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Epidemiologic Notes and Reports

Severe Acute Respiratory Illness Linked to Use of Shoe Sprays — Colorado, November 1993

On November 3, 1993, the Colorado Department of Health (CDH) was notified of acute respiratory illness in a Colorado woman following use of an aerosolized leather-shoe conditioner. Active surveillance by CDH identified two additional cases. This report summarizes the case investigations.

Patient 1

On November 2, a 44-year-old woman sprayed the entire contents of a 5-oz can of aerosolized leather-shoe conditioner on a pair of boots; the application lasted approximately 5 minutes. She used the product in a small, poorly ventilated room. Approximately 45 minutes later, she developed a severe cough, burning of her eyes and throat, shortness of breath, weakness, wheezing, myalgia, headache, and slurred speech. She was taken to an emergency department; her temperature was 101.1 F (38.4 C); pulse, 100 per minute; blood pressure, 110/60; and respiratory rate, 28 per minute. She had bilateral rales on lung examination and an oxygen partial pressure (PO_2) of 60 mmHg in arterial blood on 3 liters of oxygen through a nasal canula. A chest radiograph revealed bilateral midzone interstitial infiltrates. On admission to the hospital, her white blood cell count was 21,300 cells per mm^3 with 90% segmented forms, and her hematocrit was 47.3%. Results of tests for liver function, electrolytes, urea, and creatinine were normal. Within 1–8 hours following admission, she developed vomiting, chills, and epigastric cramping. Treatment was initiated with amantadine, erythromycin, and a bronchodilator.

On November 3, the patient's dyspnea had resolved, and she was afebrile; her pulse and respiratory rate were normal. Her chest radiograph showed an almost complete clearing of the pulmonary infiltrates. A persistent dry cough, abdominal cramps, and vomiting resolved gradually during the next 36 hours.

The patient had had a mild upper respiratory-tract illness for 3–4 days before using the spray. She has a 28-year history of smoking approximately 20 cigarettes per day but reportedly did not smoke on November 2 because of her respiratory-tract illness. She had no past history of severe respiratory illness.

Severe Acute Respiratory Illness — Continued

As a result of this case, CDH initiated active surveillance for additional cases of acute respiratory illness. Directors of emergency departments and intensive-care units at hospitals in metropolitan Denver were contacted by telephone and facsimile to identify case-patients previously treated for this illness and to request reporting of future cases. In addition, CDH issued a news release to warn the public of the adverse health effects associated with use of sprays in poorly ventilated areas. CDH retrospectively identified two additional cases: patient 2 was identified by patient 1, and patient 3 was identified by a pulmonologist who had read about patient 1 in the newspaper.

Patient 2

An 11-year-old boy, who was in an adjacent room when patient 1 used the leather conditioner, developed a burning throat, shortness of breath, cough, and abdominal pain approximately 45 minutes after exposure. He did not seek medical attention.

Patient 3

On November 1, a 23-year-old nonsmoking man sprayed three pairs of shoes with a water and soil repellant (a nonaerosol pump spray) in an enclosed garage with a partially open door. Within 30 minutes, he developed chest tightness, a nonproductive cough, dizziness, lightheadedness, shortness of breath, and tachycardia; within 1–2 hours, he developed severe chills. On November 2, the patient continued with a nonproductive cough and had an episode of posttussive emesis, a temperature of 100 F (38 C), chest tightness, and nasal congestion. On November 3, he was admitted to the hospital with a temperature of 99.5 F (37.5 C) and pulse of 104. Chest radiograph showed bilateral upper-lobe alveolar/interstitial infiltrates. He was treated with supplemental oxygen and bronchodilators and was discharged November 4.

As a result of these cases, the manufacturer of the implicated leather conditioner spray issued a voluntary nationwide recall of the product on November 3. The Consumer Product Safety Commission is investigating the water and soil repellant as well as other products of the manufacturer.

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Editorial Note: In December 1992, at least 157 persons nationwide consulted physicians about acute respiratory illnesses following the use of reformulated Wilsons Leather Protector (*1*). In August 1993, another reformulated leather conditioner, Magic Guard, was associated with 38 cases of similar respiratory illness in Pennsylvania and Virginia. Symptoms typically began within 6 hours after using the products and most frequently included shortness of breath, coughing, and chest tightness. Of these 198 reported cases (including the three described in this report), 23 persons have been hospitalized; none have died.

The shoe sprays linked recently to illness had been reformulated to eliminate 1,1,1 trichloroethane (i.e., methyl chloroform), an ozone-depleting solvent, from the

Severe Acute Respiratory Illness — Continued

formula, in accordance with Title VI of the Clean Air Act amendments of 1990*. This legislation prohibits the sale or distribution of nonessential aerosol products that release Class I substances† (such as 1,1,1 trichloroethane) and requires reformulation of products containing such substances by January 1994. In addition, the fluoropolymers and the propellants in these sprays had been changed. The product changes to the leather conditioner and the water and soil repellant sprays involved the solvent (from 1,1,1 trichloroethane to hexane and 2,2,4 trimethylpentane, respectively), the propellant (from carbon dioxide to isobutane and isooctane, respectively), and the fluoropolymers (from FC-905 and FC-3537, respectively, to FS-4565).

The illnesses described in this report appear to be either acute chemical pneumonitis or polymer-fume fever. Diseases with similar symptoms and signs include atypical pneumonia, congestive heart failure, hypersensitivity pneumonitis, and adult respiratory distress syndrome. Many chemicals cause pulmonary symptoms, usually related to either direct injury to airway cells or an exaggeration of normal physiologic responses (*2*). Chemical pneumonitis is caused by inhalation of hydrocarbons (*3*) and polymer-fume fever, by inhalation of fumes containing pyrolytic products released when fluoropolymers are heated to high temperatures and has been associated with smoking of cigarettes contaminated with fluoropolymers (*4*).

Consumers should be warned about potential adverse health effects linked to use of shoe sprays (aerosol and nonaerosol) in enclosed areas. Any spray containing polymers or solvents should be used only in adequately ventilated areas. In addition, manufacturers of shoe sprays should be aware that problems have occurred following reformulation.

State health departments are requested to report to CDC persons who have been hospitalized following exposure to any shoe spray (aerosol or nonaerosol). Standardized case-report forms are available from CDC's Air Pollution and Respiratory Health Branch, Division of Environmental Hazards and Health Effects, National Center for Environmental Health, telephone (404) 488-7320.

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*Public Law no. 101-549, §610 (42 U.S.C. §7671).
†Controlled substances that include chlorofluorocarbons, halons, methyl chloroform, and carbon tetralchloride.

Health Objectives for the Nation

Dental Health of School Children — Oregon, 1991–92

Dental caries remains among the most prevalent diseases of both children and adults. To establish a baseline for monitoring oral disease trends in Oregon, the State Health Division, Oregon Department of Human Resources; Oregon Health Sciences

Dental Health — Continued

University; and Multnomah County Health Department collaborated in a statewide assessment of oral health needs. Phase 1 (1991–92) evaluated Head Start and elementary school children. Phase 2 (1993) is assessing the oral health of adults. This report presents the results of Phase 1.

The study population was a convenience sample of 2872 Head Start and elementary school children. Seventeen communities representing all of the state's 13 administrative districts were selected to ensure that certain age and racial/ethnic groups were included in the survey. Elementary schools within each community were selected randomly. In the elementary schools, students in first and second grades (aged 6–8 years) and fifth and sixth grades (aged 10–12 years) who returned consent forms (n=2084, approximately 40% of the children in those classes) were examined for dental caries and other oral conditions. Head Start children aged 3–5 years (n=788) were examined at five different programs within the state. Two dental professionals completed clinical examinations following the protocol and criteria used for prevalence surveys conducted by the National Institute of Dental Research (*1*).

