	(± 5.0)	38.2	(± 5.0)
Oregon	49.9	(± 3.7)	60.0	(± 3.7)	42.6	(± 3.7)
Pennsylvania	48.6	(± 4.5)	54.6	(± 4.5)	38.6	(± 4.4)
Rhode Island	51.5	(± 5.1)	61.8	(± 5.3)	41.8	(± 5.1)
South Carolina	41.6	(± 5.2)	52.3	(± 5.1)	36.0	(± 5.1)
South Dakota	41.0	(± 4.9)	52.3	(± 5.0)	32.9	(± 4.8)
Tennessee	38.0	(± 4.2)	60.5	(± 4.3)	33.9	(± 4.1)
Texas	45.4	(± 4.9)	55.7	(± 5.0)	38.8	(± 4.8)
Utah	41.0	(± 5.5)	51.8	(± 5.9)	35.5	(± 5.3)
Vermont	51.2	(± 5.0)	66.7	(± 4.8)	47.0	(± 5.1)
Virginia	50.3	(± 5.6)	54.1	(± 5.8)	37.9	(± 5.6)
Washington	48.4	(± 4.6)	59.7	(± 4.5)	42.0	(± 4.6)
West Virginia	34.4	(± 3.9)	48.8	(± 4.2)	29.1	(± 3.7)
Wisconsin	41.1	(± 6.4)	54.7	(± 6.5)	34.4	(± 6.2)
<b>Median</b>	<b>45.1</b>		<b>56.9</b>		<b>38.8</b>	

\* Defined as an examination that was part of a routine check-up.

<sup>†</sup> An examination during which a doctor, nurse, or other medical professional felt the breast for lumps.

<sup>‡</sup> Data were weighted to the age, race, and sex distribution and probability of selection in each state.

<sup>§</sup> Confidence interval.

## Mammography — Continued

Because the risk for breast cancer increases with age (8), the finding in this report that the percentage of women who reported having had breast cancer screening examinations decreased dramatically with age is of particular concern. Even though the sensitivity of both clinical breast examination and mammography to detect breast cancer increases with age (9), the BRFSS findings indicate that women in the older age groups, who are at highest risk for breast cancer, are least likely to receive breast cancer screening. Reasons for the decreased use are unclear but may include an inaccurate perception among older women of their actual risk for breast cancer (i.e., that risk increases with age), the belief that breast cancer screening examinations are necessary only if a lump is detected during breast self-examination, and the inability of women on limited incomes to pay for annual examinations. In addition, some women aged  $\geq 65$  years may be unaware that screening mammography on a biennial basis is a reimbursable benefit of Medicare.

**TABLE 2. Percentage of women aged  $\geq 50$  years who reported having had a screening\* mammogram, a screening clinical breast examination,<sup>†</sup> or both during the year preceding the interview, by age group, race/ethnicity,<sup>§</sup> level of education,<sup>¶</sup> and income — Behavioral Risk Factor Surveillance System, 1992\*\***

Category	Sample size	Mammogram		Clinical breast examination		Both examinations	
		%	(95% CI <sup>††</sup> )	%	(95% CI)	%	(95% CI)
<b>Age group (yrs)</b>							
50–54	3,435	50.8	( $\pm 2.4$ )	63.7	( $\pm 2.3$ )	45.2	( $\pm 2.4$ )
55–59	3,099	51.6	( $\pm 2.6$ )	61.3	( $\pm 2.5$ )	45.2	( $\pm 2.6$ )
60–64	3,248	48.2	( $\pm 2.5$ )	58.4	( $\pm 2.5$ )	42.2	( $\pm 2.5$ )
65–69	3,420	47.7	( $\pm 2.5$ )	57.5	( $\pm 2.4$ )	41.0	( $\pm 2.5$ )
70–74	3,246	45.7	( $\pm 2.5$ )	55.7	( $\pm 2.5$ )	39.0	( $\pm 2.5$ )
$\geq 75$	5,153	35.6	( $\pm 1.9$ )	50.4	( $\pm 2.0$ )	29.1	( $\pm 1.8$ )
<b>Race/Ethnicity</b>							
White, non-Hispanic	18,694	46.3	( $\pm 1.0$ )	57.8	( $\pm 1.0$ )	40.1	( $\pm 1.0$ )
Black, non-Hispanic	1,688	45.3	( $\pm 3.5$ )	58.0	( $\pm 3.5$ )	38.4	( $\pm 3.4$ )
Hispanic <sup>§§</sup>	670	44.7	( $\pm 5.7$ )	52.8	( $\pm 5.7$ )	38.6	( $\pm 5.6$ )
<b>Education (yrs)</b>							
<12	5,911	35.4	( $\pm 1.8$ )	46.7	( $\pm 1.9$ )	27.9	( $\pm 1.7$ )
12	7,940	47.7	( $\pm 1.6$ )	59.3	( $\pm 1.6$ )	41.4	( $\pm 1.6$ )
>12	7,679	52.3	( $\pm 1.7$ )	63.6	( $\pm 1.6$ )	46.8	( $\pm 1.7$ )
<b>Annual income</b>							
<\$10,000	5,206	34.3	( $\pm 2.0$ )	47.9	( $\pm 2.1$ )	28.4	( $\pm 1.9$ )
\$10,000–\$20,000	4,986	43.9	( $\pm 2.1$ )	55.8	( $\pm 2.0$ )	36.8	( $\pm 2.0$ )
>\$20,000	7,232	54.1	( $\pm 1.7$ )	64.9	( $\pm 1.6$ )	48.3	( $\pm 1.7$ )
Unknown/Refused	4,177	45.7	( $\pm 2.2$ )	55.2	( $\pm 2.2$ )	38.8	( $\pm 2.2$ )
<b>Total</b>	<b>21,601</b>	<b>46.1</b>	<b>(<math>\pm 1.0</math>)</b>	<b>57.5</b>	<b>(<math>\pm 1.0</math>)</b>	<b>39.8</b>	<b>(<math>\pm 1.0</math>)</b>

\* Defined as an examination that was part of a routine check-up.

<sup>†</sup> An examination during which a doctor, nurse, or other medical professional felt the breast for lumps.

<sup>§</sup> A total of 549 respondents identified themselves as other than black, white, or Hispanic; the numbers in the "other" category were too small for analysis.

<sup>¶</sup> A total of 71 respondents refused to provide years of education or reported that they did not know; the numbers were too small for analysis.

\*\* Aggregated, weighted data.

<sup>††</sup> Confidence interval.

<sup>§§</sup> Persons of Hispanic origin may be of any race.



*Mammography — Continued*

The BRFSS findings also are consistent with previous reports indicating that the levels of breast cancer screening are lowest among women with less than a high school education and with low incomes. Barriers to screening among women of low socioeconomic status include limited access to health care, the cost of screening, and fear of finding breast cancer (10). The differences in the level of compliance with the breast cancer screening recommendations across age groups and income and educational levels were greater than those across racial/ethnic groups, reinforcing the need for intervention programs directed toward older, poorer, and less educated women regardless of race or ethnicity.

