

# MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

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## Clean Air Month — May 1995

The American Lung Association (ALA) sponsors National Clean Air Month each May to educate the public about the relation between clean air and respiratory health. This year's theme is "Helping Kids Breathe Easier."

Air pollution is an important contributor to lung disease, the third leading cause of death in the United States. ALA is committed to decreasing lung disease in children by emphasizing the importance of reducing air pollution. ALA recommends that persons drive less, support state and local clean air regulations, make their homes and workplaces smoke-free, and test them for harmful pollutants (e.g., radon and carbon monoxide).

Efforts planned by local lung associations throughout the country for Clean Air Month include Clean Commute Days and Clean Air Challenge cycling and walking fundraising events. This issue of *MMWR* includes a report that provides estimates of the number of children potentially at risk from ozone air pollution.

Additional information about Clean Air Month and related activities is available from local ALA offices (telephone [800] 586-4872) or from the national office (1740 Broadway, New York, NY 10019-4374; telephone [212] 315-8700).

## Children at Risk from Ozone Air Pollution — United States, 1991–1993

A national health objective for the year 2000 is to reduce exposure to air pollutants so that at least 85% of persons reside in counties that meet Environmental Protection Agency (EPA) standards (objective 11.5) (1). Ozone, the principle component of summer smog, is the most pervasive air pollutant in the United States. The risks associated with ozone and other air pollutants are especially increased for children and adults with asthma (2); however, children with no underlying pulmonary diseases also are at risk for adverse health effects associated with these pollutants (3). In addition, because children of racial/ethnic minorities are more likely to reside in areas with higher air pollution levels, they may be exposed to higher levels of ozone (4). This report presents the findings of an analysis by the American Lung Association (ALA) to

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characterize pediatric populations potentially at risk for adverse health effects from exposure to ozone air pollution in the United States during 1991–1993.

The National Ambient Air Quality Standard for ozone is 0.12 parts per million (ppm) averaged over 1 hour.\* The federal standard is met if this value is not exceeded more than once per calendar year on average over a 3-year period. The federal “exceedance” of the 0.12 ppm standard is defined as all levels  $\geq 0.125$  ppm.† For this report, both the federal exceedance level ( $\geq 0.125$  ppm, averaged over 1 hour) and an alternative level—used in recent health studies ( $\geq 0.085$  ppm, averaged over 8 hours) (5)—were used as cutoff values.

The 1990 population census provided race/ethnicity-specific data for persons aged  $\leq 17$  years in each county (Bureau of the Census, unpublished data, 1992). The number of children with asthma was estimated by applying age-specific national prevalence rates from CDC’s National Health Interview Survey (6) to age-specific population estimates at the county level. Information about ozone exposure was based on 1991–1993 monitored ozone data (EPA, unpublished data, 1994), the most recent data available from EPA. Although individual levels of ozone exposure may vary for persons who reside in a particular county and differ from those measured by the monitor in that county, ozone levels generally are consistent within specific geographic areas (7).

During 1991–1993, ozone levels exceeded 0.085 ppm over 8 hours on four or more occasions in 394 counties and cities; an estimated 136 million persons (54.7% of the U.S. population) resided in these areas. Of the total number of children aged  $\leq 13$  years in the United States (50,324,764), approximately 27.1 million (53.9%) resided in these areas. Among racial/ethnic groups, 61.3% of all black children, 67.7% of all Asian/Pacific Islander children, and 69.2% of all Hispanic children resided in these areas (Table 1). An estimated 2.0 million (5.8%) of the 34.3 million children (aged  $\leq 17$  years) residing in these areas were affected by asthma.

During 1991–1993, a total of 104 counties and cities had ozone levels  $> 0.125$  ppm over a 1-hour period on four or more occasions. An estimated 60 million persons in the United States (24.1% of the U.S. population) resided in these areas, including an estimated 12.1 million children (aged  $\leq 13$  years) (24.1% of all children in this age group). Among racial/ethnic groups, 23.1% of black children, 39.9% of Asian/Pacific Islander children, and 44.2% of Hispanic children resided in these areas (Table 2). Approximately 877,000 children (aged  $\leq 17$  years) in these areas were affected by asthma.

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**Editorial Note:** Ozone pollution results when hydrocarbons and nitrogen oxides emitted from motor vehicles and other sources react in the presence of sunlight. Exposure to ozone has been associated with adverse health effects, including hospital and emergency department visits for asthma and other respiratory problems; reductions in lung function; and exercise-related wheezing, coughing, and chest tightness (5). Children are at higher risk for detrimental effects of ozone than adults because they

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\*44 FR 8202.

†40 CFR 50.

*Ozone Air Pollution — Continued*

spend more time outdoors during summer months when ozone levels are higher and because their lungs are still developing (8).

Although air pollution has been recognized as a public health hazard in the United States since the 1950s, the disproportionate risks for racial/ethnic minorities with low

**TABLE 1. Estimated number and percentage\* of persons aged  $\leq 13$  years exposed to ozone levels  $\geq 0.085$  ppm over an 8-hour period on four or more occasions, by race/ethnicity and age group — United States, 1991–1993**

Race/Ethnicity	Age group (yrs)					
	0–4		5–13		Total	
	No.	(%)	No.	(%)	No.	(%)
White	7,024,973	(51.5)	12,105,966	(50.4)	19,130,940	(50.8)
Black	1,726,730	(62.0)	2,915,656	(60.9)	4,642,386	(61.3)
American Indian/ Alaskan Native	57,562	(28.5)	102,586	(29.2)	160,149	(28.9)
Asian/Pacific Islander	400,682	(67.6)	702,920	(67.6)	1,103,601	(67.7)
Hispanic <sup>†</sup>	1,665,225	(69.7)	2,628,432	(68.9)	4,293,657	(69.2)
Other <sup>§</sup>	821,455	(72.9)	1,272,863	(72.4)	2,094,318	(72.6)
<b>Total</b>	<b>10,031,403</b>	<b>(54.7)</b>	<b>17,099,991</b>	<b>(53.5)</b>	<b>27,131,394</b>	<b>(53.9)</b>

\*Percentage of race/ethnicity-specific and age-specific population (e.g., percentage of blacks aged <5 years) residing in these areas.

<sup>†</sup>Persons of Hispanic origin can be of any race and therefore are represented in the other five racial categories.

<sup>§</sup>Includes all other persons not included in white, black, American Indian/Alaskan Native, or Asian/Pacific Islander groups (e.g., multiracial, multiethnic, mixed, and interracial) or a Spanish/Hispanic origin group (e.g., Mexican, Cuban, or Puerto Rican).

**TABLE 2. Estimated number and percentage\* of persons aged  $\leq 13$  years exposed to ozone levels  $\geq 0.125$  ppm over a 1-hour period on four or more occasions, by race/ethnicity and age group — United States, 1991–1993**

Race/Ethnicity	Age group (yrs)					
	0–4		5–13		Total	
	No.	(%)	No.	(%)	No.	(%)
White	3,077,213	(22.5)	5,155,003	(21.4)	8,232,215	(21.8)
Black	658,805	(23.6)	1,089,974	(22.8)	1,748,779	(23.1)
American Indian/ Alaskan Native	24,388	(12.1)	43,000	(12.2)	67,388	(12.2)
Asian/Pacific Islander	236,856	(40.2)	413,419	(39.8)	650,276	(39.9)
Hispanic <sup>†</sup>	1,070,046	(44.8)	1,667,656	(43.7)	2,738,062	(44.2)
Other <sup>§</sup>	558,082	(49.5)	857,686	(48.8)	1,415,768	(49.1)
<b>Total</b>	<b>4,555,344</b>	<b>(24.8)</b>	<b>7,559,082</b>	<b>(23.6)</b>	<b>12,114,426</b>	<b>(24.1)</b>

\*Percentage of race/ethnicity-specific and age-specific population (e.g. percentage of blacks aged <5 years) residing in these areas.

<sup>†</sup>Persons of Hispanic origin can be of any race and therefore are represented in the other five racial categories.

