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MORBIDITY AND MORTALITY WEEKLY REPORT

National Drunk and Drugged Driving Awareness Week – December 7–13, 1991

Persons who drive while impaired by alcohol or other drugs are a public health hazard to themselves and to others. Accordingly, the injuries, disabilities, and deaths associated with impaired driving are a major preventable public health problem.

The 10th anniversary of National Drunk and Drugged Driving Awareness Week, December 7–13, 1991, includes activities to discourage persons from driving if they have consumed alcohol. The theme of this week is: "Make a Pledge. Take the Keys. Call a Cab. Take a Stand. Friends Don't Let Friends Drive Drunk." Additional information about National Drunk and Drugged Driving Awareness Week is available from Elizabeth Hendricks, Office of Alcohol and State Programs (NTS-22), National Highway Traffic Safety Administration, 400 7th Street, SW, Washington, DC 20590; telephone (202) 366-6976.

Current Trends

Annual and New Year's Day Alcohol-Related Traffic Fatalities – United States, 1982–1990

Traffic crashes are the leading cause of death in the United States for all age groups from 1 through 34 years (*1*), and almost half of these fatalities are alcohol-related (*2,3*); an estimated 40% of all persons may be involved in an alcohol-related traffic crash sometime during their lives (*3*). During holiday periods, the incidence of traffic fatalities and of alcohol-related traffic fatalities (ARTFs) tends to be higher than during nonholiday periods (*4,5*). This report summarizes data from the National Highway Traffic Safety Administration's (NHTSA) Fatal Accident Reporting System on trends in ARTFs in the United States from 1982 through 1990 both annually and for

Alcohol-Related Traffic Fatalities — Continued

January 1 of each year.* In addition, a quarterly table (pages 838–9 of this issue) presents data on alcohol involvement in fatal motor-vehicle crashes in the United States for October–December 1990.

A fatal traffic crash is considered alcohol-related by NHTSA if either a driver or nonoccupant (e.g., a pedestrian) had a blood alcohol concentration (BAC) ≥0.01 g/dL in a police-reported traffic crash. NHTSA defines a BAC ≥0.01 g/dL but <0.10 g/dL as indicating a low level of alcohol and a BAC ≥0.10 g/dL (the legal level of intoxication in most states) as indicating intoxication. Because BAC levels are not available for all persons involved in fatal crashes, NHTSA estimates the number of ARTFs based on a discriminant analysis of information from all cases for which driver or nonoccupant BAC data are available (*6*). In this report, "alcohol-involved" refers to crashes† or drivers with a BAC ≥0.01 g/dL. Data on alcohol-involved drivers refer only to drivers involved in fatal crashes.

From 1982 through 1990, the estimated percentage of ARTFs decreased both annually and for January 1 (Table 1). The estimated percentage of total ARTFs declined 13% (from 57.3% in 1982 to 49.6% in 1990), an average annual decline of approximately 2%; the estimated percentage of ARTFs occurring on January 1 decreased 26% (from 83.5% in 1982 to 62.0% in 1990), an average annual decrease of 4%. The estimated percentage of alcohol-involved drivers in fatal crashes decreased 17% (from 38.9% in 1982 to 32.2% in 1990), an average annual decline of 2%;

*Because many crashes related to New Year's Eve activities are recorded on January 1 rather than December 31, data for January 1 were used to assess changes in ARTFs associated with New Year's Eve. During 1975–1985, when fatalities on national holidays were compared with fatalities on adjacent days, New Year's Day had the greatest relative increase in traffic fatalities (64%) compared with all other holidays (*4*).

†NHTSA assigns vehicle crashes a BAC level that represents the highest BAC level of anyone involved in the crash.

TABLE 1. Estimated number and percentage of total traffic fatalities in crashes involving at least one person* with a blood alcohol concentration (BAC) level,† by BAC level and time period — United States, 1982–1990

	Annual§					January 1¶				
		BAC=0.00		BAC≥0.01%			BAC=0.00		BAC≥0.01%	
Year	Total fatalities	No.	(%)	No.	(%)	No. fatalities	No.	(%)	No.	(%)
1982	43,945	18,780	(42.7)	25,165	(57.3)	187	31	(16.5)	156	(83.5)
1983	42,589	18,943	(44.5)	23,646	(55.5)	165	35	(21.5)	130	(78.5)
1984	44,257	20,499	(46.3)	23,758	(53.7)	128	30	(23.7)	98	(76.3)
1985	43,825	21,109	(48.2)	22,716	(51.8)	120	39	(32.2)	81	(67.8)
1986	46,087	22,042	(47.8)	24,045	(52.2)	172	61	(35.3)	111	(64.7)
1987	46,390	22,749	(49.0)	23,641	(51.0)	152	43	(28.3)	109	(71.7)
1988	47,087	23,461	(49.8)	23,626	(50.2)	171	55	(32.2)	116	(67.8)
1989	45,582	23,178	(50.8)	22,404	(49.2)	131	49	(37.5)	82	(62.5)
1990	44,529	22,445	(50.4)	22,084	(49.6)	130	49	(38.0)	81	(62.0)

*Driver or nonoccupant.

†BAC distributions are estimates for drivers and nonoccupants involved in fatal crashes. Numbers of fatalities are rounded to the nearest whole number.

§Represents calendar year January 1–December 31.

¶Represents 24-hour period from 12:01 a.m. to midnight.

Source: Fatal Accident Reporting System, National Highway Traffic Safety Administration.

Alcohol-Related Traffic Fatalities — Continued

however, for January 1, the estimated percentage of alcohol-involved drivers decreased 37% (from 63.3% in 1982 to 39.7% in 1990), an average annual decline of 6% (Table 2).

From 1982 through 1990, compared with the expected daily average for each year, the overrepresentation of ARTFs and alcohol-involved drivers in fatal crashes on January 1 declined (Table 3). For example, on January 1, 1982, the number of ARTFs and the number of alcohol-involved drivers exceeded the expected daily average for the year by 126% and 135%, respectively. In comparison, on January 1, 1990, the number of ARTFs and alcohol-involved drivers were overrepresented by 34% and

TABLE 2. Estimated number and percentage of drivers involved in fatal crashes, by time period and driver* blood alcohol concentration (BAC) level† — United States, 1982–1990

	Annual§					January 1¶				
		BAC=0.00		BAC≥0.01%			BAC=0.00		BAC≥0.01%	
Year	Total no. drivers	No.	(%)	No.	(%)	No. drivers	No.	(%)	No.	(%)
1982	56,029	34,250	(61.1)	21,779	(38.9)	221	81	(36.7)	140	(63.3)
1983	54,656	34,145	(62.5)	20,511	(37.5)	171	60	(35.2)	111	(64.8)
1984	57,512	36,831	(64.0)	20,681	(36.0)	159	74	(46.7)	85	(53.3)
1985	57,883	38,321	(66.2)	19,562	(33.8)	157	82	(52.5)	75	(47.5)
1986	60,335	39,633	(65.7)	20,701	(34.3)	185	87	(47.0)	98	(53.0)
1987	61,442	41,049	(66.8)	20,393	(33.2)	172	86	(50.3)	86	(49.7)
1988	62,253	41,813	(67.2)	20,440	(32.8)	208	107	(51.4)	101	(48.6)
1989	60,435	41,271	(68.3)	19,164	(31.7)	167	97	(57.9)	70	(42.1)
1990	58,797	39,865	(67.8)	18,932	(32.2)	173	104	(60.3)	69	(39.7)

*Driver may or may not have been killed.
†BAC distributions are estimates for drivers involved in fatal crashes. Numbers of drivers are rounded to the nearest whole number.
§Represents calendar year January 1–December 31.
¶Represents 24-hour period from 12:01 a.m. to midnight.
Source: Fatal Accident Reporting System, National Highway Traffic Safety Administration.