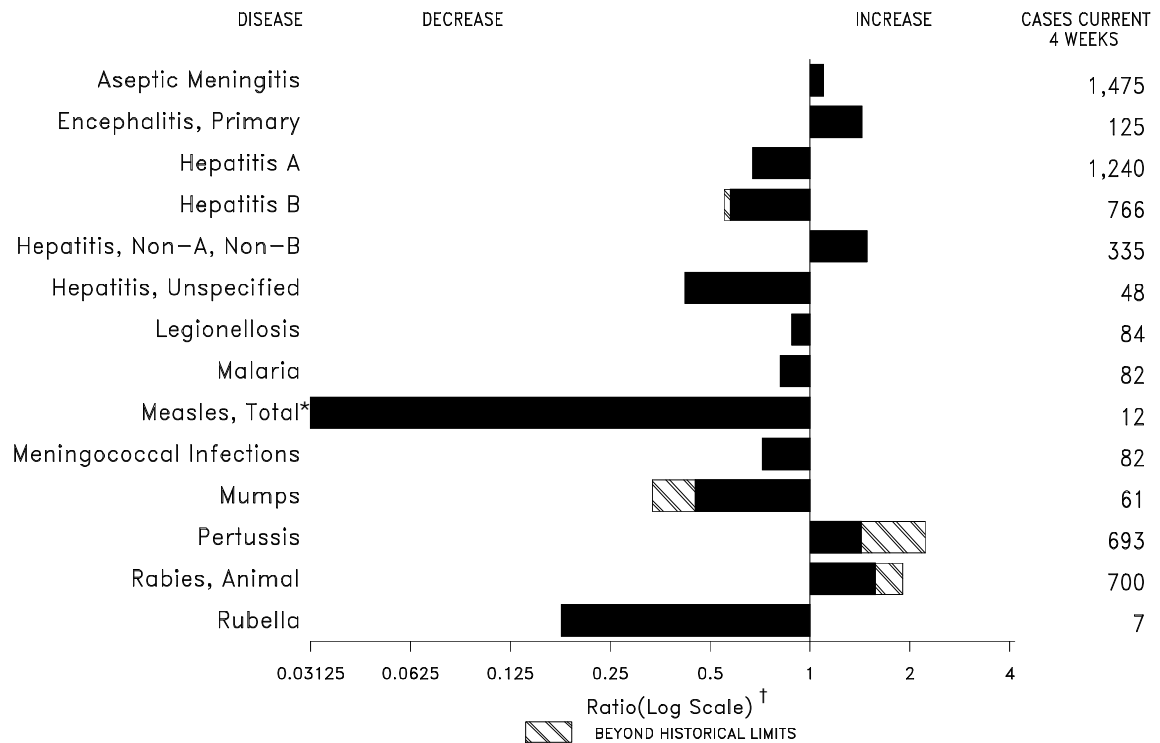
The importance of breast cancer screening should be emphasized through continuing physician education and public awareness campaigns. These efforts should be aimed at increasing 1) the percentage of women who receive both clinical breast examinations and mammograms; 2) the level of screening among women aged  $\geq 50$  years, women with incomes less than \$10,000 per year, and women with less than a high school education; and 3) the overall level of screening among all women. To increase access to breast cancer screening, physician education, and public awareness, CDC implemented the National Breast and Cervical Cancer Early Detection Program in 1991. This comprehensive program assists state health agencies in developing effective public health support systems for the early detection process (11).

October is National Breast Cancer Awareness Month. During this month, nationwide educational activities are planned to increase the public's awareness of the importance of screening for breast cancer. Additional information is available from the American Cancer Society, telephone (800) 227-2345 or the National Cancer Institute's Cancer Information Service, telephone (800) 422-6237.

*References*

1. American Cancer Society. Cancer facts and figures, 1992. Atlanta: American Cancer Society, 1992; publication no. 5008.920LE.
2. Public Health Service. Healthy people 2000: national health promotion and disease prevention objectives—full report, with commentary. Washington, DC: US Department of Health and Human Services, Public Health Service, 1991; DHHS publication no. (PHS)91-50212.
3. Hayward RSA, Steinberg EP, Ford DE, Roizen MF, Roach KW. Preventive care guidelines: 1991. *Ann Intern Med* 1991;114:758–83.
4. Frazier EL, Franks AL, Sanderson LM. Behavioral risk factor data. In: CDC. Using chronic disease data: a handbook for public health practitioners. Atlanta: US Department of Health and Human Services, Public Health Service, CDC, 1992:4-1-4-17.
5. Seidman H, Gelb SK, Silverberg E, LaVerda N, Lubera JA. Survival experience in the Breast Cancer Detection Demonstration Project. *CA Cancer J Clin* 1987;37:258–90.
6. Grady KE, Lemkau JP, McVay JM, Reisine ST. The importance of physician encouragement in breast cancer screening of older women. *Prev Med* 1992;21:766–80.
7. Lurie N, Slater J, McGovern P, Ekstrum J, Quam L, Margolis K. Preventive care for women: does the sex of the physician matter? *N Engl J Med* 1993;329:478–82.
8. Qualters JR, Lee NC, Smith RA, Aubert RE. Breast and cervical cancer surveillance—United States, 1973–1987. In: CDC surveillance summaries (April). *MMWR* 1992;41(no. SS-2):1–15.
9. Foster RS, Worden JK, Costanza MC, Solomon LJ. Clinical breast examination and breast self-examination: past and present effect on breast cancer survival. *Cancer* 1992; 69(suppl):1992–8.
10. Harper AP. Mammography utilization in the poor and medically underserved. *Cancer* 1993; 72(suppl):1478–82.
11. CDC. Update: National Breast and Cervical Cancer Early Detection Program, 1992–1993. *MMWR* 1993;42:747–9.

**FIGURE I. Notifiable disease reports, comparison of 4-week totals ending September 25, 1993, with historical data — United States**



\*The large apparent decrease in reported cases of measles (total) reflects dramatic fluctuations in the historical baseline. (Ratio (log scale) for week thirty-eight is 0.02233).

† 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 September 25, 1993 (38th Week)**

	Cum. 1993		Cum. 1993
AIDS*	75,768	Measles: imported	49
Anthrax	-	indigenous	198
Botulism: Foodborne	11	Plague	7
Infant	44	Poliomyelitis, Paralytic <sup>§</sup>	-
Other	2	Psittacosis	42
Brucellosis	64	Rabies, human	1
Cholera	16	Syphilis, primary & secondary	18,934
Congenital rubella syndrome	7	Syphilis, congenital, age < 1 year <sup>¶</sup>	677
Diphtheria	-	Tetanus	33
Encephalitis, post-infectious	132	Toxic shock syndrome	181
Gonorrhea	275,416	Trichinosis	9
<i>Haemophilus influenzae</i> (invasive disease) <sup>†</sup>	874	Tuberculosis	15,261
Hansen Disease	124	Tularemia	101
Leptospirosis	28	Typhoid fever	237
Lyme Disease	4,876	Typhus fever, tickborne (RMSF)	346

\*Updated monthly; last update September 11, 1993.

<sup>†</sup>Of 813 cases of known age, 262 (32%) were reported among children less than 5 years of age.

<sup>§</sup>Two (2) cases of suspected poliomyelitis have been reported in 1993; 4 of the 5 suspected cases with onset in 1992 were confirmed; the confirmed cases were vaccine associated.

<sup>¶</sup>Reports through first quarter of 1993.

**TABLE II. Cases of selected notifiable diseases, United States, weeks ending September 25, 1993, and September 19, 1992 (38th Week)**