<sup>§</sup>Includes all other persons not included in white, black, American Indian/Alaskan Native, or Asian/Pacific Islander groups (e.g., multiracial, multiethnic, mixed, and interracial) or a Spanish/Hispanic origin group (e.g., Mexican, Cuban, or Puerto Rican).

*Ozone Air Pollution — Continued*

incomes have only recently been recognized (4). The findings in this report underscore the increased risk for exposure—particularly among children—for racial/ethnic minorities who reside in areas where national air quality standards are not met (4). In addition, since the early 1980s, the risk for asthma-associated mortality and hospitalization has been consistently higher among young persons who are black (9).

ALA recently issued *Danger Zones: Ozone Air Pollution and Our Children*. The report is a national and county estimate of the number of children who are at potential risk from exposure to ozone. Copies are available from local offices of the ALA, telephone (800) 586-4872 or (212) 315-8700.

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### **Fatal and Nonfatal Suicide Attempts Among Adolescents — Oregon, 1988–1993**

Suicide is the third leading cause of death among adolescents aged 15–19 years in the United States and second among adolescents in Oregon. During 1959–1961 and during 1990–1992, the rate of suicide in Oregon increased sixfold among 15–19-year-olds. During 1988–1991, the suicide rate for adolescents in Oregon (15.5 deaths per 100,000) was 39.6% higher than the U.S. rate (11.1). Because of the magnitude of this problem, in 1987 the state legislature in Oregon mandated that hospitals treating a child aged  $\leq 17$  years for injuries resulting from a suicide attempt report the attempt to the State Health Division, Oregon Department of Human Resources, and that the patient be referred for counseling; the Oregon Adolescent Suicide Attempt Data System (ASADS) was established in 1988. This report presents an analysis of data for adolescents aged  $\leq 17$  years from ASADS during 1988–1993.

*Suicide — Continued*

Notification of suicide attempt is made through a one-page report form, which is usually completed by emergency department or medical records personnel and is submitted monthly from all hospitals in the state. Hospitals use their own criteria to define attempts. Information collected includes age, race/ethnicity, sex, place of attempt, date of attempt, method of attempt, and whether the patient was admitted to the hospital. Beginning in 1990, data also were collected on reasons for the attempt and number of previous attempts. Data missing from attempt reports were imputed in proportion to known distributions for the specified variable. The proportion of missing data ranged from 0.1%–23.5%. In this analysis, fatal attempts were identified using death certificate data.

During 1988–1993, a total of 3783 suicide attempts were reported for persons aged ≤17 years; of these, 3773 were by persons aged 10–17 years (Table 1). Sex-specific attempt rates were 326.4 per 100,000 for females and 73.4 for males. Children as young as age 6 years had attempted suicide. The number of reported attempts increased steadily with age for males but peaked at age 15 years for females (Figure 1).

**Characteristics of Fatal and Nonfatal Suicide Attempts**

During 1988–1993, most (2981 [78.8%]) suicide attempts were made in the residence of the attempter; 280 (7.4%), in another residence; 178 (4.7%), in school; and seven (0.2%), in jail. Attempts occurred more commonly during spring months (March, April, and May) (1106 [29.2%]) and least commonly during summer months (June, July, and August) (731 [19.3%]). In addition, attempts occurred most frequently on Mondays (660 [17.4%]) and least often on Saturdays (414 [11.0%]).

Among youth aged 10–17 years, 123 (6.4 per 100,000) made a suicide attempt that resulted in death (Table 1). The rate of fatal suicide attempts was three times greater for males (9.5) than for females (3.1). In addition, the proportion of attempts that were fatal was more than 100-fold higher among males (94 [11.5%]) than among females (29 [0.1%]). Although the risk for attempts was 3.8 times greater among youth aged 15–17 years than among those aged 10–14 years, the proportions of fatal attempts were similar among males and females in both age groups.

During 1990–1993, of the 2511 persons who attempted suicide, 1042 (41.5%) reported having made at least one previous attempt during the preceding 5 years.

**TABLE 1. Number and rate\* of fatal and nonfatal suicide attempts among persons aged 10–17 years, by age group and sex — Oregon, 1988–1993**

Attempt/ Age group	Male		Female		Total	
	No.	Rate	No.	Rate	No.	Rate
<b>Nonfatal<sup>†</sup></b>						
10–14 yrs	167	26.6	1037	174.0	<b>1204</b>	<b>98.4</b>
15–17 yrs	556	156.1	2013	594.4	<b>2569</b>	<b>369.7</b>
<b>Total</b>	<b>723</b>	<b>73.4</b>	<b>3050</b>	<b>326.4</b>	<b>3773</b>	<b>196.6</b>
<b>Fatal<sup>§</sup></b>						
10–14 yrs	22	3.5	10	1.7	<b>32</b>	<b>2.6</b>
15–17 yrs	72	20.2	19	5.6	<b>91</b>	<b>13.1</b>
<b>Total</b>	<b>94</b>	<b>9.5</b>	<b>29</b>	<b>3.1</b>	<b>123</b>	<b>6.4</b>

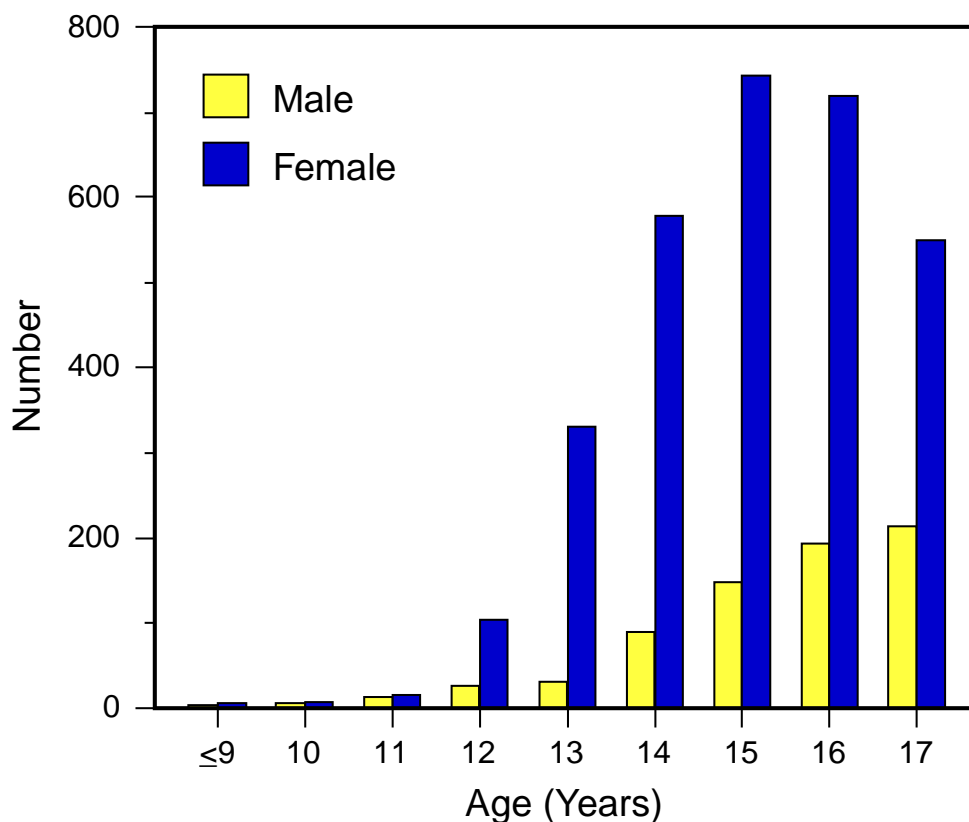
\*Per 100,000 population in specified group.

<sup>†</sup>Source: Oregon Adolescent Suicide Attempt Data System.

<sup>§</sup>Source: Oregon death certificate data.

*Suicide — Continued*

**FIGURE 1. Number of suicide attempts among persons aged  $\leq 17$  years, by age and sex — Oregon, 1988–1993**



Previous attempts occurred most often among those who indicated their reason for attempting suicide was rape/sexual abuse (149 [60.7%]), substance abuse (111 [56.6%]), or physical abuse (46 [54.0%]).