Among children aged 3–5 years, 47% had experienced dental caries (Table 1). Among these children, 4% needed urgent dental care (i.e., had signs of a dental abscess or a statement that the child had been awakened at night by dental pain), 26% needed routine restorative treatment, and 17% had fillings but no active decay.

Among children aged 6–8 years, 55% had experienced dental caries in their permanent or primary teeth or in both (Table 1): 5% required urgent care, 23% needed routine restorative treatment, 24% had had all of their carious lesions filled, and 3% had primary anterior teeth that were decayed but might not require treatment because exfoliation was imminent (i.e., teeth already were loose or all other disease had been treated). Fifteen percent of these children had dental sealant on at least one permanent molar tooth (Figure 1).

TABLE 1. Dental health status of school children, by age group and racial/ethnic group — Oregon, 1991–92

Age group	White (n=2229)	Black (n=221)	Hispanic (n=224)	American Indian/ Alaskan Native (n=95)	Asian/ Pacific Islander (n=103)	Total (n=2872)
	(n=515)	(n=117)	(n=82)	(n=51)	(n=23)	(n=788)
3–5 yrs						
With dental caries*	46%	36%	52%	71%	57%	**47%**
Needing treatment	28%	21%	35%	55%	26%	**30%**
	(n=1168)	(n=56)	(n=113)	(n=23)	(n=48)	(n=1408)
6–8 yrs						
With dental caries†	52%	64%	65%	91%	67%	**55%**
Needing treatment	26%	29%	43%	43%	46%	**28%**
	(n=546)	(n=48)	(n=29)	(n=21)	(n=32)	(n=676)
10–12 yrs						
With dental caries§	44%	48%	48%	62%	69%	**46%**
Needing treatment	21%	23%	21%	29%	38%	**22%**

*Primary teeth only.
†Primary and permanent teeth.
§Permanent teeth only.

Dental Health — Continued

Among children aged 10–12 years, 2% required urgent care, 20% needed routine restorative treatment, and 24% had all decay treated. Twenty-eight percent of the students had had dental sealant on at least one permanent molar tooth (Figure 1).

When the data were stratified by race/ethnicity, children of minority groups had higher prevalences of dental caries and untreated disease (Table 1). For example, among children aged 6–8 years, American Indians/Alaskan Natives had the highest prevalence of disease, and higher proportions of Asians/Pacific Islanders, Hispanics, and American Indians/Alaskan Natives required dental treatment.

When the data were stratified by urban (≥10,000 population)/rural status, differences appeared in the proportion of children in need of dental care, even among racial/ethnic groups with the lowest disease rates. For example, among 10–12-year-old white children, 16% in urban areas and 26% in rural areas needed dental treatment (p=0.1).

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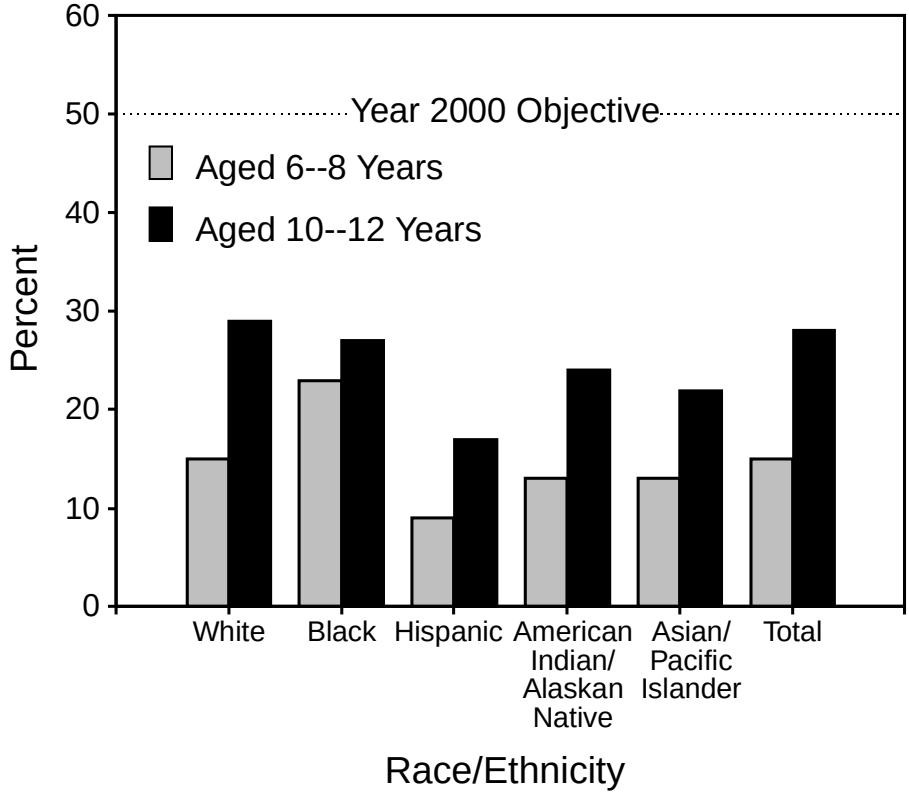
Editorial Note: The findings in this report indicate that substantial differences in oral health status exist among racial/ethnic groups. In addition, Oregon must make substantial progress to achieve the national health objectives for the year 2000 regarding oral health (objectives 13.1, 13.2, and 13.8) (*2*). These data are the first systematic comparison of dental caries prevalence among multiple racial/ethnic groups in a specific geographic area and among the first compiled during the 1990s for evaluating

FIGURE 1. Percentage of children with dental sealant on permanent molar teeth, by age and race/ethnicity — Oregon, 1992



Dental Health — Continued

progress of an individual state toward achievement of the national health objectives regarding oral health.

Variations in oral health status among racial/ethnic groups may reflect other characteristics associated with a history of dental caries. Higher prevalence of dental caries and untreated disease have been found among children of parents who have lower educational levels and incomes (*3,4*); are members of immigrant groups that remain less acculturated (*5*); lack dental insurance coverage (*6*); and live in rural areas (*1,3*). In this sample, larger proportions of American Indian/Alaskan Native and Hispanic children lived in rural areas.

The prevalence of dental sealant among children in this survey exceeds that found in surveys in other geographic areas (*2,3,7*) but does not approach the national health objective of 50%. The higher proportion of blacks aged 6–8 years with dental sealant on their first permanent molars may be associated with the county in which most blacks in Oregon live (Multnomah County [Portland]), which operates a school-based program to apply dental sealant. In addition, public health personnel in Oregon may emphasize dental sealant programs because relatively few children have access to fluoridated water.

Oregon remains among the states and territories with the smallest proportion of its population receiving fluoridated water at optimal levels (*8*). Although water fluoridation for larger water systems is particularly cost-effective (*9*), only 11 of 39 Oregon cities or census-defined places with populations ≥10,000 and only one of three cities with ≥100,000 persons (1990 census) are fluoridated.

Several factors may contribute to the observed urban/rural differences in treatment needs. Community- and school-based programs may not exist in many rural areas, thus limiting access to primary preventive measures such as fluoridated water, fluoride mouthrinse, or dental sealant. In addition, access to care may be restricted in rural areas because most dentists practicing in these areas may not be "active"* Medicaid providers.

Reaching preschool children before dental caries occurs will require the cooperation of other health professionals. During well-child appointments, primary-care providers (e.g., pediatricians and nurse practitioners) should screen and refer young children for oral health prevention services (*10*).

Although the sample in Oregon was selected to ensure representation of all racial/ethnic groups and to allow comparison of their dental caries rates, anecdotal reports suggest that the participation level (40%) was adversely affected by sending informed consent forms home with children; by parents' perception that children who receive regular dental care need not participate in the survey; and by concerns about transmission of human immunodeficiency virus in clinical dental settings.