Reporting Area	AIDS*	Aseptic Meningitis	Encephalitis		Gonorrhea		Hepatitis (Viral), by type				Legionellosis	Lyme Disease
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
			Cum. 1993	Cum. 1993	Cum. 1993	Cum. 1993	Cum. 1993	Cum. 1992	Cum. 1993	Cum. 1993	Cum. 1993	Cum. 1993
UNITED STATES	75,768	8,370	587	132	275,416	358,721	15,411	8,839	3,511	455	854	4,876
NEW ENGLAND	3,666	250	14	6	6,042	7,540	356	381	402	12	46	1,353
Maine	113	25	2	-	69	68	14	10	4	-	4	8
N.H.	83	37	-	2	47	86	33	70	323	3	3	50
Vt.	48	32	4	-	18	19	4	7	2	-	1	5
Mass.	2,053	102	6	4	2,177	2,725	170	230	65	9	34	150
R.I.	248	54	2	-	309	512	61	20	8	-	4	206
Conn.	1,121	-	-	-	3,422	4,130	74	44	-	-	-	934
MID. ATLANTIC	17,807	568	44	8	31,075	40,092	763	960	268	4	167	2,466
Upstate N.Y.	2,783	298	31	5	6,355	7,850	262	296	176	1	54	1,365
N.Y. City	9,670	104	1	-	8,300	14,319	177	121	1	-	3	3
N.J.	3,272	-	-	-	3,046	5,608	211	269	61	-	25	532
Pa.	2,082	166	12	3	13,374	12,315	113	274	30	3	85	566
E.N. CENTRAL	6,022	1,385	137	25	53,039	67,146	1,741	1,075	463	12	221	58
Ohio	1,147	485	50	4	16,608	20,290	220	146	32	-	115	30
Ind.	685	160	17	11	5,796	6,363	500	176	9	1	41	14
Ill.	2,132	300	26	3	13,407	22,063	535	193	51	5	12	8
Mich.	1,468	408	34	7	12,993	15,232	157	310	337	6	45	6
Wis.	590	32	10	-	4,235	3,198	329	250	34	-	8	-
W.N. CENTRAL	2,563	514	24	9	14,510	19,130	1,731	477	124	12	61	137
Minn.	531	65	7	-	1,793	2,176	320	51	4	4	1	52
Iowa	149	91	3	1	658	1,216	38	22	8	1	8	7
Mo.	1,456	158	2	8	8,584	10,736	1,092	344	91	7	17	38
N. Dak.	1	12	3	-	38	58	63	-	-	-	1	2
S. Dak.	22	19	5	-	192	128	13	-	-	-	-	-
Nebr.	142	8	1	-	476	1,251	141	12	8	-	27	4
Kans.	262	161	3	-	2,769	3,565	64	48	13	-	7	34
S. ATLANTIC	15,987	1,840	148	54	73,468	107,672	901	1,683	483	66	158	686
Del.	279	54	3	-	1,045	1,293	9	126	97	-	10	330
Md.	1,884	188	21	-	12,014	11,344	125	201	16	5	39	115
D.C.	1,006	30	-	-	3,585	4,383	9	34	-	-	13	2
Va.	1,227	217	32	6	8,648	11,938	108	110	29	31	6	57
W. Va.	55	22	70	-	454	646	17	30	22	-	3	41
N.C.	918	173	19	-	18,576	18,209	53	232	55	-	20	71
S.C.	959	24	-	-	7,873	8,284	11	40	3	1	18	8
Ga.	2,173	113	1	-	4,660	31,730	68	162	74	-	27	31
Fla.	7,486	1,019	2	48	16,613	19,845	501	748	187	29	22	31
E.S. CENTRAL	1,999	529	26	7	32,696	35,877	208	934	710	1	35	18
Ky.	248	226	9	6	3,496	3,512	86	60	10	-	13	5
Tenn.	811	110	7	-	9,928	11,288	50	789	686	-	14	10
Ala.	584	132	1	-	11,579	12,601	46	80	4	1	2	3
Miss.	356	61	9	1	7,693	8,476	26	5	10	-	6	-
W.S. CENTRAL	7,634	971	43	2	33,280	39,399	1,578	1,239	221	133	23	48
Ark.	293	52	1	-	6,473	5,642	41	48	3	2	3	2
La.	981	70	5	-	8,863	10,975	60	168	98	3	3	1
Okla.	621	1	7	-	2,521	3,988	123	240	75	9	11	19
Tex.	5,739	848	30	2	15,423	18,794	1,354	783	45	119	6	26
MOUNTAIN	3,157	503	22	4	8,125	9,057	2,989	430	240	63	56	20
Mont.	23	-	-	1	53	84	58	4	2	-	5	-
Idaho	56	10	-	-	128	80	162	35	-	2	1	2
Wyo.	32	5	-	-	64	42	12	21	72	-	5	8
Colo.	1,061	143	10	-	2,555	3,292	696	53	39	35	6	-
N. Mex.	249	104	4	2	699	685	281	158	77	2	5	2
Ariz.	1,043	150	6	-	3,002	3,087	1,093	72	13	12	12	-
Utah	217	37	1	-	259	238	591	41	24	11	7	3
Nev.	476	54	1	1	1,365	1,549	96	46	13	1	15	5
PACIFIC	16,933	1,810	129	17	23,181	32,808	5,144	1,660	600	152	87	90
Wash.	1,153	-	1	-	2,827	2,917	607	180	140	8	9	4
Oreg.	620	-	-	-	1,179	1,216	71	25	11	-	-	2
Calif.	14,872	1,693	124	17	18,346	27,787	3,820	1,428	437	141	71	83
Alaska	49	16	3	-	452	495	584	8	9	-	-	-
Hawaii	239	101	1	-	377	393	62	19	3	3	7	1
Guam	-	2	-	-	38	50	2	2	-	1	-	-
P.R.	2,106	41	-	-	385	169	69	300	66	2	-	-
V.I.	35	-	-	-	79	73	-	4	-	-	-	-
Amer. Samoa	-	-	-	-	37	31	16	-	-	-	-	-
C.N.M.I.	-	3	-	-	60	61	-	1	-	1	-	-

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

\*Updated monthly; last update September 11, 1993.

**TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending September 25, 1993, and September 19, 1992 (38th Week)**

Reporting Area	Malaria	Measles (Rubeola)					Men- gococcal infections	Mumps		Pertussis			Rubella		
		Indigenous		Imported*		Total		1993	Cum. 1993	1993	Cum. 1993	Cum. 1992	1993	Cum. 1993	Cum. 1992
		1993	Cum. 1993	1993	Cum. 1993	Cum. 1992									
UNITED STATES	817	-	198	-	49	2,156	1,747	19	1,197	246	3,639	1,914	3	159	133
NEW ENGLAND	61	-	57	-	5	63	97	-	8	10	585	164	-	1	6
Maine	2	-	2	-	-	4	5	-	-	-	19	11	-	1	1
N.H.	6	-	2	-	-	13	12	-	-	7	235	31	-	-	-
Vt.	1	-	30	-	1	-	6	-	-	-	61	7	-	-	-
Mass.	31	-	14	-	3	21	54	-	2	-	211	80	-	-	-
R.I.	2	-	-	-	1	21	1	-	2	-	6	1	-	-	4
Conn.	19	-	9	-	-	4	19	-	4	3	53	34	-	-	1
MID. ATLANTIC	122	-	10	-	6	203	210	-	91	76	443	98	2	51	10
Upstate N.Y.	46	-	-	-	2	111	93	-	33	39	198	56	1	10	7
N.Y. City	24	-	5	-	2	55	19	-	2	-	7	9	-	22	-
N.J.	31	-	5	-	2	37	33	-	8	-	35	33	-	13	3
Pa.	21	-	-	-	-	-	65	-	48	37	203	-	1	6	-
E.N. CENTRAL	55	-	15	-	6	60	267	5	174	27	761	336	-	5	9
Ohio	11	-	5	-	3	6	77	3	68	3	260	47	-	1	-
Ind.	3	-	-	-	-	20	45	-	3	23	86	23	-	1	-
Ill.	29	-	5	-	-	17	74	-	42	-	182	34	-	-	8
Mich.	12	-	5	-	1	13	42	2	58	1	56	10	-	2	1
Wis.	-	-	-	-	2	4	29	-	3	-	177	222	-	1	-
W.N. CENTRAL	22	-	1	-	2	11	112	-	38	49	343	165	-	1	8
Minn.	4	-	-	-	-	10	7	-	2	44	191	33	-	-	-
Iowa	3	-	-	-	-	1	18	-	7	4	27	5	-	-	3
Mo.	7	-	1	-	-	-	45	-	22	-	89	78	-	1	1
N. Dak.	2	-	-	-	-	-	3	-	5	-	3	13	-	-	-
S. Dak.	2	-	-	-	-	-	3	-	-	-	8	11	-	-	-
Nebr.	3	U	-	U	-	-	9	U	1	U	9	7	U	-	-
Kans.	1	-	-	-	2	-	27	-	1	1	16	18	-	-	4
S. ATLANTIC	225	-	15	-	11	125	331	7	373	15	351	119	-	9	13
Del.	2	-	1	-	-	1	11	-	5	1	14	7	-	2	-
Md.	31	-	-	-	4	16	41	1	66	3	107	20	-	2	5
D.C.	10	-	-	-	-	-	5	-	1	2	8	1	-	-	-
Va.	22	-	-	-	2	15	37	4	25	2	50	10	-	-	-
W. Va.	2	-	-	-	-	-	12	-	15	-	9	7	-	-	1
N.C.	91	-	-	-	-	24	56	-	195	-	53	22	-	-	-
S.C.	1	-	-	-	-	29	30	-	15	1	13	10	-	-	2
Ga.	15	-	-	-	3	73	73	-	14	5	24	14	-	-	-
Fla.	51	-	14	-	5	37	66	2	37	1	73	28	-	5	5
E.S. CENTRAL	24	-	1	-	-	460	107	1	43	8	246	24	-	-	1
Ky.	4	-	-	-	-	443	20	-	-	3	29	1	-	-	-
Tenn.	9	-	-	-	-	-	28	-	11	3	154	6	-	-	1
Ala.	6	-	1	-	-	-	34	-	22	2	52	14	-	-	-
Miss.	5	-	-	-	-	17	25	1	10	-	11	3	-	-	-
W.S. CENTRAL	19	-	7	-	3	1,098	167	4	176	22	128	194	-	17	6
Ark.	3	-	-	-	-	-	17	-	4	1	8	12	-	-	-
La.	2	-	1	-	-	-	30	-	16	1	9	7	-	1	-
Okla.	4	-	-	-	-	11	25	-	11	-	69	28	-	1	-
Tex.	10	-	6	-	3	1,087	95	4	145	20	42	147	-	15	6
MOUNTAIN	27	-	3	-	1	28	141	-	48	15	306	277	-	8	7
Mont.	2	-	-	-	-	-	12	-	-	3	7	4	-	-	-
Idaho	1	-	-	-	-	-	10	-	5	6	102	39	-	1	1
Wyo.	-	-	-	-	-	1	2	-	2	-	1	-	-	-	-
Colo.	16	-	2	-	1	22	27	-	14	5	89	27	-	-	1
N. Mex.	5	-	-	-	-	2	4	N	N	-	33	71	-	-	-
Ariz.	-	-	-	-	-	3	68	-	7	1	44	110	-	2	2
Utah	1	-	-	-	-	-	11	-	4	-	27	24	-	4	1
Nev.	2	-	1	-	-	-	7	-	16	-	3	2	-	1	2
PACIFIC	262	-	89	-	15	108	315	2	246	24	476	537	1	67	73
Wash.	23	-	-	-	-	10	60	-	10	7	55	163	-	-	6
Oreg.	4	-	-	-	-	3	22	N	N	1	14	31	-	3	1
Calif.	229	-	78	-	4	54	212	1	209	16	392	316	-	36	44
Alaska	1	-	-	-	2	9	13	-	8	-	5	7	-	1	-
Hawaii	5	-	11	-	9	32	8	1	19	-	10	20	1	27	22
Guam	1	U	2	U	-	10	1	U	6	U	-	-	U	-	3
P.R.	-	-	224	-	-	339	8	1	3	4	6	12	-	-	-
V.I.	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-
Amer. Samoa	-	-	1	-	-	-	-	-	-	-	2	6	-	-	-
C.N.M.I.	-	-	-	-	1	2	-	-	12	-	1	1	-	-	-