TABLE 3. Percentage of overrepresentation* of alcohol in fatalities and drivers involved in fatal crashes on January 1 relative to the 24-hour average — United States, 1982–1990

Year	Day of week for January 1	Average daily fatalities	January 1 fatalities	Excess fatalities	Average daily drivers involved	January 1 drivers involved	Excess drivers involved
1982	Friday	69	156	126%	60	140	135%
1983	Saturday	65	130	101%	56	111	98%
1984	Sunday	65	98	51%	57	85	50%
1985	Tuesday	62	81	30%	54	75	40%
1986	Wednesday	66	111	68%	57	98	73%
1987	Thursday	65	109	68%	56	86	54%
1988	Friday	65	116	80%	56	101	81%
1989	Sunday	61	82	34%	53	70	33%
1990	Monday	61	81	34%	52	69	33%

*Calculated by dividing the number of fatalities or drivers involved on January 1 by the average daily fatalities or drivers involved each year.
Source: Fatal Accident Reporting System, National Highway Traffic Safety Administration.

Alcohol-Related Traffic Fatalities — Continued

33%, respectively. However, the average daily number of fatalities differs by day of the week; the highest average daily number of fatalities occurs on Fridays, Saturdays, and Sundays (*4*). Therefore, the declining trend in alcohol involvement for January 1, 1982 (a Friday), compared with January 1, 1990 (a Monday), may reflect, in part, differences by day of the week (in general, fewer fatalities are expected on Mondays than on Fridays). Nonetheless, when data are compared for years when January 1 occurred on the same day of the week (e.g., 1982 versus 1988 [both Fridays] and 1984 versus 1989 [both Sundays]), a downward trend in alcohol involvement on January 1 persisted.

Reported by: ME Vegega, PhD, Office of Alcohol and State Programs, Traffic Safety Programs; TM Klein, National Center for Statistics and Analysis, Research and Development, National Highway Traffic Safety Administration. Unintentional Injury Section, Epidemiology Br, Div of Injury Control, National Center for Environmental Health and Injury Control, CDC.

Editorial Note: The findings in this report indicate that the number of ARTFs and alcohol-involved drivers in fatal crashes in the United States has decreased since 1982. Despite this trend, alcohol-involved driving remains a critical and preventable public health problem (*7*): during 1990 more than 22,000 persons died in alcohol-related traffic crashes in the United States, and an estimated 19,000 drivers had been drinking at the time of the crash.

One national health objective for the year 2000 is to reduce deaths caused by alcohol-related traffic crashes to no more than 8.5 per 100,000 persons (*8*). Preliminary data indicate that deaths caused by alcohol-related traffic crashes have declined from the 1987 baseline of 9.8 per 100,000 persons (*8*) to 8.9 per 100,000 persons in 1990 (NHTSA, unpublished data). Efforts by federal, state, and local governments and nongovernment organizations are helping to achieve this objective. For example, although New Year's Eve is traditionally a time of increased celebration and travel, from 1982 through 1990, the reduction in the estimated percentage of ARTFs was greater for January 1 than throughout the year (26% versus 13%, respectively). Similarly, the reduction in the estimated percentage of alcohol-involved drivers in fatal crashes was greater for January 1 than throughout the year (37% versus 17%, respectively).

Factors that may have contributed to the reduction in ARTFs on January 1 include general deterrence efforts (e.g., legislation and increased enforcement of existing laws), publicity about drinking and driving, and increased emphasis on the use of designated nondrinking drivers and alternative transportation (e.g., taxis). NHTSA program efforts for continued reductions in ARTFs and alcohol-involved driving include 1) supporting activities that result in the prompt suspension of licenses of persons who drive while intoxicated; 2) supporting expanded use of sobriety checkpoints; and 3) developing enforcement policies to reduce alcohol-involved driving among youth (*9*). In addition, NHTSA and CDC are collaborating to educate the public about alcohol-involved driving (*9–11*).

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Alcohol-Related Traffic Fatalities — Continued

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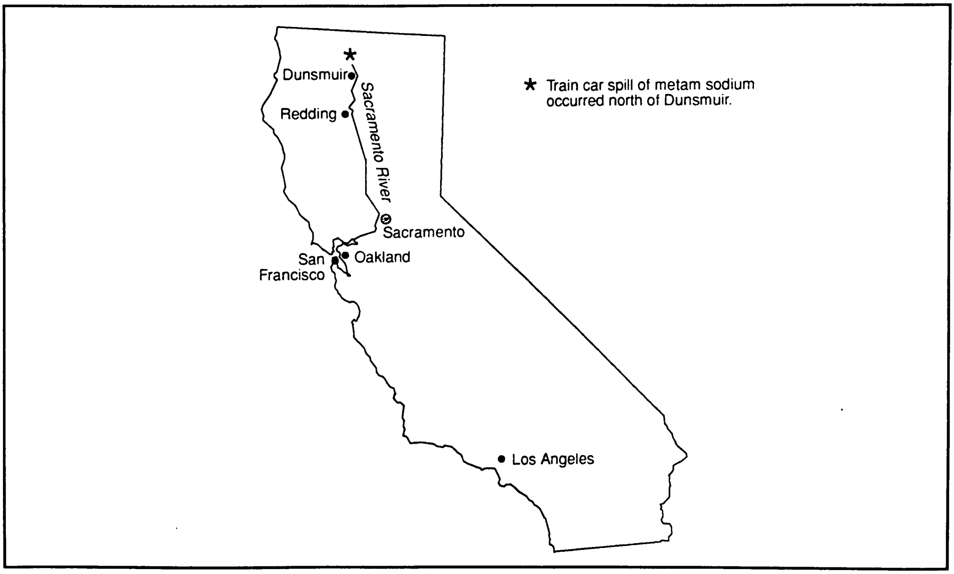
Epidemiologic Notes and Reports

Dermatitis Among Workers Cleaning the Sacramento River After a Chemical Spill — California, 1991

On July 14, 1991, a train tanker car derailed in northern California, spilling 19,000 gallons of the soil fumigant metam sodium (sodium methyldithiocarbamate) into the Sacramento River north of Redding (Figure 1). The major breakdown product of

FIGURE 1. Site of metam sodium chemical spill — California, July 1991



Dermatitis — Continued

metam sodium, methylisothiocyanate (MITC), is a known skin irritant at high concentrations (>1%). By July 21, the concentration of MITC in the river, at multiple test sites, measured 20–40 parts per billion (0.01%). On August 6, Shasta County health officials notified the California Department of Health Services (CDHS) of an outbreak of dermatitis among Shasta County jail inmates and crew leaders who had assisted in removing dead fish from the river on July 21–22 in >100 F (>38 C) ambient temperature.

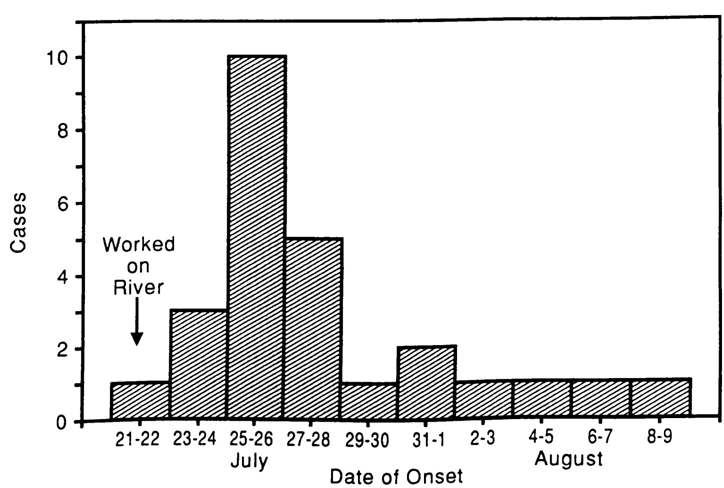
To determine whether the outbreak was related to the chemical spill, during August 12–14, CDC and the CDHS conducted a retrospective cohort study of 42 inmates and crew leaders who participated in the cleanup and 48 state and federal employees who also worked in the river July 21–22. Dermatitis was defined as a self-reported rash on the feet or ankles with onset July 21–August 11 and duration of at least 4 days.

Of the 42 inmates and crew leaders, 27 (64%) had dermatitis; none of the 48 state and federal workers interviewed reported dermatitis. Onset of rash was noted 0–18 days after exposure in the river, peaking at 3–4 days (Figure 2). Rash affected the ankles (89%), feet (74%), legs (56%), hands (15%), and arms (11%). Reported symptoms included redness (96%); itching (81%); scaling (78%); bumpiness (56%); pain, burning, or stinging (37%); warmth (30%); and blistering (26%).