A dental survey requires trained examiners and substantial travel. Because such surveys are costly, they are conducted infrequently. Current data are essential for planning programs that use resources most effectively; therefore, alternate methods for routine assessment of oral health status (e.g., telephone interview data and respondent-assessed measures) must be developed and validated.

*Defined by the Oregon Health Division as having filed 50 or more Medicaid claims during the preceding fiscal year.

Dental Health — Continued

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Current Trends

Mortality Patterns — United States, 1991

In 1991, 2,169,518 deaths were registered in the United States—21,055 more than in 1990 and the most ever recorded (*1*). Despite this increase, the overall age-adjusted death rate* was 513.7 per 100,000 population, the lowest ever recorded. Provisional data for 1992 indicate that the death rate continued to decline through 1992 (*1*). As in previous years, nearly two thirds of deaths in 1991 were caused by the first three leading causes of death (i.e., heart disease, cancer, and stroke). This report summarizes mortality data for 1991 (*2*) and compares patterns with 1990.

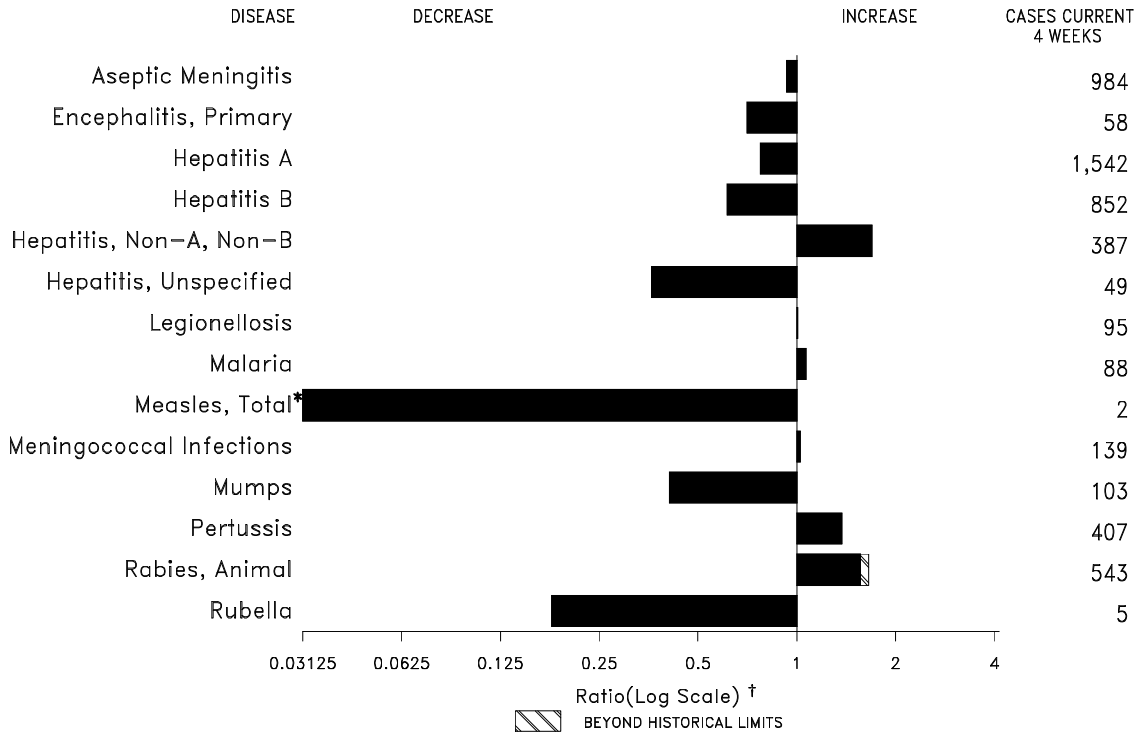
National death statistics are based on information contained on death certificates filed in state vital statistics offices as required by state law and are compiled by CDC's National Center for Health Statistics into a national data base for monitoring the nation's health and for research. In this report, cause-of-death statistics are based on the underlying cause of death.† The causes of death are recorded on the death certificate

*Age-adjusted to the 1940 U.S. population. Age-adjusted death rates indicate changes in the risk for death more effectively than crude death rates and are better indicators for comparisons of mortality by race or sex.

†Defined by the World Health Organization's *International Classification of Diseases, Ninth Revision* as "(a) the disease or injury which initiated the train of morbid events leading directly to death, or (b) the circumstances of the accident or violence which produced the fatal injury."

(Continued on page 897)

FIGURE I. Notifiable disease reports, comparison of 4-week totals ending November 20, 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 forty-six is 0.00599).

† 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 thehatched area begins is based on the mean and two standard deviations of these 4-week totals.

TABLE I. Summary — cases of specified notifiable diseases, United States, cumulative, week ending November 20, 1993 (46th Week)

	Cum. 1993		Cum. 1993
AIDS*	83,485	Measles: imported	55
Anthrax	-	indigenous	222
Botulism: Foodborne	16	Plague	10
Infant	59	Poliomyelitis, Paralytic§	-
Other	2	Psittacosis	51
Brucellosis	79	Rabies, human	1
Cholera	17	Syphilis, primary & secondary	22,431
Congenital rubella syndrome	6	Syphilis, congenital, age < 1 year¶	1,493
Diphtheria	-	Tetanus	40
Encephalitis, post-infectious	145	Toxic shock syndrome	204
Gonorrhea	336,169	Trichinosis	13
Haemophilus influenzae (invasive disease)†	1,096	Tuberculosis	18,881
Hansen Disease	159	Tularemia	115
Leptospirosis	40	Typhoid fever	312
Lyme Disease	6,747	Typhus fever, tickborne (RMSF)	441

*Updated monthly; last update October 2, 1993.
†Of 1046 cases of known age, 339 (32%) were reported among children less than 5 years of age.
§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.
¶Reports through second quarter of 1993.

TABLE II. Cases of selected notifiable diseases, United States, weeks ending November 20, 1993, and November 14, 1992 (46th Week)