#### **Methods Used**

During 1988–1993, ingestion of drugs accounted for most (2857 [75.5%]) attempts (Table 2); of the attempts involving drugs, analgesics accounted for 1354 (47.4%) (aspirin and acetaminophen were used most commonly). Cutting and piercing injuries accounted for 421 (11.1%) of the attempts, of which most were lacerations of the wrists. Most attempts by multiple methods were lacerations combined with a drug overdose.

Drugs were used in 2440 (79.8%) attempts by females, compared with 417 (57.4%) by males (Table 2). Males who attempted suicide were more likely than females to do so by suffocation/hanging, cutting/piercing, or use of firearms (Table 2).

Of all methods used to attempt suicide, those used most commonly were least likely to result in death (e.g., of attempts by drug overdose, 0.4% were fatal) (Table 2). In comparison, 78.2% and 35.7% of attempts using firearms or poisonings with gas, respectively, were fatal. Of the 124 deaths among persons aged  $\leq 17$  years, most resulted from use of firearms (63.7%) or suffocation/hanging (18.5%).

**TABLE 2. Percentage of fatal and nonfatal suicide attempts among persons aged ≤17 years, by sex, age group, and method used — Oregon, 1988–1993**

Method	Nonfatal attempts*								
	Total attempts		Sex (%)		Age group (yrs) (%)			% Fatal Attempts <sup>†</sup>	% Attempts resulting in death <sup>§</sup>
	No.	(%)	Male (n=726)	Female (n=3057)	≤12 (n=182)	13–14 (n=1029)	15–17 (n=2572)		
Poisoning, drugs	2857	( 75.5)	57.4	79.8	75.3	77.5	74.8	9.7	0.4
Poisoning, solids and liquids	174	( 4.6)	6.6	4.0	6.0	5.5	4.1	0.8	0.6
Poisoning, gas	8	( 0.2)	1.0	0.1	0	0.3	0.2	4.0	35.7
Suffocation/Hanging	91	( 2.4)	7.0	1.3	8.2	2.1	2.1	18.5	20.2
Drowning	4	( 0.1)	0.4	0.1	0	0.1	0.2	—	—
Using firearms	23	( 0.6)	2.6	0.2	0	0.6	0.8	63.7	78.2
Cutting/Piercing	421	( 11.1)	16.3	9.9	7.1	9.9	11.9	—	—
Jumping from a high place	23	( 0.6)	1.7	0.3	—	0.5	0.7	—	—
Other <sup>¶</sup>	182	( 4.8)	7.0	4.2	3.3	3.6	5.3	3.2	2.2
<b>Total</b>	<b>3783</b>	<b>(100.0)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>3.2</b>

\* Source: Oregon Adolescent Suicide Attempt Data System.

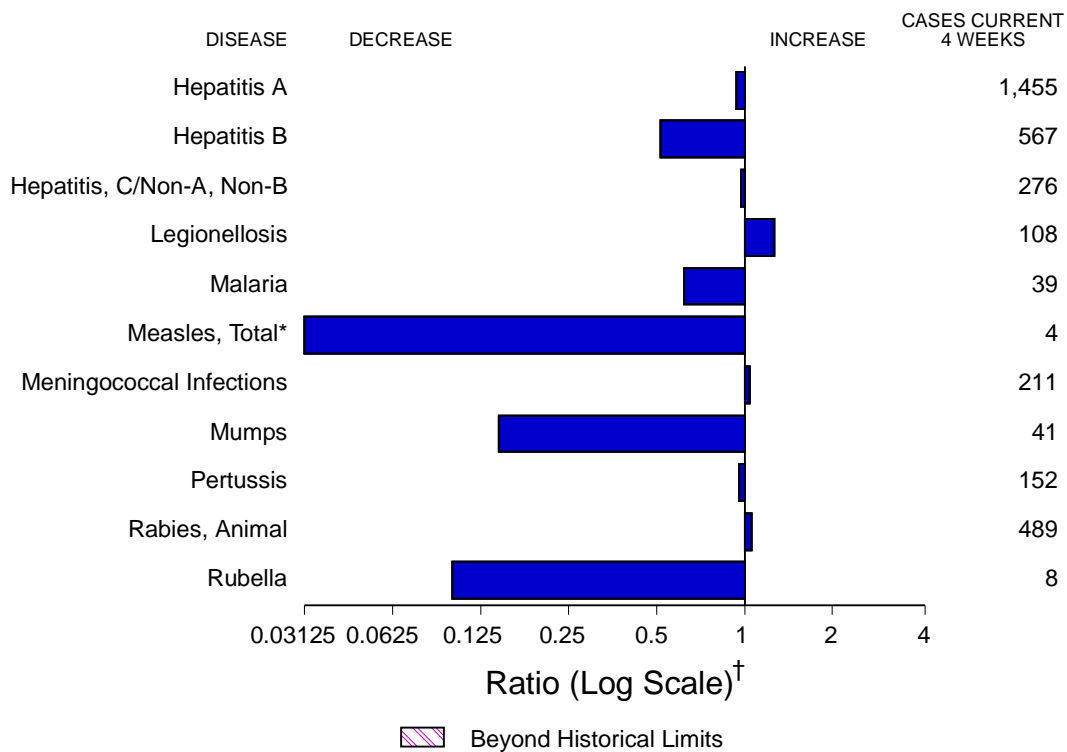
† Source: Oregon death certificate data.

§ Calculated by dividing the number of fatal attempts in a category by the total number of attempts in that category.

¶ Includes attempts by multiple methods.

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**FIGURE I. Notifiable disease reports, comparison of 4-week totals ending April 22, 1995, with historical data — United States**



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

<sup>†</sup>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 April 22, 1995 (16th Week)**

	Cum. 1995		Cum. 1995
Anthrax	-	Psittacosis	14
Brucellosis	12	Rabies, human	1
Cholera	-	Rocky Mountain Spotted Fever	34
Congenital rubella syndrome	3	Syphilis, congenital, age < 1 year <sup>†</sup>	-
Diphtheria	-	Tetanus	9
<i>Haemophilus influenzae</i> *	418	Toxic shock syndrome	58
Hansen Disease	36	Trichinosis	8
Plague	-	Typhoid fever	80
Poliomyelitis, Paralytic	-		

\*Of 407 cases of known age, 94 (23%) were reported among children less than 5 years of age.

<sup>†</sup>Updated quarterly from reports to the Division of Sexually Transmitted Diseases and HIV Prevention, National Center for Prevention Services. First quarter data not yet available.

-: no reported cases



**TABLE II. Cases of selected notifiable diseases, United States, weeks ending April 22, 1995, and April 23, 1994 (16th Week)**