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

N: Not notifiable

U: Unavailable

† International

§ Out-of-state

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending September 25, 1993, and September 19, 1992 (38th Week)

Reporting Area	Syphilis (Primary & Secondary)		Toxic-Shock Syndrome	Tuberculosis		Tula- remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1993	Cum. 1992	Cum. 1993	Cum. 1993	Cum. 1992	Cum. 1993	Cum. 1993	Cum. 1993	Cum. 1993
UNITED STATES	18,934	24,827	181	15,261	16,387	101	237	346	6,481
NEW ENGLAND	284	488	13	368	334	-	21	5	1,123
Maine	4	5	3	28	19	-	-	-	-
N.H.	26	34	3	9	14	-	1	-	78
Vt.	1	1	1	4	6	-	-	-	19
Mass.	105	243	5	202	171	-	14	5	461
R.I.	12	24	1	44	23	-	-	-	-
Conn.	136	181	-	81	101	-	6	-	565
MID. ATLANTIC	1,697	3,437	30	3,441	3,988	1	47	25	2,479
Upstate N.Y.	149	262	15	328	521	1	10	5	1,910
N.Y. City	816	1,943	1	2,044	2,320	-	26	-	-
N.J.	223	437	-	568	677	-	8	10	319
Pa.	509	795	14	501	470	-	3	10	250
E.N. CENTRAL	2,721	3,707	35	1,387	1,598	4	29	11	87
Ohio	879	570	11	230	237	-	6	7	5
Ind.	247	207	1	159	128	1	1	1	8
Ill.	841	1,655	6	609	796	2	16	1	16
Mich.	427	699	17	324	372	1	5	2	14
Wis.	327	576	-	65	65	-	1	-	44
W.N. CENTRAL	1,185	1,064	12	337	400	33	2	16	269
Minn.	56	65	2	42	114	-	-	1	37
Iowa	33	37	5	38	34	-	-	5	49
Mo.	982	819	2	176	174	14	2	7	14
N. Dak.	1	1	-	5	7	-	-	-	51
S. Dak.	1	-	-	11	18	15	-	2	36
Nebr.	10	24	-	14	16	1	-	-	7
Kans.	102	118	3	51	37	3	-	1	75
S. ATLANTIC	5,001	6,814	22	3,012	3,012	2	37	156	1,538
Del.	86	156	1	36	39	-	1	1	114
Md.	277	484	1	276	259	-	8	10	465
D.C.	256	298	-	121	84	-	-	-	14
Va.	470	556	6	309	269	-	4	8	287
W. Va.	11	15	-	61	73	-	-	6	68
N.C.	1,418	1,811	3	368	378	1	2	89	76
S.C.	734	927	-	289	306	-	-	10	117
Ga.	837	1,348	2	571	624	-	1	25	351
Fla.	912	1,219	9	981	980	1	21	7	46
E.S. CENTRAL	2,926	3,130	9	968	1,053	5	7	47	163
Ky.	249	115	2	280	281	1	2	8	14
Tenn.	831	860	3	145	283	3	2	26	72
Ala.	620	1,095	2	371	296	1	3	4	77
Miss.	1,226	1,060	2	172	193	-	-	9	-
W.S. CENTRAL	4,355	4,511	2	1,673	1,852	39	4	76	428
Ark.	583	667	-	129	147	23	-	4	28
La.	1,904	1,850	-	-	138	-	1	1	5
Okla.	295	257	2	110	114	13	-	67	56
Tex.	1,573	1,737	-	1,434	1,453	3	3	4	339
MOUNTAIN	177	264	11	370	429	11	8	10	142
Mont.	1	7	-	15	-	5	-	1	17
Idaho	-	1	1	9	18	-	-	-	6
Wyo.	7	3	-	2	-	2	-	8	18
Colo.	51	42	2	32	30	-	5	1	23
N. Mex.	24	29	1	46	61	1	1	-	9
Ariz.	78	134	1	163	197	-	2	-	52
Utah	4	7	4	23	62	2	-	-	4
Nev.	12	41	2	80	61	1	-	-	13
PACIFIC	588	1,412	47	3,705	3,721	6	82	-	252
Wash.	45	69	7	180	216	1	6	-	-
Oreg.	54	31	-	78	93	2	-	-	-
Calif.	478	1,300	40	3,218	3,178	3	73	-	235
Alaska	6	4	-	39	48	-	-	-	17
Hawaii	5	8	-	190	186	-	3	-	-
Guam	1	3	-	28	58	-	-	-	-
P.R.	395	250	-	185	174	-	-	-	34
V.I.	34	52	-	2	3	-	-	-	-
Amer. Samoa	-	-	-	2	-	-	1	-	-
C.N.M.I.	3	5	-	25	46	-	-	-	-

U: Unavailable

TABLE III. Deaths in 121 U.S. cities,\* week ending  
September 25, 1993 (38th Week)