Reporting Area	AIDS*	Aseptic Menin-gitis	Encephalitis		Gonorrhea		Hepatitis (Viral), by type				Legionel-losis	Lyme Disease
			Primary	Post-in-fectious			A	B	NA,NB	Unspeci-fied		
	Cum. 1993	Cum. 1993	Cum. 1993	Cum. 1993	Cum. 1993	Cum. 1992	Cum. 1993	Cum. 1993	Cum. 1993	Cum. 1993	Cum. 1993	Cum. 1993
UNITED STATES	83,485	11,155	794	145	336,169	433,949	19,132	10,742	4,478	547	1,107	6,747
NEW ENGLAND	4,183	371	15	8	7,394	8,976	423	429	487	15	71	1,668
Maine	118	41	2	-	76	85	15	10	4	-	5	11
N.H.	83	52	-	2	66	102	33	112	398	4	6	63
Vt.	58	42	4	-	22	23	8	8	4	-	2	5
Mass.	2,210	153	7	4	2,773	3,227	200	220	73	11	40	165
R.I.	274	83	2	2	370	593	67	20	8	-	18	255
Conn.	1,440	-	-	-	4,087	4,946	100	59	-	-	-	1,169
MID. ATLANTIC	20,227	847	58	9	40,256	49,615	956	1,172	357	6	217	3,721
Upstate N.Y.	3,118	488	41	6	7,845	9,911	399	388	241	1	74	2,267
N.Y. City	10,941	104	1	-	10,703	17,594	177	121	1	-	3	3
N.J.	3,909	-	-	-	5,135	6,825	247	356	83	-	32	678
Pa.	2,259	255	16	3	16,573	15,285	133	307	32	5	108	773
E.N. CENTRAL	6,686	1,952	180	29	65,278	82,478	2,138	1,256	519	13	295	96
Ohio	1,286	684	64	4	20,492	24,631	288	165	36	-	151	40
Ind.	718	201	20	11	7,308	7,972	561	211	15	1	51	26
Ill.	2,423	446	41	3	16,536	27,452	720	237	65	5	17	13
Mich.	1,606	582	45	11	15,578	18,557	188	355	365	7	58	17
Wis.	653	39	10	-	5,364	3,866	381	288	38	-	18	-
W.N. CENTRAL	2,694	692	35	10	17,716	23,191	2,048	583	170	17	88	203
Minn.	579	95	12	-	2,286	2,669	391	68	12	4	2	111
Iowa	159	145	5	2	1,431	1,442	53	33	9	4	15	8
Mo.	1,466	219	2	8	9,953	13,075	1,269	408	124	9	25	38
N. Dak.	2	12	3	-	38	67	63	-	-	-	1	2
S. Dak.	22	21	7	-	193	156	16	-	-	-	-	-
Nebr.	164	26	1	-	476	1,451	181	19	10	-	38	4
Kans.	302	174	5	-	3,339	4,331	75	55	15	-	7	40
S. ATLANTIC	17,732	2,337	216	57	88,510	128,204	1,120	2,035	715	86	197	835
Del.	308	74	3	-	1,357	1,573	10	144	141	-	12	394
Md.	2,039	223	24	-	14,651	14,381	142	246	24	5	44	147
D.C.	1,181	33	-	-	4,409	5,736	11	38	1	-	14	2
Va.	1,273	297	37	7	10,516	13,740	137	131	41	40	9	72
W. Va.	66	53	111	-	580	746	26	39	33	-	4	50
N.C.	960	235	31	-	22,380	21,990	82	273	67	-	25	79
S.C.	1,269	29	-	-	9,509	9,948	18	48	4	1	19	9
Ga.	2,328	156	1	-	4,660	35,269	100	257	173	1	36	46
Fla.	8,308	1,237	9	50	20,448	24,821	594	859	231	39	34	36
E.S. CENTRAL	2,179	689	41	7	39,561	44,354	287	1,199	914	4	40	32
Ky.	275	297	14	6	4,442	4,209	114	78	15	-	15	10
Tenn.	897	159	8	-	11,421	13,972	85	1,021	884	3	17	18
Ala.	611	161	3	-	14,486	15,497	53	94	5	1	2	4
Miss.	396	72	16	1	9,212	10,676	35	6	10	-	6	-
W.S. CENTRAL	8,451	1,307	69	2	41,076	47,094	2,300	1,556	314	156	30	65
Ark.	327	62	1	-	8,255	6,711	48	53	4	2	4	2
La.	1,028	79	6	-	10,536	12,975	73	186	131	4	3	2
Okla.	648	1	7	-	3,436	4,919	149	269	111	10	13	22
Tex.	6,448	1,165	55	2	18,849	22,489	2,030	1,048	68	140	10	39
MOUNTAIN	3,375	658	29	5	9,766	11,077	3,593	612	319	71	64	20
Mont.	29	-	-	1	70	102	71	7	3	-	5	-
Idaho	58	11	-	-	148	108	251	71	-	3	1	2
Wyo.	33	7	-	-	74	50	13	29	101	-	6	9
Colo.	1,106	209	15	-	3,103	4,040	787	65	50	39	9	-
N. Mex.	267	118	4	2	862	835	341	200	104	3	5	2
Ariz.	1,136	172	8	-	3,569	3,777	1,262	81	13	12	13	-
Utah	231	64	1	1	320	291	731	52	32	13	10	2
Nev.	515	77	1	1	1,620	1,874	137	107	16	1	15	5
PACIFIC	17,958	2,302	151	18	26,612	38,960	6,267	1,900	683	179	105	107
Wash.	1,337	-	1	-	3,285	3,515	715	206	167	9	10	4
Oreg.	680	-	-	-	1,059	1,491	85	30	13	1	-	2
Calif.	15,586	2,166	144	18	21,168	32,900	4,717	1,636	490	166	87	100
Alaska	58	20	5	-	546	591	689	9	10	-	-	-
Hawaii	297	116	1	-	554	463	61	19	3	3	8	1
Guam	-	2	-	-	48	51	2	2	-	3	-	-
P.R.	2,338	58	-	-	461	192	73	355	87	2	-	-
V.I.	40	-	-	-	90	90	-	4	-	-	-	-
Amer. Samoa	-	-	-	-	40	46	19	-	-	-	-	-
C.N.M.I.	-	3	1	-	69	68	-	1	-	1	-	-

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

*Updated monthly; last update October 2, 1993.

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending November 20, 1993, and November 14, 1992 (46th Week)