Rash occurred among 25 (76%) of 33 inmates and crew leaders who had lower extremity water contact compared with two (22%) of nine whose feet remained dry (relative risk [RR]=3.4, 95% confidence interval=1.0–11.8). In addition, the risk of rash for inmates and crew leaders was related to time spent in the river (36% for those in the water ≤3 hours compared with 92% for those in the water >11 hours [chi-square for linear trend=8.0; p=0.005]).

The prevalence of water contact and the duration of time in the river were similar for inmates and crew leaders when compared with state and federal workers.

FIGURE 2. Dermatitis cases among workers cleaning the Sacramento River, by date of onset — California, July–August 1991*



*Excludes one person who could not recall exact date of onset, but onset was between July 21–August 12.

Dermatitis — Continued

However, of the 31 state and federal workers who had lower extremity water contact, 23 (74%) changed immediately to dry clothing before returning to work; in comparison, of the 33 inmates who had water contact, none changed immediately and nine (27%) changed to dry clothing at the end of the workday—after their feet had been wet up to 10 hours.

By August 14, the dermatitis was resolving for all patients.

Reported by: C Busby, S Plank, MD, Shasta County Public Health Dept; R Jackson, MD, Office of Environmental Health Hazard Assessment, California Environmental Protection Agency; L Goldman, MD, R Kreutzer, MD, Office of Environmental and Occupational Epidemiology, California Dept of Health Svcs. Div of Health Studies, Agency for Toxic Substances and Disease Registry. Div of Field Epidemiology, Epidemiology Program Office, CDC.

Editorial Note: Although laboratory studies indicate that MITC is both a strong primary skin irritant and a mild skin sensitizer (allergen) in animals (*1*), its irritant and allergenic effects on humans have not been clearly distinguished. Both irritant and allergic contact dermatitis have been reported for MITC, primarily among agricultural workers (*2–5*). In California, reports to the Pesticide Illness Reporting System for 1990 included six cases of presumed irritant dermatosis associated with exposure to metam sodium that had been sprayed on crops.

Because it hydrolyzes rapidly, metam sodium is transported as a concentrated 33% solution in water. Metam sodium further diluted in water and in the presence of oxygen decomposes principally to the active pesticidal product MITC. In the incident described in this report, decomposition of MITC or of river flora and fauna killed by MITC may have produced other chemicals, concentrations of which were not determined; therefore, an etiologic role for another chemical cannot be completely excluded. The high attack rate of rash and the low probability of previous sensitization to MITC among persons exposed in this episode is consistent with irritant dermatitis.

Irritant contact dermatoses account for 65%–80% of all cases of contact dermatitis (*6–8*). Risk factors for irritant dermatitis include exposure of skin to humid or wet environments, repetitive friction, heat, soaps or detergents, and skin occlusion (*6–8*). Among the inmates and crew leaders, dermatitis was associated with lower extremity water exposure and the duration of time spent in water. In addition, based on comparison with the state and federal workers, prolonged water exposure may have promoted the development of dermatitis. Although the prevalence of water contact with workers' upper extremities was high (90%), few inmates reported dermatitis on their hands (15%) and arms (11%) indicating additional factors (e.g., occlusive boots and friction due to weight-bearing) may have contributed to the occurrence of lower extremity rash.

To minimize the risk of irritant dermatitis, special precautions are necessary during prolonged exposure to water—particularly in the presence of concentrations of a potentially irritant chemical. Such precautions include maintaining dry skin in areas of substantial friction (e.g., by wearing watertight waders or boots of appropriate height and gloves) and changing immediately to dry clothes.

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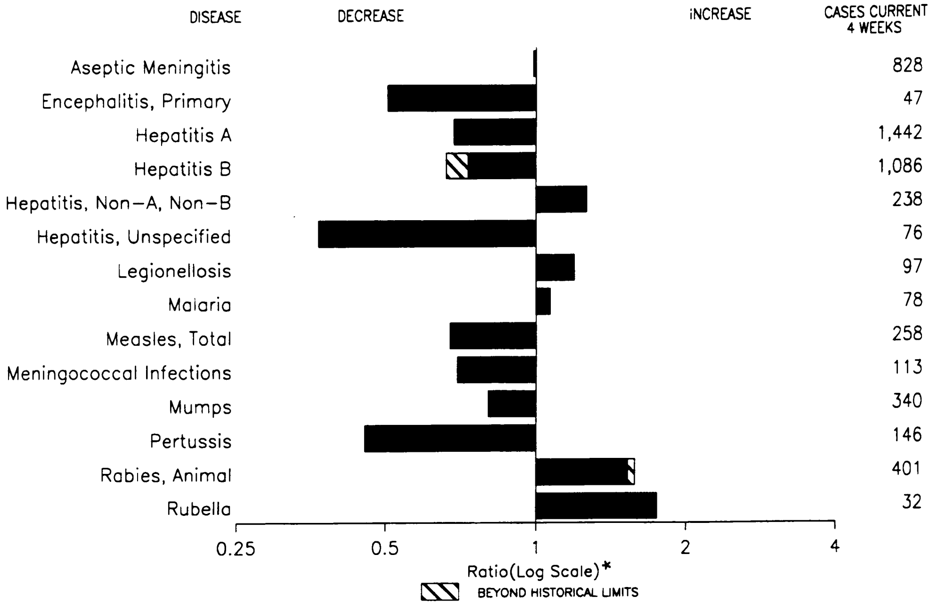
(Continued on page 833)

FIGURE I. Notifiable disease reports, comparison of 4-week totals ending November 30, 1991, with historical data — United States



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

TABLE I. Summary — cases of specified notifiable diseases, United States, cumulative, week ending November 30, 1991 (48th Week)

	Cum. 1991		Cum. 1991
AIDS	40,782	Measles: imported	203
Anthrax	-	indigenous	9,115
Botulism: Foodborne	22	Plague	10
Infant	68	Poliomyelitis, Paralytic*	-
Other	3	Psittacosis	80
Brucellosis	76	Rabies, human	3
Cholera	22	Syphilis, primary & secondary	38,362
Congenital rubella syndrome	19	Syphilis, congenital, age < 1 year	1,684
Diphtheria	2	Tetanus	45
Encephalitis, post-infectious	74	Toxic shock syndrome	254
Gonorrhea	551,989	Trichinosis	61
Haemophilus influenzae (invasive disease)	2,437	Tuberculosis	21,234
Hansen Disease	134	Tularemia	181
Leptospirosis	53	Typhoid fever	434
Lyme Disease	8,371	Typhus fever, tickborne (RMSF)	614