Reporting Area	All Causes, By Age (Years)						P&I <sup>†</sup> Total	Reporting Area	All Causes, By Age (Years)						P&I <sup>†</sup> Total
	All Ages	≥65	45-64	25-44	1-24	<1			All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	528	355	86	53	17	17	41	S. ATLANTIC	1,388	807	300	188	52	40	63
Boston, Mass.	139	77	28	22	4	8	18	Atlanta, Ga.	202	97	62	28	11	4	2
Bridgeport, Conn.	35	27	3	1	1	3	2	Baltimore, Md.	233	133	53	32	9	6	18
Cambridge, Mass.	23	18	3	2	-	-	-	Charlotte, N.C.	99	66	14	18	1	-	7
Fall River, Mass.	23	16	4	1	1	1	-	Jacksonville, Fla.	141	96	27	11	2	5	13
Hartford, Conn.	43	22	9	8	1	3	1	Miami, Fla.	103	61	15	17	6	4	-
Lowell, Mass.	19	14	4	1	-	-	2	Norfolk, Va.	54	31	14	8	-	1	3
Lynn, Mass.	13	9	3	1	-	-	1	Richmond, Va.	U	U	U	U	U	U	U
New Bedford, Mass.	21	15	5	1	-	-	1	Savannah, Ga.	42	26	11	2	2	1	2
New Haven, Conn.	35	18	6	8	3	-	-	St. Petersburg, Fla.	55	41	4	7	-	3	2
Providence, R.I.	45	37	6	1	1	-	7	Tampa, Fla.	171	108	32	19	8	4	14
Somerville, Mass.	2	2	-	-	-	-	-	Washington, D.C.	263	128	65	45	13	11	2
Springfield, Mass.	42	29	8	2	2	1	4	Wilmington, Del.	25	20	3	1	-	1	-
Waterbury, Conn.	24	20	4	-	-	-	-	E.S. CENTRAL	582	400	106	42	15	19	42
Worcester, Mass.	64	51	3	5	4	1	5	Birmingham, Ala.	130	91	21	8	7	3	3
MID. ATLANTIC	2,404	1,522	448	308	66	60	116	Chattanooga, Tenn.	58	43	9	6	-	-	5
Albany, N.Y.	41	32	5	1	2	1	3	Knoxville, Tenn.	76	53	16	4	2	1	9
Allentown, Pa.	19	11	7	-	1	-	-	Lexington, Ky.	83	60	18	2	1	2	8
Buffalo, N.Y.	100	72	19	4	1	4	4	Memphis, Tenn.	13	8	2	2	-	1	-
Camden, N.J.	35	23	5	2	2	3	2	Mobile, Ala.	52	33	9	5	1	4	7
Elizabeth, N.J.	16	13	1	2	-	-	-	Montgomery, Ala.	42	31	8	3	-	-	1
Erie, Pa.§	22	15	6	1	-	-	1	Nashville, Tenn.	128	81	23	12	4	8	9
Jersey City, N.J.	45	24	9	9	-	3	4	W.S. CENTRAL	1,485	938	306	149	55	33	69
New York City, N.Y.	1,314	788	255	203	41	27	50	Austin, Tex.	60	28	16	11	4	1	3
Newark, N.J.	65	24	16	23	1	1	9	Baton Rouge, La.	36	26	6	3	1	-	1
Paterson, N.J.	24	14	3	4	3	-	-	Corpus Christi, Tex.	55	36	12	4	1	2	2
Philadelphia, Pa.	300	194	61	26	10	9	19	Dallas, Tex.	199	130	35	22	12	-	4
Pittsburgh, Pa.§	82	58	16	4	2	2	4	El Paso, Tex.	81	59	13	5	2	2	5
Reading, Pa.	U	U	U	U	U	U	U	Ft. Worth, Tex.	102	71	19	5	2	5	3
Rochester, N.Y.	128	96	17	7	1	7	11	Houston, Tex.	360	183	100	52	12	13	31
Schenectady, N.Y.	29	24	3	1	1	-	1	Little Rock, Ark.	71	44	15	7	3	2	1
Scranton, Pa.§	34	29	1	4	-	-	-	New Orleans, La.	98	59	20	8	7	1	-
Syracuse, N.Y.	73	49	12	10	1	1	3	San Antonio, Tex.	181	126	34	11	7	2	7
Trenton, N.J.	29	19	5	3	-	2	2	Shreveport, La.	122	87	19	11	3	2	6
Utica, N.Y.	18	15	1	2	-	-	-	Tulsa, Okla.	120	89	17	10	1	3	6
Yonkers, N.Y.	30	22	6	2	-	-	3	MOUNTAIN	773	511	140	70	23	28	33
E.N. CENTRAL	2,229	1,342	453	228	143	63	101	Albuquerque, N.M.	91	61	19	6	2	3	1
Akron, Ohio	49	37	6	4	1	1	-	Colo. Springs, Colo.	41	28	6	6	-	1	1
Canton, Ohio	41	30	5	3	2	1	1	Denver, Colo.	115	66	27	8	3	11	4
Chicago, Ill.	538	200	114	112	97	15	14	Las Vegas, Nev.	116	76	21	14	3	2	4
Cincinnati, Ohio	112	76	20	6	6	4	10	Ogden, Utah	22	14	7	1	-	-	-
Cleveland, Ohio	133	76	30	14	7	6	2	Phoenix, Ariz.	143	89	20	15	10	9	13
Columbus, Ohio	190	128	43	13	2	4	9	Pueblo, Colo.	22	19	2	1	-	-	-
Dayton, Ohio	115	79	26	8	1	1	4	Salt Lake City, Utah	96	68	13	9	4	1	5
Detroit, Mich.	205	117	45	22	11	10	7	Tucson, Ariz.	127	90	25	10	1	1	5
Evansville, Ind.	45	38	4	2	1	-	2	PACIFIC	1,898	1,246	342	203	50	50	93
Fort Wayne, Ind.	58	46	6	4	1	1	7	Berkeley, Calif.	13	8	4	1	-	-	1
Gary, Ind.	17	6	8	1	-	2	-	Fresno, Calif.	118	71	19	14	8	6	5
Grand Rapids, Mich.	57	43	10	3	-	1	4	Glendale, Calif.	30	24	3	3	-	-	-
Indianapolis, Ind.	185	125	39	12	3	6	8	Honolulu, Hawaii	71	47	13	6	1	4	4
Madison, Wis.	32	22	7	1	-	2	1	Long Beach, Calif.	45	34	7	3	-	1	7
Milwaukee, Wis.	125	87	25	5	4	4	10	Los Angeles, Calif.	540	342	101	63	15	12	21
Peoria, Ill.	46	31	10	3	1	1	4	Pasadena, Calif.	25	17	3	2	2	1	-
Rockford, Ill.	49	39	8	2	-	-	7	Portland, Ore.	130	89	18	13	9	1	6
South Bend, Ind.	54	37	11	3	3	-	4	Sacramento, Calif.	155	105	29	12	3	6	11
Toledo, Ohio	120	86	22	8	2	2	4	San Diego, Calif.	150	89	32	19	5	5	13
Youngstown, Ohio	58	39	14	2	1	2	3	San Francisco, Calif.	138	89	23	25	1	-	5
W.N. CENTRAL	928	702	129	58	20	19	53	San Jose, Calif.	153	100	37	9	1	6	6
Des Moines, Iowa	131	107	20	2	2	-	9	Santa Cruz, Calif.	39	28	5	5	-	1	2
Duluth, Minn.	31	25	3	3	-	-	-	Seattle, Wash.	130	87	22	14	4	3	3
Kansas City, Kans.	25	17	3	5	-	-	-	Spokane, Wash.	62	45	11	3	1	2	4
Kansas City, Mo.	133	94	23	7	7	2	6	Tacoma, Wash.	99	71	15	11	-	2	5
Lincoln, Nebr.	33	28	2	1	-	2	1	TOTAL	12,215 <sup>¶</sup>	7,823	2,310	1,299	441	329	611
Minneapolis, Minn.	245	193	29	17	2	4	16								
Omaha, Nebr.	84	58	18	6	1	1	4								
St. Louis, Mo.	141	104	16	9	5	7	9								
St. Paul, Minn.	53	38	10	3	1	1	6								
Wichita, Kans.	52	38	5	5	2	2	2								

\*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.

<sup>†</sup>Pneumonia and influenza.

<sup>‡</sup>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.

<sup>¶</sup>Total includes unknown ages.

U: Unavailable.