Reporting Area	AIDS*	Gonorrhea		Hepatitis (Viral), by type						Legionellosis	
				A		B		C/NA,NB			
				Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994		
UNITED STATES	19,652	110,273	117,216	7,238	6,664	2,514	3,734	1,279	1,390	380	448
NEW ENGLAND	842	1,719	2,505	51	98	59	133	28	43	5	5
Maine	23	20	19	10	11	2	4	-	-	-	-
N.H.	38	34	23	2	3	7	7	3	5	-	-
Vt.	7	15	8	-	-	1	4	-	6	-	-
Mass.	457	937	918	19	45	16	92	24	25	4	1
R.I.	59	174	132	9	12	7	3	1	7	1	4
Conn.	258	539	1,405	11	27	26	23	-	-	N	N
MID. ATLANTIC	4,550	11,163	13,525	360	448	278	428	105	166	40	52
Upstate N.Y.	521	1,997	2,683	100	144	102	113	56	73	11	12
N.Y. City	2,342	3,524	5,490	155	155	63	88	1	1	-	-
N.J.	1,112	1,196	1,733	54	102	66	119	37	79	6	10
Pa.	575	4,446	3,619	51	47	47	108	11	13	23	30
E.N. CENTRAL	1,622	24,186	21,311	982	613	265	444	73	123	101	165
Ohio	409	7,642	7,306	652	170	30	62	4	3	50	62
Ind.	106	2,350	2,373	50	110	69	74	-	3	24	52
Ill.	737	6,763	4,372	116	190	35	109	12	38	7	10
Mich.	278	6,049	5,182	124	84	122	114	57	79	14	28
Wis.	92	1,382	2,078	40	59	9	85	-	-	6	13
W.N. CENTRAL	427	5,619	6,454	337	298	172	198	32	24	42	32
Minn.	93	881	992	39	61	13	18	1	5	-	-
Iowa	20	468	390	17	8	12	11	3	6	8	20
Mo.	148	3,366	3,588	225	145	121	147	20	4	27	6
N. Dak.	1	6	10	10	1	2	-	-	-	3	2
S. Dak.	1	61	60	6	12	1	-	1	-	-	-
Nebr.	43	-	332	9	39	8	10	3	4	2	3
Kans.	121	837	1,082	31	32	15	12	4	5	2	1
S. ATLANTIC	5,708	33,359	30,669	335	393	386	804	92	262	57	109
Del.	113	636	555	5	11	2	3	1	1	-	-
Md.	978	4,257	5,799	65	55	74	114	3	12	12	24
D.C.	373	1,607	2,021	2	9	8	14	-	-	3	-
Va.	374	3,553	3,971	60	38	31	28	2	14	3	2
W. Va.	21	223	225	10	3	21	7	20	10	3	1
N.C.	248	7,707	7,357	42	29	97	94	22	22	10	7
S.C.	280	3,637	3,863	9	9	10	12	1	1	12	1
Ga.	594	5,461	U	37	21	39	355	10	145	8	56
Fla.	2,727	6,278	6,878	105	218	104	177	33	57	6	18
E.S. CENTRAL	612	15,875	10,550	409	135	260	390	458	271	10	21
Ky.	63	2,787	1,356	12	72	16	37	6	8	1	3
Tenn.	269	3,798	4,089	331	46	203	329	450	261	6	13
Ala.	159	6,299	5,105	43	17	41	24	2	2	2	5
Miss.	121	2,991	U	23	U	-	U	-	U	1	U
W.S. CENTRAL	1,404	9,474	13,148	711	864	326	355	141	106	3	11
Ark.	64	1,030	2,101	49	29	5	9	-	2	-	4
La.	299	3,709	4,004	19	30	25	41	26	26	1	-
Okla.	84	564	1,128	141	70	115	108	107	56	2	7
Tex.	957	4,171	5,915	502	735	181	197	8	22	-	-
MOUNTAIN	637	2,473	8,158	1,356	1,385	216	209	147	164	84	29
Mont.	8	30	29	19	9	7	6	7	2	2	10
Idaho	17	40	52	138	210	25	56	15	76	1	-
Wyo.	4	18	30	50	6	3	6	60	31	1	1
Colo.	214	947	1,034	177	148	41	33	27	21	24	4
N. Mex.	69	277	325	258	322	74	64	18	18	2	1
Ariz.	133	910	6,054	357	499	36	18	12	4	43	1
Utah	37	39	105	315	127	21	11	3	8	2	1
Nev.	155	212	529	44	64	9	15	5	4	9	11
PACIFIC	3,850	6,405	10,896	2,695	2,430	552	773	203	231	38	24
Wash.	360	793	934	172	351	53	75	67	73	3	5
Oreg.	122	18	314	518	115	32	20	12	2	-	-
Calif.	3,261	5,135	9,152	1,938	1,882	458	653	115	153	30	17
Alaska	29	266	262	15	69	4	5	1	-	-	-
Hawaii	78	193	234	52	13	5	20	8	3	5	2
Guam	-	23	44	1	3	-	-	-	-	-	2
P.R.	649	148	154	15	24	220	116	164	43	-	-
V.I.	14	4	8	-	-	1	1	-	-	-	-
Amer. Samoa	-	8	7	5	4	-	-	-	-	-	-
C.N.M.I.	-	4	17	7	2	1	-	-	-	-	-

N: Not notifiable U: Unavailable -: no reported cases C.N.M.I.: Commonwealth of Northern Mariana Islands

\*Updated monthly to the Division of HIV/AIDS, National Center for Infectious Diseases; last update March 30, 1995.

**TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending April 22, 1995, and April 23, 1994 (16th Week)**

Reporting Area	Lyme Disease		Malaria		Measles (Rubeola)						Meningococcal Infections		Mumps	
	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	Indigenous		Imported*		Total		Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994
					1995	Cum. 1995	1995	Cum. 1995	Cum. 1995	Cum. 1994				
UNITED STATES	1,091	1,152	251	315	1	142	-	4	146	300	1,039	1,062	229	448
NEW ENGLAND	88	128	14	23	-	2	-	1	3	11	62	50	3	10
Maine	1	-	1	1	-	-	-	-	-	-	3	8	2	3
N.H.	7	4	1	3	-	-	-	-	-	-	13	4	-	4
Vt.	1	1	-	1	-	-	-	-	-	1	6	1	-	-
Mass.	34	23	3	8	-	-	-	1	1	2	22	21	-	-
R.I.	10	16	2	4	-	2	-	-	2	5	-	-	-	1
Conn.	35	84	7	6	-	-	-	-	-	3	18	16	1	2
MID. ATLANTIC	806	811	53	47	-	1	-	-	1	119	103	102	31	43
Upstate N.Y.	485	653	11	14	-	-	-	-	-	5	41	33	9	8
N.Y. City	3	-	22	11	-	1	-	-	1	10	10	14	4	-
N.J.	50	100	13	14	-	-	-	-	-	112	22	25	-	9
Pa.	268	58	7	8	-	-	-	-	-	1	30	30	18	26
E.N. CENTRAL	16	11	19	39	-	-	-	-	-	24	130	162	34	115
Ohio	13	4	1	5	-	-	-	-	-	10	39	39	15	8
Ind.	2	1	2	9	-	-	-	-	-	1	25	36	1	5
Ill.	-	5	14	15	-	-	-	-	-	7	37	51	5	78
Mich.	1	1	2	9	-	-	-	-	-	3	25	14	13	21
Wis.	-	-	-	1	-	-	-	-	-	3	4	22	-	3
W.N. CENTRAL	18	25	7	17	-	1	-	-	1	17	65	73	17	21
Minn.	-	7	3	4	-	-	-	-	-	-	13	7	2	4
Iowa	1	1	-	3	-	-	-	-	-	-	11	6	3	4
Mo.	4	14	3	7	-	1	-	-	1	16	23	39	10	11
N. Dak.	-	-	-	-	-	-	-	-	-	-	-	-	-	1
S. Dak.	-	-	-	-	-	-	-	-	-	-	3	5	-	-
Nebr.	-	-	1	2	-	-	-	-	-	1	6	6	2	1
Kans.	13	3	-	1	-	-	-	-	-	-	9	10	-	-
S. ATLANTIC	116	135	63	68	-	-	-	-	-	4	195	163	33	73
Del.	7	14	1	2	-	-	-	-	-	-	2	2	-	-
Md.	80	46	18	28	-	-	-	-	-	-	12	10	-	19
D.C.	-	1	6	7	-	-	-	-	-	-	1	1	-	-
Va.	3	12	11	8	-	-	-	-	-	1	25	25	9	17
W. Va.	7	3	-	-	-	-	-	-	-	-	3	8	-	3
N.C.	9	19	6	2	-	-	-	-	-	-	33	30	16	22
S.C.	5	-	-	2	-	-	-	-	-	-	25	5	3	5
Ga.	4	36	10	10	-	-	-	-	-	-	52	29	-	3
Fla.	1	4	11	9	-	-	-	-	-	3	42	53	5	4
E.S. CENTRAL	8	8	4	7	-	-	-	-	-	27	67	66	12	-
Ky.	1	6	-	2	-	-	-	-	-	-	20	15	-	-
Tenn.	4	1	1	4	-	-	-	-	-	27	20	20	4	-
Ala.	1	1	3	1	-	-	-	-	-	-	15	31	3	-
Miss.	2	U	-	U	-	-	-	-	-	U	12	U	5	U
W.S. CENTRAL	21	9	6	7	-	2	-	-	2	11	121	128	9	86
Ark.	1	-	2	-	-	2	-	-	2	-	11	19	-	-
La.	-	-	1	-	-	-	-	-	-	1	14	20	2	8
Okla.	11	7	-	2	-	-	-	-	-	-	11	10	-	21
Tex.	9	2	3	5	-	-	-	-	-	10	85	79	7	57
MOUNTAIN	2	5	20	14	-	40	-	-	40	78	85	92	15	14
Mont.	-	-	2	-	-	-	-	-	-	-	2	2	-	-
Idaho	-	2	1	4	-	1	-	-	1	-	2	24	3	6
Wyo.	-	-	-	-	-	-	-	-	-	-	4	2	-	-
Colo.	1	-	10	4	-	-	-	-	-	11	20	10	1	-
N. Mex.	-	3	3	2	-	28	-	-	28	-	19	6	N	N
Ariz.	-	-	2	1	-	10	-	-	10	-	31	31	3	-
Utah	-	-	1	3	-	-	-	-	-	67	2	13	1	4
Nev.	1	-	1	-	-	1	-	-	1	-	5	4	6	3
PACIFIC	16	20	65	93	1	96	-	3	99	9	211	226	75	86
Wash.	-	-	7	9	-	13	-	1	14	-	34	38	4	6
Oreg.	1	-	4	6	-	1	-	-	1	-	41	48	N	N
Calif.	15	20	47	70	1	82	-	1	83	8	133	134	62	71
Alaska	-	-	1	-	-	-	-	-	-	-	1	1	8	2
Hawaii	-	-	6	8	-	-	-	1	1	1	2	5	1	7
Guam	-	-	-	-	U	-	U	-	-	44	1	-	2	2
P.R.	-	-	-	-	-	3	-	-	3	22	10	5	-	2
V.I.	-	-	-	-	-	-	-	-	-	-	-	-	1	-
Amer. Samoa	-	-	-	-	U	-	U	-	-	-	-	-	-	1
C.N.M.I.	-	-	-	1	U	-	U	-	-	26	-	-	-	-

