CENTERS FOR DISEASE CONTROL

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Current Trends

Child Drownings and Near Drownings Associated with Swimming Pools — Maricopa County, Arizona, 1988 and 1989

In Arizona, drowning* is a leading cause of fatal injuries among children ≤4 years of age (*1*). From 1981 to 1988, the annual rate of death from drowning for children in Arizona ranged from 9 to 15 per 100,000 children ≤4 years of age; from 1985 to 1987, the average annual rate for the United States was 4 per 100,000 children in this age group.

In April 1988, to help characterize the problem and to identify opportunities for intervention, the Arizona Department of Health Services requested that fire departments in Maricopa County (the Phoenix Standard Metropolitan Statistical Area; population, approximately 2 million) use a standard form to report drowning and near-drowning† incidents. In Maricopa County, fire departments are the first responders to 911 emergency telephone calls. From January 1988 through December 1989, fire departments recorded 243 calls for drownings and near drownings involving children ≤4 years of age. Of these, 206 (85%) occurred in swimming pools (Maricopa County has an estimated 125,000 public and private swimming pools); 23 (9%), in bathtubs; and 14 (6%), in other bodies of water (e.g., buckets, toilets, and ponds). Of the 206 swimming pool incidents, 111 (54%) occurred from May through August. Detailed report forms were available for 137 (67%); of these, 94 (69%) occurred at residences.

Based on review of these forms by state and county health department and fire department personnel to determine opportunities for intervention, 55 (40%) of the 137 incidents were attributed to a lapse in supervision; 48 (35%), to absence of a pool fence (i.e., a fence that completely encloses the pool and isolates it from the house and play area); 19 (14%), to an inadequate or unclosed gate or latch; three (2%), to an inadequate fence; and 12 (9%), to other causes.

The proportion of drownings and near drownings considered preventable by a pool fence was higher during the colder months (October through April, 29 [56%] of

*Arizona uses the following *International Classification of Diseases, Ninth Revision*, rubrics to define child drowning: E830, E832, E910, E984.

†In this report, near drowning is defined as a life-threatening incident in which the child was apneic or pulled from under the surface of the water. Outcomes of near-drowning incidents were not tracked for the Maricopa County study; incidents in which the child was struggling or both floating and breathing when rescued were not counted as near-drowning incidents.

Drownings – Continued

52 drownings and near drownings) than during hotter months (May through September, 19 [22%] of 85).

Substantial morbidity and mortality also occurred among persons who were admitted to hospitals for near drowning. Of 398 children admitted to a major children's hospital in the state from July 1982 through July 1989 for near drownings, 74 (19%) died, and 36 (9%) were discharged as neurologically impaired (Phoenix Children's Hospital, unpublished data, 1989).

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Editorial Note: Factors possibly associated with the increased risk for child drowning and near drowning in Arizona include the state's numerous swimming pools, relatively higher temperatures, and relatively longer outdoor swimming season.

Reports from Australia and New Zealand suggest that pool fencing alone could substantially reduce childhood drownings in pools in those countries (*2,3*). Data from Maricopa County suggest that pool fencing, in combination with adequate gates and latches, could have prevented 70 (51%) of the 137 drownings or near drownings reported. Because 40% of the incidents were attributed to a lapse in supervision (i.e., the supervisor's attention was diverted or a child was momentarily unobserved while the adult performed a chore in the pool area), educating parents about constant vigilance at a pool should complement an emphasis on passive barriers to the pool. To reduce the higher proportion of deaths preventable by pool fences in winter months, when supervision tends to decrease around the pool environment, education should emphasize the need to maintain vigilance if the pool is not drained.

Measures to reduce childhood drownings and near drownings in Maricopa County have included mandatory fencing and barriers around swimming pools and educational campaigns conducted by Maricopa County fire departments to increase the public's awareness of child safety relating to water recreation. Other measures have included instruction on the maintenance of gates and latches, cardiopulmonary resuscitation classes, and requests of the swimming pool and home building industries to improve the design and placement of pools.

References

1. CDC. Childhood injuries in the United States. Am J Dis Child 1990;144:627–46.
2. Langley J. Fencing of private swimming pools in New Zealand. Community Health Stud 1983;7:285–9.
3. Pearn J, Nixon J. Prevention of childhood drowning accidents. Med J Aust 1977;1:616–8.

Fatal Injuries to Children — United States, 1986

Injuries are a leading cause of mortality among children ≤19 years of age in the United States (*1*). As part of the Injury Prevention Act of 1986,* Congress requested that the Secretary of Health and Human Services, through CDC, analyze the causes and incidence of childhood injuries in the United States and make recommendations for injury prevention and control legislation. The Secretary's report, *Childhood Injuries in the United States: A Report to Congress* (*2*), was presented to Congress in October 1989; it was based on national data for 1986 maintained by CDC's National

*Public Law no. 99-649, § 1, 100 Stat. 3633 (42 U.S.C. § 201 [1989]).

Injuries — Continued

Center for Health Statistics and on research conducted by pediatric injury experts in the United States. This report summarizes mortality data from *Childhood Injuries in the United States* for children (defined as persons aged ≤19 years) from the five leading causes of fatal injuries to children in the United States in 1986 (i.e., motor vehicle crashes, homicide, suicide, drowning, and fires/burns).

Motor Vehicle Crashes

Motor vehicle crashes accounted for almost half of the 22,411 fatal injuries among children in the United States (Table 1); a substantial proportion (an estimated 15%–30%) of these deaths were associated with alcohol use (*3*). Of all motor vehicle-related fatalities, 70% occurred among motor vehicle occupants, and 17%, among pedestrians. Occupant fatality rates for 15–19-year-olds (30.7 per 100,000) from motor vehicle crashes were 10 times those for children <10 years of age (3.0 per 100,000).

Among children aged 5–9 years, pedestrian injuries were associated with more deaths (502 [24%] of 2133) than any other cause of injury. Regardless of race, fatality rates for male pedestrians ≤19 years of age (3.2 per 100,000) were nearly twice as high as those for females (1.8 per 100.000); rates for children of races other than white (3.5 per 100,000) were 1.5 times those for white children (2.3 per 100,000).

Homicide

In 1986, deaths due to homicide accounted for nearly 13% of fatal injuries among children (Table 1). Nearly two thirds of childhood homicide deaths were among 15–19-year-olds; however, 23% were among children <5 years of age. Sixty-eight percent of homicide deaths were among males. Rates for black children (12.2 per 100,000) were approximately five times those for white children (2.6 per 100,000). Sixty-one percent of homicides among males and 32% of homicides among females involved firearms.