*Effectiveness in Disease and Injury Prevention***Update: National Breast and Cervical Cancer  
Early Detection Program, 1992–1993**

During the 1990s, an estimated 500,000 U.S. women will die from breast and cervical cancers (1). National efforts to prevent deaths from these cancers have included the implementation of the Breast and Cervical Cancer Mortality Prevention Act of 1990, which aims to increase the efficiency and effectiveness of screening. This program is directed toward women aged  $\geq 40$  years and to women who have low incomes, are underinsured or uninsured, or are from racial/ethnic minority groups. This report describes cancer screening in two women in Michigan who received these services in 1992 through the CDC-funded National Breast and Cervical Cancer Early Detection Program and summarizes the assessment of the implementation of this program for low-income women.

In Michigan, the program targets urban and rural white, black, Hispanic, American Indian/Alaskan Native, Asian/Pacific Islander, and Arab women aged  $\geq 40$  years. By the end of the program's second year (1992), the number of screening sites had increased by approximately 260%, from 24 to 62. Services are provided at a variety of locations, including public health departments, hospital-based clinics, churches, public housing complexes, and senior citizen centers.

**Case 1**

In early January 1992, a woman requested assistance from the Michigan Department of Public Health in obtaining a mammogram. The woman, who had a family history of breast cancer, was examined by a physician in December 1991 and advised to have a mammogram because of a suspicious finding on examination. However, the woman lived in a group home with 13 other women, was unemployed, had no insurance, and was not receiving Medicaid. From a friend who learned of Michigan's breast and cervical cancer screening program through a multimedia campaign, she was informed of the services available. The woman subsequently received the appropriate diagnostic and treatment services (2).

**Case 2**

A woman whose screening services were paid through program dollars at a program-sponsored site had a mammogram with highly suspicious findings. The report was sent simultaneously to the local health department and to the woman's primary-care physician. The program protocol required documentation of patient notification and immediate follow-up of abnormalities. When, within 2 days of receiving the report, the program nurse had not received information about a follow-up appointment, she contacted the primary-care physician; the physician's office had filed the report as "normal." The program nurse indicated to the physician the radiologist's findings of a suspicious lesion. The woman was immediately notified and a biopsy scheduled. The woman's physician is now a strong proponent of the breast and cervical cancer-control program and the need for tracking and follow-up (2).

*Breast and Cervical Cancer Early Detection Program — Continued***Assessment of Program Efforts**

By July 1992, CDC had awarded \$64 million to 12 state\* health agencies to develop comprehensive programs for the early detection of breast and cervical cancers (1). Each state during its 5-year program period will 1) establish, expand, and/or improve screening services in communities with women at risk for breast and cervical cancers; 2) provide appropriate referrals for medical treatment of women screened through this program and ensure the provision of appropriate follow-up services; 3) develop and implement a public education program about the importance of screening in the early detection of breast and cervical cancers; 4) develop and implement a professional education program for physicians and other health-care providers to improve their skills in health education, screening, diagnosis, treatment, and follow-up services; 5) improve quality-assurance measures and ensure adherence to standards and guidelines in the screening and follow-up process; 6) establish a surveillance and evaluation system to monitor the program; and 7) establish and maintain a state-based cancer-control plan and coalition with representation from key private, voluntary, and public organizations and from consumers (1).

In September 1992, CDC awarded approximately \$275,000 per state to an additional 18 state† health agencies to begin capacity-building activities (1).

*Reported by: Cancer Section, Div of Programs, Michigan Dept of Public Health. Office of the Director, and Program Svcs Br, Div of Cancer Prevention and Control, National Center for Chronic Disease Prevention and Health Promotion, CDC.*

**Editorial Note:** Screening mammography followed by appropriate treatment reduces breast cancer mortality by as much as 30% in women aged >50 years, and nearly all deaths from cervical cancer would be preventable if all women were screened according to guidelines (1). However, screening mammography is underutilized by women with fewer than 12 years of education and women earning less than \$10,000 per year; intervals between Papanicolaou (Pap) smears are longer as women age and for women with lower household incomes (3,4). The two cases described in this report demonstrate the potential benefits of state-based comprehensive breast and cervical cancer screening programs that integrate outreach, screening, tracking, and clinical follow-up. To improve systematic, ongoing information collection efforts by state and federal program personnel and policy makers, CDC is undertaking a comprehensive evaluation of this program.

Benefits resulting from increased support of comprehensive programs have included 1) substantial increases in the number of screening sites (12 states); 2) implementation of 2900 public education programs designed to motivate women to seek screening services; 3) approximately 300 training programs for health-care providers delivered by the state programs; 4) collaboration between state health agencies and an estimated 440 organizations to plan, implement, and evaluate these programs; 5) establishment of coalitions among organizations essential to addressing control of these cancers (12 states); and 6) establishment or modification of cancer-control plans to address breast and cervical cancer specifically. During 1992, 1305 screening sites were available for women, compared with 575 in 1991.

\*California, Colorado, Maryland, Michigan, Minnesota, Missouri, Nebraska, New Mexico, North Carolina, South Carolina, Texas, and West Virginia.

†Cooperative agreements ranging from \$250,000–\$300,000 were awarded to Alaska, Arizona, Arkansas, Connecticut, Georgia, Illinois, Indiana, Iowa, Maine, Massachusetts, New York, Ohio, Oregon, Pennsylvania, Rhode Island, Vermont, Washington, and Wisconsin.



The national health objectives for the year 2000 include increasing to at least 80% the proportion of low-income women aged  $\geq$

## AIDS — Continued

of the 10 laboratories in the state that perform lymphocyte immunophenotyping. This report summarizes the results of the assessment.

Records of CD4+ T-lymphocyte tests performed at these laboratories were compared with the CDH records of persons with AIDS or HIV infection (not AIDS). For all persons who were not previously reported, CDH contacted the patient's provider or reviewed the medical record to determine whether the patient met reporting criteria. Six categories were used to classify persons tested by laboratory A or B: 1) AIDS with CD4+ T-lymphocyte count <200 per  $\mu\text{L}$ , not previously reported to CDH; 2) HIV-infected with CD4+ T-lymphocyte count  $\geq 200$  per  $\mu\text{L}$ , not previously reported to CDH; 3) previously reported as HIV-infected, reclassified to AIDS, with CD4+ T-lymphocyte count <200 per  $\mu\text{L}$ ; 4) previously reported as having AIDS; 5) previously reported as HIV-infected (and not reclassified to AIDS); or 6) not HIV-infected.

From January through December 1992, a total of 1161 CD4+ T-lymphocyte tests were performed at laboratory A, and 485 were performed at laboratory B. The number of persons tested by the two laboratories was 389 and 291, respectively (Table 1). Among persons tested at laboratory A, 49 (13%) with CD4+ counts <200 per  $\mu\text{L}$  were HIV positive and had not been reported previously to CDH, 40 (10%) were HIV infected with CD4+ counts  $\geq 200$  per  $\mu\text{L}$  and not reported previously to CDH, and 69 (18%) were reported previously to CDH as HIV-infected and reclassified to AIDS (CD4+ counts <200 per  $\mu\text{L}$ ). Among those tested at laboratory B, five (2%) with CD4+ counts <200 per  $\mu\text{L}$  were HIV positive and had not been reported previously to CDH, 14 (5%) were HIV-infected with CD4+ counts  $\geq 200$  per  $\mu\text{L}$  and not reported previously to CDH, and 48 (16%) were reported previously to CDH as HIV-infected and reclassified to AIDS (CD4+ counts <200 per  $\mu\text{L}$ ). Twenty-eight (7%) persons tested by laboratory A and 26 (9%) persons tested by laboratory B were tested for reasons other than HIV infection.