\*For imported measles, cases include only those resulting from importation from other countries.

N: Not notifiable U: Unavailable -: no reported cases

**TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending April 22, 1995, and April 23, 1994 (16th Week)**

Reporting Area	Pertussis			Rubella			Syphilis (Primary & Secondary)		Tuberculosis		Rabies, Animal	
	1995	Cum. 1995	Cum. 1994	1995	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994
UNITED STATES	34	860	1,119	-	26	125	4,982	5,794	4,769	5,261	1,927	2,154
NEW ENGLAND	2	107	108	-	2	83	60	61	98	98	561	571
Maine	1	12	2	-	-	-	2	1	-	-	-	-
N.H.	-	6	30	-	1	-	1	1	4	2	73	70
Vt.	-	2	10	-	-	-	-	-	1	-	75	56
Mass.	1	81	57	-	1	83	20	17	52	47	217	214
R.I.	-	-	2	-	-	-	1	5	12	11	75	5
Conn.	-	6	7	-	-	-	36	37	29	38	121	226
MID. ATLANTIC	6	66	219	-	2	4	286	428	992	960	492	507
Upstate N.Y.	6	44	87	-	1	4	22	54	88	149	205	360
N.Y. City	-	10	35	-	1	-	154	224	554	554	-	-
N.J.	-	-	9	-	-	-	57	75	181	179	101	100
Pa.	-	12	88	-	-	-	53	75	169	78	186	47
E.N. CENTRAL	-	71	258	-	-	11	868	765	499	581	2	8
Ohio	-	33	58	-	-	-	295	324	85	77	1	-
Ind.	-	4	31	-	-	-	77	80	10	55	-	-
Ill.	-	4	88	-	-	6	351	172	282	305	1	3
Mich.	-	29	19	-	-	5	96	98	108	130	-	2
Wis.	-	1	62	-	-	-	49	91	14	14	-	3
W.N. CENTRAL	11	51	40	-	-	-	327	407	175	122	81	53
Minn.	8	22	16	-	-	-	15	14	31	28	2	5
Iowa	-	1	3	-	-	-	105	15	25	9	30	21
Mo.	-	4	11	-	-	-	198	349	62	63	12	6
N. Dak.	-	5	2	-	-	-	-	-	1	1	7	-
S. Dak.	-	6	-	-	-	-	-	-	16	6	12	6
Nebr.	-	3	2	-	-	-	-	4	6	2	-	-
Kans.	3	10	6	-	-	-	9	25	34	13	18	15
S. ATLANTIC	2	80	126	-	4	5	1,138	1,744	892	721	577	599
Del.	-	5	-	-	-	-	7	7	-	8	10	11
Md.	-	-	43	-	-	-	24	82	140	96	134	189
D.C.	1	2	3	-	-	-	42	78	29	39	4	2
Va.	-	7	13	-	-	-	210	210	29	111	116	130
W. Va.	-	-	2	-	-	-	1	6	29	26	29	22
N.C.	-	49	35	-	-	-	354	581	80	108	133	60
S.C.	1	11	8	-	-	-	220	217	89	125	45	57
Ga.	-	1	7	-	-	-	147	276	215	208	93	123
Fla.	-	5	15	-	4	5	133	287	281	-	13	5
E.S. CENTRAL	-	19	34	-	2	-	1,399	611	356	336	59	60
Ky.	-	-	15	-	-	-	143	79	54	92	5	3
Tenn.	-	4	13	-	2	-	293	303	117	120	11	28
Ala.	-	15	6	-	-	-	198	229	120	124	43	29
Miss.	-	-	U	-	-	U	765	U	65	U	-	U
W.S. CENTRAL	1	31	31	-	1	7	728	1,266	508	592	34	234
Ark.	-	-	-	-	-	-	177	154	66	72	11	12
La.	-	1	4	-	-	-	355	595	-	-	9	30
Okla.	-	3	20	-	-	4	21	50	1	65	14	16
Tex.	1	27	7	-	1	3	175	467	441	455	-	176
MOUNTAIN	7	312	110	-	3	-	81	212	189	147	28	33
Mont.	-	3	2	-	-	-	3	-	3	-	13	5
Idaho	1	30	42	-	-	-	-	2	7	10	-	-
Wyo.	-	-	-	-	-	-	2	-	1	1	5	5
Colo.	-	1	46	-	-	-	53	57	4	9	-	-
N. Mex.	1	16	5	-	-	-	1	5	22	26	-	-
Ariz.	5	257	10	-	3	-	11	129	87	67	9	22
Utah	-	2	5	-	-	-	4	5	10	-	-	-
Nev.	-	3	-	-	-	-	7	14	55	34	1	1
PACIFIC	5	123	193	-	12	15	95	300	1,060	1,704	93	89
Wash.	1	23	28	-	1	-	6	11	72	67	-	-
Oreg.	1	6	21	-	1	-	-	2	3	41	-	-
Calif.	3	89	140	-	9	14	88	285	910	1,505	89	66
Alaska	-	-	-	-	-	-	1	1	22	24	4	23
Hawaii	-	5	4	-	1	1	-	1	53	67	-	-
Guam	U	-	-	U	-	1	1	1	4	7	-	-
P.R.	-	4	3	-	-	-	94	107	23	50	15	25
V.I.	-	-	-	-	-	-	1	13	-	-	-	-
Amer. Samoa	U	-	1	U	-	-	-	-	2	-	-	-
C.N.M.I.	U	-	-	U	-	-	-	1	4	14	-	-