Suicide

Suicide was the third leading cause of childhood fatal injuries (Table 1). Among 10–19-year-olds, males accounted for 80% of suicides; of these, an estimated 60%

TABLE 1. Number, percentage, and rate of fatal injuries for children ≤19 years of age, by leading cause of injury — United States, 1986

Cause of injury	No.	(%)	Rate per 100,000
Motor vehicle crash	10,535	(47.0)	14.9
Occupant	7,412	(33.0)	10.5
Pedestrian	1,787	(8.0)	2.5
Other	1,336	(6.0)	1.9
Homicide	2,877	(12.8)	4.1
Suicide	2,151	(9.6)	3.0
Drowning	2,062	(9.2)	2.9
Fire/Burns	1,619	(7.2)	2.3
Other	3,167	(14.1)	4.5
All	**22,411**	**(100.0)**	**31.7**

Injuries – Continued

were associated with firearms. Age-specific rates among white children were generally 1.5–2.5 times the suicide rate for black children.

Drowning

Drowning, the fourth leading cause of childhood fatal injuries, was most common among children ≤4 years of age and males aged 15–19 years. Among the latter group, drownings occurred in a wide variety of aquatic environments; alcohol use was associated with an estimated 40%–50% of these events. Drowning rates for black children (4.5 per 100,000) were almost twice those for white children (2.6 per 100,000). In three states (Arizona, California, and Florida), drowning was the leading cause of fatal injuries for children ≤4 years of age. In all states, up to 90% of drownings among this age group occurred in residential swimming pools.

Fire/Burns

Fire/burns were the fifth leading cause of childhood death from injury. Fifty-three percent of childhood burn deaths occurred among children aged ≤4 years and 73% among children ≤9 years of age. Fire/burn deaths were more common among black children (5.1 per 100,000) than among children of other races (1.8 per 100,000). For children ≤9 years of age, black males (8.4 per 100,000) were three times more likely than white males (2.8 per 100,000) and black females (8.6 per 100,000) 4.5 times more likely than white females (2.0 per 100,000) to die in a house fire. Overall, 80% of deaths from fire/burns resulted from house fires, 9% from electrical burns, and 2% from scalding.

Reported by: Div of Injury Control, Center for Environmental Health and Injury Control, CDC.

Editorial Note: *Childhood Injuries in the United States: A Report to Congress* (*2*) provides the first comprehensive assessment of childhood injuries in the United States and underscores how the relative importance of childhood injuries has increased over the last 20 years. From 1968 through 1986, death rates for children from noninjury causes have declined 56%, while death rates from injuries have declined 22% (Figure 1). Injuries are the leading cause of death among children and account for as many years of potential life lost before age 65 as the next two leading categories—congenital anomalies and prematurity—combined (Figure 2).

Each year, injuries account for 20% of all hospitalizations among U.S. children, nearly 16 million emergency room visits, and permanent disability to more than 30,000 children (*4*). Although the direct and indirect costs of these injuries are difficult to measure, in 1982, the estimated costs exceeded $7.5 billion (*5*); in 1985, they were nearly $8.3 billion, with lifetime costs exceeding $13 billion (*6*).

For many childhood injuries, effective interventions are being developed or already exist and have been implemented. For example, morbidity and/or mortality from injuries could be reduced for 1) motor vehicle crashes by air bags, automatic occupant restraints, antilock brakes, programs to reduce drug and alcohol abuse, and barriers to separate pedestrians from traffic; 2) homicide by teaching conflict resolution skills and by reduction of access to lethal weapons such as firearms (*7*); 3) suicide by improved identification and referral of persons at high risk for suicide and efforts to limit access to lethal means of suicide such as firearms, high places, and prescription drugs (*7,8*); 4) drowning by enclosure of swimming pools with fencing and self-latching gates; and 5) fires/burns by use of smoke detectors and antiscald devices in shower heads and faucets.

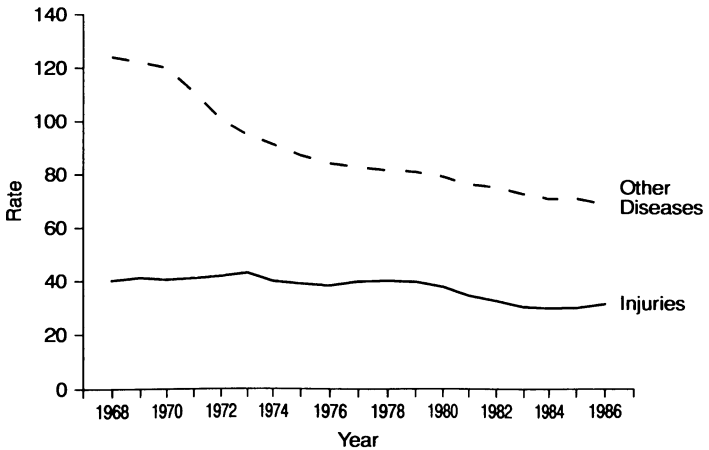
Injuries – Continued

Child abuse is a major contributor to childhood injuries from interpersonal violence–in 1986, an estimated 1.6 million children were abused or neglected. The occurrence of child abuse may be reduced through visits by public health nurses to mothers at high risk for child abuse. Other interventions include instructing parents at high risk for abuse in appropriate parenting skills; teaching children skills in identifying and reporting abusive situations; and conducting support groups for parents identified as being at high risk for child abuse.

An abridged version of *Childhood Injuries in the United States: A Report to Congress* was published in the June 1990 issue of *The American Journal of Diseases*

(Continued on page 451)

FIGURE 1. Death rates* for children ≤19 years of age from injuries and other diseases – United States, 1968–1986



*Per 100,000 population.