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

TABLE II. Cases of selected notifiable diseases, United States, weeks ending November 30, 1991, and December 1, 1990 (48th 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. 1991	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1990	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991
UNITED STATES	40,782	13,357	857	74	551,989	623,151	21,369	15,376	2,832	1,078	1,139	8,371
NEW ENGLAND	1,657	1,506	30	3	13,201	16,898	527	762	62	34	79	1,623
Maine	61	154	3	-	154	197	20	28	4	-	5	-
N.H.	45	166	5	2	183	284	30	30	8	-	9	35
Vt.	21	229	5	-	51	48	23	15	7	1	4	7
Mass.	910	506	14	1	5,644	7,087	261	527	29	30	56	273
R.I.	90	444	1	-	1,119	1,161	93	26	12	3	5	169
Conn.	530	7	2	-	6,050	8,121	100	136	2	-	-	1,139
MID. ATLANTIC	10,956	2,587	65	11	64,055	82,720	2,261	1,565	339	21	317	4,968
Upstate N.Y.	1,436	1,289	34	7	12,136	13,976	822	543	197	11	113	3,227
N.Y. City	6,226	365	1	-	23,972	33,471	826	269	9	-	55	-
N.J.	2,205	-	-	-	10,419	13,309	245	348	88	-	32	803
Pa.	1,089	933	30	4	17,528	21,964	368	405	45	10	117	938
E.N. CENTRAL	3,166	2,577	248	7	104,982	118,921	2,802	1,755	420	74	231	309
Ohio	548	962	84	2	31,980	36,074	347	372	160	19	119	168
Ind.	312	195	22	1	10,959	10,417	371	190	1	1	17	12
Ill.	1,557	480	81	4	31,052	36,154	1,205	273	71	7	22	25
Mich.	543	821	55	-	25,084	28,085	264	568	126	47	42	104
Wis.	206	119	6	-	5,907	8,191	615	352	62	-	31	-
W.N. CENTRAL	1,091	669	62	8	26,455	31,644	2,118	669	306	23	57	297
Minn.	229	132	38	-	2,886	3,877	396	79	12	2	13	84
Iowa	95	161	-	4	1,793	2,093	47	40	10	4	11	20
Mo.	611	253	14	4	16,354	18,870	576	449	273	12	15	171
N. Dak.	4	12	2	-	75	124	47	4	5	1	1	1
S. Dak.	3	12	4	-	333	288	771	7	1	-	3	1
Nebr.	55	30	2	-	1,592	1,770	201	38	1	-	10	-
Kans.	94	69	2	-	3,422	4,622	80	52	4	4	4	20
S. ATLANTIC	9,519	2,402	166	31	164,661	178,170	1,704	3,230	359	208	185	667
Del.	77	69	4	-	2,679	2,980	8	43	5	2	2	69
Md.	918	316	22	1	18,473	22,338	260	368	47	14	35	265
D.C.	628	73	2	-	8,427	12,545	71	142	1	1	10	4
Va.	710	407	41	3	16,978	17,324	179	204	30	132	16	145
W. Va.	53	47	32	-	1,188	1,242	22	61	4	17	4	43
N.C.	476	322	31	-	32,159	28,508	159	503	104	-	24	78
S.C.	307	40	-	-	13,144	13,622	38	650	16	4	36	10
Ga.	1,343	314	10	2	38,885	38,253	219	517	83	-	21	31
Fla.	5,007	814	24	25	32,728	41,358	748	742	69	38	37	22
E.S. CENTRAL	1,023	795	43	-	54,679	54,486	242	1,242	395	3	53	103
Ky.	160	194	15	-	5,509	5,907	55	160	7	2	18	42
Tenn.	333	236	17	-	18,259	17,183	141	915	360	-	18	45
Ala.	330	288	11	-	17,683	18,080	36	155	23	1	16	16
Miss.	200	77	-	-	13,228	13,316	10	12	5	-	1	-
W.S. CENTRAL	3,977	1,281	112	5	62,719	67,502	2,723	2,021	113	207	49	76
Ark.	183	61	32	-	7,319	8,043	239	123	4	8	7	27
La.	680	132	17	-	14,431	12,231	123	308	6	8	8	4
Okla.	194	4	9	3	6,337	5,891	264	193	43	16	21	31
Tex.	2,920	1,084	54	2	34,632	41,337	2,097	1,397	60	175	13	14
MOUNTAIN	1,191	261	20	3	11,131	12,864	3,316	914	194	134	79	20
Mont.	29	18	1	-	92	205	78	68	5	5	5	-
Idaho	24	-	-	-	150	132	92	67	4	2	5	2
Wyo.	17	-	-	-	90	151	125	23	5	-	-	9
Colo.	406	102	8	1	3,154	3,758	620	134	95	26	14	-
N. Mex.	103	20	1	-	920	1,143	773	213	18	29	3	-
Ariz.	248	69	10	2	4,154	4,828	1,053	163	20	57	32	1
Utah	122	17	-	-	295	355	271	69	18	14	9	2
Nev.	242	35	-	-	2,276	2,292	304	177	29	1	11	6
PACIFIC	8,202	1,279	111	6	50,106	59,946	5,676	3,218	644	374	89	308
Wash.	515	-	10	1	4,256	5,165	508	409	140	20	10	3
Oreg.	241	-	-	-	1,888	2,324	377	278	115	9	3	-
Calif.	7,237	1,185	99	5	42,446	50,753	4,655	2,442	372	344	74	305
Alaska	19	47	2	-	847	1,101	89	37	13	1	-	-
Hawaii	190	47	-	-	669	603	47	52	4	-	2	-
Guam	3	1	-	2	27	286	-	-	-	-	-	-
P.R.	1,636	230	2	4	509	702	137	466	144	44	-	-
V.I.	13	-	-	-	342	420	2	10	-	-	-	-
Amer. Samoa	-	-	-	41	38	73	4	-	-	-	-	-
C.N.M.I.	-	-	-	135	75	181	4	7	-	-	-	-

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

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending November 30, 1991, and December 1, 1990 (48th Week)

Reporting Area	Malaria	Measles (Rubeola)					Menin-gococcal Infections	Mumps		Pertussis			Rubella		
		Indigenous		Imported*		Total									
	Cum. 1991	1991	Cum. 1991	1991	Cum. 1991	Cum. 1990	Cum. 1991	1991	Cum. 1991	1991	Cum. 1991	Cum. 1990	1991	Cum. 1991	Cum. 1990
UNITED STATES	1,101	82	9,115	-	203	25,484	1,825	64	3,765	34	2,394	3,980	7	1,325	1,075
NEW ENGLAND	67	1	65	-	17	296	146	-	27	1	265	409	-	4	8
Maine	1	-	7	-	-	30	13	-	-	-	52	22	-	-	1
N.H.	2	-	-	-	-	9	13	-	5	-	18	65	-	1	1
Vt.	4	-	5	-	-	1	16	-	4	1	5	8	-	-	-
Mass.	32	1	29	-	11	31	79	-	2	-	167	277	-	2	2
R.I.	7	-	3	-	1	30	3	-	4	-	-	9	-	-	1
Conn.	21	-	21	-	5	195	22	-	12	-	23	28	-	1	3
MID. ATLANTIC	215	25	4,777	-	7	1,733	198	-	276	17	236	531	-	572	11
Upstate N.Y.	49	-	359	-	4	318	101	-	98	17	148	315	-	539	10
N.Y. City	96	25	1,850	-	-	584	17	-	-	-	7	-	-	-	-
N.J.	54	-	1,026	-	2	430	40	-	65	-	12	36	-	1	-
Pa.	16	-	1,542	-	1	401	40	-	113	-	69	180	-	32	1
E.N. CENTRAL	85	-	75	-	20	3,540	312	10	376	-	364	1,009	-	319	162
Ohio	20	-	4	-	7	539	94	10	103	-	102	214	-	283	131
Ind.	3	-	1	-	5	418	42	-	8	-	70	144	-	2	-
Ill.	33	-	25	-	1	1,358	84	-	128	-	59	350	-	8	19
Mich.	26	-	43	-	-	473	68	-	108	-	37	82	-	25	9
Wis.	3	-	2	-	7	752	24	-	29	-	96	219	-	1	3
W.N. CENTRAL	38	-	39	-	16	872	109	-	115	7	199	205	-	19	40
Minn.	11	-	12	-	15	381	24	-	21	5	78	41	-	6	34
Iowa	7	-	17	-	-	26	14	-	22	1	24	18	-	6	4
Mo.	9	-	-	-	1	102	34	-	36	-	69	108	-	5	-
N. Dak.	2	-	-	-	-	-	1	-	2	-	3	4	-	1	1
S. Dak.	2	-	-	-	-	23	3	-	2	1	5	1	-	-	-
Nebr.	1	-	1	-	-	106	10	-	7	-	9	8	-	-	1
Kans.	6	-	9	-	-	234	23	-	25	-	11	25	-	1	-
S. ATLANTIC	220	16	560	-	23	1,313	321	46	1,442	3	241	314	-	10	21
Del.	3	-	21	-	-	11	2	-	7	-	-	9	-	-	-
Md.	61	-	173	-	3	213	34	1	240	1	57	63	-	1	2
D.C.	14	-	-	-	-	23	15	-	24	-	1	15	-	1	1
Va.	48	-	25	-	5	86	32	-	61	-	24	25	-	-	1
W. Va.	3	-	-	-	-	6	13	-	27	-	9	30	-	-	-
N.C.	14	-	40	-	4	39	54	-	250	-	39	78	-	2	1
S.C.	10	-	13	-	-	4	29	-	380	1	14	5	-	-	-
Ga.	21	-	10	-	5	358	68	-	72	-	49	41	-	-	1
Fla.	46	16	278	-	6	573	74	45	381	1	48	48	-	6	15
E.S. CENTRAL	20	-	29	-	3	199	116	-	230	2	96	159	-	100	4
Ky.	2	-	23	-	1	43	43	-	-	-	-	-	-	-	1
Tenn.	11	-	5	-	1	104	36	-	197	2	40	85	-	100	3
Ala.	7	-	1	-	1	25	35	-	13	-	54	66	-	-	-
Miss.	-	-	-	-	-	27	2	-	20	-	2	8	-	-	-
W.S. CENTRAL	67	-	203	-	14	4,295	123	1	312	-	153	197	-	7	91
Ark.	10	-	-	-	5	48	20	-	43	-	13	22	-	1	3
La.	17	-	-	-	-	10	35	-	31	-	17	33	-	-	-
Okla.	7	-	-	-	-	174	13	-	16	-	49	62	-	-	1
Tex.	33	-	203	-	9	4,063	55	1	222	-	74	80	-	6	87
MOUNTAIN	46	-	1,256	-	19	967	69	3	297	-	327	319	-	37	110
Mont.	1	-	-	-	-	1	10	-	-	-	5	36	-	11	15
Idaho	3	-	446	-	2	26	7	-	10	-	27	56	-	-	49
Wyo.	-	-	1	-	2	15	2	-	5	-	3	-	-	-	-
Colo.	13	-	1	-	5	138	14	-	133	-	133	117	-	2	4
N. Mex.	6	-	117	-	5	93	8	N	N	-	51	18	-	4	-
Ariz.	16	-	453	-	-	312	22	1	116	-	69	54	-	2	32
Utah	5	-	220	-	4	147	-	2	15	-	37	34	-	11	2
Nev.	2	-	18	-	1	235	6	-	18	-	2	4	-	7	8
PACIFIC	343	40	2,111	-	84	12,269	431	4	690	4	513	837	7	257	628
Wash.	25	-	46	-	15	254	61	-	167	-	128	215	-	8	-
Oreg.	12	-	52	-	41	212	54	N	N	1	67	106	1	4	75
Calif.	302	39	2,002	-	16	11,685	302	3	480	1	248	401	5	238	537
Alaska	-	-	2	-	3	80	9	-	15	-	13	8	-	1	-
Hawaii	4	1	9	-	9	38	5	1	28	2	57	107	1	6	16
Guam	-	U	-	U	-	1	-	U	-	U	-	1	U	-	-
P.R.	2	-	94	-	-	1,665	19	-	12	-	55	19	-	-	-
V.I.	2	-	-	-	2	24	-	-	10	-	-	-	-	-	-
Amer. Samoa	-	U	-	U	-	566	-	U	3	U	-	-	U	-	-
C.N.M.I.	1	U	-	U	-	66	-	U	-	U	-	4	U	-	-