U: Unavailable - : no reported cases

**TABLE III. Deaths in 121 U.S. cities,\* week ending  
April 22, 1995 (16th Week)**

Reporting Area	All Causes, By Age (Years)						P&J† Total	Reporting Area	All Causes, By Age (Years)						P&J† Total
	All Ages	≥65	45-64	25-44	1-24	<1			All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	628	437	113	54	17	7	50	S. ATLANTIC	1,324	824	277	158	32	29	62
Boston, Mass.	138	83	31	18	4	2	8	Atlanta, Ga.	185	100	42	34	2	7	3
Bridgeport, Conn.	36	26	6	3	1	-	3	Baltimore, Md.	190	123	43	17	5	2	14
Cambridge, Mass.	30	23	3	4	-	-	2	Charlotte, N.C.	155	97	34	20	2	1	11
Fall River, Mass.	26	20	4	2	-	-	5	Jacksonville, Fla.	123	74	30	13	5	1	4
Hartford, Conn.	77	50	15	4	5	3	1	Miami, Fla.	118	73	22	18	4	1	1
Lowell, Mass.	20	18	2	-	-	-	2	Norfolk, Va.	68	42	14	10	1	1	3
Lynn, Mass.	16	14	1	1	-	-	-	Richmond, Va.	66	48	14	4	-	-	5
New Bedford, Mass.	17	15	2	-	-	-	-	Savannah, Ga.	38	29	5	1	-	3	5
New Haven, Conn.	61	45	10	4	2	-	4	St. Petersburg, Fla.	57	37	15	3	1	1	2
Providence, R.I.	65	42	16	4	2	1	10	Tampa, Fla.	180	126	25	16	8	5	9
Somerville, Mass.	6	5	1	-	-	-	-	Washington, D.C.	136	71	32	22	4	7	5
Springfield, Mass.	34	19	7	7	1	-	4	Wilmington, Del.	8	4	1	-	-	-	-
Waterbury, Conn.	34	27	4	3	-	-	3	E.S. CENTRAL	736	489	160	65	17	3	69
Worcester, Mass.	68	50	11	4	2	1	8	Birmingham, Ala.	115	69	32	9	2	1	5
MID. ATLANTIC	2,336	1,556	438	249	52	41	127	Chattanooga, Tenn.	83	52	16	12	2	1	7
Albany, N.Y.	57	38	10	5	2	2	6	Knoxville, Tenn.	73	51	15	4	3	-	12
Allentown, Pa.	18	16	1	1	-	-	-	Lexington, Ky.	79	42	27	6	3	1	5
Buffalo, N.Y.	115	84	17	13	1	-	3	Memphis, Tenn.	164	113	29	19	3	-	15
Camden, N.J.	34	22	7	3	2	-	1	Mobile, Ala.	49	39	5	3	2	-	2
Elizabeth, N.J.	25	19	3	2	1	-	1	Montgomery, Ala.	40	29	6	4	1	-	4
Erie, Pa.§	53	45	5	2	-	1	6	Nashville, Tenn.	133	94	30	8	1	-	19
Jersey City, N.J.	104	58	24	14	7	1	-	W.S. CENTRAL	1,454	949	269	134	53	49	93
New York City, N.Y.	1,334	867	271	150	23	23	60	Austin, Tex.	67	42	13	11	1	-	6
Newark, N.J.	70	27	20	15	5	3	5	Baton Rouge, La.	51	38	9	3	-	1	2
Paterson, N.J.	21	14	1	4	1	1	2	Corpus Christi, Tex.	61	40	15	3	2	1	5
Philadelphia, Pa.	U	U	U	U	U	U	U	Dallas, Tex.	203	113	44	26	12	8	2
Pittsburgh, Pa.§	87	58	18	8	1	2	9	El Paso, Tex.	82	60	11	10	-	1	6
Reading, Pa.	10	8	2	-	-	-	1	Ft. Worth, Tex.	88	52	19	9	5	3	14
Rochester, N.Y.	150	110	21	12	5	2	8	Houston, Tex.	344	220	66	36	13	9	29
Schenectady, N.Y.	31	25	3	1	2	-	4	Little Rock, Ark.	90	63	13	9	3	2	3
Scranton, Pa.§	27	24	2	1	-	-	2	New Orleans, La.	106	60	14	8	8	16	-
Syracuse, N.Y.	86	58	17	6	-	5	6	San Antonio, Tex.	189	141	27	9	8	4	9
Trenton, N.J.	56	38	12	5	-	1	7	Shreveport, La.	26	17	6	1	-	2	4
Utica, N.Y.	18	15	1	1	1	-	2	Tulsa, Okla.	147	103	32	9	1	2	13
Yonkers, N.Y.	40	30	3	6	1	-	4	MOUNTAIN	952	643	182	93	19	15	89
E.N. CENTRAL	2,585	1,667	464	256	138	60	171	Albuquerque, N.M.	107	71	17	15	4	-	7
Akron, Ohio	67	53	9	4	-	1	-	Colo. Springs, Colo.	61	42	15	-	2	2	8
Canton, Ohio	24	20	3	1	-	-	5	Denver, Colo.	152	100	28	22	1	1	22
Chicago, Ill.	592	263	112	117	90	10	25	Las Vegas, Nev.	149	111	26	11	1	-	5
Cincinnati, Ohio	251	180	37	20	8	6	28	Ogden, Utah	23	18	3	-	2	-	3
Cleveland, Ohio	195	129	34	20	5	7	6	Phoenix, Ariz.	163	101	29	21	6	6	12
Columbus, Ohio	183	125	34	11	3	10	16	Pueblo, Colo.	22	16	6	-	-	-	7
Dayton, Ohio	93	70	16	4	2	1	4	Salt Lake City, Utah	102	67	22	7	1	5	9
Detroit, Mich.	207	112	52	28	8	7	10	Tucson, Ariz.	173	117	36	17	2	1	16
Evansville, Ind.	61	47	8	3	3	-	1	PACIFIC	1,988	1,333	333	207	62	41	150
Fort Wayne, Ind.	44	35	7	1	-	1	-	Berkeley, Calif.	16	12	-	4	-	-	2
Gary, Ind.	21	12	6	-	2	1	1	Fresno, Calif.	100	68	18	4	5	5	6
Grand Rapids, Mich.	81	63	7	5	3	3	10	Glendale, Calif.	28	20	2	6	-	-	1
Indianapolis, Ind.	218	147	46	16	3	6	18	Honolulu, Hawaii	68	49	9	7	1	2	7
Madison, Wis.	53	42	8	2	-	1	8	Long Beach, Calif.	75	50	13	8	2	2	4
Milwaukee, Wis.	157	119	29	6	1	2	12	Los Angeles, Calif.	535	333	106	63	14	10	24
Peoria, Ill.	48	38	8	1	1	-	5	Pasadena, Calif.	28	23	3	1	-	1	3
Rockford, Ill.	53	35	13	3	1	1	3	Portland, Ore.	143	106	20	9	4	4	9
South Bend, Ind.	61	42	11	5	2	1	7	Sacramento, Calif.	141	99	23	12	4	3	18
Toledo, Ohio	113	86	15	5	5	2	10	San Diego, Calif.	209	112	30	36	22	6	23
Youngstown, Ohio	63	49	9	4	1	-	2	San Francisco, Calif.	133	84	25	20	-	4	18
W.N. CENTRAL	764	538	123	44	15	27	51	San Jose, Calif.	185	136	30	12	5	2	19
Des Moines, Iowa	106	77	23	3	-	3	12	Santa Cruz, Calif.	19	15	3	1	-	-	3
Duluth, Minn.	25	19	3	-	-	3	1	Seattle, Wash.	149	102	24	19	3	1	4
Kansas City, Kans.	U	U	U	U	U	U	U	Spokane, Wash.	69	47	16	4	1	1	4
Kansas City, Mo.	101	65	13	5	1	-	8	Tacoma, Wash.	90	77	11	1	1	-	5
Lincoln, Nebr.	51	39	7	2	2	1	2	TOTAL	12,767 <sup>¶</sup>	8,436	2,359	1,260	405	272	862
Minneapolis, Minn.	231	163	35	13	8	12	18								
Omaha, Nebr.	82	61	16	2	1	2	7								
St. Louis, Mo.	118	76	20	16	1	5	-								
St. Louis, Minn.	50	38	6	3	2	1	3								
Wichita, Kans.	U	U	U	U	U	U	U								