FIGURE 2. Years of potential life lost (YPLL) before age 65 among children ≤19 years of age from injuries and other diseases – United States, 1986

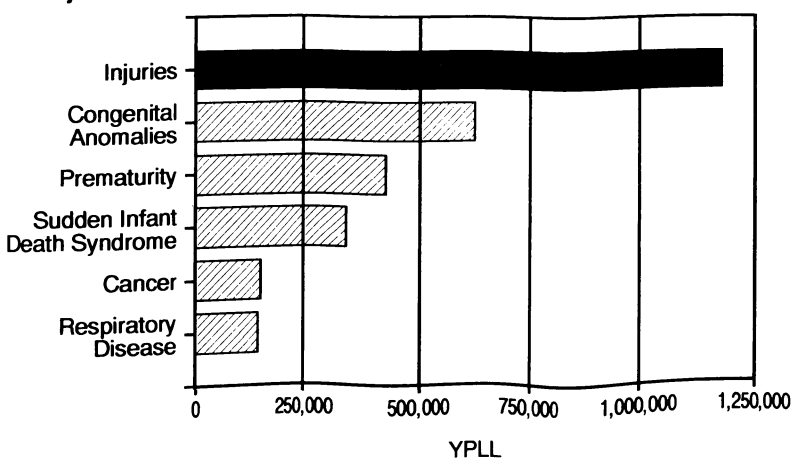
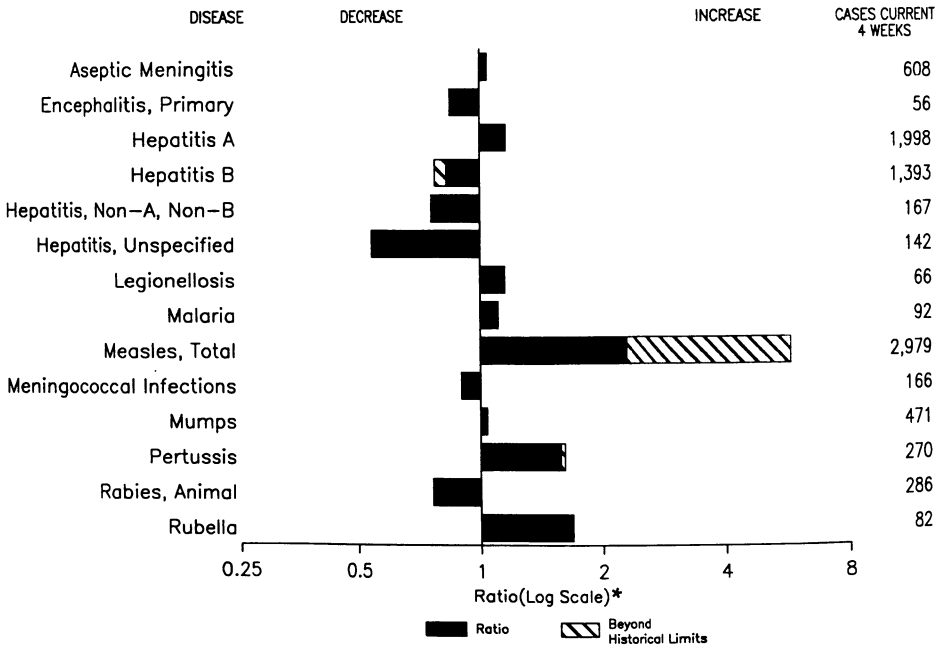


FIGURE I. Notifiable disease reports, comparison of 4-week totals ending June 30, 1990, with historical data — United States



*Ratio of current 4-week total to mean of 15 4-week totals (from comparable, previous, and subsequent 4-week periods for past 5 years).

TABLE I. Summary — cases of specified notifiable diseases, United States, cumulative, week ending June 30, 1990 (26th Week)

	Cum. 1990		Cum. 1990
AIDS	21,907	Plague	-
Anthrax	-	Poliomyelitis, Paralytic*	-
Botulism: Foodborne	1	Psittacosis	70
Infant	26	Rabies, human	1
Other	2	Syphilis: civilian	24,013
Brucellosis	32	military	130
Cholera	1	Syphilis, congenital, age < 1 year	-
Congenital rubella syndrome	1	Tetanus	25
Diphtheria	1	Toxic shock syndrome	168
Encephalitis, post-infectious	50	Trichinosis	15
Gonorrhea: civilian	324,053	Tuberculosis	10,409
military	4,560	Tularemia	40
Leprosy	96	Typhoid fever	177
Leptospirosis	20	Typhus fever, tickborne (RMSF)	146
Measles: imported	721		
indigenous	13,066		

*Three cases of suspected poliomyelitis have been reported in 1990; five of 13 suspected cases in 1989 were confirmed and all were vaccine-associated.

TABLE II. Cases of specified notifiable diseases, United States, weeks ending June 30, 1990, and July 1, 1989 (26th Week)