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

N: Not notifiable U: Unavailable [†]International [§]Out-of-state

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending November 30, 1991, and December 1, 1990 (48th Week)

Reporting Area	Syphilis (Primary & Secondary)		Toxic-shock Syndrome	Tuberculosis		Tula-remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1991	Cum. 1990	Cum. 1991	Cum. 1991	Cum. 1990	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991
UNITED STATES	38,362	45,569	254	21,234	21,478	181	434	614	6,044
NEW ENGLAND	959	1,540	15	595	564	5	33	9	137
Maine	3	7	4	33	18	-	1	-	-
N.H.	12	51	3	5	3	-	1	-	2
Vt.	2	2	-	9	8	-	-	-	-
Mass.	459	627	8	331	319	5	28	8	14
R.I.	50	23	-	69	65	-	-	-	-
Conn.	433	830	-	148	151	-	3	1	121
MID. ATLANTIC	6,455	8,976	40	4,905	5,070	2	103	24	2,137
Upstate N.Y.	152	877	19	295	349	1	19	13	870
N.Y. City	3,668	4,016	2	3,145	3,179	-	58	1	-
N.J.	1,157	1,388	-	831	860	1	18	6	924
Pa.	1,478	2,695	19	634	682	-	8	4	343
E.N. CENTRAL	4,610	3,321	46	2,097	2,064	8	35	43	174
Ohio	617	519	20	350	374	2	3	25	20
Ind.	160	99	-	223	218	-	-	10	29
Ill.	2,181	1,336	15	1,059	1,008	4	15	5	35
Mich.	1,106	972	11	374	391	2	12	3	33
Wis.	546	395	-	91	73	-	5	-	57
W.N. CENTRAL	788	490	39	465	571	53	6	38	789
Minn.	64	85	8	93	119	1	2	-	286
Iowa	65	70	7	55	63	-	-	1	148
Mo.	510	265	13	212	279	43	1	26	22
N. Dak.	-	1	-	6	18	-	-	-	97
S. Dak.	1	4	1	31	13	5	-	1	165
Nebr.	17	15	1	18	16	1	3	5	17
Kans.	131	50	9	50	63	3	-	5	54
S. ATLANTIC	11,195	14,397	24	4,003	3,958	4	71	281	1,400
Del.	155	181	1	33	33	-	-	-	164
Md.	913	1,102	1	376	325	-	11	26	536
D.C.	660	1,035	1	172	147	-	3	-	21
Va.	808	895	5	291	359	-	10	19	236
W. Va.	26	18	-	65	72	-	1	4	49
N.C.	1,881	1,630	10	522	543	1	4	154	23
S.C.	1,430	983	2	388	430	1	4	37	105
Ga.	2,720	3,631	1	790	671	1	5	38	236
Fla.	2,602	4,922	3	1,366	1,378	1	33	3	30
E.S. CENTRAL	4,261	4,251	11	1,459	1,590	19	2	100	146
Ky.	104	111	4	309	345	4	2	28	46
Tenn.	1,375	1,804	5	509	471	14	-	56	29
Ala.	1,583	1,283	2	359	454	1	-	16	71
Miss.	1,199	1,053	-	282	320	-	-	-	-
W.S. CENTRAL	7,034	7,869	14	2,536	2,521	55	28	109	580
Ark.	668	557	3	220	302	41	-	28	48
La.	2,600	2,449	-	225	251	-	5	-	7
Okla.	195	254	4	165	192	13	3	79	166
Tex.	3,571	4,609	7	1,926	1,776	1	20	2	359
MOUNTAIN	574	849	31	568	518	29	12	8	235
Mont.	6	-	1	6	22	9	-	6	39
Idaho	4	6	-	12	11	-	-	-	6
Wyo.	10	3	-	4	5	1	-	-	83
Colo.	82	49	5	56	48	9	2	2	25
N. Mex.	30	46	7	62	104	2	2	-	6
Ariz.	339	599	5	288	232	2	7	-	46
Utah	6	28	13	51	38	6	-	-	19
Nev.	97	118	-	89	58	-	1	-	11
PACIFIC	2,486	3,876	34	4,606	4,622	6	144	2	446
Wash.	166	351	5	278	273	2	6	1	1
Oreg.	81	127	-	114	119	2	6	1	5
Calif.	2,227	3,362	29	3,966	4,005	2	120	-	436
Alaska	4	18	-	52	60	-	-	-	3
Hawaii	8	18	-	196	165	-	12	-	1
Guam	1	2	-	8	40	-	-	-	-
P.R.	408	308	-	211	102	-	9	-	60
V.I.	93	42	-	3	4	-	-	-	-
Amer. Samoa	-	-	-	2	15	-	-	-	-
C.N.M.I.	5	5	-	18	57	-	-	-	-

U: Unavailable

TABLE III. Deaths in 121 U.S. cities,* week ending November 30, 1991 (48th Week)