Reporting Area	Malaria	Measles (Rubeola)					Menin-gococcal Infections	Mumps		Pertussis			Rubella		
		Indigenous		Imported*		Total									
	Cum. 1993	1993	Cum. 1993	1993	Cum. 1993	Cum. 1992	Cum. 1993	1993	Cum. 1993	1993	Cum. 1993	Cum. 1992	1993	Cum. 1993	Cum. 1992
UNITED STATES	1,069	-	222	-	55	2,195	2,071	21	1,438	93	5,102	2,844	-	182	147
NEW ENGLAND	88	-	58	-	6	65	119	1	10	10	685	211	-	2	6
Maine	5	-	2	-	-	4	9	-	-	-	19	11	-	1	1
N.H.	6	-	2	-	-	13	14	-	-	2	242	49	-	-	-
Vt.	1	-	30	-	1	-	7	-	-	2	83	10	-	-	-
Mass.	44	-	14	-	4	21	62	-	2	-	259	99	-	1	-
R.I.	5	-	1	-	1	21	1	-	2	4	10	3	-	-	4
Conn.	27	-	9	-	-	6	26	1	6	2	72	39	-	-	1
MID. ATLANTIC	207	-	11	-	6	207	251	2	111	15	686	181	-	61	10
Upstate N.Y.	116	-	-	-	2	111	111	-	38	3	310	103	-	17	7
N.Y. City	24	-	5	-	2	56	19	-	2	-	7	20	-	22	-
N.J.	42	-	6	-	2	40	38	-	12	-	51	58	-	16	3
Pa.	25	-	-	-	-	-	83	2	59	12	318	119	-	6	-
E.N. CENTRAL	68	-	21	-	6	61	328	5	220	29	1,167	632	-	7	10
Ohio	15	-	7	-	2	6	94	3	71	20	431	95	-	1	-
Ind.	3	-	1	-	-	20	51	-	5	7	136	39	-	2	-
Ill.	33	-	5	-	-	18	89	-	59	-	288	49	-	1	9
Mich.	17	-	5	-	1	13	58	2	70	2	104	14	-	2	1
Wis.	-	-	3	-	3	4	36	-	15	-	208	435	-	1	-
W.N. CENTRAL	29	-	1	-	2	14	144	-	47	15	527	289	-	1	8
Minn.	9	-	-	-	-	12	15	-	2	14	310	104	-	-	-
Iowa	3	-	-	-	-	1	25	-	9	1	37	9	-	-	3
Mo.	7	-	1	-	-	-	53	-	28	-	136	104	-	1	1
N. Dak.	2	-	-	-	-	-	3	-	5	-	3	15	-	-	-
S. Dak.	2	-	-	-	-	-	6	-	-	-	8	14	-	-	-
Nebr.	4	-	-	-	-	-	14	-	2	-	14	11	-	-	-
Kans.	2	-	-	-	2	1	28	-	1	-	19	32	-	-	4
S. ATLANTIC	278	-	18	-	13	128	382	7	432	4	566	165	-	9	20
Del.	2	-	1	-	-	1	13	-	6	-	14	7	-	2	-
Md.	43	-	-	-	4	16	50	2	76	3	132	32	-	2	5
D.C.	11	-	-	-	-	-	5	-	1	-	12	1	-	-	-
Va.	34	-	-	-	4	16	44	3	35	-	59	15	-	-	-
W. Va.	2	-	-	-	-	-	13	2	20	-	8	9	-	-	1
N.C.	96	-	-	-	-	24	61	-	222	-	152	42	-	-	-
S.C.	7	-	-	-	-	29	31	-	16	-	70	10	-	-	7
Ga.	20	-	1	-	-	3	88	-	16	1	36	17	-	-	-
Fla.	63	-	16	-	5	39	77	-	40	-	83	32	-	5	7
E.S. CENTRAL	28	-	1	-	-	467	133	1	48	3	266	29	-	1	1
Ky.	5	-	-	-	-	450	24	-	-	-	29	1	-	-	-
Tenn.	11	-	-	-	-	-	35	1	14	2	167	8	-	1	1
Ala.	7	-	1	-	-	-	43	-	22	1	59	17	-	-	-
Miss.	5	-	-	-	-	17	31	-	12	-	11	3	-	-	-
W.S. CENTRAL	31	-	7	-	3	1,104	207	3	216	6	161	216	-	17	7
Ark.	3	-	-	-	-	-	20	-	4	1	11	16	-	-	-
La.	6	-	1	-	-	-	35	-	17	-	12	10	-	1	-
Okla.	6	-	-	-	-	12	28	-	11	5	96	38	-	1	-
Tex.	16	-	6	-	3	1,092	124	3	184	-	42	152	-	15	7
MOUNTAIN	34	-	5	-	1	35	158	1	62	5	386	391	-	10	8
Mont.	2	-	-	-	-	-	13	-	-	2	11	9	-	-	-
Idaho	1	-	-	-	-	-	13	-	5	1	114	41	-	2	1
Wyo.	-	-	-	-	-	1	3	-	2	-	1	-	-	-	-
Colo.	20	-	2	-	1	29	32	-	16	2	132	87	-	1	2
N. Mex.	5	-	-	-	-	2	5	N	N	-	39	97	-	-	-
Ariz.	1	-	2	-	-	3	72	-	13	-	48	121	-	2	2
Utah	2	-	-	-	-	-	13	-	4	-	37	34	-	4	1
Nev.	3	-	1	-	-	-	7	1	22	-	4	2	-	1	2
PACIFIC	306	-	100	-	18	114	349	1	292	6	658	730	-	74	77
Wash.	28	-	-	-	-	11	69	-	10	-	67	196	-	-	8
Oreg.	5	-	-	-	-	3	23	N	N	-	31	41	-	3	1
Calif.	264	-	89	-	7	59	234	1	251	6	543	429	-	43	45
Alaska	3	-	-	-	2	9	13	-	9	-	5	14	-	1	-
Hawaii	6	-	11	-	9	32	10	-	22	-	12	50	-	27	23
Guam	1	-	2	-	-	10	2	-	8	-	-	-	-	-	3
P.R.	-	-	241	-	-	411	9	-	3	-	9	12	-	-	1
V.I.	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-
Amer. Samoa	-	-	1	-	-	-	-	-	1	-	2	6	-	-	-
C.N.M.I.	-	2	16	-	1	2	-	-	13	-	1	2	-	-	-

*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 November 20, 1993, and November 14, 1992 (46th 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	22,431	29,977	204	18,881	20,290	115	312	441	7,815
NEW ENGLAND	362	591	15	460	450	-	29	6	1,480
Maine	7	8	3	35	19	-	-	-	-
N.H.	29	37	5	9	17	-	2	-	126
Vt.	1	1	1	5	6	-	-	-	31
Mass.	115	294	5	248	252	-	21	6	625
R.I.	15	35	1	50	31	-	-	-	-
Conn.	195	216	-	113	125	-	6	-	698
MID. ATLANTIC	2,101	4,086	32	4,144	4,754	1	65	27	2,813
Upstate N.Y.	186	311	16	513	634	1	18	7	2,070
N.Y. City	1,044	2,284	1	2,335	2,741	-	26	-	-
N.J.	288	503	-	727	792	-	15	10	401
Pa.	583	988	15	569	587	-	6	10	342
E.N. CENTRAL	3,200	4,554	42	1,706	1,989	4	38	13	106
Ohio	1,018	726	11	278	285	-	8	8	6
Ind.	307	249	2	206	174	1	1	1	11
Ill.	938	2,081	8	722	1,035	2	21	2	22
Mich.	515	831	21	417	415	1	7	2	18
Wis.	422	667	-	83	80	-	1	-	49
W.N. CENTRAL	1,374	1,331	12	438	475	38	2	23	311
Minn.	62	89	2	62	136	-	-	1	40
Iowa	61	47	5	52	38	-	-	7	70
Mo.	1,129	1,009	2	222	206	15	2	11	22
N. Dak.	1	1	-	5	9	-	-	-	51
S. Dak.	1	-	-	12	20	17	-	3	41
Nebr.	10	24	-	18	21	3	-	-	10
Kans.	110	161	3	67	45	3	-	1	77
S. ATLANTIC	5,839	8,097	23	3,692	3,735	4	46	206	1,886
Del.	90	185	1	42	43	-	1	1	128
Md.	337	562	1	338	343	-	8	11	573
D.C.	297	346	-	147	94	-	-	-	16
Va.	567	644	7	386	305	-	6	11	358
W. Va.	13	17	-	68	82	-	-	6	84
N.C.	1,657	2,235	3	483	504	2	3	124	96
S.C.	847	1,086	-	346	352	-	-	10	149
Ga.	981	1,564	2	677	776	-	3	36	433
Fla.	1,050	1,458	9	1,205	1,236	2	25	7	49
E.S. CENTRAL	3,558	3,829	11	1,421	1,321	4	7	56	194
Ky.	314	152	3	340	347	1	2	10	19
Tenn.	946	1,065	4	424	386	2	2	32	72
Ala.	761	1,289	2	442	358	1	3	4	103
Miss.	1,537	1,323	2	215	230	-	-	10	-
W.S. CENTRAL	5,201	5,516	2	2,082	2,413	45	7	95	542
Ark.	662	788	-	157	186	27	-	7	37
La.	2,294	2,302	-	-	198	-	1	1	6
Okla.	334	384	2	141	133	14	1	83	64
Tex.	1,911	2,042	-	1,784	1,896	4	5	4	435
MOUNTAIN	212	310	14	476	516	13	10	15	165
Mont.	1	7	-	23	-	5	-	2	23
Idaho	-	1	2	12	21	-	-	-	6
Wyo.	8	5	-	6	-	3	-	10	22
Colo.	65	58	2	49	60	1	5	3	27
N. Mex.	24	39	1	59	71	1	2	-	9
Ariz.	92	151	1	212	222	-	2	-	59
Utah	10	8	6	28	65	2	1	-	4
Nev.	12	41	2	87	77	1	-	-	15
PACIFIC	584	1,663	53	4,462	4,637	6	108	-	318
Wash.	55	74	7	234	271	1	7	-	-
Oreg.	37	43	-	89	119	2	1	-	-
Calif.	478	1,534	46	3,865	3,957	3	97	-	298
Alaska	8	4	-	49	52	-	-	-	20
Hawaii	6	8	-	225	238	-	3	-	-
Guam	2	3	-	31	59	-	1	-	-
P.R.	454	290	-	185	200	-	-	-	42
V.I.	39	62	-	2	3	-	-	-	-
Amer. Samoa	-	-	-	2	-	-	1	-	-
C.N.M.I.	7	6	-	37	50	-	-	-	-