Reporting Area	AIDS	Aseptic Meningitis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionellosis	Leprosy
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	Cum. 1990	Cum. 1990	Cum. 1990	Cum. 1990	Cum. 1990	Cum. 1989	Cum. 1990	Cum. 1990	Cum. 1990	Cum. 1990	Cum. 1990	Cum. 1990
UNITED STATES	21,907	2,644	314	50	324,053	331,934	14,465	10,044	984	871	536	96
NEW ENGLAND	800	99	9	-	9,074	9,545	289	528	32	37	25	5
Maine	36	2	1	-	107	137	5	24	4	1	2	-
N.H.	43	10	-	-	100	82	5	24	3	2	3	-
Vt.	7	11	2	-	33	36	3	29	3	-	5	-
Mass.	439	33	2	-	3,679	3,679	214	329	14	33	10	4
R.I.	43	29	-	-	543	679	27	26	-	1	5	1
Conn.	232	14	4	-	4,612	4,932	35	96	8	-	-	-
MID. ATLANTIC	6,869	286	24	4	44,081	51,863	2,118	1,507	118	66	155	17
Upstate N.Y.	980	125	20	1	6,891	7,916	488	347	27	19	67	1
N.Y. City	3,972	67	2	1	18,244	21,347	269	448	18	31	25	12
N.J.	1,244	-	1	-	6,659	6,995	225	344	28	-	24	3
Pa.	673	94	1	2	12,287	15,605	1,136	368	45	16	39	1
E.N. CENTRAL	1,547	392	70	8	62,867	58,315	1,038	1,253	68	53	123	-
Ohio	346	88	18	3	19,090	15,157	113	228	20	8	45	-
Ind.	137	77	2	3	5,484	4,631	69	252	3	14	22	-
Ill.	674	66	22	2	20,124	17,945	481	216	22	15	8	-
Mich.	270	138	26	-	14,827	15,575	195	346	19	16	34	-
Wis.	120	23	2	-	3,342	5,007	180	211	4	-	14	-
W.N. CENTRAL	511	106	30	1	17,277	15,230	835	472	64	16	30	-
Minn.	83	9	11	1	2,158	1,555	129	57	18	-	-	-
Iowa	25	11	3	-	1,262	1,260	175	35	5	2	2	-
Mo.	305	47	2	-	10,172	9,013	278	287	22	10	18	-
N. Dak.	1	7	-	-	55	70	7	4	2	1	-	-
S. Dak.	1	4	2	-	109	133	64	4	2	-	-	-
Nebr.	24	11	4	-	884	805	48	22	3	-	5	-
Kans.	72	17	8	-	2,637	2,394	134	63	12	3	5	-
S. ATLANTIC	4,611	615	73	14	93,279	90,606	1,777	1,914	160	135	74	4
Del.	51	20	3	-	1,551	1,485	71	51	5	2	5	-
Md.	483	73	8	1	9,958	9,970	673	259	19	6	21	2
D.C.	326	2	-	-	6,477	5,982	12	28	4	-	-	-
Va.	439	87	25	2	8,234	7,640	153	112	24	97	7	-
W. Va.	34	13	6	-	653	658	11	48	3	1	1	-
N.C.	309	60	22	-	15,011	13,554	355	543	67	-	12	1
S.C.	178	8	1	-	7,466	8,257	23	319	11	7	12	-
Ga.	645	107	3	1	20,733	17,356	182	226	3	7	12	-
Fla.	2,146	245	5	10	23,196	25,704	297	328	24	15	4	1
E.S. CENTRAL	500	260	27	1	26,396	26,096	191	754	63	5	41	-
Ky.	94	61	7	-	2,937	2,512	49	268	21	4	18	-
Tenn.	172	43	14	1	8,094	8,326	89	388	26	-	12	-
Ala.	100	111	6	-	8,715	8,459	52	93	14	-	11	-
Miss.	134	45	-	-	6,650	6,799	1	5	2	1	-	-
W.S. CENTRAL	2,326	257	13	6	32,898	34,424	1,423	873	42	137	31	23
Ark.	166	5	1	-	4,283	3,672	264	46	5	12	7	-
La.	382	32	4	-	6,827	7,227	86	153	1	4	10	-
Okla.	120	22	1	5	3,004	2,960	298	72	14	13	10	-
Tex.	1,658	198	7	1	18,784	20,565	775	602	22	108	4	23
MOUNTAIN	558	120	11	-	5,846	7,106	2,309	761	75	70	25	-
Mont.	7	2	-	-	91	100	63	39	2	4	1	-
Idaho	14	-	-	-	60	97	42	49	8	-	3	-
Wyo.	2	1	1	-	90	50	22	9	5	1	-	-
Colo.	160	23	3	-	1,274	1,568	140	85	22	24	3	-
N. Mex.	51	6	-	-	623	706	364	89	5	2	3	-
Ariz.	189	60	4	-	2,714	2,604	1,313	263	19	29	8	-
Utah	51	17	-	-	211	222	178	48	10	3	2	-
Nev.	84	11	3	-	783	1,759	187	179	4	7	5	-
PACIFIC	4,185	509	57	16	32,335	38,749	4,485	1,982	362	352	32	47
Wash.	326	-	3	1	2,785	3,082	782	317	68	15	8	3
Oreg.	164	-	-	-	1,281	1,481	464	221	21	6	-	-
Calif.	3,600	452	49	14	27,492	33,495	3,092	1,375	265	327	23	36
Alaska	20	15	4	-	527	438	94	36	3	-	-	-
Hawaii	75	42	1	1	250	253	53	33	5	4	1	8
Guam	1	-	-	-	100	75	5	1	-	7	-	-
P.R.	796	36	5	-	432	583	90	157	2	22	-	-
V.I.	4	-	-	-	199	340	1	7	-	-	-	-
Amer. Samoa	-	1	-	-	43	12	18	-	-	-	-	9
C.N.M.I.	-	-	-	-	101	49	8	6	-	15	-	2

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

TABLE II. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending June 30, 1990, and July 1, 1989 (26th Week)