Reporting Area	All Causes, By Age (Years)						P&I†
	All Ages	≥65	45-64	25-44	1-24	<1	Total
NEW ENGLAND	502	352	82	43	11	14	43
Boston, Mass.	149	93	27	17	4	8	24
Bridgeport, Conn.	40	27	8	3	2	-	2
Cambridge, Mass.	22	16	5	1	-	-	2
Fall River, Mass.	17	16	1	-	-	-	-
Hartford, Conn.	40	28	7	4	1	-	3
Lowell, Mass.	19	14	5	-	-	-	-
Lynn, Mass.	14	9	3	2	-	-	1
New Bedford, Mass.	20	15	2	2	-	1	-
New Haven, Conn.	33	21	4	3	2	3	-
Providence, R.I.	25	17	6	-	2	-	1
Somerville, Mass.	8	6	1	1	-	-	1
Springfield, Mass.	42	31	5	4	-	2	5
Waterbury, Conn.	24	20	2	2	-	-	2
Worcester, Mass.	49	39	6	4	-	-	2
MID. ATLANTIC	2,295	1,496	451	256	53	39	109
Albany, N.Y.	46	36	7	2	-	1	4
Allentown, Pa.	22	16	5	1	-	-	1
Buffalo, N.Y.	103	62	29	8	2	2	3
Camden, N.J.	18	12	4	2	-	-	3
Elizabeth, N.J.	19	12	3	4	-	-	-
Erie, Pa.§	34	23	8	2	1	-	2
Jersey City, N.J.	40	22	5	9	3	1	-
New York City, N.Y.	1,194	752	237	159	27	19	55
Newark, N.J.	81	35	18	22	3	3	2
Paterson, N.J.	28	17	4	6	-	1	-
Philadelphia, Pa.	297	197	64	24	5	7	12
Pittsburgh, Pa.§	41	33	4	1	2	1	4
Reading, Pa.	53	46	5	2	-	-	6
Rochester, N.Y.	86	64	15	2	4	1	4
Schenectady, N.Y.	19	14	2	1	2	-	-
Scranton, Pa.§	29	21	6	2	-	-	1
Syracuse, N.Y.	106	80	17	4	3	2	9
Trenton, N.J.	34	22	11	1	-	-	3
Utica, N.Y.	17	16	-	1	-	-	-
Yonkers, N.Y.	28	16	7	3	1	1	-
E.N. CENTRAL	1,696	1,070	315	175	70	66	85
Akron, Ohio	56	39	10	3	1	3	-
Canton, Ohio	17	13	4	-	-	-	1
Chicago, Ill.	263	114	51	55	35	8	4
Cincinnati, Ohio	182	130	34	9	2	7	15
Cleveland, Ohio	190	113	34	18	9	16	5
Columbus, Ohio	125	79	27	13	3	3	5
Dayton, Ohio	88	63	16	7	2	-	4
Detroit, Mich.	168	94	35	29	2	8	5
Evansville, Ind.	27	19	6	-	-	2	-
Fort Wayne, Ind.	22	15	4	2	1	-	2
Gary, Ind.	35	16	10	5	1	3	-
Grand Rapids, Mich.	59	40	10	1	1	7	7
Indianapolis, Ind.	142	93	29	11	5	4	6
Madison, Wis.	26	16	3	5	2	-	2
Milwaukee, Wis.	73	53	10	6	1	3	7
Peoria, Ill.	45	36	7	1	-	1	6
Rockford, Ill.	30	26	3	-	-	1	6
South Bend, Ind.	24	19	3	-	2	-	2
Toledo, Ohio	76	60	11	4	1	-	5
Youngstown, Ohio	48	32	8	6	2	-	3
W.N. CENTRAL	752	544	126	51	12	19	42
Des Moines, Iowa	50	42	4	1	3	-	2
Duluth, Minn.	18	14	3	1	-	-	1
Kansas City, Kans.	18	14	4	-	-	-	1
Kansas City, Mo.	118	86	19	9	-	4	4
Lincoln, Nebr.	26	22	2	1	-	1	-
Minneapolis, Minn.	242	179	37	20	3	3	21
Omaha, Nebr.	76	50	18	6	1	1	7
St. Louis, Mo.	103	69	25	4	3	2	-
St. Paul, Minn.	51	40	6	3	-	2	5
Wichita, Kans.	50	28	8	6	2	6	1
S. ATLANTIC	918	591	184	79	26	37	51
Atlanta, Ga.	125	62	29	14	9	11	5
Baltimore, Md.	143	85	30	19	6	3	15
Charlotte, N.C.	75	56	11	3	1	4	4
Jacksonville, Fla.	80	55	14	10	1	-	5
Miami, Fla.	101	58	28	11	2	2	-
Norfolk, Va.	39	20	7	6	1	5	2
Richmond, Va.	67	40	17	3	2	4	6
Savannah, Ga.	48	32	10	3	-	3	6
St. Petersburg, Fla.	74	56	12	4	-	2	-
Tampa, Fla.	140	106	24	3	4	3	8
Washington, D.C.	U	U	U	U	U	U	U
Wilmington, Del.	26	21	2	3	-	-	-
E.S. CENTRAL	541	352	106	55	13	15	30
Birmingham, Ala.	94	55	22	10	5	2	3
Chattanooga, Tenn.	30	21	4	4	1	-	3
Knoxville, Tenn.	96	65	18	8	1	4	5
Louisville, Ky.	82	55	18	7	1	1	7
Memphis, Tenn.	U	U	U	U	U	U	U
Mobile, Ala.	120	77	24	12	2	5	6
Montgomery, Ala.	22	17	3	2	-	-	1
Nashville, Tenn.	97	62	17	12	3	3	5
W.S. CENTRAL	1,053	621	211	138	49	34	61
Austin, Tex.	41	25	8	5	2	1	3
Baton Rouge, La.	62	45	11	5	-	1	4
Corpus Christi, Tex.	U	U	U	U	U	U	U
Dallas, Tex.	163	88	36	24	8	7	5
El Paso, Tex.	63	40	14	6	2	1	4
Ft. Worth, Tex.	88	60	12	8	3	5	4
Houston, Tex.	247	115	59	48	19	6	23
Little Rock, Ark.	50	33	11	3	2	1	2
New Orleans, La.	81	45	15	10	3	8	-
San Antonio, Tex.	122	80	20	15	4	3	6
Shreveport, La.	71	42	15	8	5	1	6
Tulsa, Okla.	65	48	10	6	1	-	4
MOUNTAIN	625	423	107	60	15	19	31
Albuquerque, N.M.	73	49	11	8	1	3	4
Colo. Springs, Colo.	44	27	9	3	2	3	2
Denver, Colo.	111	75	17	13	2	4	8
Las Vegas, Nev.	112	72	28	9	1	2	4
Ogden, Utah	10	8	1	1	-	-	2
Phoenix, Ariz.	123	78	22	15	5	3	3
Pueblo, Colo.	16	12	4	-	-	-	-
Salt Lake City, Utah	35	21	5	4	1	4	1
Tucson, Ariz.	101	81	10	7	3	-	7
PACIFIC	1,460	960	269	148	46	31	77
Berkeley, Calif.	18	12	4	2	-	-	3
Fresno, Calif.	58	39	11	5	1	2	3
Glendale, Calif.	18	15	1	1	1	-	-
Honolulu, Hawaii	72	48	14	5	4	1	4
Long Beach, Calif.	69	43	14	7	3	2	7
Los Angeles, Calif.	401	249	78	49	15	5	16
Pasadena, Calif.	30	20	4	3	1	2	3
Portland, Oreg.	108	82	12	8	3	3	9
Sacramento, Calif.	96	59	26	7	2	2	4
San Diego, Calif.	121	80	17	16	5	3	11
San Francisco, Calif.	102	60	18	19	1	3	5
San Jose, Calif.	170	113	38	10	6	3	8
Santa Cruz, Calif.	19	13	4	2	-	-	-
Seattle, Wash.	90	65	11	9	2	3	1
Spokane, Wash.	39	28	6	4	1	-	3
Tacoma, Wash.	49	34	11	1	1	2	-
TOTAL	9,842¶	6,409	1,851	1,005	295	274	529

*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

Dermatitis — Continued

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International Notes

BCG Vaccination and Pediatric HIV Infection — Rwanda, 1988–1990

In Africa, tuberculosis (TB) is one of the most common severe diseases associated with human immunodeficiency virus (HIV) infection. For infants in Rwanda and other countries where the risk for TB infection is high, the World Health Organization (WHO) recommends vaccination against TB at birth with bacille Calmette-Guérin (BCG) vaccine (*1*). This report summarizes a study of the occurrence of immune responses and adverse reactions following BCG vaccination among a cohort of infants born to HIV-seropositive and HIV-seronegative mothers in Kigali, Rwanda, where the prevalence of HIV infection among women of childbearing age is approximately 30% (*2*).

In November 1988, an ongoing prospective study of the mother-to-infant transmission of HIV type 1 (HIV-1) was initiated in Kigali. Through June 1989, the study enrolled a cohort of 422 newborns who had been vaccinated during the first week of life with a freeze-dried BCG vaccine (Evans Medical Ltd™*, intradermal injection of 0.05 mL); of these, 209 were born to HIV-1–seropositive mothers, and 213, to HIV-1–seronegative mothers.