\*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 - : no reported cases

## Suicide — Continued

**TABLE 3. Percentage of persons aged ≤17 years who reported reasons for attempting suicide,\* by age and sex — Oregon, 1990–1993†**

Reason	Sex		Age group (yrs)			Total <sup>§</sup> (n=2231)
	Male (n=436)	Female (n=1749)	≤12 (n=100)	13–14 (n=640)	15–17 (n=1490)	
Family discord	53.9	60.8	73.0	65.0	56.1	59.4
Argument with boyfriend/girlfriend	31.0	33.0	8.0	23.1	38.3	32.6
School-related problems	27.5	21.9	32.0	26.9	20.7	23.0
Rape/sexual abuse	4.1	11.2	7.0	13.0	8.7	9.8
Peer pressure/conflict	7.3	8.2	10.0	10.0	7.0	8.0
Substance abuse	15.1	6.0	3.0	5.9	8.9	7.8
Move or new school	5.7	6.0	7.0	8.6	4.8	6.0
Legal system encounters	14.0	2.6	4.0	4.7	5.0	4.8
Death of family member/friend	4.8	4.5	6.0	4.2	4.6	4.5
Physical abuse	3.7	3.3	5.0	2.7	3.6	3.4
Suicide of friend/relative¶	4.4	3.1	2.0	4.8	2.8	3.4
Pregnancy	0.9	2.7	—	1.6	2.9	2.4
Other reasons	15.8	14.1	9.0	13.9	15.0	14.4

\*Categories are not mutually exclusive because more than one reason may have been reported.

†Source: Oregon Adolescent Suicide Attempt Data System. 1990 was the first full year the reason for the attempt was collected. Only attempts for which reasons were given are included.

§Includes one person for whom sex and age data were missing.

¶Includes suicide attempts.

During 1990–1993, persons who had made multiple attempts were more likely to use suffocation/hanging (4.3%) and cutting/piercing (14.3%) than those making attempts for the first time (1.2% and 6.9%, respectively).

**Reasons for Suicide Attempt**

During 1990–1993, the most commonly reported reasons for attempting suicide were family discord (1492 [59.4%]), an argument with a boyfriend/girlfriend (819 [32.6%]), and school-related problems (578 [23.0%]) (Table 3). A higher proportion of females (60.8%) and persons aged ≤12 years (73.0%) reported family discord as their reason for attempting suicide.

*Reported by: DD Hopkins, MS, JA Grant-Worley, MS, DW Fleming, MD, State Epidemiologist, State Health Div, Oregon Dept of Human Resources. National Center for Injury Prevention and Control, CDC.*

**Editorial Note:** In Oregon, during 1988–1993, for every fatal suicide attempt by an adolescent, 31 nonfatal attempts were reported. Some attempts may not have been made with death as a goal but instead may have reflected a desire to resolve a difficult conflict, indicate an intolerable living situation, or elicit sympathy or guilt (1,2).

Oregon is the only state with a legal requirement for reporting suicide attempts and a surveillance system for monitoring such attempts. The reported rate of suicide attempts among adolescents in Oregon during 1988–1993 based on ASADS data is substantially lower than previously reported using survey data. Based on the 1993 Youth Risk Behavior Survey, 2.7% of U.S. high school students reported making a suicide attempt during the previous 12 months that required medical attention (3);

*Suicide — Continued*

3.2% (i.e., 3200 per 100,000) of Oregon high school students reported such attempts. Because ASADS is hospital-based and includes only attempts by persons who actually seek medical care, the findings may provide more valid information than other sources. For example, data from surveys often rely on the respondents' definition of attempted suicide, and only small proportions of respondents who report having attempted suicide actually have taken a substantive action to injure themselves (4). Furthermore, YRBS may overestimate the prevalence of suicide attempts among high school students. However, ADADS probably underestimates the occurrence of suicide attempts in Oregon for at least four reasons. First, hospital reporting may be incomplete; in addition, reporting hospitals may use different criteria in determining whether a patient attempted suicide. Second, reports of adolescent suicide attempts are not required from clinics or physicians' offices; some attempters may have been treated in these settings, especially those living in rural areas. Third, attempts by adolescents who did not require professional medical care were not reported. Finally, when persons from Oregon receive treatment in another state for a suicide attempt, the event is unreported.

In Oregon, firearms were used most often in fatal suicide attempts, and most attempts involving firearms were fatal. Nationally, 81% of the increase in suicide among persons aged 15–19 years during 1980–1992 was related to use of firearms (5). Controlling access to firearms is an important prevention measure; however, storing weapons unloaded and locked may not prevent intentionally inflicted gunshot wounds among suicidal youth (6). Because an attempt with a gun usually results in death, parents and other persons who have responsibility for children should ensure that at-risk adolescents have no access to guns.

ASADS represents an initial effort to examine the magnitude and epidemiology of intentionally self-inflicted injury among adolescents. This surveillance system was the first statewide system established to quantify the incidence of adolescent suicide attempts and to characterize the attempts and attempters. Although the system still must undergo vigorous evaluation (7), it provides essential information that will be useful in applying public health measures to the problem of suicide (8). Data from ASADS are being used to develop public and private suicide-education programs. For example, the Oregon Health Division has formed a task force to review the data and propose intervention methods. This approach may be adopted for use in other states to permit characterization of persons attempting suicide and to assist in refining prevention and early-intervention measures.

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### Evaluation of Vaccination Strategies in Public Clinics — Georgia, 1985–1993

From 1987 through 1993, the vaccination coverage levels among children served in public health clinics in Georgia more than doubled. This increase followed the implementation of a multifaceted strategy that included routine measurement of vaccination coverage levels. This report describes this program and an analysis of increases in vaccination coverage during 1985–1993.

In 1985, the Georgia Division of Public Health (GDPH) reviewed the vaccination records of selected public clinics to assess vaccination coverage levels for the recommended childhood vaccines in relation to the national goal of 90% up-to-date by age 2 years. The results indicated that <40% of 2-year-olds served by the public sector had received a complete set of recommended vaccinations (i.e., four doses of diphtheria and tetanus toxoids and pertussis vaccine, three doses of oral poliovirus vaccine, and one dose of measles-mumps-rubella vaccine). In response, GDPH initiated a state-wide annual assessment of vaccination coverage levels in public clinics. Information from these assessments assists in a program with four elements: 1) assessment of coverage levels and missed opportunity rates through analysis of birth and vaccination dates obtained for a sample of children from each clinic; 2) feedback of these data to the clinics; 3) issuance of awards (e.g., plaques) to health districts and clinics meeting coverage goals; and 4) dissemination of maps of coverage, rank-order lists, and other information to health district offices and public clinics.