Reporting Area	Malaria	Measles (Rubeola)					Menin-gococcal Infections	Mumps		Pertussis			Rubella		
		Indigenous		Imported*		Total									
	Cum. 1990	1990	Cum. 1990	1990	Cum. 1990	Cum. 1989	Cum. 1990	1990	Cum. 1990	1990	Cum. 1990	Cum. 1989	1990	Cum. 1990	Cum. 1989
UNITED STATES	518	609	13,066	11	721	8,379	1,432	92	3,163	39	1,467	1,208	8	589	219
NEW ENGLAND	49	-	174	-	18	293	104	-	31	3	192	222	-	5	5
Maine	1	-	27	-	2	-	10	-	-	-	6	4	-	-	-
N.H.	4	-	-	-	8	8	3	-	7	-	12	5	-	1	3
Vt.	4	-	-	-	1	2	8	-	1	-	6	6	-	-	1
Mass.	29	-	15	-	2	41	55	-	8	1	156	190	-	-	1
R.I.	3	-	27	-	3	41	7	-	5	2	2	8	-	1	-
Conn.	8	-	105	-	2	201	21	-	10	-	10	9	-	3	-
MID. ATLANTIC	117	25	758	-	137	761	207	1	190	1	304	69	-	2	15
Upstate N.Y.	22	-	189	-	102	133	81	1	82	-	243	33	-	1	3
N.Y. City	41	15	132	-	19	63	25	-	-	-	-	2	-	-	10
N.J.	39	-	105	-	9	399	46	-	40	-	13	21	-	-	2
Pa.	15	10	332	-	7	166	55	-	68	1	48	13	-	1	-
E.N. CENTRAL	25	26	2,691	-	142	2,122	194	-	340	-	292	137	-	29	22
Ohio	5	-	451	-	3	661	64	-	75	-	86	1	-	1	3
Ind.	1	19	312	-	1	33	19	-	13	-	53	8	-	-	-
Ill.	9	-	922	-	10	1,270	47	-	105	-	80	62	-	17	17
Mich.	7	7	325	-	125	14	43	-	111	-	36	23	-	9	1
Wis.	3	-	681	-	3	144	21	-	36	-	37	43	-	2	1
W.N. CENTRAL	8	-	646	-	13	531	49	1	87	2	50	47	-	6	4
Minn.	1	-	239	-	3	5	10	-	-	-	6	7	-	1	-
Iowa	1	-	23	-	1	5	1	1	14	-	6	10	-	4	-
Mo.	5	-	66	-	-	303	18	-	41	1	31	28	-	-	3
N. Dak.	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-
S. Dak.	-	-	15	-	8	-	2	-	-	-	1	1	-	-	-
Nebr.	-	-	97	-	1	110	5	-	3	1	2	-	-	-	-
Kans.	1	-	206	-	-	108	13	-	29	-	3	1	-	-	1
S. ATLANTIC	119	41	744	8	112	388	262	58	1,306	4	132	86	-	13	8
Del.	2	-	8	-	3	37	1	-	3	-	2	1	-	-	-
Md.	31	17	173	2§	18	50	27	50	778	2	36	9	-	1	2
D.C.	10	-	10	-	7	12	11	1	24	-	14	-	-	1	-
Va.	33	-	66	-	2	20	33	-	77	-	13	6	-	1	-
W. Va.	1	-	6	-	-	28	12	-	41	-	9	11	-	-	-
N.C.	8	6	9	1†	11	167	38	6	164	2	31	18	-	-	1
S.C.	-	-	4	-	-	-	20	-	21	-	5	-	-	-	-
Ga.	9	7	61	-	16	-	49	-	56	-	14	10	-	-	-
Fla.	25	11	407	5§	55	74	71	1	142	-	8	31	-	10	5
E.S. CENTRAL	11	8	101	-	2	108	86	-	62	7	79	47	-	1	2
Ky.	2	8	23	-	-	10	27	-	-	-	-	1	-	-	-
Tenn.	6	-	34	-	-	55	32	-	30	-	28	15	-	1	2
Ala.	3	-	15	-	2	43	25	-	9	7	46	26	-	-	-
Miss.	-	-	29	-	-	-	2	N	N	-	5	5	-	-	-
W.S. CENTRAL	22	421	3,345	1	80	2,810	96	10	518	-	33	74	-	2	22
Ark.	1	-	10	-	28	2	14	7	128	-	2	11	-	1	-
La.	1	-	10	-	-	6	26	1	84	-	10	5	-	-	5
Okla.	5	4	148	-	-	90	11	1	100	-	21	13	-	1	1
Tex.	15	417	3,177	1†	52	2,712	45	1	206	-	-	45	-	-	16
MOUNTAIN	16	84	626	2	75	215	46	21	259	13	155	380	8	93	33
Mont.	1	-	-	-	1	13	9	-	-	-	23	10	-	13	1
Idaho	3	-	15	-	6	2	5	19	132	5	31	49	1	46	30
Wyo.	-	-	-	-	11	-	-	-	2	-	-	-	-	-	1
Colo.	2	13	70	2†	38	59	13	-	18	2	52	22	-	3	-
N. Mex.	2	-	81	-	4	31	8	N	N	1	8	6	-	-	-
Ariz.	7	59	232	-	12	72	3	2	86	1	27	285	4	26	-
Utah	-	8	55	-	-	36	4	-	7	4	10	7	-	1	-
Nev.	1	4	173	-	3	2	4	-	14	-	4	1	3	4	1
PACIFIC	151	4	3,981	-	142	1,151	388	1	370	9	230	146	-	438	108
Wash.	14	-	176	-	68	33	48	-	38	2	58	34	-	-	-
Oreg.	9	4	135	-	43	13	42	N	N	-	7	6	-	4	2
Calif.	124	-	3,586	-	28	1,085	288	-	323	7	146	102	-	426	86
Alaska	2	-	78	-	2	-	6	-	-	-	-	-	-	-	-
Hawaii	2	-	6	-	1	23	4	1	9	-	19	4	-	8	20
Guam	1	U	-	U	1	1	-	U	1	U	-	1	U	-	-
P.R.	2	-	808	-	-	437	9	-	7	-	5	3	-	-	6
V.I.	-	U	-	U	-	4	-	U	5	U	-	-	U	-	-
Amer. Samoa	-	U	89	U	-	-	-	U	9	U	-	-	U	-	-
C.N.M.I.	-	-	-	-	-	-	-	-	7	-	-	-	-	-	-

*For measles only, imported cases includes both out-of-state and international importations.
N: Not notifiable U: Unavailable †International §Out-of-state

TABLE II. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending June 30, 1990, and July 1, 1989 (26th Week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Toxic-shock Syndrome	Tuberculosis		Tula-remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1990	Cum. 1989	Cum. 1990	Cum. 1990	Cum. 1989	Cum. 1990	Cum. 1990	Cum. 1990	Cum. 1990
UNITED STATES	24,013	20,882	168	10,409	10,258	40	177	146	2,002
NEW ENGLAND	919	832	11	247	253	1	12	4	4
Maine	5	5	3	-	3	-	-	-	-
N.H.	39	6	1	3	15	-	-	-	2
Vt.	1	-	-	7	4	-	-	-	-
Mass.	353	254	6	130	133	1	11	3	-
R.I.	7	15	-	35	30	-	-	-	-
Conn.	514	552	1	72	68	-	1	1	2
MID. ATLANTIC	5,250	4,352	17	2,599	1,971	1	49	5	433
Upstate N.Y.	416	456	6	230	170	-	8	2	21
N.Y. City	2,302	1,867	5	1,538	1,126	-	27	-	-
N.J.	807	660	-	445	308	1	12	3	132
Pa.	1,725	1,369	6	386	367	-	2	-	280
E.N. CENTRAL	1,686	845	42	1,046	1,085	-	19	12	59
Ohio	270	54	16	158	208	-	4	8	3
Ind.	33	33	2	85	99	-	1	-	-
Ill.	642	375	5	531	478	-	10	-	17
Mich.	568	327	19	225	238	-	3	4	8
Wis.	173	56	-	47	62	-	1	-	31
W.N. CENTRAL	216	168	23	283	266	13	-	13	331
Minn.	48	13	1	53	53	-	-	-	121
Iowa	29	21	4	32	28	-	-	-	10
Mo.	113	87	11	134	115	11	-	10	11
N. Dak.	1	2	-	10	10	-	-	-	43
S. Dak.	1	-	-	9	13	1	-	-	113
Nebr.	8	17	3	13	10	1	-	-	4
Kans.	16	28	4	32	37	-	-	3	29
S. ATLANTIC	7,573	7,550	14	2,191	2,125	3	21	57	577
Del.	97	84	1	23	25	-	-	1	8
Md.	582	366	-	168	178	-	9	5	208
D.C.	469	461	1	74	85	-	-	-	-
Va.	392	267	-	159	185	1	2	2	105
W. Va.	7	9	-	38	40	-	-	-	19
N.C.	869	470	10	262	260	1	-	29	4
S.C.	470	387	1	262	242	1	-	18	74
Ga.	1,981	1,734	-	453	309	-	1	2	113
Fla.	2,706	3,772	1	752	801	-	9	-	46
E.S. CENTRAL	2,111	1,333	6	825	898	4	1	20	101
Ky.	36	32	1	206	209	1	1	3	25
Tenn.	844	588	3	234	262	3	-	13	27
Ala.	663	415	2	264	247	-	-	4	49
Miss.	568	298	-	121	180	-	-	-	-
W.S. CENTRAL	3,713	2,713	7	1,283	1,188	13	4	29	246
Ark.	249	168	-	143	131	8	-	4	22
La.	1,065	616	1	135	137	-	-	1	-
Okla.	116	46	6	98	106	5	1	22	71
Tex.	2,283	1,883	-	907	814	-	3	2	153
MOUNTAIN	482	363	19	240	238	4	12	4	97
Mont.	-	1	-	10	7	-	-	3	29
Idaho	6	1	1	6	8	-	-	-	1
Wyo.	-	3	2	3	-	1	-	-	30
Colo.	20	51	6	14	20	-	-	-	2
N. Mex.	24	17	3	52	43	3	-	1	6
Ariz.	331	116	5	117	112	-	10	-	24
Utah	4	11	2	12	24	-	-	-	3
Nev.	97	163	-	26	24	-	2	-	2
PACIFIC	2,063	2,726	29	1,695	2,234	1	59	2	154
Wash.	191	215	4	135	114	1	2	-	-
Oreg.	75	135	-	60	72	-	2	-	-
Calif.	1,779	2,368	24	1,402	1,934	-	52	2	132
Alaska	10	2	-	20	35	-	-	-	22
Hawaii	8	6	1	78	79	-	3	-	-
Guam	1	4	-	14	40	-	-	-	-
P.R.	187	277	-	51	151	-	-	-	27
V.I.	1	2	-	4	4	-	-	-	-
Amer. Samoa	-	-	-	8	2	-	1	-	-
C.N.M.I.	1	7	-	23	8	-	4	-	-