During the first 15 months of follow-up, infants were examined every 2 weeks for regional adenitis (BCG-itis) and major side effects (e.g., generalized BCG-itis, meningitis, osteomyelitis, and sepsis). At 6 months of age, the infants were examined for the presence of a BCG scar and were administered a tuberculin skin test (intradermal injection of 0.1 mL of tuberculin, 10 International Units, Institut Pasteur du Brabant™). The skin test was considered negative if the diameter of the induration was <6 mm after 48 hours. Nonreactivity to tuberculin was defined as the total absence of induration to the tuberculin skin test. In addition, at 6 months of age, mononuclear peripheral blood cell subpopulations were quantified by using an indirect immunofluorescence technique and monoclonal antibodies (P. Van de Perre, Reference Laboratory, National AIDS Control Program, Kigali, Rwanda, personal communication, 1991). A T4/T8 ratio of <1:1 was considered the criterion for impaired cellular immunity.

Of the 422 children, 18 were either lost to follow-up before the age of 6 months (10 children) or died (eight) before the age of 6 months of causes unrelated to BCG vaccination. The remaining 404 children were classified into four groups based on

*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.

BCG Vaccination — Continued

their probable HIV-infection status and the known HIV serostatus of their mothers (Table 1): group 1 (n=37), infant infected, mother HIV-antibody–positive; group 2 (n=140), infant not infected, mother HIV-antibody–positive; group 3 (n=200), infant not infected, mother HIV-antibody–negative; and group 4 (n=27), infant status undetermined, mother HIV-antibody–positive or infant seroconversion during first 6 months, mother HIV-antibody–negative. Infants in group 4 were excluded from this analysis.

No major side effects occurred during follow-up among the 377 children in groups 1–3. BCG-itis was diagnosed 54 days after vaccination in a child from group 1. Suppuration at the location of injection was reported in one infant from group 1, one from group 2, and four from group 3 (not significant, Fisher's exact test). No other clinical manifestations were reported.

Of the 377 children, 361 (96%) were alive at 6 months of age and were skin tested and examined for the presence of BCG scars. Of the 361, seven did not have scars (three [9%] of 33 in group 1, one [1%] of 136 in group 2, and three [2%] of 192 in group 3) (two-tailed Fisher's exact test of group 1 versus group 3; $p=0.04$). Tuberculin skin test reactions were measured according to the protocol in 341 (94%) of the 361 children. The proportion of negative skin tests was statistically higher in groups 1 (73%) and 2 (43%) than in group 3 (30%) (Table 2). The mean reaction diameter was substantially smaller in group 1 than in groups 2 and 3 (Table 2). The proportion of children with nonreactivity to tuberculin was significantly higher in group 1 (48%) than in the other groups (Table 2).

A T4/T8 lymphocyte count was performed for 291 (85%) of the 341 children. The proportion with a T4/T8 ratio <1:1 at 6 months of age was 61% in group 1 (17/28), 17% in group 2 (19/111), and 9% in group 3 (14/152). Among the children with a T4/T8 ratio <1:1, the proportion with nonreactivity to tuberculin was 65% in group 1 (11/17), 16% in group 2 (3/19), and 14% in group 3 (2/14). Among the children with a T4/T8 ratio ≥1:1, the proportion with nonreactivity to tuberculin was 45% in group 1 (5/11), 18% in group 2 (17/92), and 9% in group 3 (13/138).

Reported by: P Msellati, MD, F Dabis, MD, National Institute of Health and Medical Research, University of Bordeaux II, Bordeaux, France. P Lepage, MD, DG Hitimana, MD, C Van Goethem, MD, Dept of Pediatrics, Hospital Center of Kigali; P Van de Perre, MD, Reference Laboratory, National AIDS Control Program, Kigali, Rwanda.

TABLE 1. Classification of children with HIV-1 infection — Kigali, Rwanda, 1988–1990

Group 1 (n=37)	Group 2 (n=140)	Group 3 (n=200)	Group 4 (n=27)
Mother: HIV-antibody–positive **Child**: • Alive and HIV-antibody–positive at age 15 months (n=29) • Died before age 15 months; HIV-antibody–positive and symptomatic HIV infection at last contact (n=8)	**Mother**: HIV-antibody–positive **Child**: Alive and HIV-antibody–negative at age 15 months	**Mother**: HIV-antibody–negative **Child**: Alive and HIV-antibody–negative at age 15 months	**Mother**: HIV-antibody–positive **Child**: Died before age 15 months without symptomatic HIV infection (n=6) or lost to follow-up before age 15 months (n=15) **Mother**: HIV-antibody–negative **Child**: Seroconversion during first 6 months (n=6)

BCG Vaccination — Continued

Editorial Note: In this study, no cases of disseminated BCG disease were identified following BCG vaccination of newborns—a finding consistent with other studies in Africa (*3,4*). In addition, only one case of BCG-itis was observed, which did not appear to be directly associated with HIV infection. Although absence of scarring after vaccination was infrequent, this problem was noted more commonly among HIV-infected children than among the other groups. The proportion of infants with a negative skin test reaction to tuberculin was substantially higher among HIV-infected infants than among the other groups; this finding is similar to results of a study of HIV-infected adults in Uganda (*5*). These data suggest that tuberculin skin test responses following BCG vaccination may be decreased among HIV-infected children.

At least two mechanisms may account for the higher proportions of nonreactivity to tuberculin and of negative skin reaction in group 2 compared with group 3. First, some of the children who were HIV-antibody–negative at 15 months of age may nonetheless have been HIV-infected. In group 2, seven children alive as of September 30, 1991, had at least two signs of the WHO clinical definition of pediatric AIDS but were persistently HIV-antibody negative since the age of 12 months. For six of the seven children, results of the skin tests performed at 6 months of age were available: two had total tuberculin nonreactivity, two had a negative skin test, and two had a normal skin test. Second, circulating inhibitors of lymphocyte functions or soluble factors already identified in viral infections (*6*), including HIV infection among adults (*7*), could be transmitted from mother to child and could impair the cellular immunity of uninfected children born to HIV-positive mothers.

The differences in response to BCG between groups 2 and 3 have important practical implications. Uninfected children born to HIV-antibody–positive mothers

TABLE 2. Reactions to tuberculin skin test among HIV-infected children and controls — Kigali, Rwanda, 1988–1990

	Children born to seropositive mothers		Children born to seronegative mothers	Comparison of groups (p value)		
Category	Group 1* (n=33)	Group 2* (n=130)	Group 3* (n=178)	Group 1/ Group 3	Group 2/ Group 3	Overall
Mean diameter of reaction (mm) (Standard deviation)	3.5 (4.4)	6.6 (4.8)	7.3 (4.0)	<0.01†	0.17†	<0.01§
Median diameter of reaction (mm) (Range)	2 (0–15)	6 (0–25)	8 (0–18)			
Proportion of children with nonreactivity to tuberculin test (95% CI**)	48.5% (31.4%–65.5%)	16.9% (10.4%–23.4%)	9.0% (5.8%–13.2%)	<0.01¶	0.06¶	<0.01¶
Proportion of children with negative tuberculin test†† (95% CI)	72.7% (57.5%–87.9%)	43.1% (34.6%–51.6%)	29.8% (23.1%–36.5%)	<0.01¶	0.03¶	<0.01¶

*See Table 1 for definitions.
†Student t-test.
§Variance analysis.
¶Chi-square test.
**Confidence interval.
††<6 mm induration.

BCG Vaccination — Continued

could be at higher risk for acquiring TB because their mothers are more likely to reactivate a latent *Mycobacterium tuberculosis* infection. For this cohort of children in Rwanda, five HIV-positive mothers previously had been diagnosed with active TB, including one during pregnancy and four during the first 15 months postpartum. Three were mothers of children in group 1 and two of children in group 2.

The findings in this report support the continued practice of vaccinating asymptomatic infants in Africa with BCG for at least three reasons (*1*). First, because HIV-infected children are usually asymptomatic at birth, vaccinating these newborns with BCG appears to be a safe practice. Second, because side effects occur infrequently in infants after BCG vaccination during the neonatal period, mothers are likely to adhere to the sequence of vaccinations scheduled during infancy. Third, vaccinating HIV-infected infants with BCG could also provide cross-protection against atypical mycobacteria, an important cause of morbidity and mortality among AIDS patients (*8*).