U: Unavailable

TABLE III. Deaths in 121 U.S. cities,* week ending November 20, 1993 (46th Week)

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	637	449	115	46	12	15	62
Boston, Mass.	181	123	35	17	2	4	22
Bridgeport, Conn.	30	20	6	1	1	2	3
Cambridge, Mass.	24	18	5	1	-	-	2
Fall River, Mass.	36	30	4	1	-	1	2
Hartford, Conn.	69	40	15	8	3	3	3
Lowell, Mass.	20	19	-	1	-	-	4
Lynn, Mass.	13	12	1	-	-	-	1
New Bedford, Mass.	22	19	1	1	1	-	1
New Haven, Conn.	48	29	10	6	2	1	3
Providence, R.I.	44	35	9	-	-	-	5
Somerville, Mass.	4	2	2	-	-	-	-
Springfield, Mass.	48	33	11	2	-	2	3
Waterbury, Conn.	41	29	8	2	1	1	6
Worcester, Mass.	57	40	8	6	2	1	7
MID. ATLANTIC	2,543	1,671	472	283	70	47	125
Albany, N.Y.	63	43	13	5	2	-	7
Allentown, Pa.	23	19	4	-	-	-	-
Buffalo, N.Y.	100	72	18	6	2	2	1
Camden, N.J.	46	27	11	3	4	1	-
Elizabeth, N.J.	35	23	6	3	3	-	4
Erie, Pa.§	44	37	6	1	-	-	3
Jersey City, N.J.	45	29	8	7	-	1	1
New York City, N.Y.	1,281	807	259	163	34	18	42
Newark, N.J.	64	22	16	19	4	3	7
Paterson, N.J.	30	15	6	8	-	1	-
Philadelphia, Pa.	299	210	43	29	7	10	17
Pittsburgh, Pa.§	139	96	25	9	5	4	15
Reading, Pa.	14	10	3	1	-	-	2
Rochester, N.Y.	146	108	19	11	6	2	12
Schenectady, N.Y.	31	21	6	2	1	1	2
Scranton, Pa.§	33	27	5	1	-	-	1
Syracuse, N.Y.	103	72	16	9	2	4	8
Trenton, N.J.	25	15	6	4	-	-	-
Utica, N.Y.	22	18	2	2	-	-	3
Yonkers, N.Y.	U	U	U	U	U	U	U
E.N. CENTRAL	2,183	1,379	419	220	115	50	113
Akron, Ohio	84	57	18	4	1	4	1
Canton, Ohio	33	19	8	6	-	-	5
Chicago, Ill.	412	170	87	80	66	9	14
Cincinnati, Ohio	156	107	33	12	3	1	12
Cleveland, Ohio	159	90	42	15	4	8	4
Columbus, Ohio	U	U	U	U	U	U	U
Dayton, Ohio	145	99	29	8	7	2	8
Detroit, Mich.	297	181	53	39	10	14	8
Evansville, Ind.	55	41	11	2	1	-	4
Fort Wayne, Ind.	72	56	9	4	1	2	6
Gary, Ind.	23	12	3	4	4	-	-
Grand Rapids, Mich.	41	31	5	3	2	-	4
Indianapolis, Ind.	208	143	35	19	7	4	15
Madison, Wis.	46	32	12	2	-	-	1
Milwaukee, Wis.	127	95	23	6	1	2	12
Peoria, Ill.	U	U	U	U	U	U	U
Rockford, Ill.	52	38	9	4	1	-	7
South Bend, Ind.	59	45	12	1	1	-	2
Toledo, Ohio	117	87	16	9	2	3	7
Youngstown, Ohio	97	76	14	2	4	1	3
W.N. CENTRAL	804	592	122	54	14	22	45
Des Moines, Iowa	45	30	11	2	2	-	3
Duluth, Minn.	28	26	2	-	-	-	-
Kansas City, Kans.	37	27	6	3	-	1	-
Kansas City, Mo.	97	72	17	5	-	3	8
Lincoln, Nebr.	37	28	3	2	2	2	3
Minneapolis, Minn.	197	144	28	15	2	8	17
Omaha, Nebr.	91	68	11	8	1	3	3
St. Louis, Mo.	148	110	22	10	3	3	3
St. Paul, Minn.	64	45	11	3	3	2	4
Wichita, Kans.	60	42	11	6	1	-	4

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	≥65	45-64	25-44	1-24	<1	
S. ATLANTIC	1,400	837	290	178	48	44	78
Atlanta, Ga.	208	122	33	37	7	9	4
Baltimore, Md.	262	153	62	27	9	11	27
Charlotte, N.C.	78	45	17	15	-	1	3
Jacksonville, Fla.	114	82	15	13	3	1	7
Miami, Fla.	114	56	30	20	2	4	1
Norfolk, Va.	49	30	11	4	3	1	4
Richmond, Va.	U	U	U	U	U	U	U
Savannah, Ga.	47	34	6	3	4	-	6
St. Petersburg, Fla.	72	51	12	3	4	2	3
Tampa, Fla.	179	112	47	11	3	5	21
Washington, D.C.	254	133	55	43	13	10	2
Wilmington, Del.	23	19	2	2	-	-	-
E.S. CENTRAL	764	523	139	58	27	17	50
Birmingham, Ala.	136	80	27	13	7	9	4
Chattanooga, Tenn.	46	36	4	5	1	-	1
Knoxville, Tenn.	74	55	12	4	1	2	7
Lexington, Ky.	104	68	22	4	7	3	8
Memphis, Tenn.	131	96	22	10	3	-	9
Mobile, Ala.	56	42	9	2	3	-	6
Montgomery, Ala.	53	40	6	6	-	1	1
Nashville, Tenn.	164	106	37	14	5	2	14
W.S. CENTRAL	1,297	813	247	146	58	30	60
Austin, Tex.	67	43	12	10	1	1	5
Baton Rouge, La.	84	58	11	10	5	-	4
Corpus Christi, Tex.	55	37	7	7	3	1	2
Dallas, Tex.	218	131	40	29	8	10	6
El Paso, Tex.	67	48	9	4	4	2	-
Ft. Worth, Tex.	104	65	21	11	7	-	6
Houston, Tex.	347	198	81	39	22	7	28
Little Rock, Ark.	80	45	22	9	-	4	3
New Orleans, La.	107	59	21	15	6	3	-
San Antonio, Tex.	U	U	U	U	U	U	U
Shreveport, La.	68	53	10	3	1	1	2
Tulsa, Okla.	100	76	13	9	1	1	4
MOUNTAIN	944	660	167	73	25	18	58
Albuquerque, N.M.	114	68	31	14	1	-	2
Colo. Springs, Colo.	55	44	7	1	1	2	5
Denver, Colo.	62	40	10	5	1	5	6
Las Vegas, Nev.	158	115	28	10	3	2	10
Ogden, Utah	32	23	5	3	1	-	3
Phoenix, Ariz.	213	133	40	22	9	9	10
Pueblo, Colo.	32	26	2	1	3	-	-
Salt Lake City, Utah	107	79	14	8	6	-	15
Tucson, Ariz.	171	132	30	9	-	-	7
PACIFIC	2,070	1,367	364	229	58	41	110
Berkeley, Calif.	18	12	2	3	-	1	2
Fresno, Calif.	134	89	24	12	5	4	12
Glendale, Calif.	31	21	8	-	1	1	1
Honolulu, Hawaii	85	64	9	10	2	-	7
Long Beach, Calif.	98	52	20	17	3	6	3
Los Angeles, Calif.	456	276	85	66	14	5	20
Pasadena, Calif.	21	16	3	2	-	-	4
Portland, Oreg.	159	107	40	7	4	1	4
Sacramento, Calif.	185	129	33	13	5	5	15
San Diego, Calif.	127	72	22	22	9	1	12
San Francisco, Calif.	184	113	33	32	6	-	8
San Jose, Calif.	211	151	33	17	2	8	12
Santa Cruz, Calif.	32	28	3	1	-	-	-
Seattle, Wash.	170	122	20	21	4	3	5
Spokane, Wash.	57	36	14	1	2	4	1
Tacoma, Wash.	102	79	15	5	1	2	4
TOTAL	12,642¶	8,291	2,335	1,287	427	284	701

*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.