U: Unavailable

TABLE III. Deaths in 121 U.S. cities,* week ending June 30, 1990 (26th Week)

Reporting Area	All Causes, By Age (Years)						P&I**
	All Ages	≥65	45-64	25-44	1-24	<1	Total
NEW ENGLAND	671	453	132	46	17	23	53
Boston, Mass.	166	101	38	16	2	9	16
Bridgeport, Conn.	78	49	16	7	5	1	5
Cambridge, Mass.	22	14	5	2	1	-	3
Fall River, Mass.	13	10	2	1	-	-	-
Hartford, Conn.	70	41	18	6	2	3	9
Lowell, Mass.	27	19	6	2	-	-	-
Lynn, Mass.	12	9	2	1	-	-	1
New Bedford, Mass.	24	22	1	1	-	-	1
New Haven, Conn.	50	30	13	4	2	1	3
Providence, R.I.	50	32	7	3	4	4	1
Somerville, Mass.	8	7	1	-	-	-	3
Springfield, Mass.	54	42	5	2	-	5	5
Waterbury, Conn.	28	21	6	-	1	-	1
Worcester, Mass.	69	56	12	1	-	-	5
MID. ATLANTIC	2,583	1,687	475	282	71	68	145
Albany, N.Y.	39	31	5	1	-	2	-
Allentown, Pa.	17	13	3	1	-	-	-
Buffalo, N.Y.	105	78	15	5	4	3	5
Camden, N.J.	27	17	7	2	1	-	4
Elizabeth, N.J.	19	13	4	2	-	-	1
Erie, Pa.†	36	29	5	-	1	1	3
Jersey City, N.J.	44	30	10	4	-	-	2
N.Y. City, N.Y.	1,366	854	261	178	43	30	59
Newark, N.J.§	72	36	15	16	2	3	6
Paterson, N.J.	29	17	6	5	1	-	4
Philadelphia, Pa.	392	260	72	35	10	15	23
Pittsburgh, Pa.†	68	50	10	6	1	1	5
Reading, Pa.	33	23	6	4	-	-	3
Rochester, N.Y.	113	76	18	12	4	3	14
Schenectady, N.Y.	20	13	5	-	1	1	1
Scranton, Pa.†	24	20	3	1	-	-	1
Syracuse, N.Y.	102	77	13	4	1	7	6
Trenton, N.J.	27	13	7	4	1	2	2
Utica, N.Y.	22	16	4	1	1	-	2
Yonkers, N.Y.§	28	21	6	1	-	-	4
E.N. CENTRAL	2,225	1,430	477	179	62	77	109
Akron, Ohio	60	43	12	2	3	-	-
Canton, Ohio	47	35	7	4	1	-	5
Chicago, Ill.§	564	362	125	45	10	22	16
Cincinnati, Ohio	91	60	21	6	-	4	7
Cleveland, Ohio	147	72	41	16	7	11	4
Columbus, Ohio	168	94	39	17	9	9	3
Dayton, Ohio	131	95	25	9	2	-	16
Detroit, Mich.	241	133	57	31	12	8	8
Evansville, Ind.	45	34	8	1	-	2	5
Fort Wayne, Ind.	51	39	7	2	1	2	4
Gary, Ind.	11	7	3	1	-	-	-
Grand Rapids, Mich.	63	43	14	2	2	2	5
Indianapolis, Ind.	162	101	31	16	4	10	2
Madison, Wis.	34	19	10	4	-	1	-
Milwaukee, Wis.	138	107	23	6	2	-	10
Peoria, Ill.	45	28	10	5	1	1	5
Rockford, Ill.	38	22	8	4	4	-	6
South Bend, Ind.	45	34	10	1	-	-	3
Toledo, Ohio	82	52	18	5	4	3	6
Youngstown, Ohio	62	50	8	2	-	2	4
W.N. CENTRAL	748	509	144	47	27	21	28
Des Moines, Iowa	69	44	14	3	4	4	2
Duluth, Minn.	23	18	3	2	-	-	-
Kansas City, Kans.	24	21	2	1	-	-	-
Kansas City, Mo.	104	70	18	8	7	1	4
Lincoln, Nebr.	42	28	9	2	2	1	3
Minneapolis, Minn.	152	100	33	12	3	4	8
Omaha, Nebr.	76	54	12	5	3	2	5
St. Louis, Mo.	133	86	29	8	5	5	2
St. Paul, Minn.	63	43	14	2	2	2	2
Wichita, Kans.	62	45	10	4	1	2	2