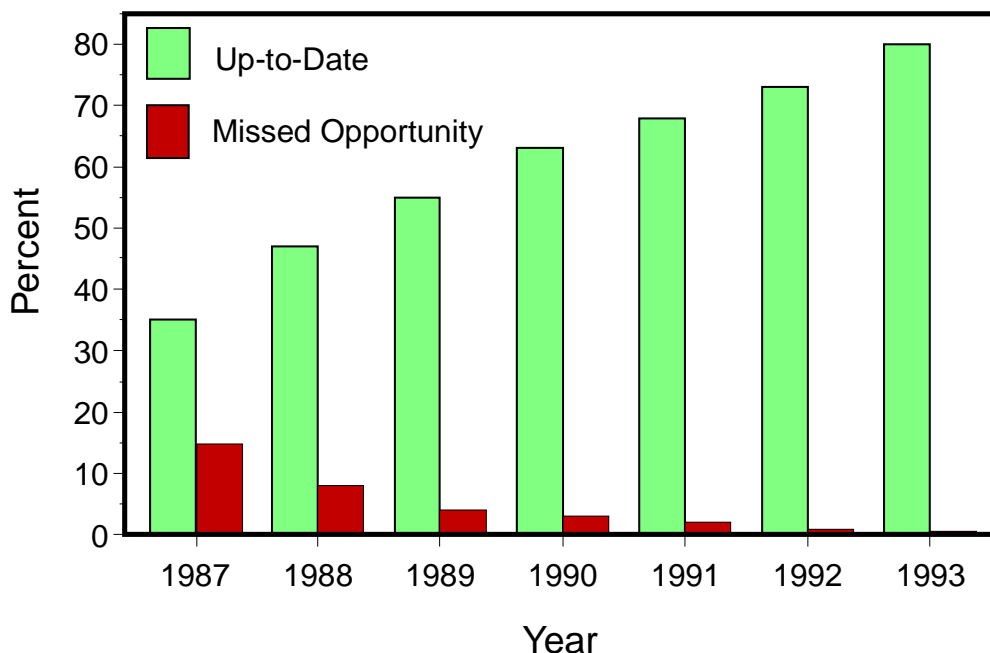
During 1987–1989, participation in the program increased from zero to include all of the approximately 220 public clinics and all 19 health districts in the state; these clinics provide vaccinations to approximately 70% of the state's birth cohort. Among children attending these clinics, the proportion who were up-to-date increased from 35% in 1987 to 80% in 1993 (Figure 1), while the rate of missed simultaneous vaccination opportunities at the last visit declined from 15% to <1%. In 1987, aggregate coverage rates were <50% in 11 of 12 participating districts; in comparison, in 1993, aggregate rates were ≥50% in all 19 districts, >75% in 16, and >90% in three.

*Reported by: M Chaney, Georgia Div of Public Health. National Immunization Program, CDC.*

**Editorial Note:** National health objectives for the year 2000 include the goal that at least 90% of children should have completed the basic vaccination series by age 24 months (objective 20.11) (1). However, based on the National Health Interview Survey, in 1993, only 67% of 2-year-olds were up-to-date (2). Although national coverage levels have increased since 1991, intensified efforts are needed to improve provider practices and to encourage parents to ensure their children are vaccinated on schedule.

*Vaccination Strategy — Continued*

**FIGURE 1. Aggregate proportions of children aged 21–23 months who were up-to-date with a complete set of recommended childhood vaccinations\* or who had a missed opportunity for simultaneous vaccination at their last clinic visit, by year — Georgia, 1987–1993**



\*Four doses of diphtheria and tetanus toxoids and pertussis vaccine, three doses of oral poliovirus vaccine, and one dose of measles-mumps-rubella vaccine.

The findings in this report suggest that institution of the multifaceted program in Georgia was associated with increased vaccination coverage. Preliminary findings from other states (e.g., Colorado and South Carolina) employing similar programs are consistent with findings in Georgia and indicate increases in coverage levels (CDC, unpublished data, 1995).

Assessment of vaccination coverage levels of both public and private providers is specified in the *Standards for Pediatric Immunization Practices* (3), and federal funding is provided to each state and local grant program to support assessments in the public and private sectors. States receiving vaccination grant funds during 1995 are required to assess all public health clinics annually.\* To assist with these assessments, Clinic Assessment Software Application (4) is available at no charge to public and private providers from the National Immunization Program, CDC, telephone (404) 639-8392.

Efforts are in progress to adapt the assessment methodology to assist private providers in self-assessment. To ensure up-to-date vaccination for children, a high priority is the development and widespread use in the private sector of programs that have been associated in Georgia and other states with increases in vaccination coverage.

\*Public Law 103-333.



*Vaccination Strategy — Continued**References*

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*Notice to Readers***Discontinuation of Publication of Figures II–V in *MMWR***

Figures II–V, which depict reported cases of acquired immunodeficiency syndrome, tuberculosis, gonorrhea, and syphilis, respectively, and have been published quarterly in the *MMWR*, will no longer be published. CDC is evaluating other methods of representing surveillance data in graphs.

**Addendum: Vol. 44, No. 4**

In the article, "Occupational Silicosis—Ohio, 1989–1994" the following name should be added to the credits ("reported by") on page 63: RJ Blinkhorn, Jr, MD, Cuyahoga County Tuberculosis Program, Cleveland, Ohio.

**Erratum: Vol. 44, No. RR-1**

In the article "Injury Control Recommendations: Bicycle Helmets," on the inside front cover, David A. Sleet, Ph.D., should be listed as the Acting Director of the Division of Unintentional Injuries Prevention. In addition, on page iv, Nancy Dean Nowak should be listed as Nancy Dean Nowak, R.N., M.P.H., and Benjamin Moore, M.P.H., should be listed without an M.P.H.

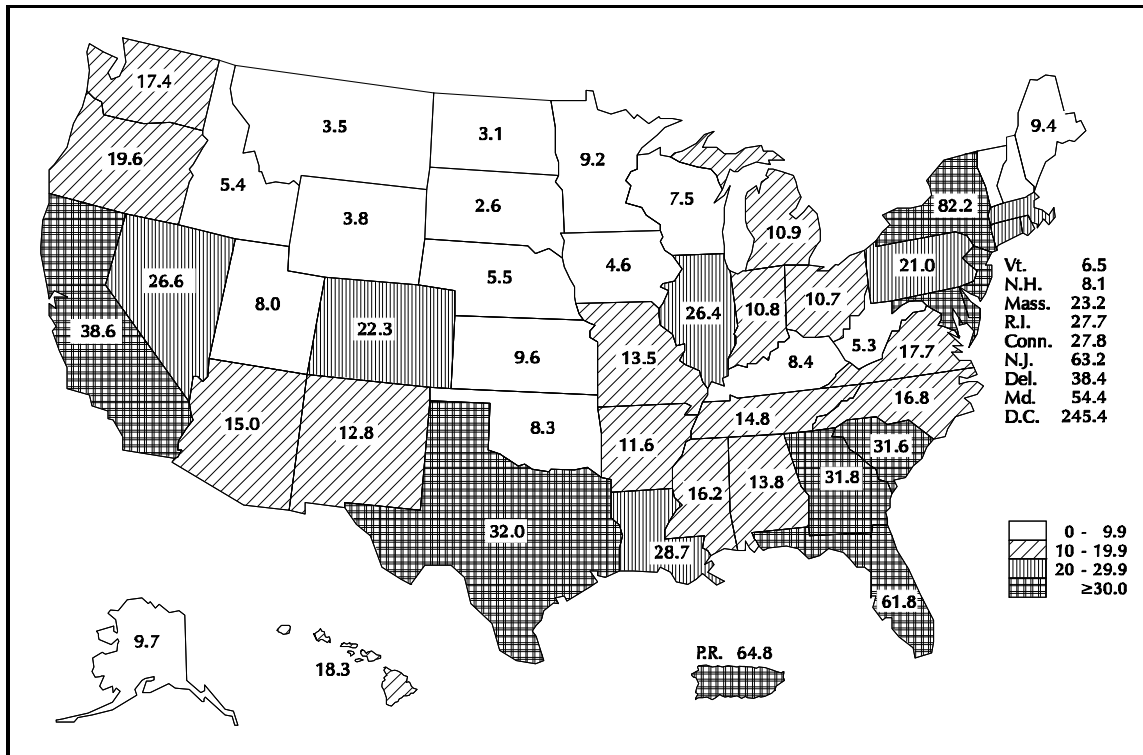
**Erratum: Vol. 44, No. 6**

In the article, "Prevalence of Recommended Levels of Physical Activity Among Women—Behavioral Risk Factor Surveillance System, 1992," the fifth sentence on page 106 should read "The prevalence of participation in recommended levels was *directly* related to education level and family income . . ."

### AIDS Map

The following map provides information on the reported number of acquired immunodeficiency syndrome (AIDS) cases per 100,000 population, by person's state of residence from January 1994 through December 1994. More detailed information on AIDS cases is provided in the *HIV/AIDS Surveillance Report*, single copies of which are available free from the CDC National AIDS Clearinghouse, P.O. Box 6003, Rockville, MD 20849-6003; telephone (800) 458-5231 or (301) 217-0023.

**AIDS cases per 100,000 population — United States, January–December 1994**



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