Mortality Patterns — Continued

by the attending physician, medical examiner, or coroner as specified by the World Health Organization (WHO) and endorsed by CDC.

For nine of the 15 leading causes of death, mortality decreased from 1990 to 1991 (Table 1)[§]; the age-adjusted death rate for heart disease (*International Classification of Diseases, Ninth Revision* [ICD-9], codes 390–398, 402, and 404–429), the leading cause of mortality in the United States, declined 2.5%. Mortality from unintentional injuries decreased 4.6%, the largest decline among the 15 leading causes of death. Mortality from cancer decreased 0.4%, and mortality from stroke decreased 3.2%. In contrast, mortality from chronic obstructive pulmonary disease (COPD) and allied conditions (ICD-9 codes 490–496), homicide and legal intervention (ICD-9 codes E960–E978), and human immunodeficiency virus (HIV) infection (ICD-9 codes 042–044)[¶] increased

[§] "Motor-vehicle accidents" and "all other accidents and adverse effects" are not included as causes of death for which the rate has decreased because these causes aresubcategories of the leading cause "accidents and adverse effects." When a death occurs under "accidental" circumstances, the preferred term within the public health community is "unintentional injury."
[¶] These codes are from addenda to the ICD-9 (*3*).

TABLE 1. Age-adjusted death rates* for 1991 and percentage changes in age-adjusted death rates from the 15 leading causes of death from 1990 to 1991 and 1979 to 1991 — United States

Rank†	Cause of death (ICD–9 code§)	1991 Age-adjusted death rate	% Change 1990 to 1991	% Change 1979 to 1991
1	Diseases of heart (390–398, 402, 404–429)	148.2	–2.5	–25.7
2	Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues (140–208)	134.5	–0.4	2.8
3	Cerebrovascular diseases (430–438)	26.8	–3.2	–35.6
4	Chronic obstructive pulmonary diseases and allied conditions (490–496)	20.1	2.0	37.7
5	Accidents¶ and adverse effects (E800–E949)	31.0	–4.6	–27.7
	Motor-vehicle accidents (E810–E825)	17.0	–8.1	–26.7
	All other accidents and adverse effects (E800–E807, E826–E949)	13.9	–0.7	–29.1
6	Pneumonia and influenza (480–487)	13.4	–4.3	19.6
7	Diabetes mellitus (250)	11.8	0.9	20.4
8	Suicide (E950–E959)	11.4	–0.9	–2.6
9	Human immunodeficiency virus infection (042–044)**	11.3	15.3	—
10	Homicide and legal intervention (E960–E978)	10.9	6.9	6.9
11	Chronic liver disease and cirrhosis (571)	8.3	–3.5	–30.8
12	Nephritis, nephrotic syndrome, and nephrosis (580–589)	4.3	—	—
13	Septicemia (038)	4.1	—	78.3
14	Atherosclerosis (440)	2.6	–3.7	–54.4
15	Certain conditions originating in the perinatal period†† (760–779)	—	–4.0	–39.5
	All causes	**513.7**	**–1.2**	**–11.0**

* Per 100,000 population, age-adjusted to the 1940 U.S. population.
† Based on number of deaths.
§ *International Classification of Diseases, Ninth Revision.*
¶ When a death occurs under "accidental" circumstances, the preferred term within the public health community is "unintentional injury."
** These codes are from addenda to the ICD-9 (*3*).
†† Based on infant mortality rates.

Mortality Patterns — Continued

2.0%, 6.9%, and 15.3%, respectively. The death rates from homicide and HIV infection in 1991 were the highest ever recorded. Provisional data for 1992 indicate that HIV is the eighth leading cause of death in the United States (*2*).

Compared with 1990, age-adjusted death rates declined for whites** (from 492.8 to 486.8) and for blacks (from 789.2 to 780.7). Differences in death rates from leading causes of death contributed to the differential in mortality between the black and white populations in 1991. For most of the leading causes, age-adjusted death rates were higher for blacks than for whites. The largest differences in rates were for homicide and HIV infection: the rate for blacks was 6.8 times and 3.4 times that for whites, respectively (Table 2). Death rates were lower for blacks for two of the 15 leading causes of death—COPD and allied conditions and suicide (ICD-9 codes E950–E959).

As in the past, age-adjusted death rates for males in 1991 were higher than those for females (Table 2). Compared with 1990, age-adjusted death rates declined for both

**Hispanics and non-Hispanics are included in totals for both whites and blacks. Numbers for other racial/ethnic groups were too small for meaningful analysis.

TABLE 2. Ratio of age-adjusted death rates* from the 15 leading causes of death, by sex and race of decedent — United States, 1991

Rank†	Cause of death (ICD–9§)	Male:female	Black:white¶
1	Diseases of heart (390–398, 402, 404–429)	1.9	1.5
2	Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues (140–208)	1.5	1.4
3	Cerebrovascular diseases (430–438)	1.2	1.9
4	Chronic obstructive pulmonary diseases and allied conditions (490–496)	1.7	0.8
5	Accidents** and adverse effects (E800–E949)	2.6	1.3
	Motor-vehicle accidents (E810–E825)	2.4	1.0
	All other accidents and adverse effects (E800–E807, E826–E949)	2.9	1.7
6	Pneumonia and influenza (480–487)	1.7	1.5
7	Diabetes mellitus (250)	1.1	2.4
8	Suicide (E950–E959)	4.4	0.6
9	Human immunodeficiency virus infection (042–044)††	7.4	3.4
10	Homicide and legal intervention (E960–E978)	3.8	6.8
11	Chronic liver disease and cirrhosis (571)	2.3	1.6
12	Nephritis, nephrotic syndrome, and nephrosis (580–589)	1.5	2.8
13	Septicemia (038)	1.3	2.7
14	Atherosclerosis (440)	1.4	1.1
15	Certain conditions originating in the perinatal period§§ (760–779)	1.3	3.1
	All causes	**1.7**	**1.6**

*Per 100,000 population, age-adjusted to the 1940 U.S. population.
†Based on number of deaths.
§*International Classification of Diseases, Ninth Revision.*
¶Both groups include Hispanics. Numbers for other racial/ethnic groups were too small for meaningful analysis.
**When a death occurs under "accidental" circumstances, the preferred term within the public health community is "unintentional injury."
††These codes are from addenda to the ICD-9 (*3*).
§§Based on infant mortality rates.