Reporting Area	All Causes, By Age (Years)						P&I**
	All Ages	≥65	45-64	25-44	1-24	<1	Total
S. ATLANTIC	1,331	810	271	156	43	48	71
Atlanta, Ga.	158	98	34	21	2	3	3
Baltimore, Md.	269	170	53	33	7	6	18
Charlotte, N.C.	75	49	8	6	4	8	11
Jacksonville, Fla.	101	62	20	13	3	3	6
Miami, Fla.	117	58	32	18	5	4	-
Norfolk, Va.	41	20	8	3	3	7	1
Richmond, Va.	79	45	27	4	1	2	9
Savannah, Ga.	51	30	7	7	2	5	7
St. Petersburg, Fla.	88	71	10	4	-	3	6
Tampa, Fla.	88	59	16	7	5	-	7
Washington, D.C.	227	118	52	37	11	7	3
Wilmington, Del.	37	30	4	3	-	-	-
E.S. CENTRAL	673	467	116	48	20	22	51
Birmingham, Ala.	106	70	17	8	7	4	4
Chattanooga, Tenn.	47	36	10	1	-	-	7
Knoxville, Tenn.	111	73	22	8	3	5	11
Louisville, Ky.	127	84	23	12	3	5	7
Memphis, Tenn.	126	89	18	10	4	5	10
Mobile, Ala.	10	5	1	4	-	-	-
Montgomery, Ala.	37	24	7	2	2	2	2
Nashville, Tenn.	109	86	18	3	1	1	10
W.S. CENTRAL	1,767	1,096	374	179	68	50	67
Austin, Tex.	41	30	5	5	1	-	6
Baton Rouge, La.	31	17	10	2	1	1	4
Corpus Christi, Tex.§	45	32	10	3	-	-	3
Dallas, Tex.	191	101	41	29	13	7	6
El Paso, Tex.	55	40	11	1	2	1	3
Fort Worth, Tex	104	66	23	9	2	4	6
Houston, Tex.§	734	436	169	89	24	16	18
Little Rock, Ark.	92	68	16	5	3	-	4
New Orleans, La.	133	98	12	11	10	2	-
San Antonio, Tex.	159	96	40	9	5	9	9
Shreveport, La.	88	51	16	9	7	5	4
Tulsa, Okla.	94	61	21	7	-	5	4
MOUNTAIN	647	416	135	62	14	20	27
Albuquerque, N. Mex.	73	42	15	9	5	2	4
Colo. Springs, Colo.	31	23	6	2	-	-	2
Denver, Colo.	123	85	26	10	1	1	7
Las Vegas, Nev.	104	64	24	12	1	3	5
Ogden, Utah	12	10	2	-	-	-	1
Phoenix, Ariz.	147	82	30	18	4	13	3
Pueblo, Colo.	31	23	6	2	-	-	2
Salt Lake City, Utah	30	21	5	2	1	1	1
Tucson, Ariz.	96	66	21	7	2	-	2
PACIFIC	1,831	1,143	351	194	76	61	107
Berkeley, Calif.	15	11	2	1	1	-	1
Fresno, Calif.	104	64	18	12	3	7	-
Glendale, Calif.	24	14	5	2	3	-	1
Honolulu, Hawaii	72	47	13	5	4	3	9
Long Beach, Calif.	66	44	9	5	5	3	5
Los Angeles Calif.	525	313	107	63	27	11	15
Oakland, Calif.	71	46	8	8	4	5	5
Pasadena, Calif.	28	23	4	1	-	-	3
Portland, Oreg.	93	65	18	5	3	2	2
Sacramento, Calif.	131	80	32	14	5	-	14
San Diego, Calif.	147	90	25	13	7	10	11
San Francisco, Calif.	151	80	30	33	1	7	4
San Jose, Calif.	173	116	31	12	6	8	21
Seattle, Wash.	142	83	32	18	6	3	3
Spokane, Wash.	58	42	11	2	1	2	11
Tacoma, Wash.	31	25	6	-	-	-	2
TOTAL	12,476††	8,011	2,475	1,193	398	390	658

*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.

§Data not available. Figures are estimates based on average of past available 4 weeks.

Injuries – Continued

of Children (*4*) and is available from the Division of Injury Control, Center for Environmental Health and Injury Control, CDC, Mailstop F36, Atlanta, Georgia 30333.

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8. Alcohol, Drug Abuse, and Mental Health Administration. Report of the Secretary's Task Force on Youth Suicide. Rockville, Maryland: US Department of Health and Human Services, Public Health Service, 1989:115–28; DHHS publication no. (ADM)89-1624.

Notices to Readers

NIOSH Alerts on Workplace Hazards: Exposure to Chlorofluorocarbon 113 and Electrocution of Workers Using Portable Metal Ladders Near Overhead Power Lines

CDC's National Institute for Occupational Safety and Health (NIOSH) recently published two new Alerts* on workplace hazards that cause death and serious injury to workers. The topics of the Alerts are prevention of death from excessive exposure to chlorofluorocarbon 113 (CFC-113) (*1*) and prevention of electrocutions of workers using portable metal ladders near overhead power lines (*2*).

Request for Assistance in Preventing Death from Excessive Exposure to Chlorofluorocarbon 113 (CFC-113) (*1*). Workers exposed to CFC-113 or other chlorofluorocarbons (CFCs) in confined spaces or areas with insufficient ventilation are at risk of death from cardiac arrhythmia or asphyxiation. The chemical name for CFC-113 is 1,1,2-trichloro-1,2,2-trifluoroethane, but it is also known by trade names† such as Freon 113®, Genetron 113®, Halocarbon 113®, or Refrigerant 113®. CFCs are most commonly used as refrigerants, propellants, degreasers, fire extinguishers, deicers, agents for cleaning electronic equipment, and agents for preparing frozen tissue for

*Single copies are available without charge from the Information Dissemination Section, DSDTT, National Institute for Occupational Safety and Health, CDC, 4676 Columbia Parkway, Cincinnati, Ohio 45226; telephone (513) 533-8287.

†Use of trade names is for identification only and does not imply endorsement by the Public Health Service or the U.S. Department of Health and Human Services.

Workplace Hazards — Continued

histopathologic examination. According to the 1977 National Occupational Hazard Survey by NIOSH, an estimated 300,000 workers are potentially exposed to CFC-113.