Most persons with AIDS or HIV infection who were identified by review of CD4+ test results but previously unreported to CDH had a diagnosis of HIV infection listed in the medical record by their physician but had no copy of a laboratory report of a positive HIV test. At laboratory A, these cases accounted for 41 (84%) of 49 newly identified AIDS cases and 36 (90%) of 40 HIV-infection (not AIDS) cases. At laboratory B, these

**TABLE 1. Classification of persons with AIDS and HIV infection based on review of CD4+ T-lymphocyte tests at two laboratories — Colorado, 1992**

Category*	Laboratory A		Laboratory B		Total	
	No.	(%)	No.	(%)	No.	(%)
<b>Previously reported as HIV-infected</b>						
Reclassified as AIDS case <sup>†</sup>	69	( 17.7)	48	( 16.5)	117	( 17.2)
HIV infection, not AIDS <sup>§</sup>	115	( 29.6)	95	( 32.6)	210	( 30.9)
<b>Previously reported as AIDS</b>	88	( 22.6)	103	( 35.4)	191	( 28.1)
<b>Not previously reported</b>						
New AIDS case <sup>†</sup>	49	( 12.6)	5	( 1.7)	54	( 7.9)
New HIV infection, not AIDS <sup>§</sup>	40	( 10.3)	14	( 4.8)	54	( 7.9)
<b>Not HIV-infected</b>	28	( 7.2)	26	( 8.9)	54	( 7.9)
<b>Total persons tested</b>	<b>389</b>	<b>(100.0)</b>	<b>291</b>	<b>(100.0)</b>	<b>680</b>	<b>(100.0)</b>

\*Mutually exclusive categories.

<sup>†</sup>Under 1993 AIDS surveillance case definition.

<sup>§</sup>CD4+ T-lymphocyte count  $\geq 200$  per  $\mu\text{L}$  or CD4+ T-lymphocyte percentage  $\geq 14$ .

*AIDS — Continued*

cases accounted for four of five newly identified AIDS cases and 12 of 14 HIV-infection (not AIDS) cases.

CDH used the findings of this study to support a request that the Colorado Board of Health amend laboratory reporting regulations to include reporting of CD4+ T-lymphocyte counts <500 per  $\mu\text{L}$  (2). The resulting regulation permits laboratories to fulfill reporting requirements by permitting authorized personnel from CDH's HIV/STD Surveillance Program to review test records.

CDH maintains the records of all persons with HIV infection and AIDS, including CD4+ T-lymphocyte test results, under strict confidentiality safeguards (i.e., restricted access and alarm systems). These records may not be shared or made public on subpoena, search warrant, or discovery proceedings. Penalties for unauthorized disclosure of information are fines, imprisonment, or both.

*Reported by: KA Gershman, MD, BA Dahan, BF Krzywicki, HIV/STD Surveillance Program; RE Hoffman, MD, State Epidemiologist, Colorado Dept of Health. Div of HIV/AIDS, National Center for Infectious Diseases, CDC.*

**Editorial Note:** Active case finding, including systematic contacts with hospitals, providers, and laboratories, is important to ensure timely and complete disease reporting (3). The findings in this report suggest that AIDS case ascertainment initiated by laboratory reports of CD4+ T-lymphocyte test results, with provider follow-up or medical record review, can enhance completeness of case surveillance under the 1993 case definition. Other laboratory-based approaches to enhance surveillance for AIDS-defining opportunistic infections have been effective (4).

Active surveillance at two laboratories in Colorado that perform CD4+ T-lymphocyte testing identified a substantial number of AIDS cases meeting the 1993 case definition. At laboratory A, 23% of persons with CD4+ test results had HIV infection or AIDS not previously reported to CDH, compared with 6.5% at laboratory B. The lower proportion of unreported cases at laboratory B is probably a result of active surveillance by CDH at the facility that accounts for most of the CD4+ T-lymphocyte tests performed by laboratory B. In comparison, the facility that accounts for most of the CD4+ T-lymphocyte tests performed by laboratory A relied on passive surveillance from providers.

Of these 108 previously unreported AIDS and HIV cases identified through a review of CD4+ test results at the two laboratories, 85% were based on a diagnosis of HIV infection listed in the medical record without a laboratory report of an HIV-positive test. These patients may have been tested in other states or anonymously. In the absence of CD4+ laboratory reporting, these previously unreported persons would likely remain unreported until hospitalization for an opportunistic infection or death.

The 1993 expansion of AIDS surveillance will enable health departments to monitor more effectively the extent of severe HIV-related immunosuppression and morbidity, and thus better anticipate resources required for provision of ongoing preventive and other health-care services. All states have implemented the 1993 AIDS surveillance case definition. Reporting of CD4+ T-lymphocyte counts <200 per  $\mu\text{L}$  may enhance AIDS surveillance efforts.

This report indicates how CD4+ T-lymphocyte reports enhanced surveillance completeness in Colorado. As of August 31, 1993, 17 states require laboratory-initiated reporting of CD4+ T-lymphocyte counts <200 per  $\mu\text{L}$ . Assessments of the

*AIDS — Continued*

completeness of AIDS reporting under various active surveillance methods are conducted routinely by individual states.

*References*

1. CDC. 1993 Revised classification system for HIV infection and expanded surveillance case definition for AIDS among adolescents and adults. *MMWR* 1992;41(no. RR-17).
2. National Institutes of Health. State-of-the-art conference on azidothymidine therapy for early HIV infection. *Am J Med* 1990;89:335-44.
3. Thacker SB, Berkelman RL. Public health surveillance in the United States. *Epidemiol Rev* 1988;10:164-90.
4. Trino R, McAnaney J, Fife D. Laboratory-based reporting of AIDS. *J Acquir Immune Defic Syndr* 1993;6:1057-61.

*Current Trends*

### Update: Influenza Activity — United States and Worldwide, 1993

From October 1992 through February 1993, influenza activity was reported at moderate levels worldwide. Epidemic or outbreak levels of influenza activity were associated with either influenza B or influenza A(H3N2) in many parts of the world. Isolation of influenza A(H1N1) occurred less frequently. This report summarizes worldwide influenza activity reported from March through mid-September 1993 and makes recommendations for vaccination schedules in the United States.

**North America and Europe.** In most countries, influenza activity peaked in late February or early March and was associated with isolation of influenza B viruses. In March, an increase in the isolation of influenza A(H3N2) that began in mid-January continued throughout the rest of the season. Canada reported influenza A(H3N2) or influenza B outbreaks in nursing homes and other institutions from March through April and detection of sporadic infections caused by influenza A continuing through July. In the United Kingdom, sporadic cases of influenza A(H3N2) were reported during July and August.

In the United States, influenza A(H3N2) was isolated during outbreaks in nursing homes and other institutions during March-May; sporadic isolation of influenza A(H3N2) continued through June. During August, laboratory-confirmed influenza A(H3N2) outbreaks were reported in two nursing homes and among workers on a dredging barge in southern Louisiana (1). Influenza A(H3N2) viruses from the Louisiana outbreaks are antigenically similar to the A/Beijing/32/92 strain (2).

**Asia.** During March, epidemic level activity associated with the isolation of influenza B viruses was reported in Beijing. Japan reported widespread outbreaks and epidemic levels of influenza activity caused by influenza A(H3N2) viruses continuing into March. Since March, moderate levels of influenza activity caused by influenza A(H3N2) and influenza B have been reported in Hong Kong. From March through August, sporadic isolations of influenza A (untyped), A(H3N2), and influenza B were reported from China, Hong Kong, Indonesia, Korea, Malaysia, Singapore, and Thailand.

*Influenza Activity — Continued*

**Central and South America.** Epidemics caused by influenza A(H3N2) were reported in Brazil in March and in Uruguay in May. During May and June, institutional outbreaks caused by influenza A(H3N2) were reported in Argentina. Concomitantly, influenza-like illness (ILI) among all age groups was reported to be widespread in Cordoba, Argentina. From May through July, Chile reported outbreaks due to influenza A(H3N2) and influenza B.

**Oceania.** Epidemic level activity caused by influenza A (untyped) occurred in Fiji during March and declined in May. During April and May, sporadic isolation of influenza B was reported in Papua New Guinea. In New Zealand, outbreaks caused by influenza B occurred in May followed by widespread outbreaks due to influenza A(H3N2) and sporadic isolation of influenza B from May through July. From March through August, Australia reported mild influenza activity with sporadic isolations of influenza A(H3N2), influenza B, and one case of influenza A(H1N1). During August 15–August 22, a continuing increase in ILI was reported in Victoria and Queensland.

**Africa.** During February and March, epidemic levels of influenza A(H3N2) occurred in Tunisia. Isolation of influenza A(H3N2) was reported in Madagascar from April through June. Outbreaks due to influenza A(H3N2) occurred in South Africa during May and June.