Mortality Patterns — Continued

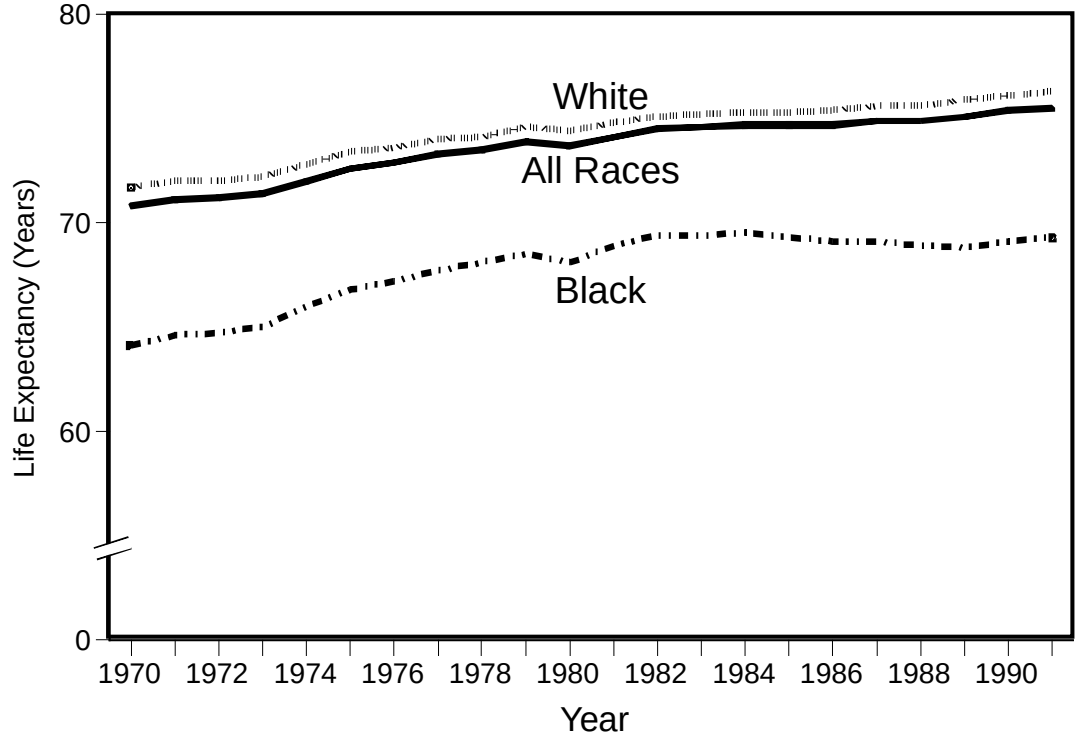
males (from 680.2 to 669.9) and for females (from 390.6 to 386.5). The greatest sex differential in mortality was associated with HIV infection: the rate for males was 7.4 times that for females. Rates for suicide and homicide were 4.4 and 3.8 times, respectively, higher for males than for females, and the rate for unintentional injuries (ICD-9 codes E800–E949) was 2.6 times higher for males. The smallest sex-specific difference was for diabetes mellitus (ICD-9 code 250) (male:female ratio=1.1:1).

In 1991, 323 women were reported to have died of maternal causes; however, this number includes only those deaths assigned to complications of pregnancy, childbirth, and the puerperium (ICD-9 codes 630–676). The maternal mortality rate was 7.9 deaths per 100,000 live births. The maternal mortality rate for blacks was 3.2 times greater than that for whites.

In 1991, 29,555 deaths were attributed to HIV infection. Age-specific death rates were highest for persons aged 35–44 years. Age-adjusted death rates were highest for black males (52.9), followed by white males (16.7), black females (12.0), and white females (1.3).

In 1991, overall life expectancy (LE) at birth was 75.5 years (Figure 1). Despite increases in HIV infection and homicide, the overall LE increased by 0.1 years, primarily because of decreases in mortality from heart disease and unintentional injuries. White females continued to have the highest LE at birth (79.6 years), followed by black females (73.8 years), white males (72.9 years), and black males (64.6 years). All four racial-sex groups experienced increases in LE during 1990–1991. The gap between the

FIGURE 1. Life expectancy at birth, by year of birth and race* — United States, 1970–1991



*Hispanics and non-Hispanics are included in calculations for whites and blacks. Numbers for other racial/ethnic groups were too small for meaningful analysis.

Mortality Patterns — Continued

life expectancy of blacks and whites remained the same as the previous year; during 1984–1989, the gap had widened.

Reported by: Mortality Statistics Br, Div of Vital Statistics, National Center for Health Statistics, CDC.

Editorial Note: The mortality data in this report can be used to monitor the health of the nation and to identify groups at greatest risk for death from specific diseases and injuries. Differences in death rates by race may reflect differences in factors such as socioeconomic status, access to medical care, and the prevalence of specific risks. Although the data indicate that mortality from some chronic diseases (e.g., heart disease and stroke) and unintentional injuries has declined, these gains are offset by trends in younger age groups in which mortality is increasing, primarily because of homicide and HIV infection.

LE summarizes death rates by age into a single measure used as an indicator of the nation's health. Overall, LE has increased every year during the past decade. Improvements in LE reflect decreases in many of the leading causes of death, particularly heart disease; however, increased LE is largely offset by mortality patterns for homicide and HIV infection. Decreasing mortality in heart disease among older persons and decreases in unintentional injuries for most age groups between ages 15 and 64 years contributed most to the increased LE for the total population. Increasing mortality attributed to HIV for all age groups, particularly between ages 25 and 54 years, and increasing mortality for homicide, particularly within the 15–24-year age group, helped offset LE gains.

Another approach to mortality data is to examine the major risk factors contributing to death. A recent study emphasized the importance of risk factors as the cause of death rather than the medical cause reported by physicians on death certificates (*4*). Studies of attributable risk use cause-of-death profiles from the death certificate as the basis for estimates. Examining the underlying causes of death and the attributable risk of underlying risk factors has been useful in establishing public health priorities, such as the national health objectives for the year 2000 (*5*).

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Notice to Readers

Publication of National Strategic Plan for Early Detection and Control of Breast and Cervical Cancers

CDC has released *The National Strategic Plan for the Early Detection and Control of Breast and Cervical Cancers* (NSP) (*1*), a collaborative effort by the Food and Drug Administration, the National Cancer Institute, and CDC, with participation from public, private, and voluntary organizations. The NSP identifies the strategic elements needed to recruit women into breast and cervical cancer screening and follow-up programs and to guarantee high-quality tests. The NSP requires integration of resources from the Public Health Service, state and local health departments, professional organizations, health-care providers, voluntary and community organizations, and consumers to achieve and surpass the national objectives for breast and cervical cancer for the year 2000 (objectives 16.3 and 16.4) (*2*). Although the NSP recognizes the entire continuum of primary prevention through treatment and recovery, it focuses on early detection.

The NSP identifies five program areas: 1) integration and coordination—providing better access to screening services and closing gaps in follow-up services; 2) public education—ensuring that women are aware of the value of screening and sources of care; 3) professional education and practice—addressing educational needs of health professionals to ensure effective screening and appropriate follow-up; 4) quality assurance for cancer screening—ensuring consistent, high-quality cancer screening throughout the entire process of obtaining, interpreting, and reporting mammogram and Papanicolaou test results; and 5) surveillance and evaluation—assessing whether programmatic efforts are increasing the number of women screened for these cancers, identifying cancers earlier, and reducing mortality.

Additional information and copies of the NSP are available from the Chief, Office of External Communications, Division of Cancer Prevention and Control, National Center for Chronic Disease Prevention and Health Promotion, CDC, Mailstop K-52, 4770 Buford Highway, NE, Atlanta, GA 30341; telephone (404) 488-4751.

Reported by: Div of Cancer Prevention and Control, National Center for Chronic Disease Prevention and Health Promotion, CDC.

References

1. CDC. The national strategic plan for the early detection and control of breast and cervical cancers. Atlanta: US Department of Health and Human Services, Public Health Service, CDC, 1993.
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, 1991:420–2; DHHS publication no. (PHS)91-50212.

The *Morbidity and Mortality Weekly Report (MMWR)* Series is prepared by the Centers for Disease Control and Prevention (CDC) and is available on a paid subscription basis from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402; telephone (202) 783-3238.

The data in the weekly *MMWR* are provisional, based on weekly reports to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday. Inquiries about the *MMWR* Series, including material to be considered for publication, should be directed to: Editor, *MMWR* Series, Mailstop C-08, Centers for Disease Control and Prevention, Atlanta, GA 30333; telephone (404) 332-4555.

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