This Alert describes 12 worker deaths since 1983 that resulted from exposure to CFC-113 in confined spaces or areas with insufficient ventilation. All deaths were attributed to cardiac arrhythmia, asphyxiation, or both. The 12 workers were apparently unaware that CFC-113 might generate vapor concentrations sufficient to cause death.

The Alert provides six recommendations for controlling CFC-113 and other CFCs in the workplace: hazard awareness, training, engineering controls, hazards in confined spaces, medical considerations, and personal protection equipment. Editors of appropriate trade journals, members of health and safety organizations, and others responsible for the safety and health of workers who use CFC-113 or other CFCs are requested to bring these recommendations to the attention of those who use these products and those who supervise the use of these products. Adherence to the recommendations should reduce the risk to these workers.

Request for Assistance in Preventing Electrocutions of Workers Using Portable Metal Ladders Near Overhead Power Lines (*2*). Contact between portable metal ladders and overhead power lines causes serious and often fatal injuries to workers in the United States. During 1980–1985, 4% of all work-related electrocutions resulted from metal ladders contacting overhead power lines. This Alert describes six deaths that occurred because portable aluminum ladders, which are electrical conductors, contacted energized overhead power lines. If nonconductive ladders had been used, or if safe working clearances had been maintained, these deaths might have been prevented.

Portable metal ladders are widely used in many industries, and specific Occupational Safety and Health Administration regulations govern their use. These regulations should be implemented and enforced by every employer, manager, supervisor, and worker in operations that use portable metal ladders. Trade journal editors, safety and health officials, and other persons (especially those in the construction trades) are requested to bring the recommendations in this Alert to the attention of contractors and workers.

Reported by: Div of Standards Development and Technology Transfer, National Institute for Occupational Safety and Health, CDC.

References

1. NIOSH. NIOSH alert: request for assistance in preventing death from excessive exposure to chlorofluorocarbon 113 (CFC-113). Cincinnati, Ohio: US Department of Heath and Human Services, Public Health Service, CDC, 1989; DHHS publication no. (NIOSH)89-109.
2. NIOSH. NIOSH alert: request for assistance in preventing electrocutions of workers using portable metal ladders near overhead power lines. Cincinnati, Ohio: US Department of Heath and Human Services, Public Health Service, CDC, 1989; DHHS publication no. (NIOSH)89-110.

MMWR Serial Publications, Vol. 39, 1990

The following documents have been published as part of *MMWR* Vol. 39. For information regarding purchase of these documents, contact the U.S. Government Printing Office (telephone [202] 783-3238) or MMS Publications (telephone [617] 893-3800). For additional information, contact Editorial Services, Epidemiology Program Office, CDC (telephone [404] 332-4555).

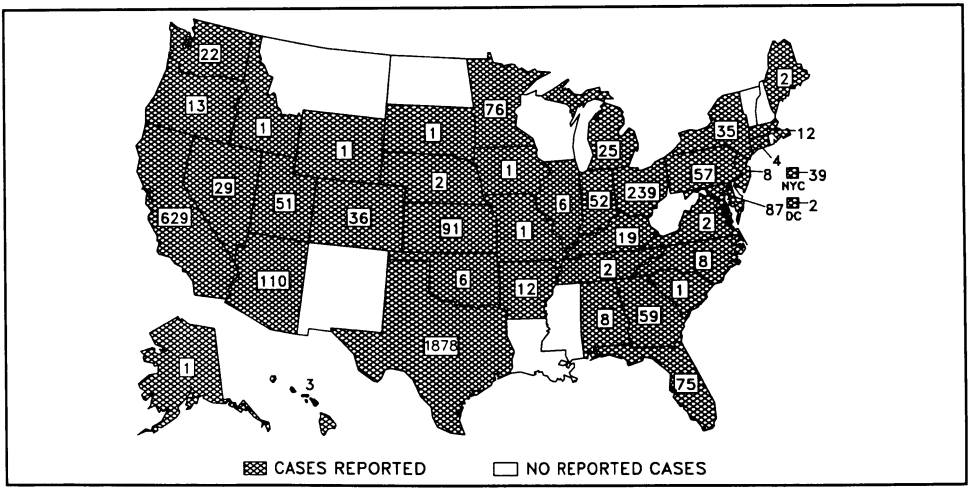
Recommendations and Reports

- Public Health Service Statement on Management of Occupational Exposure to Human Immunodeficiency Virus, Including Considerations Regarding Zidovudine Postexposure Use (Vol. 39, No. RR-1, January 26, 1990).
- Protection Against Viral Hepatitis: Recommendations of the Immunization Practices Advisory Committee (ACIP) (Vol. 39, No. RR-2, February 9, 1990).
- Recommendations for the Prevention of Malaria Among Travelers (Vol. 39, No. RR-3, March 9, 1990).
- Compendium of Animal Rabies Control, 1990 (Vol. 39, No. RR-4, April 20, 1990).
- Viral Agents of Gastroenteritis: Public Health Importance and Outbreak Management (Vol. 39, No. RR-5, April 27, 1990).
- Yellow Fever Vaccine: Recommendations of the Immunization Practices Advisory Committee (ACIP) (Vol. 39, No. RR-6, May 4, 1990).
- Prevention and Control of Influenza: Recommendations of the Immunization Practices Advisory Committee (ACIP) (Vol. 39, No. RR-7, May 11, 1990).
- Screening for Tuberculosis and Tuberculous Infection in High-Risk Populations and The Use of Preventive Therapy for Tuberculous Infection in the United States: Recommendations of the Advisory Committee for Elimination of Tuberculosis (Vol. 39, No. RR-8, May 18, 1990).

CDC Surveillance Summaries

- Vol. 39, No. SS-1, March 1990:
  Waterborne Disease Outbreaks, 1986–1988.
  Foodborne Disease Outbreaks, 5-Year Summary, 1983–1987.
- Vol. 39, No. SS-2, June 1990:
  Behavioral Risk Factor Surveillance, 1988.
  Abortion Surveillance, 1986–1987.

Reported cases of measles, by state — United States, weeks 23–26, 1990



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

The data in this report are provisional, based on weekly reports to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday. The editor welcomes accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Such reports and any other matters pertaining to editorial or other textual considerations should be addressed to: Editor, *Morbidity and Mortality Weekly Report*, Centers for Disease Control, Atlanta, Georgia 30333; telephone (404) 332-4555.

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