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Aedes albopictus Introduction into Continental Africa, 1991

From April 15 through July 20, 1991, an epidemic of yellow fever (YF) occurred in Delta State, Nigeria. In September 1991, as part of a follow-up investigation, mosquito oviposition cups were deployed in four rural communities with YF, all within a 24-kilometer radius of the principal town of Agbor (Figure 1). Based on findings from the follow-up investigation, this report documents the first record of breeding populations of *Ae. albopictus*—a competent YF virus vector—in continental Africa.

The cups were deployed approximately 200 meters from human dwellings at the edge of deciduous forest strips that separate villages and farmlands. Cup liners were collected after 48 hours, and those containing eggs of *Aedes* mosquitoes were sent to CDC for specific identification. Eggs were hatched and larvae mass-reared to the adult stage.

Ae. albopictus were present in collections from three communities (Igbodo, Owa-Alero, and Egbudu-Aka). The combined 271 specimens from Igbodo and Owa-Alero included the following: *Ae. aegypti*, 74%; *Ae. albopictus*, 18%; *Ae. apicoargenteus*, 4%; *Ae. lilii*, 3%; and *Ae. simpsoni* subgroup, 2%. The 14 specimens

Aedes albopictus — *Continued*

from Egbudu-Aka represented two taxa: *Ae. albopictus*, 64%; and *Ae. africanus*, 36%. In addition, eight adults were reared from Mbiri; all were identified as *Ae. africanus*.

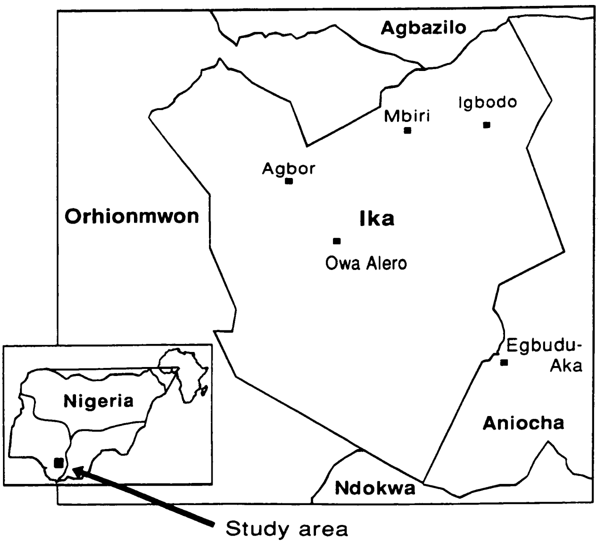
Reported by: VI Ezike, ACN Nwankwo, National Arbovirus and Vectors Research Div, Federal Ministry of Health, Enugu; US Agency for International Development, Lagos, Nigeria. Combatting Childhood Communicable Diseases Program, Div of Field Svcs, International Health Program Office; Div of Vector-Borne Infectious Diseases, National Center for Infectious Diseases, CDC.

Editorial Note: The colonization history of *Ae. albopictus* in other areas suggests a likelihood for further spread of *Ae. albopictus* in Africa (*1,2*). *Ae. albopictus* has colonized both urban and rural forested areas in Delta State, and—with its ability to adapt to a variety of oviposition sites, its biting habits, and its competence as a YF virus vector in the laboratory—*Ae. albopictus* may link sylvan and urban YF transmission cycles.

Live larvae of *Ae. albopictus* recently entered South Africa in used tires imported from Japan (*3*), and *Ae. albopictus* was previously introduced into the United States and Brazil in used tires imported from Asia (*4*). This would suggest that importation of used tires was the likely method of introduction into Nigeria. However, in Africa, imported cargo is not routinely inspected for mosquitoes, and other undetected populations of *Ae. albopictus* may now exist.

Field and laboratory data indicate that *Ae. albopictus* is an efficient laboratory vector of a number of viruses that cause human disease—including dengue (DEN), YF, chikungunya, Rift Valley fever, and West Nile—in Africa (*5,6*). Of particular concern to public health officials is its potential role in DEN and YF transmission, two viruses that continue to cause epidemic disease in Africa. Strains of *Ae. albopictus* from Asia and strains introduced into North America are efficient vectors of DEN and YF (*6,7*). In addition to the role of *Ae. albopictus* in epidemic DEN transmission, its ability to transmit DEN viruses vertically as a reservoir host may facilitate endemic transmission (*8*).

FIGURE 1. Study area of *Aedes albopictus* — Delta State, Nigeria*



*Local government areas within Delta State are in large type and communities are in small type.

Aedes albopictus — *Continued*

Ae. albopictus may displace *Ae. aegypti* in parts of Africa, as it has in some areas of the southern United States (*9*), and alter established arbovirus transmission cycles. Virus transmission studies with African strains of YF virus and *Ae. albopictus* from Nigeria are in progress. The distribution of *Ae. albopictus* in Nigeria and throughout continental Africa needs to be further characterized.

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Quarterly Table Reporting Alcohol Involvement in Fatal Motor-Vehicle Crashes

The following table reports alcohol involvement in fatal motor-vehicle crashes in the United States for October–December 1990. This table, published quarterly in *MMWR*, focuses attention on the impact of alcohol use on highway safety.

A fatal crash is considered alcohol-related by the National Highway Traffic Safety Administration (NHTSA) if either a driver or nonoccupant (e.g., pedestrian) had a blood alcohol concentration (BAC) of ≥0.01 g/dL in a police-reported traffic crash. Those with a BAC ≥0.10 g/dL (the legal level of intoxication in most states) are considered intoxicated. Because BAC levels are not available for all persons in fatal crashes, NHTSA estimates the number of alcohol-related traffic fatalities based on a discriminant analysis of information from all cases for which driver or nonoccupant BAC data are available. There may be seasonal trends associated with these data.

Quarterly Alcohol Table — Continued

Estimated number and percentage of total traffic fatalities* and drivers involved in fatal crashes, by age and blood alcohol concentration (BAC) level — United States, October–December, 1990

		Fatalities by BAC†					
		BAC=0.00		0.01%≤BAC≤0.09%		BAC ≥0.10%	
Age (yrs)	No. fatalities	No.	(%)	No.	(%)	No.	(%)
0–14	673	518	(76.9)	48	(7.1)	107	(15.9)
15–20	1,664	881	(52.9)	202	(12.1)	581	(34.9)
21–24	1,140	381	(33.4)	127	(11.2)	632	(55.4)
25–34	2,293	772	(33.7)	227	(9.9)	1,293	(56.4)
35–64	3,336	1,727	(51.8)	283	(8.5)	1,327	(39.8)
≥65	1,761	1,433	(81.4)	102	(5.8)	227	(12.9)
Total	**10,867**	**5,712**	**(52.6)**	**988**	**(9.1)**	**4,167**	**(38.3)**

		Drivers§ by BAC¶					
		BAC=0.00		0.01%≤BAC≤0.09%		BAC ≥0.10%	
Age (yrs)	No. drivers	No.	(%)	No.	(%)	No.	(%)
0–14**	42	38	(91.7)	3	(6.6)	1	(1.7)
15–20	2,085	1,478	(70.9)	189	(9.0)	418	(20.1)
21–24	1,674	922	(55.1)	162	(9.7)	589	(35.2)
25–34	3,774	2,298	(60.9)	291	(7.7)	1,185	(31.4)
35–64	5,224	3,912	(74.9)	276	(5.3)	1,036	(19.8)
≥65	1,451	1,306	(90.0)	46	(3.2)	98	(6.8)
Total	**14,250**	**9,956**	**(69.9)**	**967**	**(6.8)**	**3,327**	**(23.4)**

*Fatalities include all occupants and nonoccupants who died within 30 days of a motor-vehicle crash on a public roadway.

†BAC distributions are estimates for drivers and nonoccupants involved in fatal crashes. Numbers of fatalities are rounded to the nearest whole number.

§Driver may or may not have been killed.

¶BAC distributions are estimates for drivers involved in fatal crashes. Numbers of drivers are rounded to the nearest whole number.

**Although usually too young to legally drive, persons in this age group are included for completeness of the data set.

Source: Fatal Accident Reporting System, National Highway Traffic Safety Administration.

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