**Characterization of influenza virus isolates.** During the 1992–93 influenza season, 873 influenza isolates collected worldwide were characterized antigenically by the World Health Organization Collaborating Center for Surveillance, Epidemiology, and Control of Influenza at CDC; of these, 551 (63%) were from the United States. Of the 457 influenza A(H3N2) isolates characterized, 384 (84%) were closely related to the 1993–94 vaccine strain, A/Beijing/32/92, and 73 (16%) resembled A/Beijing/353/89, the 1992–93 vaccine strain (2). Of the 343 influenza B isolates, 339 (99%) resembled B/Panama/45/90, the 1993–94 vaccine strain, and four (1%) resembled the strain B/Victoria/02/87 (3). All 73 influenza A(H1N1) viruses analyzed were similar to A/Taiwan/01/86 or to the closely related 1993–94 vaccine strain, A/Texas/36/91 (4).

*Reported by: World Health Organization National Influenza Centers, Communicable Diseases Div, World Health Organization, Geneva. World Health Organization Collaborating Center for Surveillance, Epidemiology, and Control of Influenza, Influenza Br, and Epidemiology Activity, Div of Viral and Rickettsial Diseases, National Center for Infectious Diseases, CDC.*

**Editorial Note:** Circulation of influenza A/Beijing/32/92(H3N2)-like viruses late in the 1992–93 season and the association of this virus strain with outbreaks in August suggest that influenza A(H3N2) viruses may be the predominant circulating viruses in the United States during the 1993–94 influenza season. Since the emergence of influenza type A(H3N2) in 1968, influenza seasons during which this strain has predominated have been accompanied by a concomitant increase in the proportion of influenza-associated deaths, particularly among persons aged  $\geq 65$  years.

Although sporadic cases of influenza can occur at any time, outbreaks rarely occur during the summer in the United States. Sporadic cases of influenza are often first detected during October or November, but outbreaks usually do not begin until December. Although it is unknown whether the outbreaks investigated in Louisiana indicate an early influenza season this year, in the past, similar outbreaks have been followed by early influenza activity in other parts of the United States (5–7). Therefore, CDC recommends that, if possible, vaccination providers complete vaccination

*Influenza Activity — Continued*

programs by the end of October 1993 rather than conducting routine vaccination programs through mid-November, as is usually recommended (8).

The Advisory Committee on Immunization Practices recommends vaccination against influenza for 1) persons aged  $\geq 65$  years; 2) persons who reside in nursing homes or other chronic-care facilities; 3) persons with chronic cardiovascular or pulmonary disorders, including children with asthma; 4) persons who required medical follow-up or hospitalization during the past year because of chronic metabolic disease, renal dysfunction, hemoglobinopathies, or immunosuppression; and 5) children and teenagers who are receiving long-term aspirin therapy and, therefore, may be at risk for developing Reye syndrome after influenza (8). In addition, vaccination is recommended for health-care workers and other persons who are in close contact with persons in high-risk groups, including household members.

The 1993–94 trivalent influenza vaccine contains virus strains of the three distinct groups of influenza viruses in worldwide circulation: A/Texas/36/91-like (H1N1), A/Beijing/32/92-like (H3N2), and B/Panama/45/90-like. Most influenza viruses isolated since March 1993 are closely related to the 1993–94 influenza vaccine.

Even though the vaccine and circulating virus strains appear to be closely matched, antiviral agents can still be a useful adjunct to vaccination (9). Rimantadine hydrochloride, approved for marketing in September by the Food and Drug Administration, and amantadine hydrochloride are specifically active against influenza type A viruses and can be used for prophylaxis or for treatment of influenza A infections in certain situations, including 1) as a control measure when influenza outbreaks occur in institutions—both for treatment of ill persons and as prophylaxis for others; 2) as short-term prophylaxis for high-risk persons vaccinated after influenza activity has begun and who need protection for the 2-week period during which immunity is developing; 3) as prophylaxis during peak influenza activity for persons for whom vaccine is contraindicated or for immunocompromised persons who may not produce protective levels of antibody in response to vaccination; and 4) as prophylaxis for unvaccinated health-care workers and household contacts of high-risk persons either during peak influenza activity or until immunity develops after vaccination. Because amantadine and rimantadine are effective only against influenza type A, use of a rapid diagnostic test for influenza A may assist in determining influenza-control measures (10).

Information regarding influenza surveillance is available through the CDC Voice Information System (influenza update), telephone (404) 332-4555, or through the CDC Information Service on the Public Health Network electronic bulletin board. From October through May, the information is updated at least every other week. In addition, periodic updates about influenza are published in *MMWR*, and information on local influenza activity is available through county and state health departments.

*References*

1. CDC. Influenza A outbreaks—Louisiana, August 1993. *MMWR* 1993;42:689–92.
2. CDC. Update: influenza activity—United States and worldwide, and composition of the 1993–94 influenza vaccine. *MMWR* 1993;42:177–80.
3. World Health Organization. Recommended composition of influenza virus vaccines for use in the 1993–94 season. *Wkly Epidemiol Rec* 1993;68:57–60.
4. CDC. Update: influenza activity—United States, 1991–92 season. *MMWR* 1992;41:63–5.
5. CDC. Influenza—Arizona, worldwide. *MMWR* 1980;29:354–5.
6. CDC. Influenza—United States, worldwide. *MMWR* 1980;29:503–4.

*Influenza Activity — Continued*

7. CDC. Influenza—United States, worldwide. MMWR 1980;29:530–2.
8. ACIP. Prevention and control of influenza: part 1, vaccines—recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 1993;42(no. RR-6):1–13.
9. ACIP. Prevention and control of influenza: recommendations of the Immunization Practices Advisory Committee (ACIP). MMWR 1992;41(no. RR-9).
10. Waner JI, Todd SJ, Shalaby H, Murphy P, Wall LV. Comparison of directigen FLU-A with viral isolation and direct immunofluorescence for the rapid detection and identification of influenza A virus. J Clin Microbiol 1990;29:479–82.

*Notice to Readers***Recall of Laparotomy Sponges — United States, 1993**

On September 8, 1993, Medical Action Industries, Inc.\* (MAI) (Farmingdale, New York), announced a voluntary recall of all 300 and 400 Series laparotomy sponges packaged as sterile (lot numbers 100–1434) because of fungal contamination of the sponges. No human disease has been reported related to use of these sponges, which are used in surgical procedures to retract organs or absorb blood and/or other fluids. Cultures performed by the Food and Drug Administration (FDA) and independent laboratories have been positive for *Pyronema domesticum* and a nonsporulating basidiomycete. Additional testing by FDA of sponges manufactured by this and other firms is under way.

Health-care facilities should inspect their inventory of laparotomy sponges, discontinue use of sponges from the affected lots, and return unused sponges to the manufacturer. Sponges subject to the recall should not be resterilized or reprocessed for use. Alternative manufacturers or distributors may be contacted in case of shortages.

Prophylactic treatment of patients exposed to the affected sponges is not recommended, but hospital personnel should maintain active surveillance for surgical site infections. If postoperative infection develops, patient cultures should be evaluated for fungal pathogens.

Any laparotomy sponges, other than those covered by the recall, that are visibly contaminated, moist, or defectively packaged should immediately be reported to FDA's MedWatch Reporting Program, telephone (800) 332-1088. Any human infection suspected to be related to this contamination should be reported to CDC's Hospital Infections Program, National Center for Infectious Diseases, telephone (404) 639-1550.

*Reported by: Office of Surveillance and Biometrics, Center for Devices and Radiological Health, Food and Drug Administration. Div of Bacterial and Mycotic Diseases and Hospital Infections Program, National Center for Infectious Diseases, CDC.*

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Acting Director, Centers for Disease Control  
and Prevention

Walter R. Dowdle, Ph.D.

Acting Director, Epidemiology Program Office  
Barbara R. Holloway, M.P.H.

Editor, *MMWR* Series

Richard A. Goodman, M.D., M.P.H.

Managing Editor, *MMWR* (weekly)

Karen L. Foster, M.A.

Writers-Editors, *MMWR* (weekly)

David C. Johnson

Patricia A. McGee

Darlene D. Rumph

Caran R. Wilbanks

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